LEE'S SUMMIT
MISSOURI

The City of Lee's Summit

Final Agenda

City Council - Regular Session

Thursday, April 12, 2018
6:15 PM
City Council Chambers
City Hall
220 SE Green Street
Lee's Summit, MO 64063
(816) 969-1000

*****AMENDED*** REGULAR SESSION NO. 61 AND SINE DIE**

INVOCATION

PLEDGE OF ALLEGIANCE

CALL TO ORDER

ROLL CALL

APPROVAL OF AGENDA

1. PUBLIC COMMENTS:

(NOTE: Total time for Public Comments will be limited to 10 minutes.)

2. COUNCIL COMMENTS:

(NOTE: Total time for Council Comments will be limited to 5 minutes.)

3. APPROVAL OF CONSENT AGENDA:

Items on the Consent Agenda are routine business matters; were previously discussed in a Council Committee and carry a recommendation for approval; or, proposed ordinances approved unanimously by the Council on First Reading. Consent agenda items may be removed by any Councilmember for discussion as part of the regular agenda.

A. BILL NO. 18-63 — AN ORDINANCE AUTHORIZING THE EXECUTION OF A DEVELOPMENT AGREEMENT BETWEEN DYMON WOOD AND THE CITY OF LEE'S SUMMIT, MISSOURI FOR SIDEWALK IMPROVEMENT OBLIGATIONS RELATING TO THE PLAT HEARNE'S ADDITON, LOTS 18A, 18B, AND 18C DEVELOPMENT. (NOTE: First reading by City Council on April 5, 2018. Passed by unanimous vote.)

B. BILL NO. 18-64 — AN ORDINANCE ACCEPTING FINAL PLAT ENTITLED "ASH GROVE, TRACT A-1", AS A SUBDIVISION TO THE CITY OF LEE'S SUMMIT, MISSOURI. (NOTE: First reading by City Council on April 5, 2018. Passed by unanimous vote.)

C. BILL NO. 18-65 — AN ORDINANCE APPROVING THE EXECUTION OF AN AMENDED GRANT AGREEMENT BY AND BETWEEN THE STATE OF MISSOURI, DEPARTMENT OF TRANSPORTATION TRAFFIC AND HIGHWAY SAFETY DIVISION AND THE CITY OF LEE'S SUMMIT MISSOURI FOR THE MISSOURI HIGHWAY SAFETY PROGRAM HAZARDOUS MOVING VIOLATION PROJECT.
(NOTE: First reading by City Council on April 5, 2018. Passed by unanimous vote.)

4. RESOLUTIONS:

A. RES. NO. 18-04 — A RESOLUTION AUTHORIZING THE CITY MANAGER TO SIGN THE APPLICATION TO REQUEST APPROVAL OF A PRELIMINARY DEVELOPMENT PLAN FOR THE DEVELOPMENT OF PROPERTY LOCATED NORTHWEST OF THE INTERSECTION OF CHIPMAN ROAD AND PRYOR ROAD IN THE CITY OF LEE'S SUMMIT, MISSOURI.

5. EMERGENCY ORDINANCES:

The following proposed ordinances meet the criteria included in Sec. 3.13(f) of the Lee's Summit Charter for Emergency ordinances and are presented for two readings in this meeting. Six affirmative votes are required for approval of secona reading.

A. SUBSTITUTE BILL NO. 18-66 — AN ORDINANCE CANVASSING AND DECLARING THE RESULTS OF THE APRIL 3, 2018, REGULAR MUNICIPAL ELECTION FOR THE CITY OF LEE'S SUMMIT, MISSOURI, AND CONTAINING AN EMERGENCY CLAUSE.

6. PROPOSED ORDINANCES - SECOND READING:

The proposed Ordinances were advanced from First Reading without a unanimous vote of the City Council.

A. BILL NO. 18-62 — AN ORDINANCE GRANTING A SPECIAL USE PERMIT FOR AUTOMOTIVE SALES, GENUINE AUTO, IN DISTRICT CP-2 (PLANNED COMMUNITY COMMERCIAL DISTRICT) ON LAND LOCATED AT 520 SW 3rd ST FOR A PERIOD OF FIVE (5) YEARS, ALL IN ACCORDANCE WITH ARTICLE 10 WITHIN THE UNIFIED DEVELOPMENT ORDINANCE, FOR THE CITY OF LEE'S SUMMIT, MISSOURI.
(NOTE: First reading by City Council on April 5, 2018.)

B. BILL NO. 18-40 — AN ORDINANCE AMENDING THE CITY'S ACCESS MANAGEMENT CODE AS ADOPTED AND MADE A PART OF THE CODE OF ORDINANCES BY SECTION 26-308 OF THE CODE OF ORDINANCES OF THE CITY OF LEE'S SUMMIT, MISSOURI.
(NOTE: First reading by City Council on April 5, 2018.)

7. COMMITTEE REPORTS (Committee chairs report on matters held in Committee):

8. COUNCIL ROUNDTABLE:

9. STAFF ROUNDTABLE:

****SINE DIE AND SWEARING IN OF NEWLY ELECTED OFFICIALS****

PRESENTATION OF PLAQUES - SWEARING IN OF 2018 COUNCIL / MAYOR / JUDGE

For your convenience, City Council agendas, as well as videos of City Council and Council Committee meetings, may be viewed on the City's Internet site at "www.cityofls.net".

LEE'S SUMMIT
MISSOURI

Packet Information

File #: BILL NO. 18-63, **Version:** 1

AN ORDINANCE AUTHORIZING THE EXECUTION OF A DEVELOPMENT AGREEMENT BETWEEN DYMON WOOD AND THE CITY OF LEE'S SUMMIT, MISSOURI FOR SIDEWALK IMPROVEMENT OBLIGATIONS RELATING TO THE PLAT HEARNE'S ADDITON, LOTS 18A, 18B, AND 18C DEVELOPMENT.
(NOTE: First reading by City Council on April 5, 2018. Passed by unanimous vote.)

Proposed City Council Motion:
I move for adoptoin of AN ORDINANCE AUTHORIZING THE EXECUTION OF A DEVELOPMENT AGREEMENT BETWEEN DYMON WOOD AND THE CITY OF LEE'S SUMMIT, MISSOURI FOR SIDEWALK IMPROVEMENT OBLIGATIONS RELATING TO THE PLAT HEARNE'S ADDITON, LOTS 18A, 18B, AND 18C DEVELOPMENT.

Impact/Analysis:
The City's Unified Development Ordinance and Design & Construction Manual stipulate the construction of public sidewalks as required per the scope of the development. The proposed minor plat of Hearne's Addition, Lot 18 into three (3) new lots would require the construction of a five (5) foot wide sidewalk along NW Orchard Street and two (2) ADA ramps to cross NW Main Street. However, the City and the Developer acknowledge that the Sidewalk Improvements are premature for this area and considered extraordinary for the unimproved road conditions. Any constructed sidewalks at this point in time would likely be replaced by a future, undetermined Capital Improvement Project in conjunction with other infrastructure improvements.

Therefore, staff is supporting this payment in lieu of construction request for this particular project given the above mentioned circumstances. Payment in lieu of the construction of sidewalk and ADA ramps will be in an amount equal to the average bid amount for linear feet of sidewalk and ADA ramps of the City during the calendar years of 2016 and 2017.

Presenter: Christopher Hughey, Project Manager (Development Services Department)

Recommendation: Staff recommends approval

Committee Recommendation: (not applicable)

BILL NO. 18-63

AN ORDINANCE AUTHORIZING THE EXECUTION OF A DEVELOPMENT AGREEMENT BETWEEN DYMON WOOD AND THE CITY OF LEE'S SUMMIT, MISSOURI FOR SIDEWALK IMPROVEMENT OBLIGATIONS RELATING TO THE PLAT HEARNE'S ADDITON, LOTS 18A, 18B, AND 18C DEVELOPMENT

WHEREAS, on January 25, 2018, the Application #PL2018-016 was submitted, for minor plat, of approximately 0.94 acres of land generally lying at the southwest corner of NE Main Street and NW Orchard Street, owned by Dymon Wood ("Developer"), which will be developed as the "Hearne's Addition, Lots 18A, 18B, and 18C" the proposed plat ("Development"); and,

WHEREAS, the City and the Developer acknowledge that the Sidewalk Improvements have not been completed as defined in the Development Agreement, and the City and Developer wish to enter into this Agreement to satisfy certain provisions of Unified Development Ordinance and Design and Construction Manual as to allow Developer to make a payment in lieu of constructing the required sidewalk improvements; and,

WHEREAS, the City and the Developer acknowledge that the Sidewalk Improvements are premature for this area, considered extraordinary for the unimproved road conditions, and conceivably will be removed by a future undetermined Capital Improvement Project in which any constructed sidewalk would be replaced by said Capital project in conjunction with other infrastructure improvements; and,

WHEREAS, the Developer agrees to make payment in lieu of said public sidewalk improvements for an estimated cost of construction. This City will allocate these funds for public sidewalk improvements. Payment by the Developer will fulfill the intent of the sidewalk obligations for this Development; and,

WHEREAS, in satisfaction of the City Council's condition of approval, the Developer and the City now desire to enter into this Agreement.

NOW THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF LEE'S SUMMIT, MISSOURI, as follows:

SECTION 1. That the development agreement between Dymon Wood and the City of Lee's Summit, Missouri, attached hereto and incorporated herein by reference, is hereby approved by the City Council and the City Manager is authorized to execute the same on behalf of the City of Lee's Summit, Missouri.

SECTION 2. That this ordinance shall be in full force and effect from and after the date of its adoption, passage and approval by the Mayor.

PASSED by the City Council of the City of Lee's Summit, Missouri, this _____ day of __ _____, 2018.

_____
Mayor *Randall L. Rhoads*

ATTEST:

_____
City Clerk *Trisha Fowler Arcuri*

APPROVED by the Mayor of said city this ____ day of _____, 2018.

_____
Mayor *Randall L. Rhoads*

ATTEST:

_____
City Clerk *Trisha Fowler Arcuri*

APPROVED AS TO FORM:

_____
City Attorney *Brian W. Head*

DEVELOPMENT AGREEMENT FOR SIDEWALK IMPROVEMENT OBLIGATIONS RELATING TO THE PLAT HEARNE'S ADDITON, LOTS 18A, 18B, AND 18C DEVELOPMENT

THIS AGREEMENT ("**Agreement**") is made this _____ day of April, 2018, by and between Dymon Wood, (the "**Developer**"), and the City of Lee's Summit, Missouri, a municipal corporation ("**City**").

WHEREAS, on January 25, 2018, the Application #PL2018-016 was submitted, for minor plat, of approximately 0.94 acres of land generally lying at the southwest corner of NE Main Street and NW Orchard Street, on property legally described in **Exhibit A** ("**Property**"), owned by the Developer, which will be developed as the "Hearne's Addition, Lots 18A, 18B, and 18C" ("**Development**") as shown in **Exhibit B**, the proposed plat;

WHEREAS, The City's Unified Development Ordinance and Design and Construction Manual stipulates the Responsibility for Construction of a sidewalk is required adjacent to a buildable lot, sidewalks shall be constructed by the builder prior to occupancy of any structure on that lot;

WHEREAS, the City and the Developer acknowledge that the Sidewalk Improvements have not been completed as defined in Section 1.D below, and the City and Developer wish to enter into this Agreement to satisfy certain provisions of Unified Development Ordinance and Design and Construction Manual as to allow Developer to make a payment in lieu of constructing the required sidewalk improvements;

WHEREAS, the City and the Developer acknowledge that the Sidewalk Improvements are premature for this area, considered extraordinary for the unimproved road conditions, and conceivably will be removed by a future undetermined Capital Improvement Project in which any constructed sidewalk would be replaced by said Capital project in conjunction with other infrastructure improvements;

WHEREAS, the Developer agrees to make payment in lieu of said public sidewalk improvements for an estimated cost of construction. This City will allocate these funds for public sidewalk improvements. Payment by the Developer will fulfill the intent of the sidewalk obligations for this Development;

WHEREAS, the parties agree that the obligations assumed by the Developer pursuant to this Agreement are reasonably related to the impact that will be caused by the Development on the public services provided by the City and other public jurisdictions and on facilities that are constructed and maintained by the City and other public jurisdictions; and

WHEREAS, the parties have freely negotiated in good faith and this Agreement reflects the desires of the parties.

NOW, THEREFORE, in consideration of the mutual terms, covenants and conditions contained herein, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

1. **Definitions**. Words or terms not defined elsewhere in this Agreement shall have the following definitions:

   A. **"Certificate of Occupancy"** as defined in Chapter 7, Lee's Summit Building Code, as adopted by the City of Lee's Summit.

   B. **"City Engineer"** shall mean the City Engineer or their designated representative.

   C. **"Developer"** shall mean Dymon Wood, or its successors and assigns in the Property.

   D. **"Improvements"** shall mean the following improvements that are to be financed, designed, engineered, and constructed by the Developer in the manner set forth in this Agreement:

      (1) A five (5) foot wide sidewalk along the north property line of the plat (proposed Lot 18A) and applicable right-of-way for a total linear distance of approximately 205 feet.

      (2) Two (2) sidewalk accessible (ADA) ramps for the crossing of NE Main Street.

   E. **"Staff"** shall mean employees of the City of Lee's Summit.

   F. **"Temporary Certificate of Occupancy"** as defined in Chapter 7, Lee's Summit Building Code, as adopted by the City of Lee's Summit.

2. **Timing of Issuance of Certificates of Occupancy.**

   A. A Temporary Certificate of Occupancy will not be issued until payment in lieu of the construction of sidewalk and ADA ramps (Section 1.D above) in an amount equal to the average bid amount for linear feet of sidewalk and ADA ramps of the City during the calendar years of 2016 and 2017 is paid.

   B. A Certificate of Occupancy will not be issued until payment in lieu of the construction of sidewalk and ADA ramps (Section 1.D above) in an amount equal to the average bid amount for linear feet of sidewalk and ADA ramps of the City during the calendar years of 2016 and 2017 is paid.

3. **Indemnification**.

   A. General Indemnity. The Developer shall indemnify, release, defend, be responsible for and forever hold harmless the City, its officers, agents, employees, elected officials, and attorneys, each in their official and individual capacities, from and

against all lawsuits, suits, actions, costs, claims, demands, damages, disability, losses, expenses, including reasonable attorney's fees and other defense costs or liabilities of any character and from any cause whatsoever, brought because of bodily injury or death received or sustained, or loss or damage received or sustained, by any person, persons, or property arising out of or resulting from any act, error, or omission of the Developer or its officers, agents, employees, or subcontractors, to the extent such loss or injury arises out of or is related to the performance of this Agreement; provided, however, that the Developer need not save harmless the City from claims, demands, losses and expenses arising out or to the extent caused by the sole negligence of the City, its employees or agents. This indemnification obligation shall survive the termination or expiration of this Agreement.

B. No Limitations or Waiver. The indemnity required hereunder shall not be limited by reason of the specification of any particular insurance coverage in this Agreement, or by a limitation of the amount or type of damages or compensation payable by or for the Developer under Workers' Compensation, disability or other employee benefit acts, acceptance of insurance certificates required under this Agreement, or the terms, applicability or limitation of any insurance held by the Developer. The City does not, and shall not, waive any rights against the Developer which it may have by reason of this indemnification, because of the acceptance by the City, or the deposit with the City by the Developer, of any of the insurance policies described in this Agreement. In addition, the parties agree that this indemnification by the Developer shall not be limited by reason of whether or not such insurance policies shall have been determined to be applicable to any such damages or claims for damages.

C. Notification of Claims. With respect to any claims which are subject to indemnity hereunder, the Developer shall immediately notify the City of any and all claims filed against the Developer or the Developer and the City jointly, and shall provide the City with a copy of the same. Such notice shall be given in the manner prescribed by Section 26, "Notice" of the Agreement.

D. Use of Independent Contractors. The fact that the Developer carries out any activities under this Agreement through independent contractors shall not constitute an avoidance of, or defense to, the Developer's duty of defense and indemnification under this section.

4. **Remedies**. Each party to this Agreement agrees that if it fails to perform when due any act required by this Agreement to be performed, then, in addition to whatever other remedies are available to the non-defaulting parties hereto, the non-defaulting party shall have the right to enforce specific performance of this Agreement against the defaulting party, and such non-defaulting party shall, to the extent permitted by law, be entitled to its reasonable costs, attorneys' fees and court costs in connection with such enforcement.

5. **Rights and Remedies Non-Exclusive**. No right or remedy conferred upon or reserved to any party in this Agreement is intended to be exclusive of any rights or remedies, and each

and every right and remedy shall be cumulative and shall be in addition to every right and remedy given now or hereafter existing at law or in equity.

6. **Non-Waiver**. No waiver of any condition or covenant contained in this Agreement or of any breach thereof, shall be taken to constitute a waiver of any subsequent condition, covenant or breach.

7. **Applicable Law**. This Agreement shall be governed by and construed according to the laws of the State of Missouri.

8. **Venue**. In the event this Agreement is litigated, venue shall be proper only in the Circuit Court of Jackson County, and the parties expressly waive any rights to venue inconsistent therewith.

9. **Recording and Binding Effect**. No building permits shall be issued for any structure in the development until the agreement has been fully executed. The City shall file a copy of this Agreement or a memorandum of this Agreement in the office of the Recorder of Deeds for Jackson County, Missouri ("Office"). This Agreement shall run with the land and be binding on and inure to the benefit of the parties and their respective legal representatives, successors in interest, successors and assigns. Upon certification by the City Engineer of the completion of the Developer's obligations under this Agreement, the City Manager, in his sole discretion, may execute, on behalf of the City, a document suitable for recording in the Office, in such form as is approved by the City Attorney that acknowledges the completion of the Developer's obligations under the Agreement.

10. **Time of Essence**. Time is of the essence with respect to the duties and obligations set forth herein.

11. **Estoppel Letter**. Upon request by Developer made from time to time, the City shall prepare and deliver to Developer an estoppel letter confirming for the benefit of any purchaser or lender whether the Developer is or is not in default under this Agreement and verifying the status of Developer's performance of its obligations under this Agreement.

12. **Representations**. The Developer represents that it owns the property described in **Exhibit A** on the date that this Agreement is executed. Each party represents and warrants that it (a) has made due and diligent inquiry into the facts and matters which are the subject matter of this Agreement; (b) fully understands the legal effect of this Agreement; (c) is duly authorized and empowered to execute, deliver and perform this Agreement according to its terms and conditions; and (d) has not assigned or transferred any claim against the other party that is the subject of this Agreement. The parties agree that the obligations assumed by the Developer pursuant to this Agreement are reasonably related to the impact that will be caused by the Development on the public services provided by the City and other public jurisdictions and on facilities that are constructed and maintained by the City and other public jurisdictions.

13. **No Waiver of Breach**. No waiver of any condition or covenant contained in this Agreement or any breach thereof shall be taken to constitute a waiver of any subsequent condition, covenant or breach.

14. **Rules of Construction**. Each party to this Agreement has received independent legal advice from its attorneys of choice with respect to entering this Agreement and the advisability of agreeing to the provisions herein. Because each party has had its respective legal counsel review the terms of this Agreement, the normal rules of construction to the effect that any ambiguities in its terms be resolved against the drafting party shall not be employed with regard to issues of its validity, interpretation, performance or enforcement.

15. **Assignment**. The Agreement may not be assigned or transferred, in whole or part, to any other person, firm, corporation, or entity without the prior, express, written consent of the other parties, which consent shall not be unreasonably withheld. The Developer shall request the assignment of the Agreement, with the consent of the City, to any person, firm, corporation, or entity to which any ownership interest in the Property is transferred after the date of execution of this Agreement.

16. **Entire Agreement**. This Agreement and the acts provided for herein is the entire agreement between the parties with respect to the subject matter hereof, the terms and provisions of this Agreement are contractual and not mere recitals and no alterations, amendment, modification, or interpretation hereof shall be binding unless in writing and signed by all parties.

17. **Exhibits**. All Exhibits referenced in this Agreement are incorporated into this Agreement by such reference as if set forth in full in the text of this Agreement.

18. **Headings**. The paragraph headings contained herein are for convenience in reference and are not intended to modify, expand or limit the scope of any provision of the Agreement.

19. **Severability**. Any provision of this Agreement which is not enforceable according to law will be severed herefrom, and the remaining provisions shall be enforced to the fullest extent permitted by law.

20. **Counterparts**. This Agreement may be executed in two or more counterparts, each of which shall be deemed to be an original but all of which together shall be deemed to be one and the same instrument.

21. **Alternate Compliance.** In the event the Developer constructs the Improvements to the satisfaction of the City, then this agreement shall be deemed fulfilled.

22. **Notice**. Any notice required by this Agreement shall be deemed to be given if it is mailed by United States registered mail, postage prepaid, and addressed as hereinafter specified.

Any notice to the City shall be addressed to:

City Manager
City Hall
220 SE Green Street
Lee's Summit, Missouri 64063

With a copy to:

City Attorney
City Hall
220 SE Green Street
Lee's Summit, Missouri 64063

Notices to Developer shall be addressed to:

Dymon Wood
732 SW Wintergarden Dr
Lee's Summit, MO 64081

With a copy to:

(Not applicable)

Each party shall have the right to specify that notice be addressed to any other address by giving to the other party ten (10) days written notice thereof.

IN WITNESS WHEREOF, this Agreement has been executed by the parties hereto on the date first above written.

CITY OF LEE'S SUMMIT, MISSOURI

By: _____
Stephen A. Arbo, *City Manager*

Attest:

_____
Trisha Fowler Arcuri, *City Clerk*

Approved as to form:

_____
Nancy Yendes, *Chief Counsel of Infrastructure and Planning*

_____ **(DEVELOPER)**

By: _____
Its: _____

Notary for City of Lee's Summit

STATE OF MISSOURI)
) ss.
COUNTY OF JACKSON)

BE IT REMEMBERED, that on this ____ day of April, 2018, before me, the undersigned, a Notary Public in and for the County and State aforesaid, came Stephen A. Arbo, the City Manager of the City of Lee's Summit, Missouri, a City duly incorporated and existing under and by virtue of the laws of the State of Missouri, who are personally known to me to be the same person who executed, as such official, the within instrument on behalf of and with the authority of said City, and such persons duly acknowledged the execution of the same to be the act and deed of said City.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year last above written.

_____
NOTARY PUBLIC

My Commission Expires:

_____

[SEAL]

Notary for Dymon Wood

STATE OF _____)
) ss.
COUNTY OF _____)

BE IT REMEMBERED, that on this _____ day of April, 2018, before me, the undersigned, a Notary Public in and for the County and State aforesaid, came Dymon Wood, the _____of _____, who is personally known to me to be the same person who executed the within instrument on behalf of _____, and such person duly acknowledged the execution of the same to be the act and deed of _____.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year last above written.

_____
NOTARY PUBLIC

My Commission Expires:

_____

[SEAL]

END OF DOCUMENT

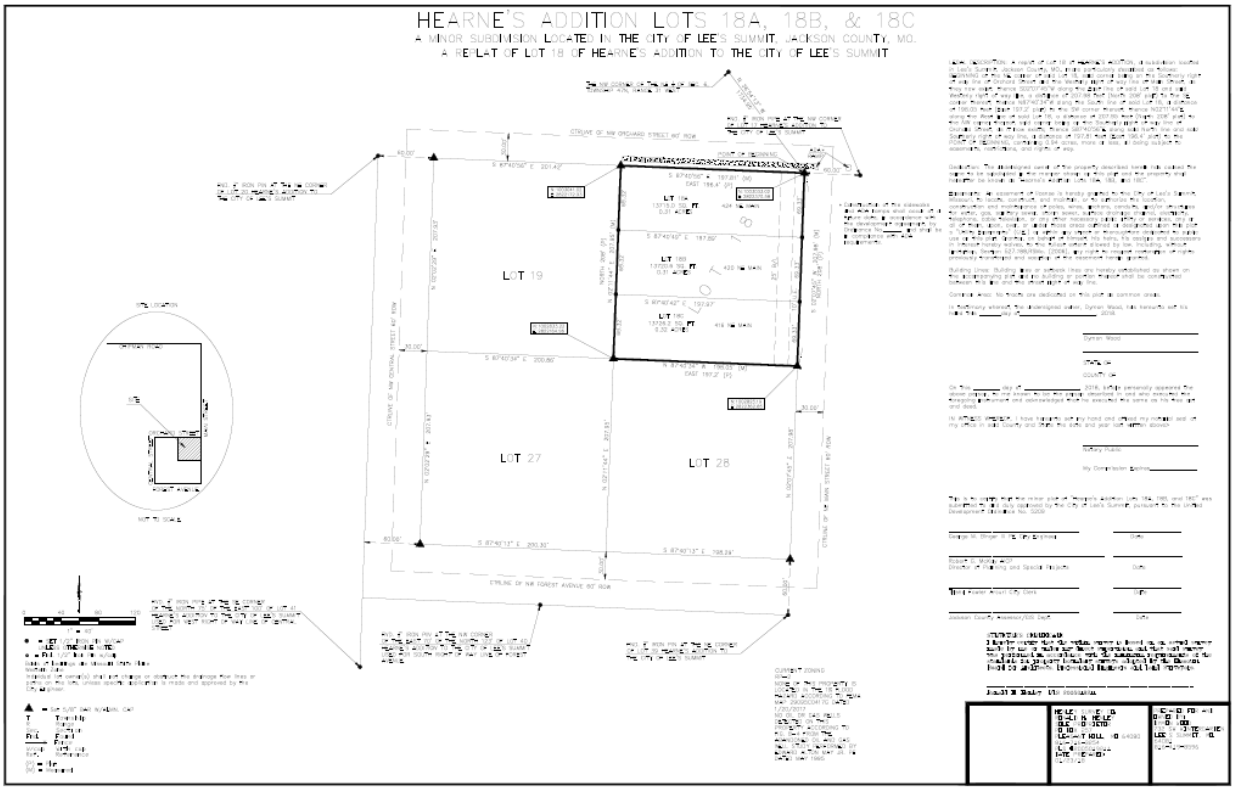
EXHIBIT A

LEGAL DESCRIPTION FOR PROPERTY

Hearne's Addition, Lot 18

EXHIBIT B

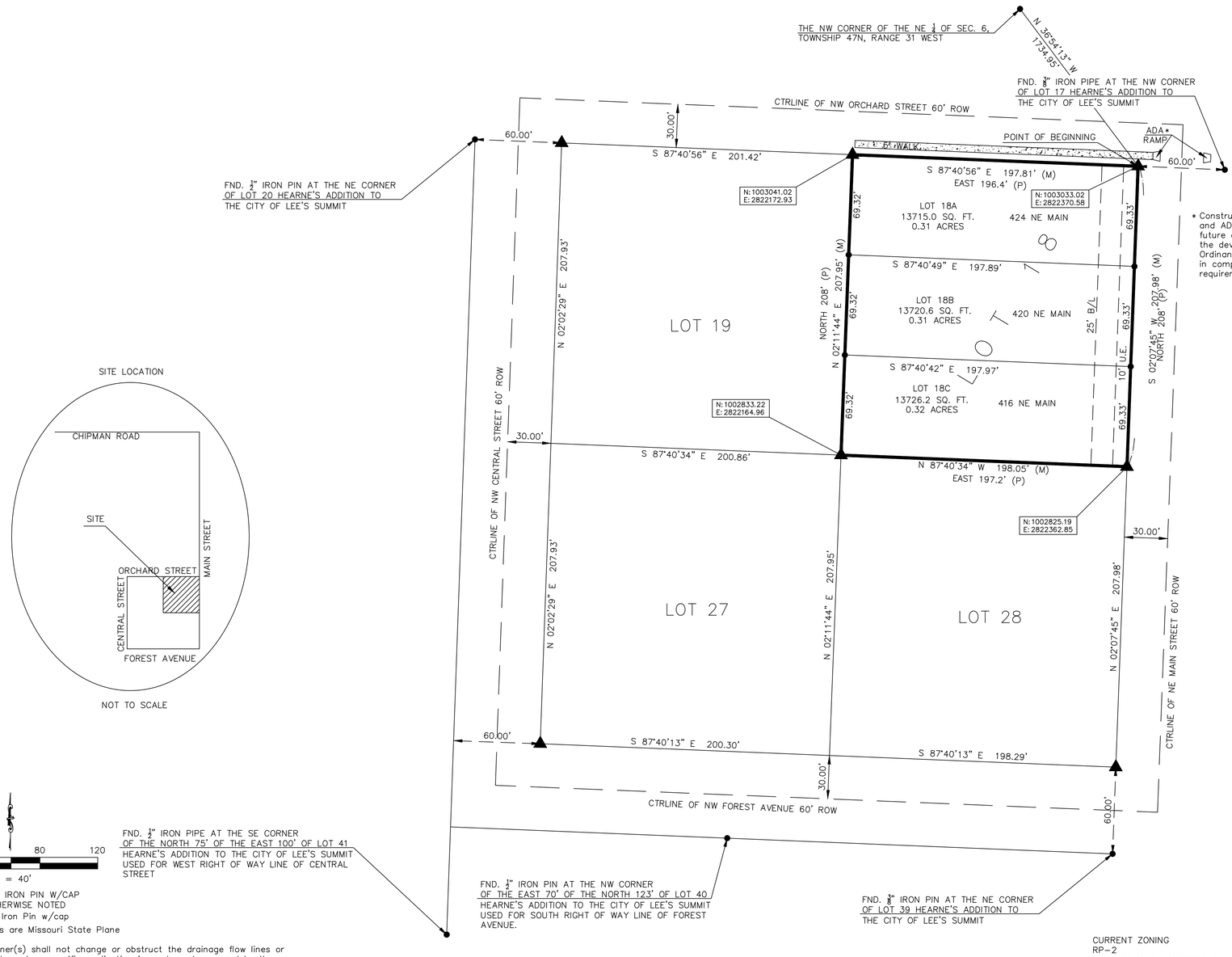
MAP OF THE MINOR PLAT



HEARNE'S ADDITION LOTS 18A, 18B, & 18C

A MINOR SUBDIVISION LOCATED IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MO.

A REPLAT OF LOT 18 OF HEARNE'S ADDITION TO THE CITY OF LEE'S SUMMIT



* Construction of the sidewalks and ADA ramps shall occur at a future date, in accordance with the development agreement, by Ordinance No.____, and shall be in compliance with ADA requirements.

● = SET 1/2" IRON PIN W/CAP UNLESS OTHERWISE NOTED

⊙ = Fnd. 1/2" Iron Pin w/cap

Basis of bearings are Missouri State Plane Western Zone

Individual lot owner(s) shall not change or obstruct the drainage flow lines or paths on the lots, unless specific application is made and approved by the City Engineer.

▲ = Set 5/8" BAR W/ALMN. CAP

T	Township
R	Range
Sec.	Section
Fnd.	Found
——x——	Fence
W/cap	With cap
Ref.	Reference

(P) = Plat
(M) = Measured

CURRENT ZONING
RP-2
NONE OF THIS PROPERTY IS LOCATED IN THE 1% FLOOD HAZARD ACCORDING TO FEMA MAP 29095C0417G DATED 1/20/2017
NO OIL OR GAS WELLS DETECTED ON THIS PROPERTY ACCORDING TO FIG. B-4 FROM THE ABANDONED OIL AND GAS WELL STUDY PERFORMED BY EDWARD ALTON MAY JR. PE DATED MAY 1995

LEGAL DESCRIPTION: A replat of Lot 18 of HEARNE'S ADDITION, a subdivision located in Lee's Summit, Jackson County, MO., more particularly described as follows: BEGINNING at the NE corner of said Lot 18, said corner being on the Southerly right of way line of Orchard Street and the Westerly right of way line of Main Street, as they now exist; thence S02°07'45"W along the East line of said Lot 18 and said Westerly right of way line, a distance of 207.98 feet (North 208' plat) to the SE corner thereof; thence N87°40'34"W along the South line of said Lot 18, a distance of 198.05 feet (East 197.2' plat) to the SW corner thereof; thence N02°11'44"E along the West line of said Lot 18, a distance of 207.95 feet (North 208' plat) to the NW corner thereof, said corner being on the Southerly right of way line of Orchard Street, as it now exists; thence S87°40'56"E along said North line and said Southerly right of way line, a distance of 197.81 feet (East 196.4' plat) to the POINT OF BEGINNING, containing 0.94 acres, more or less, all being subject to easements, restrictions, and rights of way.

Dedication: The undersigned owner of the property described herein has caused the same to be subdivided in the manner shown on this plat and the property shall hereafter be known as "Hearne's Addition Lots 18A, 18B, and 18C".

Easements: An easement of license is hereby granted to the City of Lee's Summit, Missouri, to locate, construct, and maintain, or to authorize the location, construction and maintenance of poles, wires, anchors, conduits, and/or structures for water, gas, sanitary sewer, storm sewer, surface drainage channel, electricity, telephone, cable television, or any other necessary public utility or services, any or all of them, upon, over, or under those areas outlined or designated upon this plat s "Utility Easements" (U.E.) or within any street or thoroughfare dedicated to public use on this plat. Grantor, on behalf of himself, his heirs, his assigns and successors in interest hereby waives, to the fullest extent allowed by law. including, without limitation, Section 527.188,RSMo. (2006), any right to request restoration of rights previously transferred and vacation of the easement herein granted.

Building Lines: Building lines or setback lines are hereby established as shown on the accompanying plat and no building or portion thereof shall be constructed between this line and the street right of way line.

Common Area: No tracts are dedicated on this plat as common areas.

In testimony whereof, the undersigned owner, Dymon Wood, has hereunto set his hand this _____day of_____, 2018.

_____
Dymon Wood

_____

STATE OF

COUNTY OF

On this _____ day of _____, 2018, before personally appeared the above person, to me known to be the person described in and who executed the foregoing instrument and acknowledged that he executed the same as his free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my notarial seal at my office in said County and State the date and year last written above>

_____
Notary Public

My Commission Expires_____

This is to certify that the minor plat of "Hearne's Addition Lots 18A, 18B, and 18C" was submitted to and duly approved by the City of Lee's Summit, pursuant to the Unified Development Ordinance No. 5209

George M. Binger III PE City Engineer	Date
Robert G. McKay AICP Director of Planning and Special Projects	Date
Trisha Fowler Arcuri City Clerk	Date
Jackson County Assessor/GIS Dept.	Date

SURVEYOR'S CERTIFICATE

I hereby certify that the within survey is based on an actual survey made by me or under my direct supervision and that said survey was performed in accordance with the minimum requirements of the standards for property boundary surveys adopted by the Missouri Board for Architects, Professional Engineers and Land Surveyors.

_____
Ronald H. Henley PLS 2005019211

HENLEY SURVEY CO.
RONALD H. HENLEY
SOLE PROPRIETOR
PO BOX 257
PLEASANT HILL, MO 64080
816-716-3254
PLS #2005019211
DATE PREPARED:
01/23/18

PREPARED FOR AND OWNED BY:
DYMON WOOD
732 SW WINTERGARDEN
LEE'S SUMMIT, MO.
64081
816-419-8596

LEE'S SUMMIT
MISSOURI

Packet Information

File #: BILL NO. 18-64, **Version:** 1

AN ORDINANCE ACCEPTING FINAL PLAT ENTITLED "ASH GROVE, TRACT A-1", AS A SUBDIVISION TO THE CITY OF LEE'S SUMMIT, MISSOURI.
(NOTE: First reading by City Council on April 5, 2018. Passed by unanimous vote.)

Proposed City Council Motion:
I move for adoption of AN ORDINANCE ACCEPTING FINAL PLAT ENTITLED "ASH GROVE, TRACT A-1", AS A SUBDIVISION TO THE CITY OF LEE'S SUMMIT, MISSOURI.

Committee Recommendation: On motion of Mr. Funk and seconded by Mr. Gustafson, the Planning Commission voted unanimously by voice vote on March 27, 2018, to **APPROVE** the Consent Agenda as published, inclusive of **Appl. #PL2018-025 - FINAL PLAT -** Ash Grove, Tract A-1; East Estates Development Corp., applicant.

BILL NO. 18-64

AN ORDINANCE ACCEPTING FINAL PLAT ENTITLED “ASH GROVE, TRACT A-1”, AS A SUBDIVISION TO THE CITY OF LEE’S SUMMIT, MISSOURI.

WHEREAS, Application PL2018-025, submitted by East Estates Development Corp, requesting approval of the final plat entitled “Ash Grove, Tract A-1”, was referred to the Planning Commission as required by the Unified Development Ordinance No. 5209; and,

WHEREAS, the Planning Commission considered the final plat on March 27, 2018, and rendered a report to the City Council recommending that the plat be approved.

NOW THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LEE’S SUMMIT, MISSOURI, as follows:

SECTION 1. That the final plat entitled “Ash Grove, Tract A-1” is a subdivision in Section 5, Township 48, Range 31, in Lee’s Summit, Missouri more particularly described as follows:

All that part of the Southwest Quarter of the Northwest Quarter of Section 5, Township 48 North, Range 31 West of the Fifth Principal Meridian and all of Tract A, THE ASH GROVE SECOND PLAT, a subdivision in Lee's Summit, all being situated in the City of Lee's Summit, Jackson County, Missouri and more particularly described as follows: Commencing at the Southwest corner of the Northwest Quarter of said Section 5; thence South 88°13'45" East along the South line of said Northwest Quarter a distance of 717.69 feet; thence North 01°46'15" East a distance of 25.00 feet to the Southwest corner of said Tract A, said Southwest corner being on the North right-of-way line of NE Saint Andrews Circle as now established and the POINT OF BEGINNING; thence North 02°12'42" East along the West line of said Tact A, a distance of 202.54 feet; thence North 73°18’38” West departing said West line and 20 feet South of and parallel with the South line of THE ASH GROVE THIRD PLAT, a subdivision in Lees Summit, Jackson County, Missouri, a distance of 379.04 feet; thence North 37°44’05” East, 50 feet West of and parallel with the West line of said THE ASH GROVE THIRD PLAT, a distance of 507.91 feet; thence South 66°34’16” East a distance of 51.60 feet to the Northwest corner of said subdivision plat; thence South 37°44’05” West along the West line of said THE ASH GROVE THIRD PLAT, a distance of 479.99 feet to the Southwest corner thereof; thence South 73°18’38” East along the South line of said THE ASH GROVE THIRD PLAT, a distance of 442.20 feet to the Southeast corner thereof, said Southeast corner also being the Southwest corner of Lot 21, THE ASH GROVE FIRST PLAT, a subdivision in said city, county and state; thence South 82°45’37” East along the South line of said Lot 21 a distance of 114.96 feet to the Southeast corner thereof, said Southeast corner also being the Northeast corner of said Tract A; thence South 02°12’42” West along the East line thereof a distance of 178.88 feet to the Southeast corner of said Tract A; thence North 88°13’45” West along the South line thereof a distance of 240.00 feet to the POINT OF BEGINNING.

SECTION 2. That the proprietor of the above described tract of land ("Proprietor") has caused the same to be subdivided in the manner shown on the accompanying plat, which subdivision shall hereafter be known as "Ash Grove, Tract A-1".

SECTION 3. That an easement shall be granted to the City of Lee's Summit, Missouri, to locate, construct and maintain or to authorize the location, construction, and maintenance of poles, wires, anchors, conduits, and/or structures for water, gas, sanitary sewer, storm sewer, surface drainage channel, electricity, telephone, cable TV, or any other necessary public utility or services, any or all of them, upon, over, or under those areas outlined or designated upon this plat as "Utility Easements" (U.E.) or within any street or thoroughfare dedicated to public use on this plat. Grantor, on behalf of himself, his heirs, his assigns and successors in interest, shall waive, to the fullest extent allowed by law, including, without limitation, Section 527.188, RSMo. (2006), any right to request restoration of rights previously transferred and vacation of any easement granted by this plat.

SECTION 4. That building lines or setback lines are hereby established as shown on the accompanying plat and no building or portion thereof shall be constructed between this line and the street right-of-way line.

SECTION 5. That individual lot owner(s) shall not change or obstruct the drainage flow lines on the lots.

SECTION 6. That the final plat substantially conforms to all applicable requirements of the Code.

SECTION 7. That the City Council for the City of Lee's Summit, Missouri, does hereby approve and accept, as a subdivision to the City of Lee's Summit, Missouri, the final plat entitled "Ash Grove, Tract A-1", attached hereto and incorporated herein by reference.

SECTION 8. That this ordinance shall be in full force and effect from and after the date of its passage and adoption, and approval by the Mayor.

PASSED by the City Council for the City of Lee's Summit, Missouri, this _____ day of _____, 2018.

_____
Mayor Randall L. Rhoads

ATTEST:

City Clerk *Trisha Fowler Arcuri*

APPROVED by the Mayor of said City this ____ day of _____, 2018.

Mayor Randall L. Rhoads

ATTEST:

City Clerk *Trisha Fowler Arcuri*

APPROVED AS TO FORM:

City Attorney Brian Head

City of Lee's Summit
Development Services Department

March 23, 2018

TO: Planning Commission

PREPARED BY: C. Shannon McGuire, Planner

CHECKED BY: Hector Soto, Jr., AICP, Current Planning Manager

RE: **Appl. #PL2018-025 – FINAL PLAT – Ash Grove, Tract A-1; East Estates Development Corp, applicant**

Commentary

This final plat application is for *Ash Grove, Tract A-1,* located at the northwest corner of NE Ash Grove Drive and NE Saint Andrews Circle. The proposed final plat consists of 1 tract on 1.81 acres. The proposed final plat combines Tract A of *The Ash Grove Second Plat* with 0.81 acres of unplated property.

- 1 tract on 1.81 acres

Subdivision-Related Public Improvements

In accordance with UDO Section 16.340, prior to an ordinance being placed on a City Council agenda for the approval of a final plat, all subdivision-related public improvements shall be constructed and a Certificate of Final Acceptance shall be issued. In lieu of completion of the public improvements and the issuance of a certificate, financial security (an escrow secured with cash, an irrevocable letter of credit, or a surety bond) may be provided to the City to secure the completion of all public improvements.

There are no subdivision-related public improvements required for this plat. This application will be placed on an upcoming City Council agenda for consideration.

Recommendation

Staff recommends **APPROVAL** of the final plat.

Zoning and Land Use Information

Location: 5100 NE Ash Grove Dr. - northwest corner of NE Ash Grove Drive and NE Saint Andrews Circle

Zoning: R-1 (Single-Family Residential District)

Surrounding zoning and use*:*

North: R-1 (Single-Family Residential District) – Ash Grove residential subdivision; single-family residential homes

South (across NE Saint Andrews Circle): R-1 (Single-Family Residential District) – Forest at St Andrews residential subdivision; single-family residential homes

East (across NE Ash Grove Dr): R-1 (Single-Family Residential District) – Ash Grove residential subdivision; single-family residential homes

West: R-1 (Single-Family Residential District) – Unplatted vacant ground

Project Information

Current Use: vacant ground, subdivision common area tract

Proposed Use: vacant ground, subdivision common area tract

Land Area: 1.81 acres (78,638 sq. ft.)

Number of Lots: 1 tract

Process

Procedure: The Planning Commission makes a recommendation to the City Council on the final plat within thirty (30) days after the application is submitted to the Planning Commission. The City Council takes final action on the final plat in the form of an ordinance.

Duration of Validity: Final plat approval shall become null and void if the plat is not recorded within one (1) year from the date of City Council approval.

The Director may administratively grant a one (1) year extension, provided no changes have been made to any City ordinance, regulation or approved engineering plans that would require a change in the final plat.

The City Council may grant one additional one (1) year extension, provided that additional engineering plans may be required by the City Engineer to comply with current City ordinances and regulations.

Unified Development Ordinance

Applicable Section(s)	Description
5.090	R-1 (Single-Family Residential District)
16.140, 16.150	Final Plats

Background

- June 10, 1986 – The City Council approved the rezoning (Appl. #835) from A to R-1 for Ash Grove by Ordinance No. 2808.
- April 14, 1988 – The City Council approved the final plat (Appl. #1987-129) for The Ash Grove Second Plat, Tract A, by Ordinance No. 2958.

Code and Ordinance Requirements to be met Following Approval

The items in the box below are specific to this subdivision and must be satisfactorily addressed in order to bring this plat into compliance with the Codes and Ordinances of the City.

Planning

1. A final plat shall be approved and recorded prior to any building permits being issued.

Attachments:
1. Final Plat, dated 3/16/2018
2. Location Map

FINAL PLAT OF
ASH GROVE, TRACT A–1
A REPLAT OF TRACT A, THE ASH GROVE SECOND PLAT
SW 1/4 OF THE NW 1/4 OF
SECTION 5, TOWNSHIP 48 NORTH, RANGE 31 WEST,
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

CITY OF LEE'S SUMMIT APPROVED:

This is to Certify that the within plat of ASH GROVE, TRACT A–1, was submitted to and duly approved by the Mayor and City Council of the City of Lee's Summit, Missouri, this _____ day of _____ 2018 by Ordinance No. _____ .

_____ _____
RANDALL L. RHOADS, MAYOR DATE

_____ _____
TRISHA FOWLER ARCURI, CITY CLERK DATE

_____ _____
DANA ARTH, PLANNING COMMISSION SEC DATE

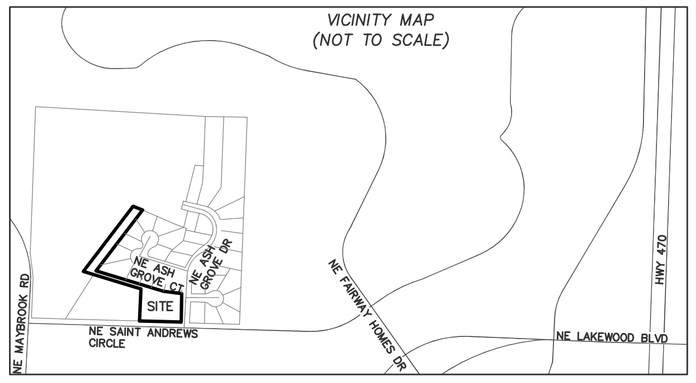
_____ _____
GEORGE M. BINGER III, P.E – CITY ENGINEER DATE

_____ _____
ROBERT G. MCKAY AICP DATE
DIRECTOR OF PLANNING AND
SPECIAL PROJECTS

JACKSON COUNTY
APPROVED: COUNTY ASSESSOR OR GIS DEPARTMENT

_____ _____
DATE

VICINITY MAP
(NOT TO SCALE)



SCALE 1"= 40
40 0 40

IN TESTIMONY WHEREOF: Timbercreek Development CO., INC., has caused these presents to be signed by its president and corporate seal to be affixed this ____ day of _____, 2018.

BY: _____ BY: _____
John L Hulston, President

NOTARY CERTIFICATION:

STATE OF MISSOURI)
)SS
COUNTY OF JACKSON)

On this _____ day of _____, 2018, before me the undersigned Notary Public, personally appeared John L. Hulston, president of Timbercreek Development CO., INC., known to be the person described herein and who executed the foregoing instrument and being duly sworn by me acknowledged that they executed the same as his free act and deed

IN TESTIMONY THEREOF: I have hereunto set my hand and affixed my seal the day and year last written above.

_____ _____
My commission Expires Notary Public in and for said County & State

SURVEYORS CERTIFICATION:

I hereby certify that a subdivision plat was made by me, or under my direct supervision, on the ground of the premises herein described, and the results of said survey are represented hereon. This plat was executed in accordance with the current standards for property boundary surveys (type urban) in the State of Missouri. I further certify that I have complied with all statutes, ordinances and regulations governing the practice of surveying and platting of subdivisions to the best of my professional knowledge and belief.

_____ _____
BY: Jeffrey B. Lovelace, MO–PLS#2580 DATE

MISSOURI STATE PLANE COORDINATE TABLE
GEODETIC DATA – NAD 1983 1 METER = 3.28083333 FEET
GRID FACTOR USED: 0.9999030 (COMBINED PROJECT GRID FACTOR)

DESCRIPTION	POINT NUMBER	NORTH (Y) COORDINATE	EAST (X) COORDINATE
MON. JA–29–2	JA29–2	1034478.705 ft	2829553.629 ft
PLAT CORNER 1	PC1	1033391.462 ft	2826169.315 ft
PLAT CORNER 2	PC2	1033593.834 ft	2826177.131 ft
PLAT CORNER 3	PC3	1033702.679 ft	2825814.091 ft
PLAT CORNER 4	PC4	1034104.321 ft	2826124.905 ft
PLAT CORNER 5	PC5	1034083.806 ft	2826172.246 ft
PLAT CORNER 6	PC6	1033704.241 ft	2825878.516 ft
PLAT CORNER 7	PC7	1033577.259 ft	2826302.047 ft
PLAT CORNER 8	PC8	1033562.773 ft	2826416.080 ft
PLAT CORNER 9	PC9	1033384.044 ft	2826409.177 ft

PROPERTY DESCRIPTION: PLAT BOUNDARY
Containing: 78,638 Square Feet or 1.81 Acres More or Less

All that part of the Southwest Quarter of the Northwest Quarter of Section 5, Township 48 North, Range 31 West of the Fifth Principal Meridian and all of Tract A, THE ASH GROVE SECOND PLAT, a subdivision in Lee's Summit, all being situated in the City of Lee's Summit, Jackson County, Missouri and more particularly described as follows:

Commencing at the Southwest corner of the Northwest Quarter of said Section 5; thence South 88°13'45" East along the South line of said Northwest Quarter a distance of 717.69 feet; thence North 01°46'15" East a distance of 25.00 feet to the Southwest corner of said Tract A, said Southwest corner being on the North right–of–way line of NE Saint Andrews Circle as now established and the POINT OF BEGINNING; thence North 02°12'42" East along the West line of said Tact A, a distance of 202.54 feet; thence North 73°18'38" West departing said West line and 20 feet South of and parallel with the South line of THE ASH GROVE THIRD PLAT, a subdivision in Lee's Summit, Jackson County, Missouri, a distance of 379.04 feet; thence North 37°44'05" East, 50 feet West of and parallel with the West line of said THE ASH GROVE THIRD PLAT, a distance of 507.91 feet; thence South 66°34'16" East a distance of 51.60 feet to the Northwest corner of said subdivision plat; thence South 37°44'05" West along the West line of said THE ASH GROVE THIRD PLAT, a distance of 479.99 feet to the Southwest corner thereof; thence South 73°18'38" East along the South line of said THE ASH GROVE THIRD PLAT, a distance of 442.20 feet to the Southeast corner thereof, said Southeast corner also being the Southwest corner of Lot 21, THE ASH GROVE FIRST PLAT, a subdivision in said city, county and state; thence South 82°45'37" East along the South line of said Lot 21 a distance of 114.96 feet to the Southeast corner thereof, said Southeast corner also being the Northeast corner of said Tract A; thence South 02°12'42" West along the East line thereof a distance of 178.88 feet to the Southeast corner of said Tract A; thence North 88°13'45" West along the South line thereof a distance of 240.00 feet to the POINT OF BEGINNING.

DEDICATION: The undersigned owner of the above described tract of land has caused the same to be subdivided in the manner shown, which plat and subdivision shall hereafter be known as:

"ASH GROVE, TRACT A–1"

BUILDING LINES:
Building lines or set back lines (B/L or S/L) are as depicted and shown hereon.

EASEMENTS:
An easement or license is hereby granted to the City of Lee's Summit to locate, construct and maintain or to authorize the location, construction and maintenance of conduits, gas, water, sewer lines, poles, wires, anchors and surface drainage and all or any of them over, under and along strips of land designated as "utility easement" or by the abbreviation "U/E".

DRAINAGE NOTE:
Individual lot owner(s) shall not change or obstruct the drainage flow lines or paths on the lots covered by the Master Drainage Plan, unless specific application is made and approved by the City Engineer.

OIL–GAS WELLS:
According to The Missouri Department of Natural Resources State Oil and Gas Council Wells as of December 2017 report, located at www.dnr.mo.gov/geology/geosrv/oilandgas.htm, there are no oil or gas wells on the property shown hereon.

OPEN SPACES:
Open space is marked as Tract A–1 separate easement is hereby dedicated over this open space to the Ash Grove Home Owners Association for the use and benefit of all members of the Association. The open space shall be owned and maintained by said Association.

Grantor, on behalf of himself, his heirs, his assigns and successors in interest, hereby waives, to the fullest extent allowed by law, including, without limitation, Section 527.188 RSMo. (2006) any right to request restoration of rights previously transferred and vacation of the easements herein granted.

MONUMENTATION

□= Found Section Corner Monument at position and as noted hereon.

●= Set 5/8" Iron Bar with Stamped Plastic Cap "MO LC–2002026538–D" at all Plat Corners.

Note: Upon completion of construction, 1/2" iron bars w/plastic caps stamped "MO LC–2002026538–D" will be set at all rear Lot Corners.

GENERAL NOTES:

1. A current Title Commitment had not been provided by the owners as of the date of issuance of this Plat of Survey. This company has made no investigation or independent search for easements of record, encumbrances, restrictive covenants, ownership title evidence, or any other facts that an accurate and current title search may disclose.

2. The Record Source for this plat is THE ASH GROVE 1ST PLAT, ASH GROVE 3RD PLAT, ASH GROVE 4TH PLAT, REPLAT OF LOT 38 ASH GROVE 4TH PLAT, Warranty Deed filed for record with the Jackson County Recorder of Deeds office as Instrument Number 2004I0119501.

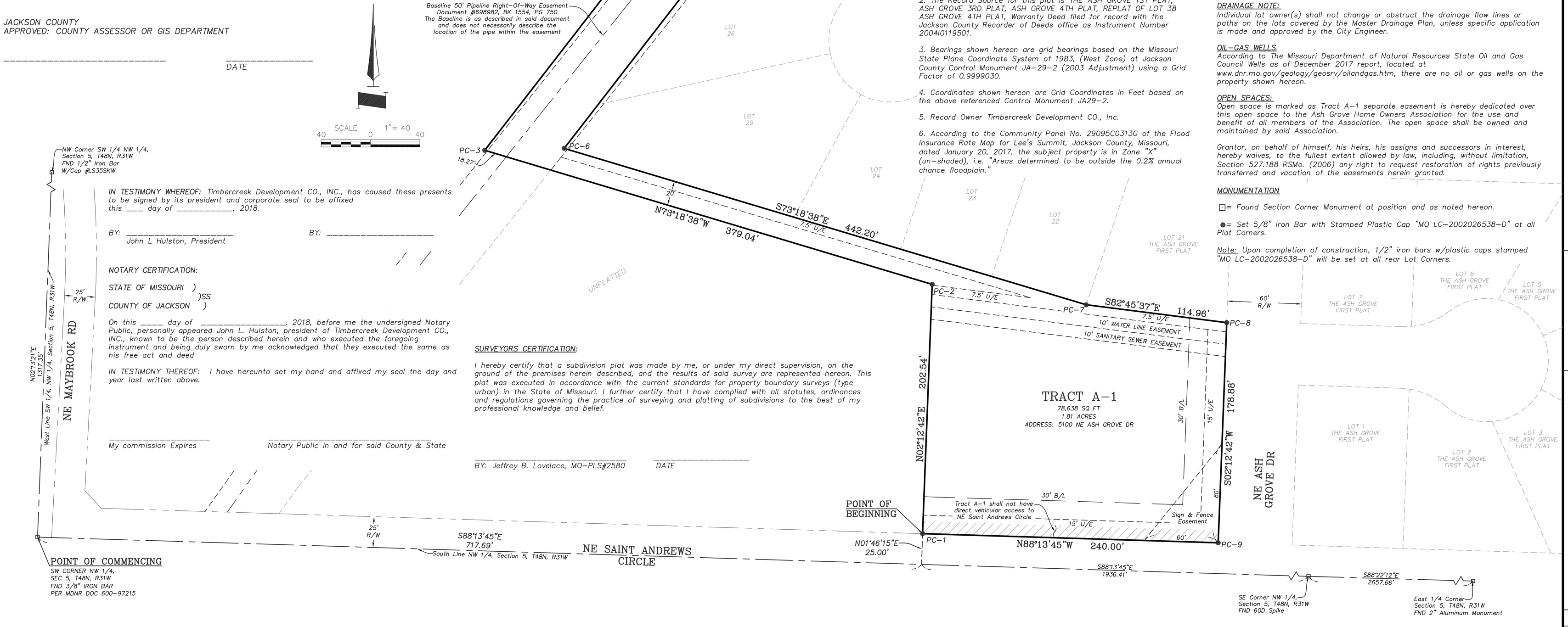
3. Bearings shown hereon are grid bearings based on the Missouri State Plane Coordinate System of 1983, (West Zone) at Jackson County Control Monument JA–29–2 (2003 Adjustment) using a Grid Factor of 0.9999030.

4. Coordinates shown hereon are Grid Coordinates in Feet based on the above referenced Control Monument JA29–2.

5. Record Owner Timbercreek Development CO., Inc.

6. According to the Community Panel No. 29095C0313G of the Flood Insurance Rate Map for Lee's Summit, Jackson County, Missouri, dated January 20, 2017, the subject property is in Zone "X" (un–shaded), i.e. "Areas determined to be outside the 0.2% annual chance floodplain."

Baseline 50' Pipeline Right–Of–Way Easement Document #698982, BK 1554, PG 750 The Baseline is as described in said document and does not necessarily describe the location of the pipe within the easement



DATE	NUMBER	REVISION	BY:	APPROVED
03/16/2018	1	PER COMMENTS	JWSJR	JBL

FINAL PLAT OF
ASH GROVE, TRACT A-1
A REPLAT OF TRACT A, THE ASH GROVE FIRST PLAT
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

PREPARED FOR: TIMBER CREEK DEVELOPMENT CO
P.O. BOX 10226
KANSAS CITY, MO 64171

Project No: 17401
Drawn By: JWSJR
Checked By: JBL
Date: 01/23/2018
Scale: 1"=40'
File Name: ASHGROVEREPLAT.DWG
Certificate of Authority: Missouri - 2002026538 Kansas - LS-154

LOVELACE & ASSOCIATES
Land Surveying - Land Planning
939 SE 3rd Street Lee's Summit, Missouri 64063
Phone: (816) 347-9997 Fax: (816) 347-9979

FINAL PLAT

SHT 1 OF 1

Appl. #PL2018-025 – FINAL PLAT
Ash Grove, Tract A-1
East Estates Development Corp, applicant

LEE'S SUMMIT
MISSOURI

Packet Information

File #: BILL NO. 18-65, **Version:** 1

AN ORDINANCE APPROVING THE EXECUTION OF AN AMENDED GRANT AGREEMENT BY AND BETWEEN THE STATE OF MISSOURI, DEPARTMENT OF TRANSPORTATION TRAFFIC AND HIGHWAY SAFETY DIVISION AND THE CITY OF LEE'S SUMMIT MISSOURI FOR THE MISSOURI HIGHWAY SAFETY PROGRAM HAZARDOUS MOVING VIOLATION PROJECT.
(NOTE: First reading by City Council on April 5, 2018. Passed by unanimous vote.)

Issue/Request:
AN ORDINANCE APPROVING THE EXECUTION OF AN AMENDED GRANT AGREEMENT BY AND BETWEEN THE STATE OF MISSOURI, DEPARTMENT OF TRANSPORTATION TRAFFIC AND HIGHWAY SAFETY DIVISION AND THE CITY OF LEE'S SUMMIT MISSOURI FOR THE MISSOURI HIGHWAY SAFETY PROGRAM HAZARDOUS MOVING VIOLATION PROJECT.

Key Issues:
THE CITY OF LEE'S SUMMIT AND THE MISSOURI HIGHWAY AND SAFETY TRAFFIC DIVISION ENTERED INTO CONTRACT TO CONDUCT HAZARDOUS MOVING ENFORCEMENT (HMV) EFFECTIVE 10/01/2017 THROUGH 09/30/2018. THIS ORDINANCE IS TO ALLOW FOR THE CURRENT CONTRACT TO BE AMENDED; THEREFORE, ALLOWING THE CITY OF LEE'S SUMMIT TO RECEIVE ADDITIONAL FUNDS IN THE AMOUNT OF $6,950.00.

Proposed City Council Motion:
MOTION: I move for adoption of AN ORDINANCE APPROVING THE EXECUTION OF AN AMENDED GRANT AGREEMENT BY AND BETWEEN THE STATE OF MISSOURI, DEPARTMENT OF TRANSPORTATION TRAFFIC AND HIGHWAY SAFETY DIVISION AND THE CITY OF LEE'S SUMMIT MISSOURI FOR THE MISSOURI HIGHWAY SAFETY PROGRAM HAZARDOUS MOVING VIOLATION PROJECT.

Background:
THE ADDITIONAL FUNDS WILL BE ALLOTTED FOR THE LEE'S SUMMIT POLICE DEPARTMENT TRAFFIC OFFICERS AND TRAFFIC SERGEANTS TO ATTEND IMS 360 CRASH RECONSTRUCTION TRAINING. THIS TRAINING IS HIGHLY SPECIALIZED AND SPECIFIC TO THOSE OFFICERS WHO WORK SERIOUS INJURY / FATALITY CRASHES.

Impact/Analysis:
LEE'S SUMMIT TRAFFIC OFFICERS AND SERGEANTS WHO ATTEND THIS TRAINING WILL RECEIVE CERTIFICATION IN CONDUCTING SUCH SPECIALIZED INVESTIGATIONS.

Timeline:
Start: MAY 7TH 2018
Finish: MAY 11TH 2018

Other Information/Unique Characteristics:
[Enter text here]

Presenter:
CHIEF TRAVIS FORBES

Recommendation: Staff recommends approval.

Committee Recommendation: [Enter Committee Recommendation text Here]

BILL NO. 18-65

AN ORDINANCE APPROVING THE EXECUTION OF AN AMENDED GRANT AGREEMENT BY AND BETWEEN THE STATE OF MISSOURI, DEPARTMENT OF TRANSPORTATION TRAFFIC AND HIGHWAY SAFETY DIVISION AND THE CITY OF LEE'S SUMMIT MISSOURI FOR THE MISSOURI HIGHWAY SAFETY PROGRAM HAZARDOUS MOVING VIOLATION PROJECT.

WHEREAS, the City of Lee's Summit, Missouri ("City") Police Department applied for and was awarded a grant by the Missouri Department of Transportation, Traffic and Highway Safety Division in the amount of Twenty Seven Thousand Two Hundred Fifty Dollars ($27,250.00) for a Hazardous Moving Violation Project for the period October 1, 2017 through September 30, 2018; and,

WHEREAS, the purpose of the grant is to assist the City with funding in order to reduce the number and severity of traffic crashes occurring on Missouri roadways and reduce traffic fatalities and injuries; and,

WHEREAS, the City Council passed Ordinance 8246 in September of 2017 accepting the grant award; and,

WHEREAS, the City has since requested and been awarded additional funds through the Hazardous Moving Violation Project in the amount of Six Thousand Nine Hundred Fifty Dollars ($6,950.00) for training of traffic officers.

WHEREAS, the City desires to accept the additional grant award by entering into an amended contract with the Missouri Department of Transportation, Traffic and Highway Safety Division for the Hazardous Moving Violation Project.

NOW THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF LEE'S SUMMIT, MISSOURI, as follows:

SECTION 1. That an Amended Grant Agreement by and between the State of Missouri, Department of Transportation Traffic and Highway Safety Division, and the City of Lee's Summit to provide for a grant award of an additional Six Thousand Nine Hundred Fifty Dollars ($6,950.00) to the Twenty Seven Thousand Two Hundred Fifty Dollars ($27,250.00) already accepted by the City for a total Hazardous Moving Violation Project in the amount of Thirty Four Thousand Two Hundred Dollars ($34,200.00), that is attached hereto and incorporated herein by this reference, is hereby approved and the Mayor is hereby authorized to execute any and all documents related to such grant award including the attached Amended Grant Agreement on behalf of the City of Lee's Summit, Missouri.

SECTION 2. That this Ordinance shall be in full force and effect from and after the date of its passage and adoption, and approval by the Mayor.

BILL NO. 18-65

PASSED by the City Council of the City of Lee's Summit, Missouri, this ____ day of _____, 2018.

ATTEST: Mayor *Randall L. Rhoads*

City Clerk *Trisha Fowler Arcuri*

APPROVED by the Mayor of said city this _____ day of _____ 2018.

ATTEST: Mayor *Randall L. Rhoads*

City Clerk *Trisha Fowler Arcuri*

APPROVED AS TO FORM:

Chief Counsel of Public Safety *Beth Murano*

MoDOT

Missouri Department of Transportation

Highway Safety and Traffic

830 MoDOT Drive
P.O. Box 270
Jefferson City, MO 65102
573-751-4161
1-800-800-2358
Fax: 573-634-5977

March 08, 2018

Chief Travis Forbes
Lee's Summit Police Dept.
10 NE Tudor Rd
Lee's Summit, MO 64063-2313

Dear Chief Forbes:

Enclosed is a **revised contract** between the Highway Safety and Traffic Division and the Lee's Summit Police Dept. for the HMV Enforcement contract.

The project obligates $34,200.00 in federal funds for the period October 01, 2017 through September 30, 2018. All expenditures should be claimed against the project #18-PT-02-018.

Please review this contract carefully for any discrepancies or questions. If acceptable, have the appropriate individuals sign the Contract Cover Page. The Authorizing Official and Project Direct signatures on the contract must be signed by two separate individuals. After signing, please return **all pages** of the contract to the Highway Safety and Traffic Division. Once the Highway Safety Director approves and signs the revised contract, a fully executed copy will be returned to your agency.

If you have any questions concerning the project activity or reimbursement procedures, please contact Scott Wilson, Senior System Management Specialist, at 573-751-4161. We look forward to working with you and your staff.

Sincerely,

Bill Whitfield

Bill Whitfield
Highway Safety Director

Enclosure

CONTRACT

Form HS-1 **Revision Reason:** Budget Increase **Version:** 2 03/08/2018

Missouri Department of Transportation
Highway Safety and Traffic Division
P.O. Box 270
830 MoDOT Drive
Jefferson City, MO 65102
Phone: 573-751-4161
Fax: 573-634-5977

Project Title: HMV Enforcement
Project Number: 18-PT-02-018
Project Category: Police Traffic Services
Program Area: Police Traffic Services

Funding Source: 402 / 20.600

Name of Grantee
Lee's Summit Police Dept.

Type of Project: Initial
Started: 10/01/2017

Grantee County
Jackson

Grantee Address
10 NE Tudor Rd
Lee's Summit, MO 64063-2313

Telephone	Fax
816-969-1700	816-969-1635

Federal Funds Benefiting

State:	
Local:	$34,200.00
Total:	$34,200.00

Source of Funds

Federal:	$34,200.00
State:	
Local:	$0.00
Total:	$34,200.00

Contract Period
Effective: 10/01/2017
Through: 09/30/2018

Prepared By
Wilson, Scott

Authorizing Official **Date**

Project Director **Date**

Highway Safety Director **Date**

It is mutually agreed by the parties executing this contract to the following: the reimbursable costs shall not exceed the **total obligated amount of $34,200.00**; the recipient of funds shall proceed with the implementation of the program as detailed in attached forms (which become part of this agreement) and shall adhere to conditions specified in attachments (which become part of this agreement); all Federal and State of Missouri laws and regulations are applicable and any addendums or conditions thereto shall be binding; any facilities and/or equipment acquired in the connection with this agreement shall be used and maintained for highway safety purposes; the recipient of funds must comply with the Title VI of the Civil Rights Act of 1964, and the Federal Funds from other sources, excluding Federal Revenue Sharing Funds, will not be used to match the Federal funds obligated to this project.

IN ORDER TO RECEIVE FEDERAL FUNDING, THE SUBRECIPIENT AGREES TO COMPLY WITH THE FOLLOWING CONDITIONS IN ADDITION TO THOSE OUTLINED IN THE NARRATIVE OF THE CONTRACT.

I. RELATIONSHIP

The relationship of the Subrecipient to the Missouri Highways and Transportation Commission (MHTC) shall be that of an independent contractor, not that of a joint enterpriser. The Subrecipient shall have no authority to bind the MHTC for any obligation or expense without the express prior written approval of the MHTC. This agreement is made for the sole benefit of the parties hereto and nothing in the Agreement shall be construed to give any rights or benefits to anyone other than the MHTC and the Subrecipient.

II. GENERAL REQUIREMENTS

The State will comply with applicable statutes and regulations, including but not limited to:

- 23 U.S.C. Chapter 4 - Highway Safety Act of 1966, as amended
- Sec. 1906, Pub. L. 109-59, as amended by Sec. 4011, Pub. L. 114-94
- 23 CFR part 1300 - Uniform Procedures for State Highway Safety Grant Programs
- 2 CFR part 200 - Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards
- 2 CFR part 1201 - Department of Transportation, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards

III. INTERGOVERNMENTAL REVIEW OF FEDERAL PROGRAMS

The State has submitted appropriate documentation for review to the single point of contact designated by the Governor to review Federal programs, as required by Executive Order 12372 (Intergovernmental Review of Federal Programs).

IV. EQUIPMENT

A. PROCUREMENT: Subrecipient may use its own procurement regulations which reflect applicable state/local laws, rules and regulations provided they adhere to the following:

1. Equipment with a cost of $3,000 or more must be purchased on a competitive bid basis, or purchased through use of state cooperative procurement;

2. Price or rate quotations shall be solicited from at least three (3) qualified sources;

3. All procurement transactions, regardless of whether by sealed bids or by negotiation, shall be conducted in a manner that provides maximum open and free competition;

4. Subrecipients shall have a clear and accurate description of the item to be purchased. Such description shall not, in competitive procurements, contain features that unduly restrict competition. A "brand name or equal" description may be used as a means to define the performance or other requirement of a procurement;

5. If for some reason the low bid is not acceptable, the Subrecipient must have written approval from the MHTC prior to bid approval and purchase.

6. Subrecipients will make a good faith effort to utilize minority and women owned businesses within resource capabilities when procuring goods and services.

B. DISPOSITION: The Subrecipient shall make written request to the MHTC for instructions on the proper disposition of all items of equipment provided under the terms of this contract with a cost of $5,000 or more. Subrecipient must keep and maintain equipment with a cost of under $5,000 until it is no longer useful for its originally intended purpose.

C. REPLACEMENT: No equipment may be funded on a replacement basis. Participation in equipment and manpower projects must be in addition to the Subrecipient's previous twelve months authorized strength.

V. FISCAL RESPONSIBILITY

A. MAINTENANCE OF RECORDS: The Subrecipient agrees that the Commission and/or its designees or representatives shall have access to all records related to the grant. The Subrecipient further agrees that the Missouri Department of Transportation (MoDOT) Highway Safety and Traffic (HS) Division, the National Highway Traffic Safety Administration (NHTSA), the Federal Highway Administration (FHWA) and/or any Federal audit agency with jurisdiction over this program and the Auditor of the State of Missouri or any of their duly authorized representatives may have access, for purpose of audit and examinations, to any books, documents, papers or records maintained by the Subrecipient pertaining to this contract and further agrees to maintain such books and records for three years after the date of final project disposition.

B. REIMBURSEMENT VOUCHER, SUPPORTING DOCUMENTATION AND PAYMENT SCHEDULE: The MHTC agrees to reimburse the Subrecipient for accomplishment of all authorized activities performed under this contract. Reimbursement proceedings will be initiated upon the receipt of a claim voucher and supporting documentation from the Subrecipient, as required by the MHTC. The voucher must reflect actual costs and work accomplished during the project period, to be submitted on the appropriate MHTC certified payroll form or in a format approved by the MHTC, and shall include project number, project period, hours worked, rate of pay, any other allowable expenditures, and must be signed by the contracting official. Vouchers should be received by the MHTC within ten (10) working days from the date of the authorizing official/project director's signature. Final payment is contingent upon receipt of final voucher. AUDITS: Subrecipient will be responsible for the required supporting documentation no later than 30 days after the end of the contract period.

C. ACCOUNTING: The Subrecipient shall maintain all documentation in file for audit review; failure to provide supporting documentation at the time of audit could result in questioned costs. The Subrecipient must document the following: (1) Receipt of federal funds, (2) date and amount paid to officers, (3) officer's timesheet (regular hours and overtime hours). Documentation shall be kept available for inspection for representatives of the MHTC for a period of three years following date of final payments. Copies of such records shall be made available upon request.

D. OMB AUDIT: A subrecipient that expends $750,000 or more during the subrecipient's fiscal year in Federal awards must have a single audit conducted in accordance with §200.514 Scope of audit except when it elects to have a program-specific audit conducted in accordance with paragraph (c) of 2 CFR §200.501. A copy of the Audit report shall be submitted to MoDOT within the earlier of thirty (30) days after receipt of the auditor's report(s), or nine (9) months after the end of the audit period. A subrecipient that expends less than $750,000 during the subrecipient's fiscal year in Federal awards is exempt from Federal audit requirements for that year, except as noted in 2 CFR §200.503 Relation to other audit requirements, but records must be available for review or audit by appropriate officials of the Federal agency, pass-through entity, and Government Accountability Office (GAO). Failure to furnish an acceptable audit may be basis for refunding federal funds to the MHTC. Cost records and accounts pertaining to the work covered by this contract shall be kept available for inspection for representatives of the MHTC for a period of three (3) years following date of final payments. Copies of such records shall be made available upon request.

VI. FEDERAL FUNDING ACCOUNTABILITY AND TRANSPARENCY ACT (FFATA)

The State will comply with FFATA guidance, OMB Guidance on FFATA Subward and Executive Compensation Reporting, August 27, 2010, (*https://www.fsrs.gov/documents/OMB_Guidance_on_FFATA_Subaward_and_Executive_Compensation_Reporting_08272010.pdf*) by reporting to FSRS.gov for each sub-grant awarded:

A. Name of the entity receiving the award;
B. Amount of the award;
C. Information on the award including transaction type, funding agency, the North American Industry Classification System code or Catalog of Federal Domestic Assistance number (where applicable), program source;
D. Location of the entity receiving the award and the primary location of performance under the award, including the city, State, congressional district, and country; and an award title descriptive of the purpose of each funding action;
E. A unique identifier (DUNS);
F. The names and total compensation of the five most highly compensated officers of the entity if:
    1. the entity in the preceding fiscal year received-
        a. 80 percent or more of its annual gross revenues in Federal awards;
        b. $25,000,000 or more in annual gross revenues from Federal awards; and
    2. the public does not have access to information about the compensation of the senior executives of the entity through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986;
G. Other relevant information specified by OMB guidance.

VII. TERMINATION

If, through any cause, the Subrecipient shall fail to fulfill in timely and proper manner its obligation under this contract, or if the Subrecipient shall violate any of the covenants, agreements or stipulations of this contract, the MHTC shall thereupon have the right to terminate this contract and withhold further payment of any kind by giving written notice to the Subrecipient of such termination and specifying the effective date thereof, at least thirty (30) days before such date. The MHTC shall be the sole arbitrator of whether the Subrecipient or its subcontractor is performing its work in a proper manner with reference to the quality of work performed by the Subrecipient or its subcontractor under the provisions of this contract. The Subrecipient and the MHTC further agree that this contract may be terminated by either party by giving written notice of such termination and specifying the effective date thereof, at least thirty (30) days before such date.

VIII. NONDISCRIMINATION

(applies to subrecipients as well as States)

The State highway safety agency will comply with all Federal statutes and implementing regulations relating to nondiscrimination ("Federal Nondiscrimination Authorities"). These include but are not limited to:

- **Title VI of the Civil Rights Act of 1964** (42 U.S.C. 2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin) and 49 CFR part 21;
- **The Uniform Relocation Assistance and Real Property Acquisition Policies** Act of 1970, (42 U.S.C. 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- **Federal-Aid Highway Act of 1973**, (23 U.S.C. 324 *et seq.),* **and Title IX of the Education Amendments of 1972,** as amended (20 U.S.C. 1681-1683 and 1685-1686) (prohibit discrimination on the basis of sex);
- **Section 504 of the Rehabilitation Act of 1973**, (29 U.S.C. 794 *et seq.),* as amended, (prohibits discrimination on the basis of disability) and 49 CFR part 27;
- **The Age Discrimination Act of 1975**, as amended, (42 U.S.C. 6101 *et seq.),* (prohibits discrimination on the basis of age);
- **The Civil Rights Restoration Act of 1987**, (Pub. L. 100-209), (broadens scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal aid recipients, sub-recipients and contractors, whether such programs or activities are Federally-funded or not);
- **Titles II and III of the Americans with Disabilities Act** (42 U.S.C. 12131-12189) (prohibits discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing) and 49 CFR parts 37 and 38;
- **Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations** (prevents discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations); and
- **Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency** (guards against Title VI national origin discrimination/discrimination because of limited English proficiency (LEP) by ensuring that funding recipients take reasonable steps to ensure that LEP persons have meaningful access to programs (70 FR at 74087 to 74100).

The State highway safety agency-

1. Will take all measures necessary to ensure that no person in the United States shall, on the grounds of race, color, national origin, disability, sex, age, limited English proficiency, or membership in any other class protected by Federal Nondiscrimination Authorities, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any of its programs or activities, so long as any portion of the program is Federally-assisted.
2. Will administer the program in a manner that reasonably ensures that any of its subrecipients, contractors, subcontractors, and consultants receiving Federal financial assistance under this program will comply with all requirements of the Non-Discrimination Authorities identified in this Assurance;
3. Agrees to comply (and require any of its subrecipients, contractors, subcontractors, and consultants to comply) with all applicable provisions of law or regulation governing US DOT's or NHTSA's access to records, accounts, documents, information, facilities, and staff, and to cooperate and comply with any program or compliance reviews, and/or complaint investigations conducted by US DOT or NHTSA under any Federal Nondiscrimination Authority;
4. Acknowledges that the United States has a right to seek judicial enforcement with regard to any matter arising under these Non-Discrimination Authorities and this Assurance;
5. Insert in all contracts and funding agreements with other State or private entities the following clause:

During the performance of this contract/funding agreement, the contractor/funding recipient agrees-

1. To comply with all Federal nondiscrimination laws and regulations, as may be amended from time to time;
2. Not to participate directly or indirectly in the discrimination prohibited by any Federal non-discrimination law or regulation, as set forth in Appendix B of 49 CFR part 2l and herein;
3. To permit access to its books, records, accounts, other sources of information, and its facilities as required by the State highway safety office, US DOT or NHTSA;

4. That, in event a contractor/funding recipient fails to comply with any nondiscrimination provisions in this contract/funding agreement, the State highway safety agency will have the right to impose such contract/agreement sanctions as it or NHTSA determine are appropriate, including but not limited to withholding payments to the contractor/funding recipient under the contract/agreement until the contractor/funding recipient complies; and/or cancelling, terminating, or suspending a contract or funding agreement, in whole or in part; and
5. To insert this clause, including paragraphs 1 through 5, in every subcontract and subagreement and in every solicitation for a subcontract or sub-agreement that receives Federal funds under this program.

IX. STATUTORY AND REGULATORY REQUIREMENTS

A. COMPLIANCE: The Subrecipient must comply with the following Statutes or Rules:

1. Peace Officer Standards and Training (P.O.S.T.) Chapter 590 RSMo Department of Public Safety (DPS) certification of peace officers

2. Statewide Traffic Accident Records System (STARS) 43.250 RSMo--Law enforcement officer to file all crash reports with Missouri State Highway Patrol (MSHP).

4. Uniform Crime Reporting RSMo 43.505-Crime incident reports shall be submitted to DPS on forms or in format prescribed by DPS.

5. Racial Profiling RSMo 590.650-Law enforcement agency to file a report to the Attorney General each calendar year.

6. US DOT AND OMB REGULATIONS: The Subrecipient shall comply with all requirements of 2 CFR Parts 200 and 1201 beginning with the federal fiscal year 2016: starting October 1, 2015.

X. PRODUCTION & DEVELOPMENT COSTS Items produced with federal funds are within the public domain and are not bound by copyright restrictions. All items produced with federal funds, in whole or in part, must acknowledge this by clearly indicating that MoDOT Traffic and Highway Safety funding supported this effort. Examples may include, but are not limited to print materials; incentive items; audio/video productions; and training aides such as curricula or workbooks. Any materials developed under this contract must be submitted to the MHTC for approval prior to final print and distribution. Copies of all final products are to be provided to the MHTC. The MHTC has the right to reproduce and distribute materials as the MHTC deems appropriate.

XI. INDEMNIFICATION Option 1 below only applies to State agencies, Cities, Counties and other political subdivisions or political corporations of the State of Missouri. Option 2 applies to all other entities (e.g. non-profit, private institutions).

OPTION 1:

A. To the extent allowed or imposed by law, the Subrecipient shall defend, indemnify and hold harmless the MHTC, including its members and MoDOT employees, from any claim or liability whether based on a claim for damages to real or personal property or to a person for any matter relating to or arising out of the Subrecipient's wrongful or negligent performance of its obligations under this Agreement. The Subrecipient may satisfy this requirement utilizing a self-funded program.

B. The Subrecipient will require any contractor procured by the Subrecipient to work under this Agreement:

1. To obtain a no cost permit from the MHTC's district engineer prior to working on the MHTC's right-of-way, which shall be signed by an authorized contractor representative (a permit from the MHTC's district engineer will not be required for work outside of the MHTC's right-of-way); and

2. To carry commercial general liability insurance and commercial automobile liability insurance from a company authorized to issue insurance in Missouri, and to name the MHTC, and the MoDOT and its employees, as additional named insured's in amounts sufficient to cover the sovereign immunity limits for Missouri public entities as calculated by the Missouri Department of Insurance, Financial Institutions and Professional Registration, and published annually in the Missouri Register pursuant to Section 537.610, RSMo.

C. In no event shall the language of this Agreement constitute or be construed as a waiver or limitation for either party's rights or defenses with regard to each party's applicable sovereign, governmental, or official immunities and protections as provided by federal and state constitution or law.

OPTION 2:

The Subrecipient shall defend, indemnify and hold harmless the MHTC, including its members and the MoDOT employees, from any claim or liability whether based on a claim for damages to real or personal property or to a person for any matter relating to or arising out of the Subrecipient's performance of its obligations under this Agreement.

XII. **AMENDMENTS** The Budget Proposal within this Agreement may be revised by the Subrecipient and the MHTC subject to the MHTC's approval without a signed amendment as long as the total contract amount is not altered. Prior to any revision being made to the Budget Proposal, Subrecipient shall submit a written request to the MHTC requesting the change. Any other change in this Agreement, whether by modification or supplementation, must be accomplished by a formal contract amendment signed and approved by the duly authorized representative of the Subrecipient and the MHTC.

XIII. **MHTC REPRESENTATIVE** The MoDOT Traffic and Highway Safety Division Director is designated as the MHTC's representative for the purpose of administering the provisions of this Agreement. The MHTC's representative may designate by written notice other persons having the authority to act on behalf of the MHTC in furtherance of the performance of this Agreement.

XIV. **ASSIGNMENT** The Subrecipient shall not assign, transfer, or delegate any interest in this Agreement without the prior written consent of the MHTC.

XV. **LAW OF MISSOURI TO GOVERN** This Agreement shall be construed according to the laws of the State of Missouri. The Subrecipient shall comply with all local, state and federal laws and regulations relating to the performance of this Agreement.

XVI. **VENUE** It is agreed by the parties that any action at law, suit in equity, or other judicial proceeding to enforce or construe this agreement, or regarding its alleged breach, shall be instituted only in the Circuit Court of Cole County, Missouri.

XVII. **SECTION HEADINGS** All section headings contained in this Agreement are for the convenience of reference only and are not intended to define or limit the scope of any provision of this Agreement.

XVIII. **NONSEGREGATED FACILITIES**
(Applicable to contracts over $10,000) Subrecipient and its subcontractors, suppliers and vendors, should meet Federal requirements regarding nonsegregated facilities.

XIX. **FUNDING ORIGINATION AND AUDIT INFORMATION**
The MHTC funds the following NHTSA program areas:

Section	CFDA#	Program Title
402	20.600	State and Community Highway Safety Programs
154	20.607	Alcohol Open Container Requirements
164	20.608	Minimum Penalties for Repeat Offenders for Driving While Intoxicated
405b	20.616	National Priority Safety Programs
405c	20.616	National Priority Safety Programs
405d	20.616	National Priority Safety Programs
405f	20.616	National Priority Safety Programs

XX. **THE DRUG-FREE WORKPLACE ACT OF 1988 (41 U.S.C. 8103)**
The State will provide a drug-free workplace by:

A. Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the Subrecipient's workplace and specifying the actions that will be taken against employees for violation of such prohibition;
B. Establishing a drug-free awareness program to inform employees about:
   1. The dangers of drug abuse in the workplace.
   2. The Subrecipient's policy of maintaining a drug-free workplace.
   3. Any available drug counseling, rehabilitation, and employee assistance programs.
   4. The penalties that may be imposed upon employees for drug violations occurring in the workplace.
   5. Making it a requirement that each employee engaged in the performance of the grant be given a copy of the statement required by paragraph (A).

C. Notifying the employee in the statement required by paragraph (A) that, as a condition of employment under the grant, the employee will:
   a. Abide by the terms of the statement.
   b. Notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five days after such conviction.

D. Notifying the agency within ten days after receiving notice under subparagraph (C)(b) from an employee or otherwise receiving actual notice of such conviction.

E. Taking one of the following actions, within 30 days of receiving notice under subparagraph (C)(b), with respect to any employee who is so convicted:
   a. Taking appropriate personnel action against such an employee, up to and including termination.
   b. Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency.

F. Making a good faith effort to continue to maintain a drug-free workplace through implementation of all of the paragraphs above.

XXI. POLITICAL ACTIVITY (HATCH ACT)

(applies to subrecipients as well as States)

The State will comply with provisions of the Hatch Act (5 U.S.C. 1501-1508), which limits the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

XXII. CERTIFICATION REGARDING FEDERAL LOBBYING

(applies to subrecipients as well as States)

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

A. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

B. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

C. The undersigned shall require that the language of this certification be included in the award documents for all sub-award at all tiers (including subcontracts, subgrants, and contracts under grant, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

XXIII. RESTRICTION ON STATE LOBBYING

(applies to subrecipients as well as States)

None of the funds under this program will be used for any activity specifically designed to urge or influence a State or local legislator to favor or oppose the adoption of any specific legislative proposal pending before any State or local legislative body. Such activities include both direct and indirect (e.g., "grassroots") lobbying activities, with one exception. This does not preclude a State official whose salary is supported with NHTSA funds from engaging in direct communications with State or local legislative officials, in accordance with customary State practice, even if such communications urge legislative officials to favor or oppose the adoption of a specific pending legislative proposal.

XXIV. CERTIFICATION REGARDING DEBARMENT AND SUSPENSION

(applies to subrecipients as well as States)

Instructions for Primary Certification (States)

A. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below and agrees to comply with the requirements of 2 CFR Parts 180 and 1300.

B. The inability of a person to provide the certification required below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such person from participation in this transaction.

C. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default or may pursue suspension or debarment.

D. The prospective primary participant shall provide immediate written notice to the department or agency to which this proposal is submitted if at any time the prospective primary participant learns its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

E. The terms *covered transaction, debarment, suspension, ineligible, lower tier, participant, person, primary tier, principal, and voluntarily excluded*, as used in this clause, have the meaning set out in the Definitions and Coverage sections of 2 CFR Part 180. You may contact the department or agency to which this proposal is being submitted for assistance in obtaining a copy of those regulations.

F. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is proposed for debarment under 48 CFR part 9, subpart 9.4, debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by NHTSA.

G. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Instructions for Lower Tier Certification" including the "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions and will require lower tier participants to comply with 2 CFR Parts 180 and 1300.

H. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not proposed for debarment under 48 CFR part 9, subpart 9.4, debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the list of Parties Excluded from Federal Procurement and Non-procurement Programs.

I. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

J. Except for transactions authorized under paragraph F of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is proposed for debarment under 48 CFR part 9, subpart 9.4, suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, the department or agency may disallow costs, annul or terminate the transaction, issue a stop work order, debar or suspend you, or take other remedies as appropriate.

Certification Regarding Debarment, Suspension, and Other Responsibility Matters-Primary Covered Transactions:

1. The prospective primary participant certifies to the best of its knowledge and belief, that its principals:
    a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded by any Federal department or agency;

b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of record, making false statements, or receiving stolen property;

c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or Local) with commission of any of the offenses enumerated in paragraph (1) (b) of this certification; and

d. Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

2. Where the prospective primary participant is unable to certify to any of the Statements in this certification, such prospective participant shall attach an explanation to this proposal.

Instructions for Lower Tier Certification

A. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below and agrees to comply with the requirements of 2 CFR Parts 180 and 1300.

B. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

C. The prospective lower tier participant shall provide immediate written notice to the person to whom this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

D. The terms *covered transaction, debarment, suspension, ineligible, lower tier, participant, person, primary tier, principal, and voluntarily excluded*, as used in this clause, have the meanings set out in the Definition and Coverage sections of 2 CFR Part 180. You may contact the person to whom this proposal is submitted for assistance in obtaining a copy of those regulations.

E. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is proposed for debarment under 48 CFR part 9, subpart 9.4, debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by NHTSA.

F. The prospective lower tier participant further agrees by submitting this proposal that it will include the clause titled "Instructions for Lower Tier Certification" including the "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions and will require lower tier participants to comply with 2 CFR Parts 180 and 1300.

G. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not proposed for debarment under 48 CFR part 9, subpart 9.4, debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the List of Parties Excluded from Federal Procurement and Non-procurement Programs.

H. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

I. Except for transactions authorized under paragraph E of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is proposed for debarment under 48 CFR part 9, subpart 9.4, suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, the department or agency with which this transaction originated may disallow costs, annul or terminate the transaction, issue a stop work order, debar or suspend you, or take other remedies as appropriate.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion -- Lower Tier Covered Transactions:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

XXV. BUY AMERICA ACT

(applies to subrecipients as well as States)

The State and each subrecipient will comply with the Buy America requirement (23 U.S.C. 313) when purchasing items using Federal funds. Buy America requires a State, or subrecipient, to purchase only steel, iron and manufactured products produced in the United States with Federal funds, unless the Secretary of Transportation determines that such domestically produced items would be inconsistent with the public interest, that such materials are not reasonably available and of a satisfactory quality, or that inclusion of domestic materials will increase the cost of the overall project contract by more than 25 percent. In order to use Federal funds to purchase foreign produced items, the State must submit a waiver request that provides an adequate basis and justification to and approved by the Secretary of Transportation.

All items purchased must be compliant with the National Highway Traffic Safety Administration (NHTSA) interpretation of the Buy America Act including, but not limited to:

1. Items valued over $5,000 per unit must be manufactured or assembled in the United States of America, or as allowed by a current Buy America Act waiver issued by the NHTSA;
2. All vehicles must be manufactured or assembled in the United States of America regardless of cost.

www.nhtsa.gov/staticfiles/administration/programs-grants/Buy-America-Act-revised-11202015.pdf

XXVI. PROHIBITION ON USING GRANT FUNDS TO CHECK FOR HELMET USAGE

(applies to subrecipients as well as States)

The State and each subrecipient will not use 23 U.S.C. Chapter 4 grant funds for programs to check helmet usage or to create checkpoints that specifically target motorcyclists.

XXVII. POLICY ON SEAT BELT USE

In accordance with Executive Order 13043, Increasing Seat Belt Use in the United States, dated April 16, 1997, the Subrecipient is encouraged to adopt and enforce on-the-job seat belt use policies and programs for its employees when operating company-owned, rented, or personally-owned vehicles. The National Highway Traffic Safety Administration (NHTSA) is responsible for providing leadership and guidance in support of this Presidential initiative. For information on how to implement such a program, or statistics on the potential benefits and cost-savings to your company or organization, please visit the Buckle Up America section on NHTSA's website at www.nhtsa.dot.gov. Additional resources are available from the Network of Employers for Traffic Safety (NETS), a public-private partnership headquartered in the Washington, D.C. metropolitan area, and dedicated to improving the traffic safety practices of employers and employees. NETS is prepared to provide technical assistance, a simple, user-friendly program kit, and an award for achieving the President's goal of 90 percent seat belt use. NETS can be contacted at 1 (888) 221-0045 or visit its website at www.trafficsafety.org.

XXVIII. POLICY ON BANNING TEXT MESSAGING WHILE DRIVING

In accordance with Executive Order 13513, Federal Leadership On Reducing Text Messaging While Driving, and DOT Order 3902.10, Text Messaging While Driving, States are encouraged to adopt and enforce workplace safety policies to decrease crashes caused by distracted driving, including policies to ban text messaging while driving company-owned or -rented vehicles, Government-owned, leased or rented vehicles, or privately-owned when on official Government business or when performing any work on or behalf of the Government. States are also encouraged to conduct workplace safety initiatives in a manner commensurate with the size of the business, such as establishment of new rules and programs or re-evaluation of existing programs to prohibit text messaging while driving, and education, awareness, and other outreach to employees about the safety risks associated with texting while driving.

CONTRACT REQUIREMENTS

THE FOLLOWING REQUIREMENTS ONLY APPLY TO CONTRACTS THAT INCLUDE TRAINING

Subrecipients offering the MHTC-funded courses must adhere to the following standard elements required for training contracts:

A. A course schedule must be presented to the MHTC program coordinator prior to the proposed training. The schedule should include: title of course; date(s); time; exact location; and agenda. Any changes to the course schedule must have prior approval from the MHTC.

B. Each student must complete a survey form at the completion of the workshop/training. The survey will ask a series of questions concerning adequacy of: training received; instructor's presentation; training facility/location; and worth of the training.

C. The Subrecipient must provide a sign-up sheet for every class when submitting a reimbursement request for the course (a typed list of everyone who registered is not acceptable). The sign-up sheet must capture the following information:

1. Title of the class
2. Date(s) and location of class
3. Printed Name and signature of attendees (unless otherwise prohibited)
4. Name of agency/organization of each attendee

D. To ensure cost effectiveness, every effort should be made to enroll a minimum of fifteen (15) students per class.

E. Copies of the student evaluations, number of students enrolled/number of students attending, agenda/syllabus/curriculum, and participant sign-up sheets must be retained in Subrecipient's files after the training has been conducted and available for MHTC review upon request.

THE FOLLOWING REQUIREMENTS APPLY TO LAW ENFORCEMENT AGENCIES ONLY

A. PROBLEM IDENTIFICATION

Subrecipient must develop a selected traffic enforcement plan by evaluating crash data involving fatal, disabling and moderate injuries. This will be done on an annual basis to determine the highest crash locations, to include: month of year, day of week, time of day, and causation factors. This plan must be used to determine locations utilized in site selection for conducting enforcement efforts. Any changes to the enforcement plan must be made in writing to the MHTC project coordinator in advance of enforcement efforts.

B. PROJECT ACTIVITIES

1. Enforcement activities by the Subrecipient must remain at the current level. Enforcement efforts provided by this contract must be in addition to current enforcement activities.
2. Officers will be permitted and encouraged to issue multiple citations and/or written warnings to drivers who have committed several violations.
3. High visibility enforcement is a key strategy to reducing traffic crashes; therefore, law enforcement officers working overtime projects are strongly encouraged to make at least three (3) contacts per hour when conducting an enforcement project.
4. Subrecipient should report monthly or at least quarterly to MHTC using the *Grant Enforcement Activities Monthly Report* Form.
5. Subrecipient is strongly encouraged to participate in all national or state mobilization efforts in conjunction with, or at the direction of, the Traffic and Highway Safety Division. These mobilizations include, but are not limited to: Click It or Ticket campaign, impaired driving campaign, youth seat belt enforcement campaign, and quarterly enforcement efforts. Mobilization reporting efforts shall be completed using the online mobilization reporting form located at: www.modot.mo.gov/safety.
6. Only law enforcement work performed by a duly licensed, Peace Officer Standards and Training certified law enforcement officer will be reimbursed.
7. The Subrecipient will not be eligible for reimbursement for any individual law enforcement officer working under this grant in excess of 40 hours for any two week pay period. The Subrecipient will not be eligible for reimbursement for any individual law enforcement officer working under this grant where said officer is claiming to have worked as a law enforcement officer for more than 16 hours in any 24 hour period.

C. PARTNERSHIPS

Law Enforcement agencies are strongly encouraged to participate in the Law Enforcement Traffic Safety Advisory Council (LETSAC) and attend the general meetings and annual conference. Agencies located within the metropolitan areas of St. Louis or Kansas City should participate in Operation Impact (traffic safety task force).

D. ALLOWABLE COSTS

Full-time, part-time and reserve officers are eligible to participate in overtime enforcement projects. Part-time and reserve officers must have the same authority as a full-time permanent officer. MHTC will reimburse Subrecipient at officer's standard rate of pay in accordance with Subrecipient policies and procedures regarding standard rate of pay and overtime rate of pay. The Subrecipient will not be reimbursed at the overtime rate for work that according to Subrecipient's own policies and procedures does not constitute overtime. Non-POST certified personnel may be allowed, at the sole discretion of MHTC, in a support/administrative role.

Exceptions to allowable costs may be made with prior written permission of the MHTC.

E. DRUNK DRIVING ENFORCEMENT PROJECTS

1. Those officers conducting standardized field sobriety testing must have 24 hours of Standardized Field Sobriety Test training to participate in grant funded enforcement efforts.
2. Agency should participate in quarterly enforcement efforts and the national impaired driving crackdown held annually.

F. SOBRIETY CHECKPOINTS

Unless otherwise prohibited by state statute or appropriation,

1. The MHTC will fund enforcement agencies to conduct sobriety checkpoints in accordance with standards outlined in the Sobriety Checkpoint Reference Manual and the Sobriety Checkpoint Supervisor Training program.
2. Sobriety checkpoint enforcement efforts must be coupled with appropriate public information efforts to increase the perceived risk of arrest and to enhance the actual risk of arrest.
3. Enforcement statistics and the agency's sobriety checkpoint operations plan must be submitted with reimbursement vouchers.

Hazardous Moving Violations (HMV) also known as aggressive driving is a serious problem on Missouri's roadways and has contributed substantially to traffic crashes, especially crashes resulting in death. Aggressive drivers are defined within Missouri's Blueprint to SAVE MORE LIVES as, "drivers of motorized vehicles who committed one or more of the following violations which contributed to the cause of a traffic crash: speeding; driving too fast for conditions; and/or following too close."

Aggressive drivers not only put their own lives at risk, but the lives of others as well. Of the 930 people killed, 67.4% were the aggressive driver and the other 32.6% were some other party in the incident. Of the 5,266 seriously injured, slightly more than one-half (53.9%) were the aggressive drivers and nearly one-half (46.1%) being some other person involved.

Jackson County and Lee's Summit consistently have problems with speed related crashes. The following shows comparative analysis of where Jackson County and the City of Lee's Summit rank as compared to other cities and counties in the State of Missouri for speed related crashes:

Speed Involved:
Jackson County - 2nd in the state with 8,134
Lee's Summit - 6th in the state with 655

Speed Involved Disabling Injury:
Jackson County - 1st in the state
Lee's Summit - 8th in the state

Speed Involved Fatal:
Jackson County - 1st in the state
Lee's Summit - 8th in the state

Top 10 Crash Locations in Lee's Summit in 2016 were:

1) M-291 Highway & US 50 Highway
2) 3rd Street & US 50 Highway
3) Chipman Road & US 50 Highway
4) US 50 Highway & M-291 Highway
5) Langsford Road & M-291 Highway
6) M-150 Highway & M-291 Highway
7) Blue Parkway & M-291 Highway
8) M-291 Highway & Persels Road
9) Sam Walton Lane (Wal-Mart)
10) Blue Parkway & Chipman Road

The top two Contributing Circumstances for crashes in Lee's Summit in 2016:

Following Too Close	501 = 27%
Failed to Yield	403 = 21%
Total	904 = 48%

In 2016 the days of the week for higher number of crashes remains consistent with Monday-Saturday. The highest times for crashes in Lee's Summit begin around 6:00 a.m. and run through the day until around 9:00 p.m. when crashes drop significantly.

In 2012-2014, there were 414,173 traffic crashes in Missouri - 15.1% involved speeding. Correlating with the national data, Missouri's problem is also more significant when examining fatal crashes—of the 2,143 fatal crashes, 37.5% involved drivers who were speeding.

Goal #1:
To decrease HMV/aggressive driving related fatalities to:
- 314 by 2013
- 299 by 2014
- 288 by 2015
- 270 by 2016

Performance Measure:
Number of HMV/aggressive driving-related fatalities

Benchmark:
2012 aggressive driving-related fatalities = 326
(308 in 2013, 287 in 2014)

Goal #2:
To decrease speed-related fatalities to:
- 312 by 2013
- 297 by 2014
- 283 by 2015
- 268 by 2016

Performance Measure:
Number of speed-related fatalities

Benchmark:
2012 speed-related fatalities = 326
(302 in 2013, 276 in 2014)

Objective:
Develop and implement a plan that focuses on hazardous moving violations (such as speeding, following too closely, driving too fast for conditions, red-light running, improper lane changes, and failure to yield) at high crash locations and corridors.

Conduct HMV enforcement efforts during the highest reported crash times throughout the day focusing on speeding , following too closely, driving too fast for conditions, red-light violations, improper lane changes, and failure to yield. These efforts will be focused on high crash locations and corridors within the city limits .

In 2014 Lee's Summit had 1,750 crashes and issued 18,363 tickets and written warnings
In 2015 Lee's Summit had 1,700 crashes and issued 17,059 tickets and written warnings
In 2016 Lee's Summit had 1,881 crashes and issued 20,376 tickets and written warnings

Lee's Summit experienced an increase in reported crashes when comparing 2015 to 2016 with an increase of 181 crashes. Lee's Summit experienced several large roadway construction projects, which attributed to some of the increased crashes. Officers conduct enforcement in these areas and make an impact while there; however, once they leave the area the poor driving behaviors return. It is anticipated Lee's Summit will once again have major roadway construction with the redevelopment of M-291 Highway over US 50 Highway.

PROJECT DESCRIPTION

Project Description information is captured in the supplemental section.

SUPPLEMENTAL INFORMATION

	Question	Answer
	You must answer the following questions.	
1	Does your agency have and enforce an internal safety belt policy for all personnel?	Yes
2	Does your agency have and enforce a policy restricting cell phone use while driving?	Yes
3	Does your agency report racial profiling data annually?	Yes
4	Does your agency report to STARS?	Yes
5	Does your agency report UCR information annually?	Yes
6	Please explain any NO answer(s) to questions 1-5:	
7	Have any of your officers/personnel been debarred and are therefore not eligible to receive federal funds for reimbursement of salary, fringe benefits, or overtime?	No
8	Does your agency have adequate manpower to fully expend the funds requested in this application?	Yes
9	If NO, please explain.	
10	Have any significant changes occurred with your agency within the last year that would affect performance, including personnel or system changes?	No
11	If YES, please explain.	
12	Are you aware of any fraud, waste or abuse on grant projects in your office/agency within the last 5 years?	No
13	If YES, please explain.	
14	If your agency received Highway Safety grant funding in the last three (3) fiscal years and there were unexpended balances, please explain why.	

Funds left over from DWI enforcement grants. We had a reduction in checkpoints due to the unusual amount of special events encountered by our agency. We have worked with city officials to help limit the amount of approved special events; therefore, allowing more HMV grant enforcement activities to be conducted.

15	Did your political entity receive more than 80% of its annual gross revenues in Federal Awards in your preceding fiscal year?	No
16	Did your political entity receive $25,000,000 or more in Federal Awards in your preceding fiscal year?	No
17	If you answered NO to either question 15 and 16, DO NOT answer this question. If you answered YES to both question 15 and 16, and the public does not have access to this information, list the names and compensation amounts of the five most highly compensated employees in your business or organization (the legal entity to which the DUNS number it provided belongs).	

Please use the most current 12-months of data available for answering questions 18-23. Include ALL of your agency's statistics, not just those issued during grant activity.

18	Total number of DWI violations written by your agency.	189
19	Total number of speeding violations written by your agency.	2,327
20	Total number of HMV violations written by your agency.	4,230
21	Total number of child safety/booster seat violations written by your agency.	15
22	Total number of safety belt violations written by your agency.	248
23	Total number of sobriety checkpoints hosted.	2

Use the most current three years crash data from the Missouri State Highway Patrol (MSHP) or your internal record management system for questions 24-34.

24	Total number of traffic crashes.	5,236
25	Total number of traffic crashes resulting in a fatality.	11
26	Total number of traffic crashes resulting in a serious injury.	96
27	Total number of speed-related traffic crashes.	655
28	Total number of speed-related traffic crashes resulting in a fatality.	3
29	Total number of speed-related traffic crashes resulting in a serious injury.	23
30	Total number of alcohol-related traffic crashes.	195
31	Total number of alcohol-related traffic crashes resulting in a fatality.	3
32	Total number of alcohol-related traffic crashes resulting in a serious injury.	18
33	Total number of unbuckled fatalities.	2
34	Total number of unbuckled serious injuries.	10

Enter your agency's information below.

35	Total number of commissioned law enforcement officers.	143
36	Total number of commissioned patrol and traffic officers.	100
37	Total number of commissioned law enforcement officers available for overtime enforcement.	130
38	Total number of vehicles available for enforcement.	26
39	Total number of radars/lasers.	30

40 Total number of in-car video cameras. 24

41 Total number of PBTs. 23

42 Total number of Breath Instruments. 2

The following information explains the strategies your agency will use to address the traffic crash problem. This information is considered to be the Project Description and should be specific to the crash problem.

43 Identify primary enforcement locations.

All of US 50 Highway within the city limits - Colbern Road to Smart Road, M-291 Highway within the city limits - Colbern Road to US 50 Highway and US 50 Highway to 150 Highway, 150 Highway within the city limits - Doc Henry Road to Pryor Road, Interstate 470 within the city limits - focusing on the high crash areas and all corridors coming off highway systems within the city limits. Also, the top crash locations as determined by STARS reporting, to include known traffic complaint areas within the city limits.

44 Enter the number of enforcement periods your agency will conduct each month. 20

45 Enter the months in which enforcement will be conducted.

Enforcement efforts will be conducted all 12 months of the year.

46 Enter the days of the week in which enforcement will be conducted.

Typically, Monday through Saturday, which coincides with our crash statistics as being the highest crash activity times.

47 Enter the time of day in which enforcement will be conducted.

Officers will focus on enforcement beginning with the morning rush hours and through the evening rush hours.

48 Enter the number of officers assigned during the enforcement period. 12

49 If equipment or supplies are requested to conduct this project, explain below why it is needed and how it will be used.

PROJECT EVALUATION

The MHTC will administratively evaluate this project. Evaluation will be based, at a minimum, upon the following:

1. Law enforcement compliance with state UCR, Racial Profiling, and STARS reporting requirements (law enforcement contracts only)
2. Timely submission of monthly reimbursement vouchers and appropriate documentation to support reimbursement for expenditures (i.e., personal services, equipment, materials)
3. Timely submission of periodic reports (i.e., monthly, quarterly, semi-annual) as required
4. Timely submission of the Year End Report of activity (due within 30 days after contract completion date)
5. Attaining the Goals set forth in this contract*
6. Accomplishing the Objectives* established to meet the project Goals, such as:
- Enforcement activities (planned activities compared with actual activities)
- Programs (number and success of programs held compared to planned programs, evaluations if available)
- Training (actual vs. anticipated enrollment, student evaluations of the class, student test scores on course examinations, location of classes, class cancellation information)
- Equipment purchases (timely purchase of equipment utilized to support and enhance the traffic safety effort; documentation of equipment use and frequency of use)
- Public awareness activities (media releases, promotion events, incentive items or education materials produced or purchased)
- Other (any other information or material that supports the Objectives)
7. The project will be evaluated by the Traffic and Highway Safety Division through annual crash analysis .

Evaluation results will be used to determine:
- The success of this type of activity in general and this particular project specifically ;
- Whether similar activities should be supported in the future; and
- Whether grantee will receive funding for future projects.

The Lee's Summit Police Department conducts monthly reviews of officer's activities such as car stops, tickets/warnings written, and the number of crashes worked. We also review traffic crash statistics quarterly to include top crash locations (city, state or private), top contributing circumstances and citations issued. We also compare the previous year's statistics to the current year's statistics to determine effectiveness. All of this data is complied into a report, which then allows supervision to direct traffic and patrol officer activities in the most efficient manner possible . Officers are directed to work these high priority locations in an effort to decrease traffic accidents and educate drivers . These efforts will continue to be followed to measure the department effectiveness.

BUDGET

Category	Item	Description	Quantity	Cost	Total	Local	Total Requested
Equipment							
					$0.00	**$0.00**	**$0.00**
Personnel							
	Overtime and Fringe	Overtime for commissioned officers to conduct HMV enforcement.	1.00	$25,000.00	$25,000.00	$0.00	$25,000.00
					$25,000.00	**$0.00**	**$25,000.00**
Training							
	Professional Development	Three officers for LETSAC Conference.	3.00	$750.00	$2,250.00	$0.00	$2,250.00
	Professional Development	IMS 360 Crash Recon Training	1.00	$6,950.00	$6,950.00	$0.00	$6,950.00
					$9,200.00	**$0.00**	**$9,200.00**
				Total Contract	**$34,200.00**	**$0.00**	**$34,200.00**

ATTACHMENTS

Document Type	Description	Original File Name	Date Added

LEE'S SUMMIT
MISSOURI

Packet Information

File #: RES. NO. 18-04, **Version:** 2

A RESOLUTION AUTHORIZING THE CITY MANAGER TO SIGN THE APPLICATION TO REQUEST APPROVAL OF A PRELIMINARY DEVELOPMENT PLAN FOR THE DEVELOPMENT OF PROPERTY LOCATED NORTHWEST OF THE INTERSECTION OF CHIPMAN ROAD AND PRYOR ROAD IN THE CITY OF LEE'S SUMMIT, MISSOURI.

Issue/Request:
A RESOLUTION AUTHORIZING THE CITY MANAGER TO SIGN THE APPLICATION TO REQUEST APPROVAL OF A PRELIMINARY DEVELOPMENT PLAN FOR THE DEVELOPMENT OF PROPERTY LOCATED NORTHWEST OF THE INTERSECTION OF CHIPMAN ROAD AND PRYOR ROAD IN THE CITY OF LEE'S SUMMIT, MISSOURI.

Key Issues:
Adoption of this resolution will authorize the City Manager to sign an ownership affidavit to allow for the inclusion of City owned property within a proposed Preliminary Development Plan application. The City owned properties in include three parcels of property: two parcels abutting Lowenstein Drive consisting of approximately 5.47 acres and one parcel immediately south of Interstate I-470 along the west side of Pryor Road of approximately 7.55 acres. By providing this ownership affidavit, the City is not in any way agreeing to sell, convey or dispose of the property, however by executing the ownership affidavit, the proposed developer is authorized to bring forward a proposed Preliminary Development Plan incorporating the City owned property within the application for consideration in the development process. Any potential disposition of the property would occur through legal processes by which the City is authorized to take such action and would occur at a later date if necessary.

Proposed City Council Motion:
I move to adopt Resolution 18-04 an APPLICATION TO REQUEST APPROVAL OF A PRELIMINARY DEVELOPMENT PLAN FOR THE DEVELOPMENT OF PROPERTY LOCATED NORTHWEST OF THE INTERSECTION OF CHIPMAN ROAD AND PRYOR ROAD IN THE CITY OF LEE'S SUMMIT, MISSOURI

Background:
For over two years the acreage along the west side of Pryor Road between I-470 and Chipman Road has been subject to conceptual and preliminary development plan proposals. At this time there is no active Preliminary Development Plan submitted or in process for this area. By providing an executed ownership affidavit, the City is allowing a potential developer to incorporate the City owned parcels within a Preliminary Development Plan for the Planning Commission and City Council to consider.

Presenter:
Mark Dunning, Assistant City Manager

Recommendation:
Staff recommends adoption of the Resolution

RESOLUTION NO. 18-04

A RESOLUTION AUTHORIZING THE CITY MANAGER TO SIGN THE APPLICATION TO REQUEST APPROVAL OF A PRELIMINARY DEVELOPMENT PLAN FOR THE DEVELOPMENT OF PROPERTY LOCATED NORTHWEST OF THE INTERSECTION OF CHIPMAN ROAD AND PRYOR ROAD IN THE CITY OF LEE'S SUMMIT, MISSOURI.

WHEREAS, the City is working with property owners who own property located to the west of Pryor Road and north of Chipman Road to facilitate redevelopment of this property; and,

WHEREAS, the City owns approximately 13.02 acres of property generally located west of Pryor Road and north of Chipman Road which consists of tax parcels 51-800-04-81-00-0-00-000 (3.17 acres), 51-800-04-88-00-0-00-000 (2.3 acres), and 51-800-04-91-01-0-00-000 (7.55 acres) (collectively the "City Property"); and,

WHEREAS, a property owner in this area seeks to have a preliminary development plan approved by the City Council to allow for the development of property located west of Pryor Road and north of Chipman Road, which would include portions of the City Property; and,

WHEREAS, the City Council now desired to authorize the City Manager to sign the application for consideration of a preliminary development plan in this area to allow City staff to process such application in compliance with the City's Unified Development Ordinance.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LEE'S SUMMIT AS FOLLOWS:

SECTION 1. The City Manager of the City of Lee's Summit, Missouri, is hereby authorized to sign on behalf of the City the application for consideration of a preliminary development plan for the development of the City Property in connection with other properties located west of Pryor Road and north of Chipman Road.

SECTION 2. The City Manager or his designee are authorized to take such additional actions as are necessary for the City staff to process the preliminary development plan application.

SECTION 3. That this Resolution shall be in full force and effect from and after its passage and approval.

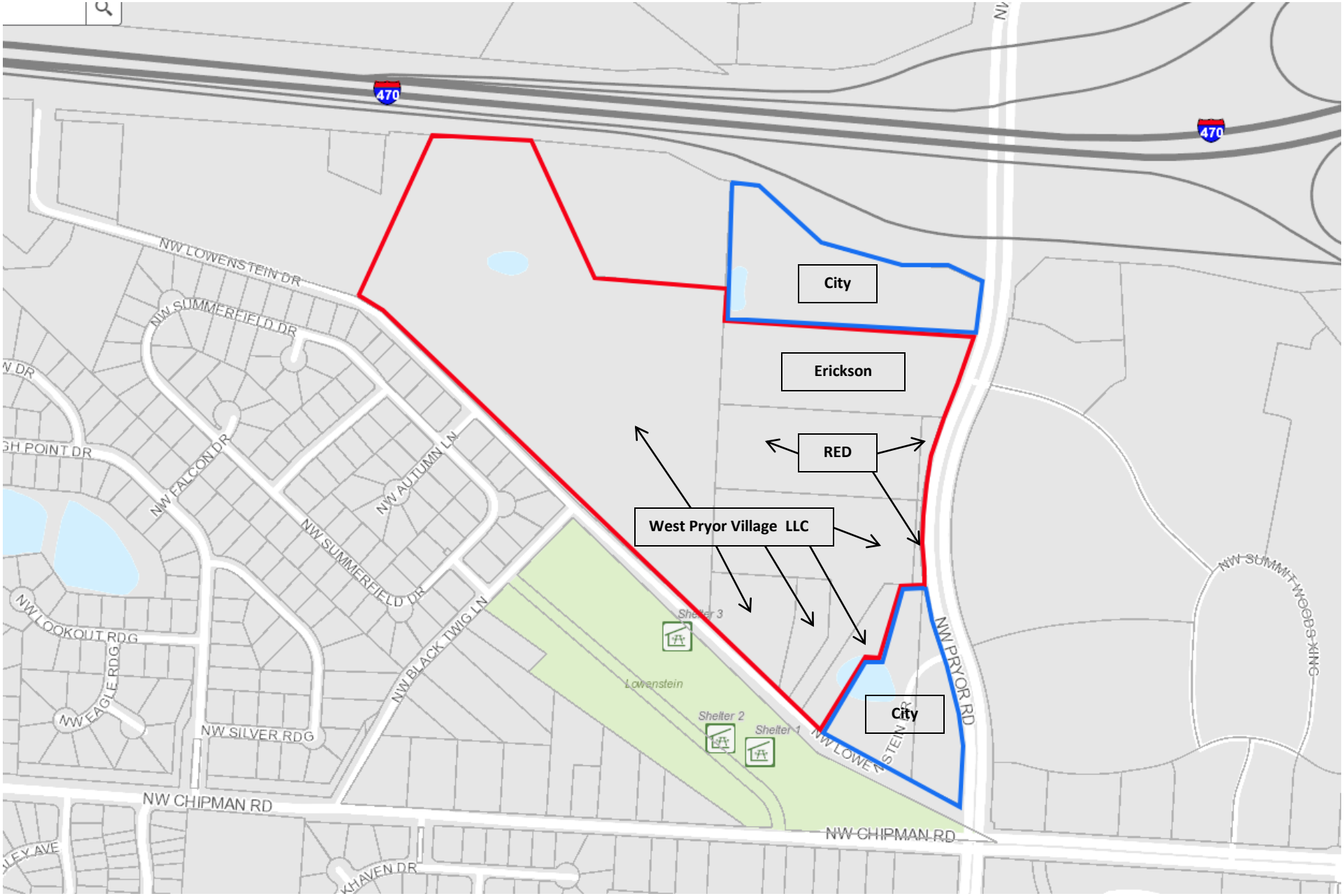
Passed by the City Council of the City of Lee's Summit, Missouri, this _____ day of _____, 2018.

ATTEST: Mayor *Randall L. Rhoads*

City Clerk *Trisha Fowler Arcuri*

APPROVED AS TO FORM:

City Attorney *Brian W. Head*



West Pryor Corridor

LEE'S SUMMIT
MISSOURI

Packet Information

File #: SUBSTITUTE BILL NO. 18-66, **Version:** 1

AN ORDINANCE CANVASSING AND DECLARING THE RESULTS OF THE APRIL 3, 2018, REGULAR MUNICIPAL ELECTION FOR THE CITY OF LEE'S SUMMIT, MISSOURI, AND CONTAINING AN EMERGENCY CLAUSE.

Certified results will be recieved by April 12, 2018 from Cass County for the April 3, 2018, Municipal Election. The certified results by April 12, 2018 from Jackson County. Both will be made available prior to the Council meeting that evening. Attached is a bill containing the tentative results. If there are any changes in the numbers once the Jackson County certification is received, a substitute bill will be presented to the Council prior to meeting.

MOTION:

FIRST MOTION: I move for second reading of AN ORDINANCE CANVASSING AND DECLARING THE RESULTS OF THE APRIL 3, 2018, REGULAR MUNICIPAL ELECTION FOR THE CITY OF LEE'S SUMMIT, MISSOURI, AND CONTAINING AN EMERGENCY CLAUSE.

SECOND MOTION: I move for adoption of AN ORDINANCE CANVASSING AND DECLARING THE RESULTS OF THE APRIL 3, 2018, REGULAR MUNICIPAL ELECTION FOR THE CITY OF LEE'S SUMMIT, MISSOURI, AND CONTAINING AN EMERGENCY CLAUSE.

Recommendation: Staff recommends approval of the proposed ordinance.

SUBSTITUTE BILL NO. 18-66

AN ORDINANCE CANVASSING AND DECLARING THE RESULTS OF THE APRIL 3, 2018, REGULAR MUNICIPAL ELECTION FOR THE CITY OF LEE'S SUMMIT, MISSOURI, AND CONTAINING AN EMERGENCY CLAUSE.

WHEREAS, a special election was held in the City of Lee's Summit, Missouri, on April 3, 2018; and,

WHEREAS, the official return of the election has been received from the Jackson County Board of Election Commissioners, certified by such board; and,

WHEREAS, the official return of the election has been received from the Election Authority of Cass County, certified by such authority; and,

WHEREAS, the Council of the City of Lee's Summit, Missouri wishes to canvass and declare the results and effect of the election described above as provided by section 9.3 of the Charter of the City of Lee's Summit, Missouri.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF LEE'S SUMMIT, MISSOURI, as follows:

SECTION 1. That the election conducted in the City of Lee's Summit, Missouri on April 3, 2018 is found to have been held in all respects as required by the Constitution and the law of the State of Missouri and the Charter of the City of Lee's Summit, Missouri at designated voting places; that duly qualified electors of the City of Lee's Summit and no others were permitted to vote and that the official return of the election, as submitted by the Jackson County Board of Election Commissioners attached hereto as Exhibit "A" and Election Authority of Cass County attached hereto as Exhibit "B" is as follows:

SECTION 2. That the official return of the election, as submitted by the Jackson County Board of Election Commissioners for candidates seeking the office of Mayor, Councilmember for Districts 1, 2, 3 and 4 (1 Four Year Term and 1 Two Year Term); and, for Municipal Judge, Division 243, is as follows:

MAYOR	
Bill Baird	**4343**
Ron Williams	2665
Robert "Rob" Binney	2161

COUNCILMEMBER DISTRICT 1	
Diane Forte	**1044**
Robert L. Dye	879

COUNCILMEMBER, DISTRICT 2	
Trish Carlyle	**1503**
John Elkin	1203

COUNCILMEMBER, DISTRICT 3	
Jose H. "Beto" Lopez	**1105**
Diane Seif	1101

COUNCILMEMBER, DISTRICT 4 (TWO YEAR TERM)	
Fred E. DeMoro	**1107**
Casey Crawford	1079

COUNCILMEMBER, DISTRICT 4 (FOUR YEAR TERM)	
Robert Thane "Bob" Johnson	**1307**
Donna Gordon	893

MUNICIPAL JUDGE, DIVISION 243
Dana M. Altieri 7366

SECTION 3. That the Council of the City of Lee's Summit, Missouri hereby declares that the results of the municipal election are as tabulated above and does declare the candidates receiving the highest number of votes for the office sought are elected to their respective office.

PASSED by the City Council of the City of Lee's Summit, Missouri, this _____ day of _____, 2018.

_____
Mayor *Randall L. Rhoads*

ATTEST:

_____
City Clerk *Trisha Fowler Arcuri*

APPROVED by the Mayor of said city this _____ day of _____, 2018.

_____
Mayor *Randall L. Rhoads*

ATTEST:

_____
City Clerk *Trisha Fowler Arcuri*

APPROVED AS TO FORM:

_____
City Attorney *Brian W. Head*

BILL NO. 18-11 **ORDINANCE NO. 8331**

AN ORDINANCE PROVIDING FOR AN ELECTION OF MUNICIPAL OFFICERS BY VOTERS IN THE CITY OF LEE'S SUMMIT, MISSOURI, AT THE GENERAL ELECTION TO BE HELD ON APRIL 3, 2018, AND PROVIDING THAT NOTICE OF SAID ELECTION BE GIVEN, CONTAINING AN EMERGENCY CLAUSE.

WHEREAS, a general election of municipal officers is held the first Tuesday in the month of April, as established by the State of Missouri; and,

WHEREAS, the Charter passed by the voters of said city on April 2, 1996, provides that candidates elected to fill offices with expiring terms shall serve four-year terms.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LEE'S SUMMIT, MISSOURI, as follows:

SECTION 1. That an election shall be held within the city of Lee's Summit on April 3, 2018, in conformity with Section 9.1 and Section 16.2 of the Charter for the City of Lee's Summit, Missouri. At said election, there shall be one candidate elected for the following positions:

Mayor for a term of four (4) years:
Ron Williams
Bill Baird
Robert "Rob" Binney

A Member of City Council from District 1 for a Term of Four (4) years:
Diane Forte
Robert L. Dye

A Member of City Council from District 2 for a Term of Four (4) years:
Trish Carlyle
John Elkin

A Member of City Council from District 3 for a Term of Four (4) years:
Diane J. Seif
Jose H. "Beto" Lopez

A Member of City Council from District 4 for a Term of Two (2) years:
Fred E. DeMoro
Casey Crawford

A Member of City Council from District 4 for a Term of Four (4) years:
Donna Gordon
Robert Thane "Bob" Johnson

A Municipal Judge for Division I (Municipal Division No. 243 of the Sixteenth Judicial Circuit) of the City of Lee's Summit for a term of four (4) years:
Dana M. Altieri

SECTION 2. That at said election the qualified registered voters of the city shall vote at the polling places within the city, as designated by the Board of Election Commissioners of Jackson County, Missouri, and the Election Authority of Cass County, Missouri.

SECTION 3. That the judges and clerks at said election shall be designated by the Board of Election Commissioners of Jackson County, Missouri, and the Election Authority of Cass County, Missouri.

SECTION 4. That the Board of Election Commissioners for Jackson County, Missouri, and the Election Authority for Cass County, Missouri, shall be provided a certified copy of this ordinance and are requested to conduct said election in the manner provided in the Statutes of the State of Missouri relating to Charter Cities.

SECTION 5. That all ordinances or parts of ordinances in conflict with this ordinance are hereby repealed.

SECTION 6. That this ordinance calling an election is an emergency within the meaning of Section 3.13(f)(4) of the Charter of the City of Lee's Summit, Missouri and shall be in full force and effect from and after the date of its passage and adoption, and approval by the Mayor.

PASSED by the City Council of the City of Lee's Summit, Missouri, this 18th day of January, 2018.

Randall L. Rhoads

Mayor *Randall L. Rhoads*

ATTEST:

Trisha Fowler Arcuri

City Clerk *Trisha Fowler Arcuri*

APPROVED by the Mayor of said city this 18th day of January, 2018.

Randall L. Rhoads

Mayor *Randall L. Rhoads*

ATTEST:

Trisha Fowler Arcuri

City Clerk *Trisha Fowler Arcuri*

APPROVED AS TO FORM:

Brian W. Head

City Attorney *Brian W. Head*

Election Summary Report
GENERAL MUNICIPAL ELECTION
CASS COUNTY, MISSOURI
TUESDAY, APRIL 3, 2018
ELECTION RESULTS
Certified Results

Date: 4/6/2018
Time: 1:12:38 PM CDT

Registered Voters 71,519 - Total Ballots 8,703 : 12.17%

45 of 45 Precincts Reporting 100.00%

LEE'S SUMMIT MAYOR

Number of Precincts	2	
Precincts Reporting	2	100.00%
Vote For 1		
Total Votes	234	
RON WILLIAMS	66	28.21%
BILL BAIRD	109	46.58%
ROBERT "ROB" BINNEY	59	25.21%
WRITE-IN	0	0%

LEE'S SUMMIT MUNICIPAL JUDGE, DIV. 243

Number of Precincts	2	
Precincts Reporting	2	100.00%
Vote For 1		
Total Votes	162	
DANA ALTIERI	160	98.77%
WRITE-IN	2	1.23%

LEE'S SUMMIT COUNCILMEMBER DISTRICT 1

Number of Precincts	2	
Precincts Reporting	2	100.00%
Vote For 1		
Total Votes	226	
DIANE FORTE	137	60.62%
ROBERT L. DYE	87	38.50%
WRITE-IN	2	0.88%

LEE'S SUMMIT COUNCILMEMBER DISTRICT 2

Number of Precincts	2	
Precincts Reporting	2	100.00%
Vote For 1		
Total Votes	11	
TRISH CARLYLE	2	18.18%
JOHN ELKIN	9	81.82%
WRITE-IN	0	0%

Certificate of Election Results

I Michael J. Vinck, County Clerk/Election Authority of Cass County, Missouri, do hereby certify that the foregoing is a full accurate return of all votes cast in the General Municipal Election; held in the City of Lee's Summit, Missouri as certified by me of said election.

Dated this 9th day of April 2018

Michael J. Vinck

Michael J. Vinck, Cass County Clerk

COUNTY SEAL
CASS COUNTY MISSOURI

LEE'S SUMMIT
MISSOURI

Packet Information

File #: BILL NO. 18-62, **Version:** 1

AN ORDINANCE GRANTING A SPECIAL USE PERMIT FOR AUTOMOTIVE SALES, GENUINE AUTO, IN DISTRICT CP-2 (PLANNED COMMUNITY COMMERCIAL DISTRICT) ON LAND LOCATED AT 520 SW 3rd ST FOR A PERIOD OF FIVE (5) YEARS, ALL IN ACCORDANCE WITH ARTICLE 10 WITHIN THE UNIFIED DEVELOPMENT ORDINANCE, FOR THE CITY OF LEE'S SUMMIT, MISSOURI.
(NOTE: First reading by City Council on April 5, 2018.)

Proposed City Council Motion:
I move for adoption of AN ORDINANCE GRANTING A SPECIAL USE PERMIT FOR AUTOMOTIVE SALES, GENUINE AUTO, IN DISTRICT CP-2 (PLANNED COMMUNITY COMMERCIAL DISTRICT) ON LAND LOCATED AT 520 SW 3rd ST FOR A PERIOD OF FIVE (5) YEARS, ALL IN ACCORDANCE WITH ARTICLE 10 WITHIN THE UNIFIED DEVELOPMENT ORDINANCE, FOR THE CITY OF LEE'S SUMMIT, MISSOURI.

BILL NO. 18-62

AN ORDINANCE GRANTING A SPECIAL USE PERMIT FOR AUTOMOTIVE SALES, GENUINE AUTO, IN DISTRICT CP-2 (PLANNED COMMUNITY COMMERCIAL DISTRIC) ON LAND LOCATED AT 520 SW 3rd ST FOR A PERIOD OF FIVE (5) YEARS, ALL IN ACCORDANCE WITH ARTICLE 10 WITHIN THE UNIFIED DEVELOPMENT ORDINANCE, FOR THE CITY OF LEE'S SUMMIT, MISSOURI.

WHEREAS, Application #PL2017-257 submitted by Gary Serville, Jr., requesting a special use permit for automotive sales, Genuine Auto, in District CP-2 (Planned Community Commercial District) on land located at 520 SW 3rd St, was referred to the Planning Commission to hold a public hearing; and,

WHEREAS, after due public notice in the manner prescribed by law, the Planning Commission held a public hearing for the request on March 13, 2018 and rendered a report to the City Council containing findings of fact and a recommendation that the special use permit be approved; and,

WHEREAS, after due public notice in the manner prescribed by law, the City Council held a public hearing on April 5, 2018, and rendered a decision to grant said special use permit.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF LEE'S SUMMIT, MISSOURI, as follows:

SECTION 1. That the application pursuant to Section 10.450 and Section 10.020.A of the Unified Development Ordinance to allow automotive sales in District CP-2 with a Special Use Permit is hereby granted for a period of 5 years, with respect to the following described property:

HIGGINS L H PLACE LOTS 1 & 2 & PT TR IN SEC 6 DAF: BEG PT 561.88' W OF SE SW 1/4 TH W 58' TH N 248.91' TH E 58' TH S 248.91' TO POB

SECTION 2. That the following conditions of approval apply:

1. The special use permit shall be granted for a period of five (5) years.
2. The number of vehicles for sale at any given time shall be limited to five (5) vehicles.
3. Parking lot screening, consisting of one (1) shrub per three (3) linear feet, shall be installed within the green space along 3rd Street.

SECTION 3. That failure to comply with all of the provisions contained in this ordinance shall constitute violations of both this ordinance and the City Unified Development Ordinance, enacted by Ordinance No. 5209, amended from time to time.

SECTION 4. That this ordinance shall be in full force and effect from and after the date of its passage and adoption, and approval by the Mayor.

PASSED by the City Council of the City of Lee's Summit, Missouri, this _____ day of _____, 2018.

Mayor Randall L. Rhoads

ATTEST:

City Clerk *Trisha Fowler Arcuri*

APPROVED by the Mayor of said city this _____ day of _____, 2018.

Mayor *Randall L. Rhoads*

ATTEST:

City Clerk *Trisha Fowler Arcuri*

APPROVED AS TO FORM:

City Attorney *Brian Head*

City of Lee's Summit
Development Services Department

March 9, 2018

TO: Planning Commission

PREPARED BY: C. Shannon McGuire, Planner

CHECKED BY: Hector Soto, Jr., AICP, Current Planning Manager

RE: **PUBLIC HEARING – Application #PL2017-257 – Appl. #PL2017-257 – SPECIAL USE PERMIT for outdoor secondary sales of motor vehicles – Genuine Auto Repair, 520 SW 3rd St; Gary Serville, Jr., applicant**

Commentary

This application is for a special use permit (SUP) renewal for auto sales as an accessory use at 520 SW 3rd St. The applicant operates a tire and auto service business, but also sells vehicles under a special use permit (Appl. #PL2012-099) previously granted for a period of five (5) years by Ord. #7263.

The applicant requests the renewal for a time period of 25 years. Staff recommends a 5 year time period keeping consistent with the previously approved special use permit for vehicle sales at this location. The previously approved SUP ordinances (#7100 and #7263) required shrubs to be installed in the green space along 3rd Street, which has not been done; a similar requirement for shrubs is included in the conditions of approval.

Recommendation

Staff recommends **APPROVAL** of the special use permit, subject to the following:

1. The special use permit shall be granted for a period of 5 years.
2. The number of vehicles for sale at any given time shall be limited to five (5) vehicles.
3. Parking lot screening, consisting of one (1) shrub per three (3) linear feet, shall be installed within the green space along 3rd Street.

Zoning and Land Use Information

Location: 520 SW 3rd St.

Zoning: CP-2 (Planned Community Commercial District)

Surrounding Zoning and Use*:*

North: RP-4 (Planned Apartment Residential District.) – Robin Hills Apartments

South (across SW 3rd St.): CP-2 (Planned Community Commercial District) – general office spaces

East: CP-2 (Planned Community Commercial District) – Pinnacle Auto Sales)

West: CP-2 (Planned Community Commercial District) – general office and commercial spaces

Site Characteristics. The property is developed with single story 5,000 sq. ft. commercial building. The subject building has historically housed auto repair shops.

Description and Character of Surrounding Area. The surrounding area is primarily developed with office/retail uses to the east, west and south. More specifically, the two adjacent properties to the east house auto sales and a gas/auto service station. The property to the north is the Robin Hills Apartments.

Project Information

Current Use: auto repair and auto sales

Proposed Use: accessory sales of cars/vehicles

Land Area: 42,823 sq. ft.

Building Area: approximately 5,000 sq. ft.

FAR: 0.12

Number of Buildings: 1

Number of Stories: 1

Parking Spaces: 29 spaces required; 42 spaces provided

Public Notification

Neighborhood meeting conducted: n/a

Newspaper notification published: February 24, 2018

Radius notices mailed to properties within 185 feet: February 23, 2018

Process

Procedure: The Planning Commission makes a recommendation to the City Council on the proposed special use permit. The City Council takes final action on the special use permit.

Duration of Validity: A special use permit shall be valid for a specific period of time if so stated in the permit.

Unified Development Ordinance

Applicable Section(s)	Description
10.020, 10.030, 10.040, 10.050, 10.400	Special Use Permit

Comprehensive Plan

Focus Areas	Goals, Objectives and Policies
Economic Development	Objective 2.2

Background

- January 4, 1983 – Ordinance 2380 was approved by the City Council to amend the zoning ordinance to require a Special Use Permit for “automobile, truck, mobile homes and/or boat sales rooms or yards…” in commercial zoning districts. Car sales businesses legally operating prior to 1983 became legal non-conforming, and are

allowed to continue as long as the use is not discontinued for more than 6 months. No evidence has been found of any car sales business on the subject property prior to 1996.

- June 18, 1996 – A special use permit was approved by the City Council for vehicle sales for 520-522 SW 3rd Street for 10 years, Ord. #4297 (Appl. #1996-028), which expired in 2006, and was not renewed.
- October 6, 2011 – A special use permit was approved by the City Council for car/vehicle sales and U-Haul leasing at 520 SW 3rd Street for 5 years, Ord. #7100 (Appl. #PL2011-108).
- December 15, 2011 – Ordinance 7119 was approved by the City Council to amend the special use permit section of the UDO (Amendment #40) to restrict accessory car sales to an auto-related primary use, subject to certain locations and limits on number of vehicles and signs.
- December 6, 2012 – A special use permit was approved by the City Council for car/vehicle sales at 520 SW 3rd Street for 5 years, Ord. #7263 (Appl. #PL2012-099).

Analysis of Special Use Permit

Ordinance Requirements. Under the Unified Development Ordinance (UDO) a special use permit is required for outdoor secondary sales of motor. According to Section 10.460, of the UDO the following conditions apply to outdoor sales of motor vehicles:

1. Primary motor vehicle related business shall include:
    a. Motor vehicle parts and supply;
    b. Motor vehicle repair services, both minor and major. **The existing use is an auto repair shop.**
2. Number and placement/display of accessory motor vehicles shall:
    a. Be limited to a maximum of five vehicles at any time; **No more than five (5) vehicles for sale shall be located on the site at any one time.**
    b. Be limited to existing parking spaces, for display purposes, in excess of the required parking spaces for the primary business use as determined by the Director on a case by case basis. **A total of 29 parking spaces are required for the multitenant building. A total of 42 parking spaces are provided on the site, yielding a parking space surplus of 13 parking spaces.**
3. Motor vehicle accessory sale locations shall be limited to specific areas identified in Figure 10-1 as follows:
    a. Major Arterials – Allowed only within 1/4 mile wide strip measured 1/8 mile from centerline on each side of the arterial. **The site is located outside a 1/4 mile buffer area from an arterial. Special use permits have been granted for vehicle sales at this located since 1996, which pre-exist the proximity requirement to an arterial street.**
    b. Entry Gateways – Prohibited within 1/4 mile radius. **The site is located greater than 1/4 mile from the nearest entry gateway. The gateways are defined as the areas where I-470, M-150 Hwy, M-291 Hwy and US 50 Hwy enter the city limits.**

c. Primary Intersections – Prohibited within 1/8 mile radius. **The site is located greater than 1/8 mile from the nearest primary intersection (SW 3rd St and US 50 Hwy)**

4. Minimum landscaping shall be required:
    a. Between street right-of-way and parking lot display of motor vehicles; **1 shrub shall be planted per 3 linear feet along the green space along SW 3rd St.**
    b. To include a 30 inch high berm with shrubbery and ornamental trees as approved by the Governing Body. **The existing parking lot is constructed up to the right-of-way line. Therefore, a berm cannot be constructed between the right-of-way and existing parking lot boundary along SW 3rd St.**
5. Signage.
    a. One sign per motor vehicle. **The applicant will comply with this and the other signage requirements below.**
    b. 6 square feet maximum area
    c. Located inside motor vehicle

Time Period.

- Request – The applicant requests a 25 year time period.
- Recommendation – A total of nine special use permits for vehicle sales as an accessory use have been previously approved.

Address	Ordinance No.	Time Period	Approval	Expiration
190 NW Oldham Pkwy	6779	7	4/16/2009	4/16/2016
201 SE Green Street	6981	5	10/7/2010	10/7/2015
1115 SW Oldham Parkway	7106	7	11/3/2011	11/3/2018
520 SW 3rd Street	7263	5	12/6/2012	12/6/2017
1300 SW Market St	7383	5	10/10/2013	10/10/2018
1308 SW Market St	7418	5	1/9/2014	1/9/2019
1000 SE Blue Pkwy	7445	10	4/3/2014	4/3/2024
957 SE Oldham Pkwy	7552	10	11/18/2014	11/18/2024
190 NW Oldham Pkwy	7941	7	8/4/2016	4/16/2029

The applicant has requested a 25 year time period. Staff recommends a 5 year time period keeping consistent with the previously approved special use permits for vehicle sales at this location. Additionally, the history of current and previous City Councils approving SUPs for periods not to exceed 5 years along the SW 3rd St corridor is tied to the long-term redevelopment potential of the area. The corridor is the gateway and primary connection to downtown from the west. While auto sales have been viewed as an acceptable short-term use for the area, auto sales may not be highest and best use from a long-term perspective as the area redevelops.

Ordinance Criteria. The criteria enumerated in Section 10.050 as well as the regulations in Section 10.460 addressed above were considered in analyzing this request.

- The lot is zoned CP-2. The adjacent property to the east and west are zoned CP-2. Automotive sales as a primary or accessory use are allowed in the CP-2 zoning districts with a special use permit.
- The proposed auto sales at this location will not detrimentally affect the appropriate use of neighboring property.
- The proposed use is not expected to negatively impact traffic and/or parking in the area.

In considering all the criteria and regulations, staff finds the use to be appropriate and recommends approval of the special use permit.

Attachments:
1. Use Narrative provided by Applicant, date stamped January 10, 2018 – 3 pages
2. Special Use Permit Explanation, provided by Applicant, date stamped January 10, 2018 – 1 page
3. Photos of Subject and Surrounding Properties, date stamped January 10, 2018 – 5 pages
4. Proposed sale vehicle parking location map
5. Location Map

1. The Character of the neighborhood is held by quality standards and will be kept up to these standards by which is asked of us.
2. The property will be kept up with the adjacent properties and zoning as said in article 10 section 10.450.
3. The property at 520 SW 3rd street will be used strictly for auto sales and vehicle mechanic use. We at Genuine Auto Repair will adhere to this Special Use Permit by not exceeding the amount of cars being presented on the lot at one time. We will be sure to keep the property well-manicured.
4. Genuine Auto Repair will not to any extent negatively impact the surrounding aesthetics or surrounding properties. For we plan to keep and only enhance the Surrounding area.
5. We plan to keep the property at the same level of use and to not injure the surrounding property.
6. Our property is supplied with enough parking on the lot that will leave customers room to park and will not affect the traffic flow on 520 SW 3rd Street.
7. Every year we will be sure to have the backflow tested to make sure that we do not impact the quality of the water.
8. We will continue to work at the level of work we have been under the hours of operation to not create a noise pollution for the adjacent properties.
9. We will not have a negative impact on the property value by following what is asked of us by the City of Lee's Summit and our Land Lord.
10. We are obtaining a Special Use Permit to be able to have a Dealership of used quality cars. By having a Auto dealership we will provide the people of Lee's Summit an opportunity to purchase a safe vehicle for the road.
11. We will bring economic growth in the area because of the quality of service that we offer to the community.
12. The services that we offer make it convenient for the City of Lee's Summit to be able to get their transportation needs from us and have the comfort of a genuine family working man. By this we would satisfy the demand generated by the Special Use Permit.
13. n/a
14. We plan to keep the 2 bushes and accompanying trees along the front of the property on 520 SW 3rd Street.
15. Our professional staff is kept at high standards to provide the public with exceptional service to be sure their vehicle is running efficiently for the road. This is our priority to be sure our customers are satisfied with all of the services we offer.
16. We plan on keeping the use of the Special Use permit consistent with what we are to adhere by such as keeping the property well-manicured and keeping the parking of the automobiles for sale at what is asked of us.

Genuine Auto Repair provides a unique car buying experience to the customers in Lee's Summit, MO. One that focuses on customer satisfaction first. We understand that vehicle purchasing is a necessary, but sometimes unpleasant experience. Our goal is to provide the customer with an enjoyable, honest service by satisfying individual customers practical transportation needs with a quality product.

We also believe it is important to have quality vehicles at a low cost, yet reliable means of transportation. Our company will make a profit by generating sales. It will provide job satisfaction and fair compensation to its employees, and a fair return to its owners. Hard work and performance is rewarded through bonuses and commissions. Job satisfaction is very important for employees and owners, we will create a work environment that is enjoyable and profitable for all.

Our dealership will be open from 0800-1800 Monday – Saturday. We will have 5 or less cars on the property for sale facing 3rd street. We are asking for a time period of 25 years for the special use permit.

Objectives

1. 100% customer satisfaction, measured through repeat customers, referrals and surveys.
2. To achieve and surpass the industry average profit margin within the first two-years.
3. To achieve a respectable net profit by year two.

Mission

Genuine Auto Repair provides a unique car buying experience to the customers in Lee's Summit, MO. One that focuses on customer satisfaction first. We understand that vehicle purchasing is a necessary, but sometimes unpleasant experience. Our goal is to provide the customer with an enjoyable, honest service by satisfying individual customers practical transportation needs with a quality product.

We also believe it is important to have quality vehicles at a low cost, yet reliable means of transportation. Our company will make a profit by generating sales. It will provide job satisfaction and fair compensation to its employees, and a fair return to its owners. Hard work and performance is rewarded through bonuses and commissions. Job satisfaction is very important for employees and owners, we will create a work environment that is enjoyable and profitable for all.

To succeed in this business we must:

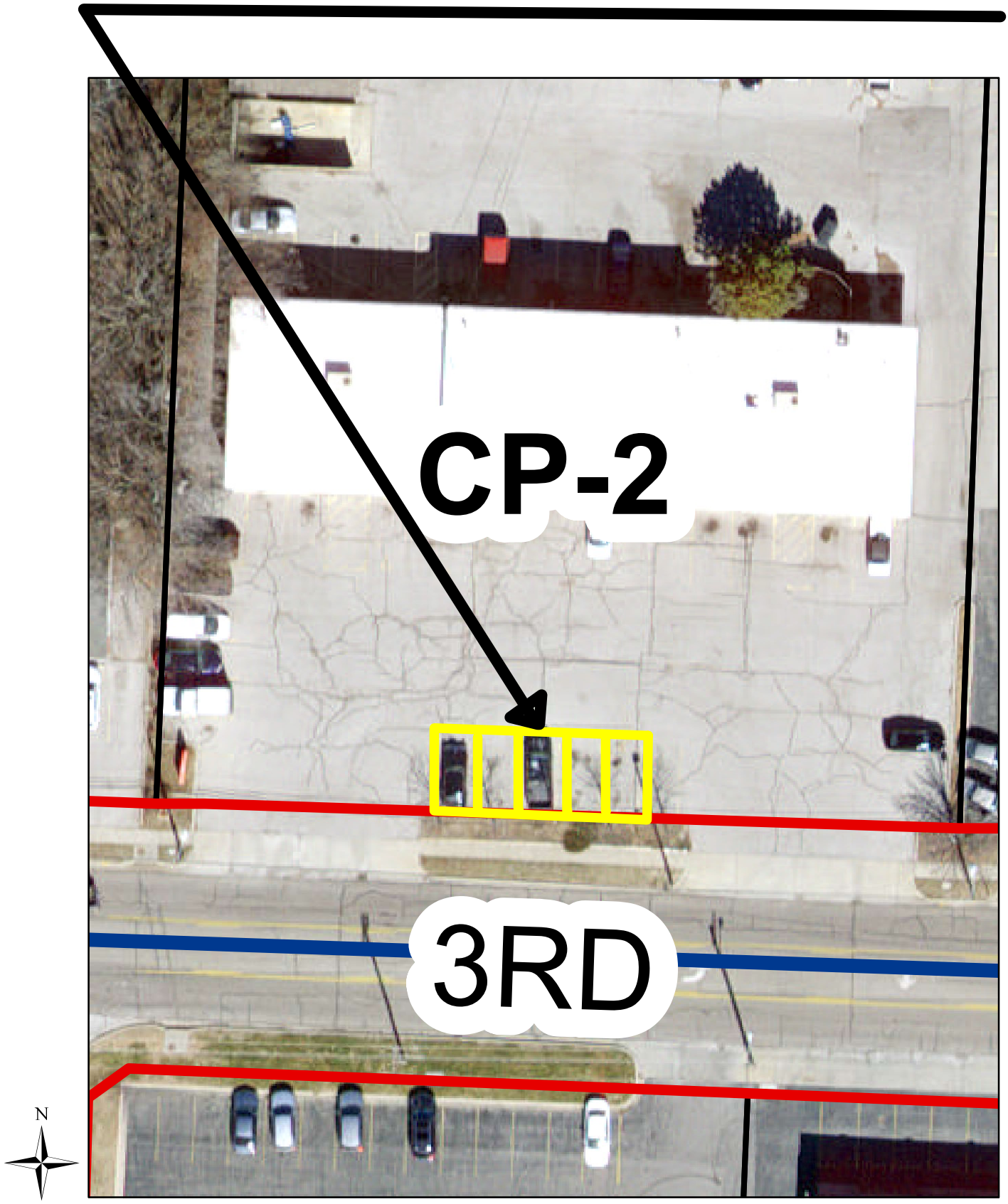
- Put together a team of experienced professionals.
- Secure an excellent high-traffic location.
- Establish a network of suppliers, in order to buy and sell products that are of the highest reliability and quality, at a competitive price.
- Ensure customer satisfaction by encouraging the two most important values, honor and integrity.
- Create high morale by rewarding employee success with monetary compensation.


GENUINE AUTO REPAIR

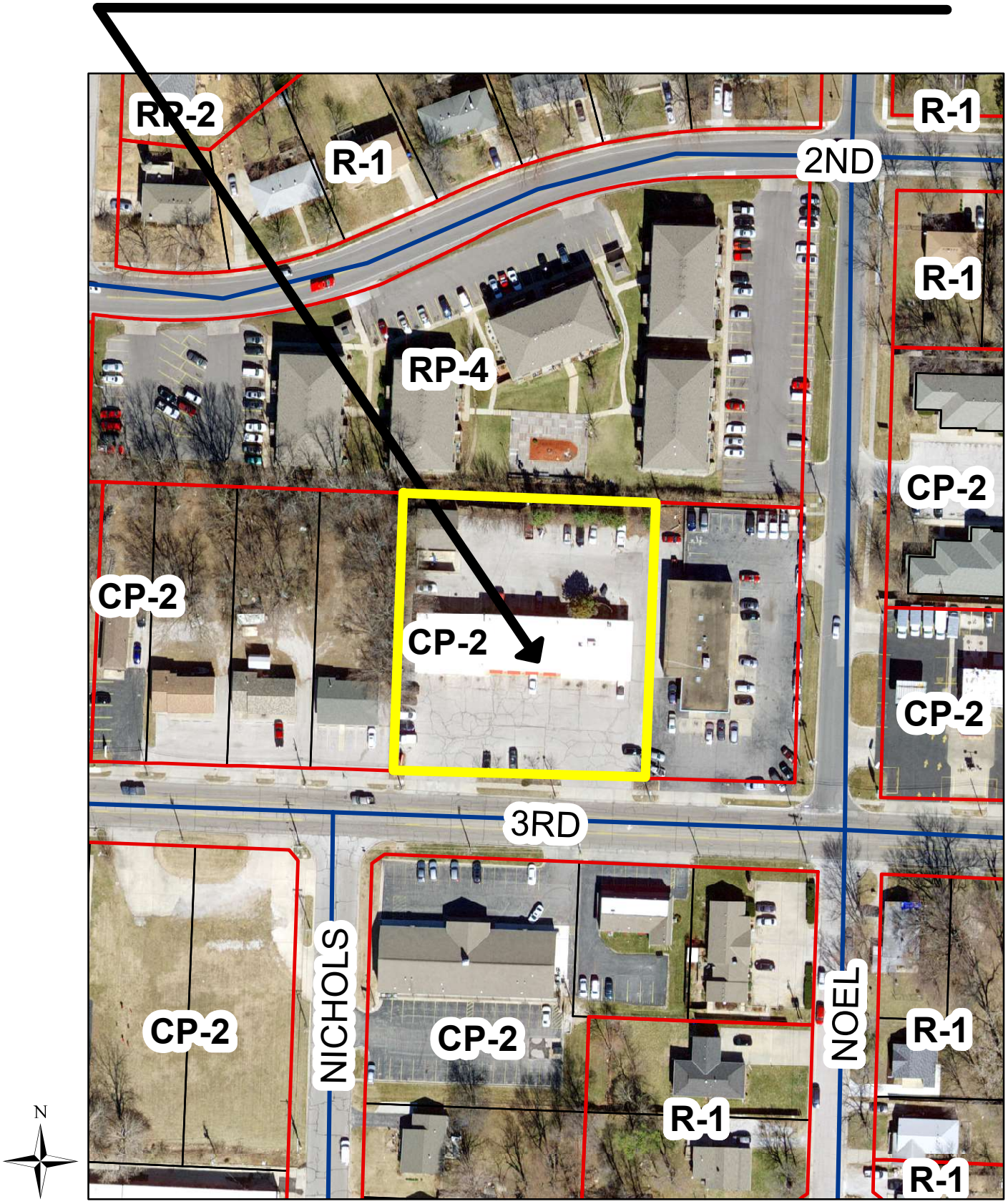

GENUINE AUTO REPAIR
520 SW 3


E AUTO REPAIR
SHOCKS/STRUTS

Proposed Parking Location of Sale Vehicles



Appl. #PL2017-257 – SPECIAL USE PERMIT for automobile sales and major auto repair
Genuine Auto Repair, 520 SW 3rd St
Gary Serville, Jr., applicant



LEE'S SUMMIT
MISSOURI

Packet Information

File #: BILL NO. 18-40, **Version:** 1

AN ORDINANCE AMENDING THE CITY'S ACCESS MANAGEMENT CODE AS ADOPTED AND MADE A PART OF THE CODE OF ORDINANCES BY SECTION 26-308 OF THE CODE OF ORDINANCES OF THE CITY OF LEE'S SUMMIT, MISSOURI.
(NOTE: First reading by City Council on April 5, 2018.)

Issue/Request:
AN ORDINANCE AMENDING THE CITY'S ACCESS MANAGEMENT CODE AS ADOPTED AND MADE A PART OF THE CODE OF ORDINANCES BY SECTION 26-308 OF THE CODE OF ORDINANCES OF THE CITY OF LEE'S SUMMIT, MISSOURI.

Key Issues:

- The original Access Management Code was adopted in November 2004. This is the first proposed amendment of the Access Management Code.
- The purpose, benefits, and applicability of the Access Management Code have not been amended.
- Various provisions of the Access Management Code have been updated to reflect current industry best practices and consistency with years of application in Lee's Summit.
- Proposed changes are generally less restrictive and more practical than originally drafted. No significant alterations or adverse impacts foreseen.

Proposed City Council Motion:
I move for adoption of AN ORDINANCE AMENDING THE CITY'S ACCESS MANAGEMENT CODE AS ADOPTED AND MADE A PART OF THE CODE OF ORDINANCES BY SECTION 26-308 OF THE CODE OF ORDINANCES OF THE CITY OF LEE'S SUMMIT, MISSOURI.

Background:

The Access Management Code (AMC) was adopted by Ordinance 5832 and incorporated in Chapter 26 of the Code of Ordinances, Article IV. It was drafted and approved in 2004 and has not been amended since then. The Access Management Code applies to all development and redevelopment applications and is used in capital project planning and design. The Access Management Code provides criteria, standards, and conditions for access along the City's rights-of-way to protect the function, efficiency and safety of all right-of-way users.

Changes primarily clarify language, update the AMC to incorporate current industry standards, and codify the past 10 years of local practice. Clarifications focus on grammar, typos, expanding on statements to better describe the intent of the AMC, and better clarify the roles of City Staff. Updates to current standards generally incorporate more recent industry references. The AMC was changed to incorporate references to

the most recent Highway Capacity Manual, Trip Generation Manual and other best practices used in traffic engineering. The only new requirement in the AMC specifies that evaluations for installing a roundabout shall be conducted when new work will cause a signal to be warranted at an intersection. This means a comparison of the traffic impacts of a signal versus roundabout will be conducted at these locations.

Updating the AMC to match past practices generally makes the code less restrictive. For the past ten years, numerous waivers have been granted to development work because requirements in the manual created work not warranted by the impacts of a project. For example, turn lanes on minor arterials streets were routinely waived, so that AMC requirement increased the cars per hour that would trigger installing a turn lane on minor arterial streets. The requirement for traffic impact studies was modified so that many studies for small projects no longer require a 20 to 40 year long-range outlook.

Access Management is a proven safety measure and can mitigate costly capacity and delay deficiencies. The Access Management Code also clearly defines the City's expectations of managed right-of-way, turn lane requirements, traffic study conditions, etc. for the development community. These updates will improve the clarity and use of the AMC.

Impact/Analysis:
[Enter text here]

Other Information/Unique Characteristics:
[Enter text here]

Presenter: Michael Park, PE, PTOE, City Traffic Engineer

Recommendation:
Staff recommends approval of AN ORDINANCE AMENDING THE CITY'S ACCESS MANAGEMENT CODE AS ADOPTED AND MADE A PART OF THE CODE OF ORDINANCES BY SECTION 26-308 OF THE CODE OF ORDINANCES OF THE CITY OF LEE'S SUMMIT, MISSOURI.

Committee Recommendation: The Public Works Committee February 20, 2018 was cancelled due to forecasted weather conditions.

BILL NO. 18-40

AN ORDINANCE AMENDING THE CITY'S ACCESS MANAGEMENT CODE AS ADOPTED AND MADE A PART OF THE CODE OF ORDINANCES BY SECTION 26-308 OF THE CODE OF ORDINANCES OF THE CITY OF LEE'S SUMMIT, MISSOURI.

WHEREAS, the current Access Management Code (AMC) was originally adopted in November 2004; and,

WHEREAS, the Access Management Code has never been updated or amended since originally adopted; and,

WHEREAS, revisions to the Access Management Code must be done by ordinance; and,

WHEREAS, certain sections and paragraphs of the Access Management Code should be amended to comply with current advances in industry standards, advances in access management practices, changes to referenced documents and manuals, and provide better consistency with years of the City's application of AMC regulations and waivers or modifications granted; and,

WHEREAS, several sections and paragraphs of the Access Management Code have been amended to correct typographical, grammatical errors, or provide clarification.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF LEE'S SUMMIT, MISSOURI, as follows:

SECTION 1. That the City of Lee's Summit, Missouri's Access Management Code, as adopted and made a part of the Code of Ordinances by Chapter 26 of the Code of Ordinances of the City of Lee's Summit, Missouri, Streets, Sidewalks and Other Public Places, Article IV, Access Management Code, Section 26-308, Access Management Code Adopted, is hereby amended to reference the attached hereto Access Management Code dated March 2018 and to adopt and incorporate such Access Management Code as revised and dated March 2018 into Chapter 26 as fully as if set forth therein. Section 26-308 shall read:

"The City of Lee's Summit, Missouri, Access Management Code, dated March, 2018, is hereby adopted and incorporated in this chapter as fully as if set forth herein."

SECTION 2: Severability Clause. That should any section, sentence or clause of this Ordinance be declared invalid or unconstitutional, such declaration shall not affect the validity of the remaining sections, sentences, or clauses.

SECTION 3: Savings Clause. Nothing in this ordinance hereby adopted shall be construed to affect any suit or proceeding now pending in any court or any rights acquired or liability incurred nor any cause or causes of action accrued or existing, under any act or ordinance repealed hereby, nor shall any right or remedy of any character be lost, impaired, or affected by this ordinance.

SECTION 4: That it is the intention of the City Council and it is hereby ordained that the provisions of this ordinance shall become and be made a part of the Code of Ordinances for the City of Lee's Summit, Missouri.

SECTION 5: That this ordinance shall be in full force and effect from and after the date of its passage, and adoption, and approval by the Mayor.

PASSED by the City Council of the City of Lee's Summit, Missouri, this _____ day of _____, 2018.

_____
Mayor *Randall L. Rhoads*

ATTEST:

_____
City Clerk *Trisha Fowler Arcuri*

APPROVED by the Mayor of said city this _____ day of _____, 2018.

_____
Mayor *Randall L. Rhoads*

ATTEST:

_____
City Clerk *Trisha Fowler Arcuri*

APPROVED AS TO FORM:

_____
City Attorney *Brian W. Head*

Lee's Summit, Missouri
Access Management Code

March 2018

Originally Drafted by TranSystems Corp. and Adopted by Ordinance #5832 on November 4, 2004
Revisions Drafted by Staff and Amended by Ordinance #XXXX on Date, 2018

Section 1 - Introduction

1.1. Introduction

Throughout the country, problems on our street system such as midblock crashes and delays to through traffic caused by turning vehicles can be traced to the access provided to abutting property via side streets and driveways. Historically, decisions to allow access were typically made relative to individual properties and not the function and characteristic of the street to which access was allowed. This piece-meal approach to access planning has frequently resulted in an illogical and excessive number of access points that have led to increased congestion and crashes.

"Access management" takes a comprehensive view of property access relative to the function of the streets from which it is provided. The objective of access management is to optimize, or find that right balance, between property access and traffic safety and efficiency, particularly along arterial streets. In other words, access is viewed in the context of the street system instead of just the individual property. Even further, access should be viewed in the context of the ultimate traffic volumes. What might appear acceptable one day may well be perceived differently in a long-term perspective.

Access management is the careful planning and design of driveways, median openings, interchanges, and street connections to a roadway. It also involves the application of median treatments and turning lanes, and the appropriate separation of traffic signals. This is done to maintain the viability of major roadways to safely and efficiently accommodate traffic volumes commensurate with their function. It is the arterial street network that is key to the success of transportation within a community and it represents perhaps the greatest financial infrastructure investment.

Access management requires that all properties have reasonable access to the public roadway system. Existing access may be improved as to comply with best practices in access management as redevelopment, surrounding development or capital projects occur, but due to existing constraints, some access may never be fully improved. The objective of this Access Management Code is to avoid further degradation caused by access in already developed areas and to prevent the creation of problems in the future. The net effect of access management along arterial streets is that the supporting networks of collector and local streets, and even inter-parcel connectivity, become more critical to effective circulation and property access.

The ultimate configuration of a street and its function are typically the result of land use planning, transportation planning, and traffic engineering. The concept of access management integrates these activities in order to optimize the safety and performance of the public street network, a significant infrastructure investment vital to the public health, safety and well-being of the community.

1.2. Experience

Every community has experienced safety and traffic operational problems associated with too much or poorly planned access to abutting properties. Many have also found it necessary to retrofit solutions to solve these problems. In the course of this experience, it has been discovered that managing access to major roadways has significant positive effects, including reducing crash frequency, minimizing crash severity, lessening congestion, facilitating economic growth, enhancing community character, and improving air quality.

Studies to date indicate that an effective access management program can result in significant decreases in crashes and travel delays. Obviously the degree of impact will vary based on the specific circumstances of any street segment, but this experience has provided valuable insight into the factors that have a negative influence on traffic safety and efficiency. Some of these factors include:

- Driveways or side streets in close proximity to major intersections;
- Driveways or side streets spaced too close together;
- Lack of left-turn lanes to store turning vehicles;
- Deceleration of turning traffic in through lanes; and
- Traffic signals too close together.

Sometimes congestion and crash experience on major streets have unintended and undesirable consequences such as encouraging drivers to find alternate routes on collector and local streets.

Requirements for well-designed road and access systems further the orderly layout and use of land and help improve the design of residential subdivisions and commercial circulation systems. However, the "change" to a system of shared or unified access to property along major roadways often causes concern among property owners or business operators, due to the perception that loss of individual driveway access could adversely impact property values or income.

The appearance of corridors and gateways is also critical to the image of a community and its overall attractiveness to investors. Minimizing the number of curb cuts, consolidating access drives, constructing landscaped medians, and buffering parking lots from adjacent thoroughfares results in a visually pleasing and efficient corridor that, in turn, can help attract new investment. Effective management of roadway corridors also protects property values over time and fosters healthy economies.

1.3. Conflicts and Revisions

While every effort has been made to ensure that this Access Management Code has no conflicts with the Code of Ordinances, Unified Development Ordinance or the Design and Construction Manual, there may be occasions where discrepancies between these documents arise. Upon such an occasion, the City Engineer (or designee) shall determine the more restrictive provision and it shall apply. This decision can be appealed to the City Council.

Should a discrepancy be identified, city staff will work to modify the affected ordinances in a timely manner.

Section 2 - Glossary

AASHTO - The American Association of State Highway and Transportation Officials.

Access - Any way or means of approach to provide vehicular or pedestrian entrance to a property.

Access Management - Measures to assure the appropriate location, design, and operation of driveways, median openings, interchanges, and street connections to a roadway, as well as the application of median treatments and turning lanes in roadway design, and the appropriate separation of traffic signals for the purpose of maintaining the safety and operational performance of roadways.

Access Management Program - The whole of all actions taken by a governing council, board, or agency to maintain the safety and traffic carrying capacity of its roadways.

At Grade - When two or more facilities that meet in the same plane of elevation.

Auxiliary Lane - A lane adjoining a roadway that is used for acceleration, deceleration, or storage of turning vehicles.

Average Daily Traffic (ADT) - The average two-way daily traffic volume on a route.

Backage Road - A local road that is used to provide alternative access to a road with higher functional classification; backage roads typically run parallel with the main route and provide access at the back of a line of adjacent properties. Also known as a "Reverse Frontage Road" or "Parallel Access Road".

Change in Use - A change in use may include, but is not limited to, structural modifications, remodeling, a change in the type of business conducted, expansion of an existing business, a change in zoning, or a division of property creating new parcels, but does not include modifications in advertising, landscaping, general maintenance or aesthetics that do not affect internal or external traffic flow or safety.

City Engineer - City staff position that is responsible for directing the technical engineering element of the Public Works Department. Staff position in responsible charge of design and construction criteria and specifications, inspections and interpretations for public transportation infrastructure.

City Traffic Engineer - City staff position established by ordinance with powers and duties with respect to traffic. Staff position that is responsible for determining and directing the installation and operation of traffic control devices and management of transportation, including access management, development related traffic/transportation impacts, traffic engineering, transportation planning, operations and maintenance for transit, bicycle, pedestrian, and vehicular transportation/traffic operations. The City Engineer shall act as the City Traffic Engineer in his or her absence. The City Traffic Engineer may delegate duties with respect to this code to a qualified professional engineer as appropriate.

Commercial - Property developed for the purpose of retail, wholesale, recreation, med- and high-density multi-family, educational or industrial activities. Generally, not residential property as residential is defined with limited uses herein.

Conflict - A traffic-related event that causes evasive action by a driver to avoid a collision.

Conflict Point - Any point where the paths of two through or turning vehicles diverge, merge, or cross and create the potential for conflicts.

Congestion - A condition resulting from more vehicles trying to use a given road during a specific period of time than the road is designed to handle with what are considered acceptable levels of delay or inconvenience.

Connection/Connector - Any driveway, street, turnout or other means of providing for the movement of vehicles to or from the public roadway system.

Connection Spacing - The distance between connections, measured from centerline to centerline (center of right-of-way for public streets) along the edge of the traveled way.

Controlled-Access Highway - Every highway, street or roadway in respect to which owners or occupants of abutting lands and other persons have no legal right of access to or from the highway, street or roadway except at such points only and in such manner as may be determined by the public authority having jurisdiction over the highway, street or roadway.

Cross Access - A service drive that provides vehicular access between two or more abutting sites so that the driver need not enter the public street system to move between them.

Deceleration Lane - A speed-change lane that enables a vehicle to leave the through traffic lane and decelerate to stop or make a slow-speed turn.

Directional Median Opening - An opening in a raised median that provides for specific traffic movements and physically restricts other movements. For example, a directional median opening may allow only right turns at a particular location.

Design Traffic Volume - The traffic volume which a roadway or driveway was designed to accommodate, and against which its performance is evaluated.

Downstream - The next feature (e.g. a driveway) in the same direction as the traffic flow.

Downtown Core - An area defined in the Unified Development Ordinance for Downtown Central Business District (CBD).

Driveway - A (typically) private roadway or entrance used to access residential, commercial, or other property from an abutting roadway.

Driveway Density - The number of driveways divided by the length of a particular roadway.

Driveway Spacing - (see Connection Spacing)

Driveway Width - The width of a driveway measured from one side to the other at the point of tangency.

Easement - A grant of one or more property rights by a property owner. For example, one property owner may allow a neighbor to access public roads across his or her property.

Entering (or Intersection) Sight Distance - The distance of minimum visibility needed for a passenger vehicle to safely enter a roadway and accelerate without unduly slowing through traffic.

Facility - A transportation asset designed to facilitate the movement of traffic, including roadways, intersections, auxiliary lanes, frontage roads, backage roads, bike paths, etc.

FHWA - The Federal Highway Administration of the U.S. Department of Transportation.

Flag Lot - A lot not meeting minimum frontage requirements where access to a public road is provided by a narrow strip of land carrying a private driveway.

Frontage - The length of a property that directly abuts a highway.

Frontage Road - A roadway that is used to provide alternative access to property from a roadway with higher functional classification; frontage roads typically run parallel to the mainline roadway and provide access at the front of a line of adjacent properties.

Functional Area - The area surrounding an interchange or intersection that includes the space needed for drivers to make decisions, accelerate, decelerate, weave, maneuver, and queue for turns and stop situations.

Functional Classification System - A system used to categorize the design and operational standards of roadways according to their purpose in moving vehicles; higher functional classification implies higher traffic capacity and speeds, and typically longer traveling distances.

Functional Integrity - Incorporating appropriate access management standards and controls that allow a roadway to maintain its classified purpose.

Geometric Design Standards - The acceptable physical measurements that allow a facility to maintain functional integrity.

Grade Separated - Two or more facilities that intersect in separate planes of elevation.

Highway - The entire width between the boundary lines of every way maintained when any part thereof is open to the use of the public for purposes of vehicular travel.

Highway Capacity - The maximum number of vehicles a roadway can handle during a particular amount of time and at a given level of service.

Highway Network – Collectively all roadways, including controlled access highways, interstates, freeways, expressways, arterials, collectors, and local streets that facilitate vehicular movement within the transportation system.

Industrial/Commercial Collector - Roadway that collects traffic to and from commercial or industrial areas and distributes it to arterials.

Industrial/Commercial Local Street – Street that carries traffic between commercial or industrial lots to industrial/commercial collector streets or arterial streets.

Interchange - A grade-separated facility that provides for movement between two or more roadways.

Internal Circulation - Traffic flow that occurs inside a private property.

Internal Site Design - The layout of a private property, including building placement, parking lots, service drives, and driveways.

Intersection - An at-grade facility that provides mobility between two or more roadways.

Interstate - A federally-designated roadway system for relatively uninterrupted, high-volume mobility between states.

Joint (or Shared) Access - A private access facility used by two or more adjacent sites.

Lane - The portion of a roadway used in the movement of a single line of vehicles.

Left-Turn Lane - A lane used for acceleration, deceleration, and/or storage of vehicles conducting left-turning maneuvers.

Level of Service - The factor that rates the performance of a roadway by comparing operating conditions to ideal conditions described in the Highway Capacity Manual; "A" is the best to "F," which is worst.

Major Arterial - Roadway that serves the highest traffic volume corridors and the longest trips. Typically provides travel between business districts and outlying residential areas, between major inner city communities and between major suburban centers, and connects communities to major state and interstate highways. Access is generally limited and partially controlled. Spacing of major arterials is typically from one to five miles.

Median - A barrier that separates opposing flows of traffic. Raised medians (with curbs and a paved or landscaped area in the center) are generally used in urban areas. Raised medians should not be confused with more obtrusive Jersey barriers. Flush median (with no curbs and a grass-covered area in the center) are generally used in rural areas. Medians can be both functional and attractive.

Median Width - The distance between the near edge of the through travel lanes in each direction when separated by a median.

Mid-Block Crossing - A crossing that is provided so that pedestrians can conveniently cross a roadway in the middle of a block or segment of roadway.

Minor Arterial - Roadway that interconnects and augments the major arterials. Accommodates trips of moderate length at a lower level of travel mobility than major arterial streets with typically similar operating speed and less volume. Access is generally limited and mostly controlled. Spacing of minor arterials in combination with major arterials is generally from one-half mile to three miles.

Shared-Use Path - A paved surface typically constructed parallel to a street to serve pedestrian and bicycle traffic.

NCHRP - The National Cooperative Highway Research Program, a program that sponsors research on highway safety, operations, standards, and other topics.

Peak Hour Traffic - The number of vehicles passing over a section of roadway during its most active 60-minute period each day.

Police Power - The general power vested in the legislature to make reasonable laws, statutes and ordinances where not in conflict with the Constitution that secure or promote the health, safety, welfare and prosperity of the public.

Private Street - A highway, street or road, open for use by the general public and which is under private jurisdiction or control. A private street is generally constructed to the same standards as a public street, named and used in reference addressing property.

Public Street - A highway, street or road, open for use by the general public and which is under the jurisdiction or control of a public body. Public Streets are generally classified as various highways, arterials, collectors, local and access based on function.

Queue Storage - That portion of a traffic lane that is used to temporarily hold traffic that is waiting to make a turn or proceed through a traffic control device such as a stop sign or traffic signal.

Raised Median - The elevated section of a divided road that separates opposing traffic flows.

Residential - Property developed for the purpose of single family, low-density multi-unit, agricultural or other housing quarters.

Residential Access Street - Roadway that carries traffic between residential lots and residential local street or residential collector streets. Residential access streets usually carry no through traffic and include short loop streets, cul-de-sacs, and courts that provide direct access to property. Desirable maximum ADT = 200 for cul-de-sacs and 400 for loop streets.

Residential Collector - Roadway that collects traffic to and from residential areas via residential local and residential access streets and distributes it to arterial streets. Limited access is allowed from residential lots when no local street or access street is available. Desirable maximum ADT = 3,000.

Residential Local Street - Street that usually carry through traffic having its origin or destination within the immediate neighborhood and provide direct access to property. Desirable maximum ADT = 1,500.

Reviewing Engineer - An individual or individuals designated by the City Engineer to review development projects and make decisions as outlined in this Policy. The review should include input from the appropriate departments (fire, police, public works, planning & development, etc.).

Right-In, Right-Out (RIRO) - A driveway where left turns and cross-overs at an intersection are prohibited.

Right-of-Way - Land reserved, used, or slated for use for a highway, street, alley, walkway, drainage facility, or other public purpose related to transportation or utilities.

Roadway - The portion of a highway improved, designed or ordinarily used for vehicular travel. That portion of a street which only includes the travel lanes.

Roadway Classification System - See "Functional Classification System"

Service Street - A local street that is used to provide alternative access to a street with higher functional classification; service roads may include internal circulation systems, frontage roads, or backage roads.

Shared Driveway - A single, private driveway serving two or more lots.

Side Friction - Driver delays and conflicts caused by vehicles entering and exiting driveways.

Sidewalk - A paved surface designed specifically to serve permitted non-motorized transportation users. Refer to sidewalk definitions in the Code of Ordinances.

Sight Distance - The distance visible to the driver of a passenger vehicle measured along the normal travel path of a roadway to a specified height above the roadway when the view is unobstructed to oncoming traffic. Sight distance would include intersection sight distance, roadway sight distance, stopping sight distance, passing sight distance, etc.

Spacing - For purposes of this policy, the distance between two roadways and or drives measured from the center of one roadway to the center of the next roadway, unless otherwise defined for a specific application.

Speed Differential - The difference in travel speed between through traffic, and traffic entering or exiting a roadway.

Stopping Sight Distance - The minimum distance required for a vehicle traveling on a roadway to come to a complete stop upon the driver seeing a potential conflict; it includes driver reaction and braking time and is based on a wet pavement.

Storage Length - see Queue Length.

Street - The pavement and sub-grade of an access, local, collector or arterial roadway, inclusive of shoulder, curb, on-street parking, etc.

Strip Development - A linear pattern of roadside commercial development, typically with relatively shallow lots and frequent drives. Also typically lacks a network of side streets permitting efficient traffic circulation between adjacent developments.

Taper - The transitional area of a roadway where lanes are added or dropped.

Throat Length -The distance parallel to the centerline of a driveway to the first on-site location at which a driver can make a right-turn or a left turn. On roadways with curb and gutter, the throat length shall be measured from the back of the curb. On roadways without a curb and gutter, the throat length shall be measured from the edge of the shoulder.

Through Street –A through street shall be defined as any part of any roadway or street functionally classified as a Local, Collector, Arterial, Frontage Road, or Highway that assumes priority or which may be designated priority over another roadway at intersections based on the highest functional classification of intersecting roadways, except when otherwise may be determined by the City Traffic Engineer upon the basis of an engineering and traffic study and such condition is appropriately signed or controlled to give notice thereof.

Traffic Flow - The actual amount of traffic movement.

Transportation Impact Study - A report that compares relative roadway conditions with and without a proposed development; typically including an analysis of mitigation measures.

Trip Generation - The estimated volume of entering and exiting traffic caused by a particular development.

Turning Radius - The radius of an arc that approximates the turning path of a vehicle.

Two-Way Left-Turn Lane (TWLTL) – A lane located between opposing traffic flows which provides a transition area for left-turning vehicles.

Uncontrolled Access - A situation that results in the incremental development of an uncontrolled number, spacing, and/or design of access facilities.

Upstream - Against (behind) the direction of the traffic flow.

Vehicle Trip - A vehicle moving from a point of origin to a point of destination.

Warrant - The standardized condition under which traffic management techniques are justified.

Weaving - Crossing of traffic streams moving in the same general direction through merging and diverging, for instance near an interchange or intersection.

Section 3 - Street Classification System

3.1. Street Classifications

Safe and efficient operation of roadways requires that these facilities be classified and designed for the functions that they will perform. The entire highway network is traditionally classified by relating the proportion of through movement to the proportion of access. Interstates and freeways, which have full control of access and serve only the movement function, are at one end of the scale; access and local streets, which predominately provide for land connections, are at the other end of the scale because they have little or no through movement. Collector and arterial streets normally must provide a balance between movement and access functions; it is along these streets that access management actions become most important.

Interstates, freeways and expressways in Lee's Summit are generally the responsibility of the Missouri Department of Transportation (MoDOT). As such, those facilities should generally reference the state and federal classification systems and applicable requirements. City streets generally range from access streets to arterial streets. Seven roadway classifications are defined in Section 2; also referenced in more detail and context in the Thoroughfare Master Plan. These include:

- Major Arterial
- Minor Arterial
- Industrial/Commercial Collector
- Residential Collector
- Industrial/Commercial Local
- Residential Local
- Residential Access

A number of highway frontage roads exist in Lee's Summit, some owned by MoDOT and some by the City. These frontage roads are unique by their proximity to fully-controlled highways but the function of each may be categorized by one of the seven aforementioned classifications.

3.2. Typical Sections

A typical section for each classification is described in the Lee's Summit Public Works Department Design and Construction Manual. Some of the considerations that go into defining the needed cross section of any given street segment are described below.

3.2.A. Traffic Lanes

The number and types of lanes on any street should be determined by existing and projected traffic volumes and the nature of land use activity adjacent to it. Turn lanes are essential at many intersections. Reference the Thoroughfare Master Plan and Access Management Code for lane requirements and planning.

3.2.B. Bicyclists

Bicycle routes are established on some city streets. Considerations for bicyclists could include a wider traffic lane, marked bike lanes, or shared-use paths. Reference the

Bicycle Transportation Plan and Greenway Master Plan for bicyclist accommodation types and locations.

3.2.C. Pedestrians

Sidewalks or shared-use paths are generally required on one or both sides of a public street. Requirements are outlined in the Design and Construction Manual and the Unified Development Ordinance. Reference the Greenway Master Plan for shared-use path locations.

3.2.D. Right-of-Way

Providing sufficient right-of-way to meet the long term growth potential of a street is one of the most important elements of the transportation system. Once development occurs adjacent to the street, additional expansion of the roadway may become very expensive or impractical if sufficient right-of-way is not available. This may in turn limit additional development if sufficient capacity cannot be provided.

In addition to the basic number of through lanes, street elements that influence the amount of right-of-way required include left-turn lanes (double left-turn lanes at some arterial street intersections), right-turn lanes, bike lanes, medians, sidewalks and shared-use paths.

3.2.E. Corner Right-of-Way Triangles

A minimum 25-foot triangle of additional right-of-way shall be provided at the corners of two intersecting streets as noted in the Unified Development Ordinance. The triangle is determined by measuring along both right-of-way lines 25 feet from their point of intersection and striking a line to connect the two points (see ***Figure 3-1***). A larger triangle may be required at intersecting streets that both have a designated classification of arterial or collector and/or where any street alignments require additional sight distance. A triangle of additional right-of-way may be required at intersections with driveways if the conditions are deemed appropriate by the City Traffic Engineer. The purpose of this triangle is to allow room for utilities, traffic control devices, sight distance, sidewalks and shared-use paths behind the corner radius of the intersection.

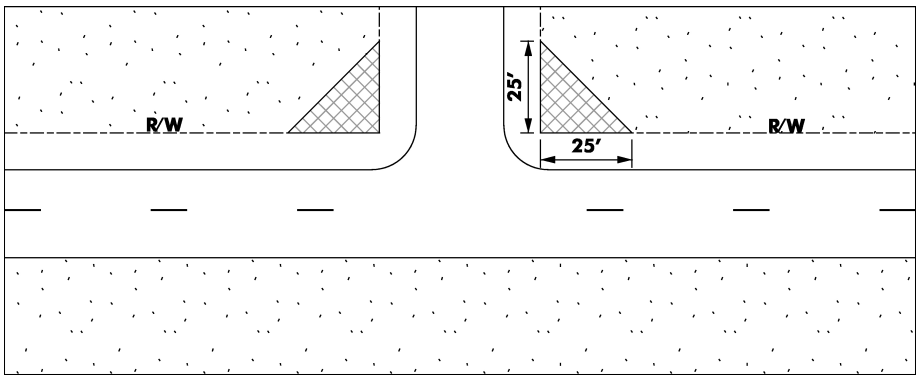


Figure 3-1
Corner Right-of-Way Triangle

Section 4 - Street Planning

The location and spacing of arterial streets should reference the Thoroughfare Master Plan. Arterials have highly controlled alignments associated with long-term community planning considerations and predetermined connectivity to fully-controlled highways. Collectors are also depicted in the Thoroughfare Master Plan, but to a much lesser extent than arterials with more flexibly in location and alignment to better accommodate development activity. Collector streets are the backbone of effective access management. These streets, both those classified as collector streets and those within or adjacent to developments that serve in this capacity, allow many developments to be efficiently served from a limited number of connections to the arterial street network.

4.1. Planning Requirements

The following requirements shall be applied in the development of the collector street network.

4.1.A. Prior to the approval of any new development, the Thoroughfare Master Plan shall be reviewed and the development compared with consideration of the planned conceptual collector street network, or the modification thereto that maintains continuity thereof, for the area bounded by the arterial streets or section lines containing the development and projected future land uses based on zoning and supporting transportation system within the area. Consideration must also be given to existing or planned connections and collector streets in adjacent sections, nearby developments, existing property lines and topographic features.

4.1.B. The proposed development plan may propose an alternative collector street network as long as the principles described above are followed. The alternative collector street network must be approved along with the development plan. Within exclusively residential areas, continuous collector streets are desirable, but not essential. In these areas, a less defined collector network may be utilized, but should provide connectivity between developments and relatively direct access between the designated collector street connections to the arterial street network (note that access at other connections to the arterial street network may be restricted per this policy).

4.1.C. Collector streets shall be public streets.

4.1.D. A collector street may serve both residential and non-residential development, but should be planned to discourage use by commercial traffic into residential areas.

4.1.E. Collector streets should connect to arterial streets at full median opening locations in accordance with the standards in this policy. Where feasible, the connection should also be made at a location suitable for a traffic signal.

4.2. Example

An example of a collector street network is shown on ***Figure 4-1***. Note that in order to maintain good connection spacing on the arterial roadways, commercial development areas should be at least 1/4 mile by 1/4 mile in size, larger where adjacent to major arterial streets.

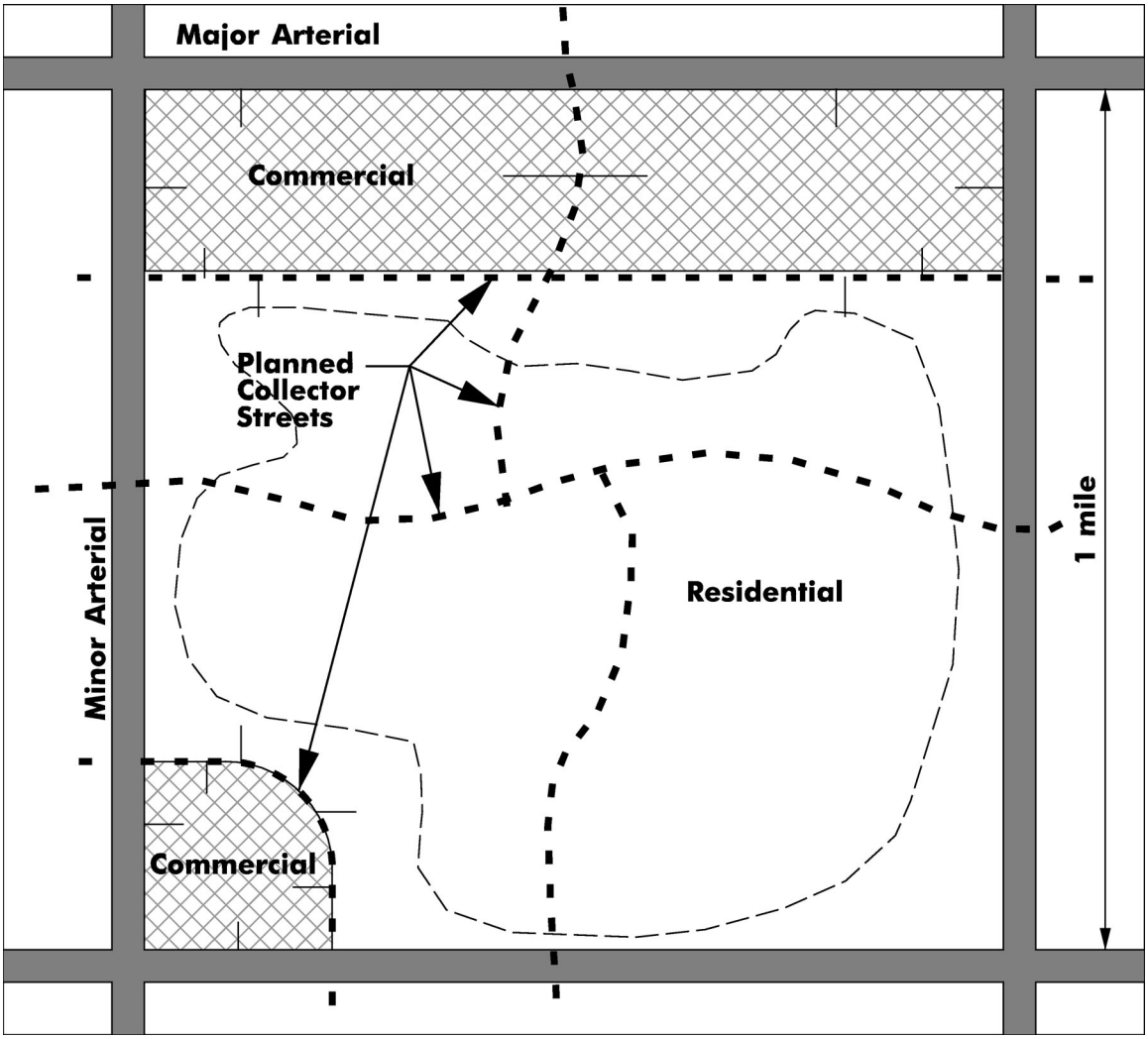


Figure 4-1
Collector Street Planning Example

Section 5 - Review/Exceptions Process

Flexibility is essential when administering access spacing requirements to balance access management objectives with the needs and constraints of a development site. The following administrative procedures are intended to provide flexibility, while maintaining a fair, equitable and consistent process for access management decisions. The exception/waiver process described below applies to all of the standards in this policy.

5.1. Approval Required

5.1.A. No person shall construct or modify any access connection to a Lee's Summit street without approval from the City. Approval is typically granted through the preliminary and final development plan processes, plats and/or engineering approval of construction plans for streets. All requests for connections to a roadway, including those requests by Right-of-Way permit, within the City shall be reviewed for conformance with this Access Management Code.

5.1.B. Access connections that do not conform to this policy and were constructed before the effective date of this policy, as may be applicable to the original policy of 2004, shall be considered legal nonconforming connections and may continue until a change occurs as provided in Section 8. Temporary access connections are legal nonconforming connections until such time as the temporary condition expires. Access connections and legal nonconforming conditions do not limit the City's ability to restrict access or relocate access as the extent, number and location of access, whether full or partial, for existing legal conforming or legal nonconforming conditions is not guaranteed at any time.

5.1.C. Any access connection constructed without approval after the adoption of this policy shall be considered an illegal nonconforming connection and shall be issued a violation notice and may be closed or removed.

5.2. Requests for Modification

5.2.A. Access connections deemed in conformance with this policy may be authorized by the City Traffic Engineer. Any requests for modification shall require approval by the City Traffic Engineer. Any appeal of the decision of the City Traffic Engineer shall be to the city council which has final authority. Note: some access restrictions are also described on the recorded plat and the subject plat should be referenced in review of any request for modification.

5.2.B. Modifications of greater than 10 percent of the allowable spacing standard or 100 feet, whichever is less, shall require documentation justifying the need for the modification and an access management plan for the site that includes site frontage plus the distance of connection spacing standards from either side of the property lines. The analysis shall address existing and future access for study area properties, evaluate impacts of the proposed plan versus impacts of adherence to standards, and include improvements and recommendations necessary to implement the proposed plan.

5.3. Waiver for Nonconforming Situations

Where the existing configuration of properties and driveways in the vicinity of the subject site precludes spacing of an access point in accordance with the spacing standards of this policy, the City

Traffic Engineer, in consultation with appropriate City departments, shall be authorized to waive the spacing requirement if all of the following conditions have been met:

5.3.A. No other reasonable access to the property is available.

5.3.B. The connection does not create a potential safety or operational problem as reasonably determined by the City Traffic Engineer based on a review of a transportation impact study prepared by the applicant's professional engineer.

5.3.C. The access connection along the property line farthest from the intersection may be allowed. The construction of a median may be required on the street to restrict movements to right-in/right-out and only one drive shall be permitted along the roadway having the higher functional classification.

5.3.D. Joint access shall be considered with the property adjacent to the farthest property line. In these cases:

- A joint-use driveway with cross-access easements will be established to serve two abutting building sites,
- The building site is designed to provide cross access and unified circulation with abutting sites; and
- The property owner agrees to close any pre-existing curb cuts after the construction of both sides of the joint use driveway.

Where the spacing requirement is waived, the requirements for turn lanes may also be amended accordingly at the discretion of the City Traffic Engineer due to physical constraints and limitations of access separation.

5.4. Temporary Access

A development that cannot meet the connection spacing standards of this policy and has no reasonable alternative means of access to the public road network may be allowed a temporary connection. When adjoining parcels develop which can provide joint or cross access, permission for the temporary connection shall be rescinded and the property owner must remove the temporary access and apply for another connection.

Conditions shall be included in the approval of a temporary connection including, but not limited to the following:

- Applicants must sign an agreement to participate in any future project to consolidate access points.
- Applicants must sign an agreement to abandon the interim or temporary access when adequate alternative access becomes available.
- The transportation impact study should consider both the temporary and final access/circulation plan.

A limit may be placed on the development intensity of small corner properties with inadequate corner clearance, until alternative access becomes available.

Section 6 - Access Management and Subdivision Practices

The design of property access is established when land is subdivided for commercial or residential development. Therefore, all new lot splits and commercial and residential plats will be reviewed to assure that property access is designed in accordance with the access management code. The following standards shall also apply.

6.1. Creation of New Lots

New lots shall not be created on any arterial or collector street unless they comply with the access spacing standards of this plan through existing, shared, or alternative access.

6.2. Subdivision Access

6.2.A. When a subdivision is proposed that would abut or contain an arterial or collector street, it shall be designed to provide lots abutting the classified roadway with access from an interior local or access street. On arterial streets, appropriate measures may be required to buffer residential properties from the noise and traffic of the through street.

6.2.B. Direct residential driveway access to individual one-family and two-family dwellings shall be avoided from any arterial or collector street.

6.2.C. Residential corner lots shall obtain access from the street with the lowest functional classification, and access shall be placed as far from the intersection as possible to achieve the maximum available corner clearance. Residential corner lots located at the intersection of two local or access streets may have one access from each street so long as minimum corner clearances are met, the access does not impact the intersection functional area, or encroach the sight distance triangle. Access shall also reference the connection spacing standards in Section 15 and consider any restrictions that may be noted on the recorded plat.

6.2.D. Access locations to subdivisions shall provide appropriate sight distance, driveway spacing, and include a review of related considerations.

6.3. Connectivity of Supporting Streets

As the City of Lee's Summit continues to grow and land is subdivided for development, it will be essential to provide for a balanced network of local and collector streets to avoid traffic congestion on arterial roadways. Without a supporting well connected minor street network, all local trips are forced onto a few major streets resulting in significant traffic delays and driver frustration. Reasonable connectivity of the local street network is important. Fragmented street networks impede emergency access, focus congestion, diminish operational and maintenance efficiencies (e.g. snow removal, service deliveries, etc.) and increase the number and length of individual trips. A network of residential local and access streets should be designed in a manner that fosters appropriate operating speeds, diversity of routes, access to collectors, shorter block lengths, and fewer through trips, without eliminating connectivity.

To accomplish these objectives, the following standards shall apply:

6.3.A. New residential subdivisions shall be designed to coordinate with existing, proposed and anticipated streets.

6.3.B. All new developments shall be designed to discourage the use of access and local roadways by non-local traffic while maintaining the overall connectivity with the surrounding system of roadways. This may be accomplished through the use of well-connected local streets to centrally located collectors, shorter block lengths between streets that increase route choice, modified grid systems, T-intersections, roadway jogs, or other appropriate traffic calming or street design measures within the development.

6.3.C. Proposed streets should be extended to the boundary lines of the proposed development where such an extension would connect with streets in another existing, platted, approved, planned or potential development. The extension or connection should be based upon traffic circulation and/or public safety enhancement opportunities and compatibility of adjacent land uses, development requirements for access and to reasonably support the highest and best anticipated use of the property in conformance with the Comprehensive Plan.

6.3.D. When a proposed development abuts unplatted land or a future development phase of the same development, stub streets should be provided to provide access to abutting properties or to logically extend the street network into the surrounding areas. All street stubs serving more than two residential units (or exceeds the allowable maximum length of dead-end street considering provisions of the Fire Code or Unified Development Ordinance) should be provided with a temporary cul-de-sac, and the restoration and extension of the street would be the responsibility of any future developer of the abutting land.

Section 7 - Unified Access and Circulation

Internal connections between neighboring properties and shared driveways allow vehicles to circulate from one business or development to the next without having to reenter a collector or arterial street. Unified access and circulation improves the overall ease of access to development and reduces the need for individual driveways. The purpose of this section is to accomplish unified access and circulation systems for commercial development.

7.1. Outparcels and Shopping Center Access

Outparcels are lots on the perimeter of a larger parcel that break its frontage along a roadway. They are often created along arterial street frontage of shopping center sites, and leased or sold separately to businesses that desire the visibility of major street locations. Outparcel access policies foster unified access and circulation systems that serve outparcels as well as interior development, thereby reducing the need for driveways on an arterial street.

In the interest of promoting unified access and circulation systems, development sites under the same ownership or consolidated for the purposes of development and comprised of more than one building site shall prepare a unified access and circulation plan. In addition, the following shall apply:

7.1.A. The number of connections shall be the minimum number necessary to provide reasonable access to the overall development site and not the maximum available for that frontage under the connection spacing requirements in this policy.

7.1.B. Access to outparcels shall be internalized using the shared circulation system of the principal development.

7.1.C. All necessary easements and agreements shall be recorded in an instrument that runs with the deed to the property.

7.1.D. Unified access for abutting properties under different ownership and not part of an overall development plan shall be addressed through the Joint and Cross Access provisions below.

7.1.E. Where properties are under the same ownership or consolidated for the purposes of development, the shared access, driveway or street(s) shall be constructed by the developer.

7.2. Joint and Cross Access

7.2.A. Joint and cross access policies promote connections between developments, interactions of land use varieties, as well as continuity of properties along a corridor without thoroughfare conflicts. These policies help to achieve unified access and circulation systems for individual developments under separate ownership that could not otherwise meet access spacing standards or that would benefit from interconnection, i.e., adjacent shopping centers or office parks that abut shopping centers, apartments and restaurants. Adjacent commercial or office properties and major traffic generators, e.g. shopping plazas, shall provide a cross-access drive and pedestrian access way to allow circulation between adjacent properties. This requirement shall also apply to a building site that abuts an existing developed property unless the City Traffic Engineer finds that this would be impractical.

7.2.B. To promote efficient circulation between smaller development sites, the City Traffic Engineer may require dedication of a 30-foot easement that extends to the edges of the property lines of the development site under consideration to provide for the development of shared access. The shared access shall be of sufficient width to accommodate two-way travel aisles and incorporate stub-outs and other design features that make it visually obvious that abutting properties may be tied in to it. Abutting properties shall be required to continue the shared access as they develop or redevelop in accordance with the requirements of this policy. The easement may be provided to the front or rear of the site or across the site where it connects to a public roadway.

7.2.C. Property owners shall record all necessary easements and agreements, including an easement allowing cross access to and from the adjacent properties, an agreement to close driveways provided for access in the interim after construction of the joint use driveway(s) or shared access (or private road), and a joint maintenance agreement defining maintenance responsibilities of property owners that share the joint-use driveway and cross-access system (or private road).

7.2.D. Joint and cross access requirements may be waived by the City Traffic Engineer for special circumstances such as incompatible uses, e.g. a gas station next to a child care center, or major physical constraints, e.g. change in grade between properties makes connection impractical.

Section 8 - Redevelopment

Access management policies are not retroactive, but existing legal non-conforming access is not immune to the problems associated with inept access management; and the absence of access management policies in the past does not diminish the benefits of proactive improvement. Existing nonconforming properties may continue in the same manner as they existed before this policy was adopted and until such time redevelopment of the property, significant change of property use or street improvement occurs. This allowance, commonly known as "grandfathering", protects the substantial investment of property owners and recognizes the expense a property owner may incur bringing nonconforming properties into conformance.

Yet nonconforming access situations may pose safety dilemmas, contribute to traffic congestion, deter economic development, or undermine community character. To address the public interest in these matters, without posing an undue burden on property owners, access to existing nonconforming properties is addressed when a change in use, expanded use or redevelopment occurs so applicants can finance access improvements as part of the overall property improvement. In some instances, opportunities to improve the location or design of property access can also occur during the public roadway improvement process. The extent of access to a property is not guaranteed and such access may be limited directly by improvements to the street where access exists or indirectly through access restrictions to the subject street at intersecting streets. This plan includes the following conditions or circumstances where property owners or permittees may be required to relocate or reconstruct nonconforming access features and/or pursue alternative access measures.

8.1. Requirements

Properties with nonconforming access connections shall be allowed to continue, but must be brought into compliance with this Access Management Code to the maximum extent possible when modifications to the roadway are made or when a change in use or density results in one or more of the following conditions:

8.1.A. When a new connection is requested or required.

8.1.B. When a preliminary and/or final development plan is required.

8.1.C. When a preliminary and/or final plat is required.

8.1.D. When a site experiences an increase of ten percent (10%) or greater in peak hour trips or 100 vehicles per hour in the peak hour, whichever is less, as determined by any one of the following methods:

8.1.D.1. An estimation based on the ITE Trip Generation manual (latest edition) for typical land uses, or

8.1.D.2. Traffic counts made at similar traffic generators in the metropolitan area, or

8.1.D.3. Actual traffic monitoring conducted during the peak hour of the adjacent roadway traffic for the property.

8.1.E. If the principal activity on a property is discontinued for a period of one year or more, or construction has not been initiated for a previously approved final development plan or final plat within a period of one year from the date of approval, or the previously approved preliminary

development plan or preliminary plat has expired in accordance with the Unified Development Ordinance, then that property must thereafter be brought into conformance with all applicable access management requirements of this policy (unless otherwise exempted by the permitting authority) and any previous waivers granted through prior approvals are nullified. This shall include the need to update any previously approved transportation impact study where new traffic projections are available for the proposed development or redevelopment project. For uses or approved plats in existence upon adoption of this policy, the initial one-year period for the purposes of this section already ended as the effective date of these requirements was established in 2004.

8.1.F. Access to all change-in-use or change-in-density activities shall require approval by the City Traffic Engineer. All relevant requirements of this policy shall apply. When a development has been approved with a waiver or modification to these access management requirements, the final development plan and or final plat carries the approval of such waiver or modification in accordance with the approved preliminary plan and or preliminary plat provided by City Council until such time as the preliminary plan and or preliminary plat has expired in accordance with the Unified Development Ordinance. Conformance to these requirements may otherwise be dictated by the remaining provisions of Section 8.1.

Section 9 - Transportation Impact Study Requirements

9.1. Background and Purpose

Land use and transportation are strongly interdependent. Transportation facilities and services are essential for development to occur, and high levels of mobility and accessibility are needed to attract the economic development to provide and maintain a high quality of life.

The primary purpose for evaluating the impact of development through transportation impact studies is to protect the integrity of the transportation systems and ensure adequate transportation infrastructure exists to support not only the proposed development but existing users. Neither public nor private interests are well served if transportations systems needlessly degrade due to poor planning and design.

In order to accomplish this objective, the review of transportation systems associated with development needs to be extensively scrutinized and needs to take a long-term perspective. What might be acceptable today may not be as an area develops and matures. This is certainly consistent with the City's long-range planning for land use, streets and other infrastructure.

A transportation impact study, and the resulting work products, will allow for more informed decision-making and could lead to necessary mitigation measures for the impacts created by development to maintain or provide safe and adequate performance of the transportation systems.

9.2. Extent of Study Required

The necessity to review all land development applications from a transportation perspective as well as the wide variety of land use types and intensities suggest that multiple thresholds or triggers be established to warrant a transportation impact study. The following thresholds and associated scope of study will be followed.

9.2.A. All Applications

9.2.A.1. Identify the specific development plan under study and any existing development on and/or approved plans for the site (land use types and intensities and the arrangement of buildings, parking and access). Also identify land uses (including types and the arrangement of buildings, parking and access) on property abutting the proposed development site, including property across public streets.

9.2.A.2. Identify the land uses shown in the Lee's Summit Comprehensive Plan for the proposed development site under study, as well as the ultimate arterial and collector street network in the vicinity of the site.

9.2.A.3. Identify the functional classification of the public street(s) within the development, bordering the site and those streets on which access for the development is proposed.

9.2.A.4. Identify allowable access to the development site as defined by the City Design and Construction Manual, Unified Development Ordinance and/or Access Management criteria.

9.2.A.5. Document current public street characteristics adjacent to the site, including the nearest arterial and collector streets (number and types of lanes, speed limits or 85th percentile speeds, and sight distances along the public street(s) from proposed access).

9.2.A.6. Compare proposed access with established standards and criteria (driveway spacing, alignment with other streets and driveways, width of driveway, and minimum sight distances). Identify influences or impacts of proposed access to existing access for other properties. If appropriate, assess the feasibility of access connections to abutting properties, including shared access with the public street system.

9.2.A.7. Estimate the number of trips generated by existing and proposed development on the site for a typical weekday, weekday commuter peak hours (commonly referred to as A.M. and P.M. peak hours), and other peak hour(s). Calculate the net difference in trips between existing and proposed uses. If the development site already has an approved plan, also estimate the number of trips that would be generated by the approved land uses. If the development application is proposing a land use different than indicated in the Comprehensive Plan, also estimate the number of trips that would be generated by the land use indicated in the Comprehensive Plan. The Director of Planning & Development shall approve the potential land use intensity in such cases.

9.2.B. Rezoning, Preliminary Development Plan, Preliminary Plat, and Conceptual Development Plan applications.

9.2.B.1. Development or Site Plan Generates 100 to 499 Trips in a Peak Hour

A transportation impact study will be required. The study area may tend to be confined to the street or streets on which access is proposed but should be extended to at least the first major intersection in each direction.

9.2.B.2. Development or Site Plan Generates 500 or More Trips in a Peak Hour

A transportation impact study will be required. The study area will include the street or streets on which access is proposed to at least the first major intersection in each direction but may also extend beyond the first major intersection and/or include other streets.

9.2.B.3. Proposed Land Use Modifies the Comprehensive Plan

Determine the extent of a transportation impact study based on anticipated trip generation. Conduct comparative analyses using the proposed land use and the land use identified in the comprehensive plan.

Table 9-1 lists several land use types and the approximate amount of development that would generate 100 or 500 trips in a typical weekday peak hour.

Table 9-1
Typical Development Size Thresholds

ITE Code	Land Use	Units	Size to Generate 100 Trips	Size to Generate 500 Trips
110	Light Industry	Sq. Ft.	160,000	800,000
130	Industrial Park	Sq. Ft.	250,000	1,250,000
140	Manufacturing	Sq. Ft.	140,000	750,000
150	Warehouse	Sq. Ft.	500,000	2, 650,000
210	Single Family	Units	100	510
220	Apartments	Units	180	n/a
310	Hotel	Units	170	n/a
565	Daycare	Sq. Ft.	9,000	n/a
712	Small Office	Sq. Ft.	40,000	n/a
720	Medical Office	Sq. Ft.	30,000	n/a
812	Bldg Materials	Sq. Ft.	50,000	n/a
813	Discount Superstore	Sq. Ft.	all	115,000
816	Hardware Store	Sq. Ft.	40,000	n/a
820	Shopping Center	Sq. Ft.	10,000	90,000
932	Sit Down Rest.	Sq. Ft.	10,000	n/a
934	Fast Food w/DT	Sq. Ft.	3,000	n/a
945	Gas Sta. w/Conv. Store	Sq. Ft.	all	n/a
881	Pharmacy w/DT	Sq. Ft.	9,500	n/a
912	Bank w/DT	Lanes	4	n/a
912	Bank w/DT	Sq. Ft.	5,000	n/a

Institute of Transportation Engineers (ITE) *Trip Generation*, 10th Edition

9.3. Qualifications to Conduct and Review a Study

The parties involved in a land development application sometimes have different objectives and perspectives. Further, the recommended elements of a transportation impact study require skills found only in a trained professional engineer with specific experience in the field of traffic engineering and transportation planning.

For these reasons, the person conducting and the person reviewing the study must be registered professional engineers licensed in the State of Missouri with at least five years of demonstrated experience either in the preparation or review of transportation impact studies for land development. A registered Professional Traffic Operations Engineer, certified by the Transportation Professional Certification Board, is preferred.

The City Traffic Engineer shall determine whether an individual professional engineer is qualified to conduct a transportation impact study. Credentials shall be provided upon request. Any appeal shall be made to the City Council.

9.4. Review and Use of a Study

A transportation impact study should be viewed as a technical assessment of existing and projected transportation conditions. The extent to which individual professional judgment has to

be applied will be minimized by provision of community policies and practices with respect to street and traffic control design and land development.

Ultimately, a transportation impact study will be used by professional staff to make recommendations to the Planning Commission and City Council. Transportation is one element amongst many that must be considered.

City personnel charged with reviewing transportation impact studies have several functions to consider:

9.4.A. Determine whether the impacts of development have been adequately assessed.

9.4.B. Ensure that proposed access is properly coordinated with existing and planned facilities, fits into the ultimate configuration of the street network, and is appropriately designed at its connection to the public street network.

9.4.C. Determine whether proposed improvements for the public street network are necessary and sufficient to mitigate the impacts created, that the improvements meet local requirements, and that adequate transportation infrastructure is available to support the existing transportation users as well as the proposed development in the interest of protecting public health, safety and welfare. The expectations for adequate infrastructure relate to safety and operations in reference to not only the Access Management Code, but also the other standards, policies and ordinances of the City; including but not limited to the Level of Service Policy and Unimproved Road Policy.

9.4.D. Ensure that the development plan considers the needs of pedestrians, bicyclists, and transit users.

9.4.E. Determine whether the development layout can accommodate all anticipated vehicle types and that such vehicles can be accommodated on-site without adverse impact to the public street network.

9.4.F. Invite other responsible and applicable transportation agencies or entities, e.g., Missouri Department of Transportation, to participate in the study and review processes.

9.4.G. Provide consistent, fair, and legally defensible reviews.

9.5. Standard Transportation Impact Study Procedures

9.5.A. Study Methodology Determination

Prior to conducting any transportation impact study it is necessary to determine the minimum technical responsibilities and analyses that will be performed. It is the applicant's responsibility to ensure that the study utilize the techniques and practices accepted by the City and other participating agencies.

The following items shall be considered, discussed and agreed to by the City Traffic Engineer and the applicant for transportation impact studies. The City Traffic Engineer can provide a general scope of services for a traffic impact study upon request from the applicant or applicant's traffic engineer.

- Definition of the proposed development, including type and intensity of the proposed land uses and proposed access.
- Study area limits based on the magnitude of the development.
- Impact or influence on access for adjacent and nearby properties.
- Time periods to be analyzed, e.g., weekday A.M. and P.M. peak hours.
- Scenarios or conditions to be analyzed, e.g. existing conditions, existing plus approved/unbuilt, existing plus approved/unbuilt plus development conditions, and future conditions (consistent with horizon year in City traffic model).
- Future analysis year(s), including special study procedures for multi-phase development plans.
- General assumptions for trip generation, trip distribution, mode split, and traffic assignment.
- Traffic analysis tools and acceptable parameters.
- Availability and applicability of known data.
- Traffic data collection requirements and responsibilities, including time periods in which traffic counts will be collected.
- Transportation system data, e.g. traffic signals, transit stops, etc.
- Planned transportation system improvements, including the anticipated schedule, for all modes of transportation, e.g. street widening, bicycle trails, transit stops, etc.
- Planned/Approved development in the vicinity and any associated improvement conditions/mitigations.
- Methodology for projecting future traffic volumes.
- Current level of service, road condition and access management requirements.
- Acceptable mitigation strategies.

9.5.B. Study Area

The study area and the intersections and street segments to be included will vary for a number of reasons - the type and intensity of the development, the maturity of other development in the vicinity, the condition of the street network, etc. The study area should be large enough to assess the impact or influence of proposed access along street segments and to evaluate the ability of streets and intersections to absorb the additional traffic.

The study area should at least include those street segments onto which access is proposed and should typically extend to the next major intersection (arterial/arterial, arterial/collector, or collector/collector) in each direction.

9.5.C. Analysis Periods

Transportation impact studies should be based on peak-hour analyses. The analysis period(s) should be based on the peaking characteristics of both the public transportation systems and development traffic. The typical analysis periods for most development are the weekday A.M. and P.M. peak hours, often coincidental with peak commuter activity. Retail development that is typically not open early in the morning may not warrant study for the A.M. peak hour. On the other hand, intense retail activity in an area may warrant study during the Saturday peak hour. Some development generates its highest traffic volumes outside these time periods, such as Church and Recreation/Entertainment Facilities, and may require unique study to ascertain the impact of its peak traffic activity.

9.5.D. Analysis Years

In general, the analysis years should be the current period, development build-year, and the horizon year in the City's traffic model. Not all development will require a horizon year analysis; depending on the scale and land use proposed, consistency with the Comprehensive Plan and

Thoroughfare Master Plan, rights-of-way impact for ultimate buildout of adjacent and inclusive roadways and other factors that may be considered by the City Traffic Engineer for its waiver.

9.5.E. Method of Determining Future Traffic Volumes

Future traffic volumes on arterial and collector streets may be identified from the City's traffic model used to develop the long-range transportation plan for each arterial and collector street segment in the study area. The City Traffic Engineer shall provide future traffic projections based on the long-range transportation model or provide a method of derivation to be used in the analysis based on the scope of services. Some large-scale projects that significantly change the land use or transportation network may require long-range transportation modeling, in which case the City may share its transportation demand model for reference. Future traffic volumes are not applicable if the analysis of future year is not included in the scope of study.

9.6. Transportation Impact Assessment

Once the parameters for the transportation impact study have been established, the steps in the study process require the applicant to collect relevant data, assess existing conditions, assess the impact of development, and project future conditions. Actually, two baseline conditions will be studied for existing conditions unless there are no approved developments in the vicinity - one called "Existing Conditions" that is based on conditions in the study area at the time of the study and another called "Existing Plus Approved/Unbuilt Conditions" that is comprised of existing conditions plus traffic forecasts linked to development projects in the vicinity that have been approved but not yet built.

9.6.A. Data Collection

The applicant is responsible for collecting, assembling, analysis and presentation of all data. Typically, the following types of data are required for the study area.

9.6.A.1. Proposed Site Development Characteristics

Identify the specific development plan under study and any existing development on and/or approved plans for the site. This includes land use types and intensities and the arrangement of buildings, parking and access. Also identify land uses (including types and the arrangement of buildings, parking and access) on property abutting the proposed development site, including property across public streets.

Information for the proposed development shall be displayed on a scaled drawing. If detailed information regarding abutting property is not shown on the development plan, it may be exhibited on a current aerial photograph, or other drawing, along with the proposed development.

This information is needed to assess the proposed access in relation to existing driveways and side streets at the site and along the street corridors on which access is proposed. This process should also take into account potential access for undeveloped land in the vicinity.

9.6.A.2. Transportation System Data

This includes the physical and functional characteristics of the transportation systems in the study area. Data to be collected includes:

- The functional classification and jurisdiction responsible for each street.
- The number and types of lanes for all intersections and street segments.

- Traffic control devices such as traffic signals (including left-turn control type(s) and phasing), other intersection control, and speed limits.
- Transit, bicycle, and pedestrian routes and facilities.
- Available sight distances to/from each proposed point of access.
- Planned streets not yet built.
- Planned transit, bicycle and pedestrian routes and facilities not yet built.
- Planned improvements for each street and/or intersection (either programmed for construction or included in the long-range transportation plan).

9.6.A.3. Transportation Demand Data

This includes current traffic volumes (intersection turning movement counts), percent trucks, peak hour factors, transit patronage, bicycle usage, and pedestrian usage. For some studies, additional data such as right-turn-on-red usage, traffic distribution by lane, or other similar data may be required.

Intersection turning movement counts shall be taken on a typical Tuesday, Wednesday, and/or Thursday for weekday conditions. It is preferred that morning and afternoon counts be taken on the same day. For a study requiring traffic counts at several intersections that cannot be accomplished all in one day, the counting program should be organized so that adjacent intersections are counted as close in time as possible and volumes adjusted to balance the highest movements measured. As a minimum, traffic volumes should be measured at any existing site driveway and on the adjacent streets, including the nearest arterial/arterial or arterial/collector intersection in each direction along streets bordering the development site. If a proposed driveway or street will line up with an existing driveway or street opposite it, traffic volumes shall be collected at the existing intersection. The time periods in which existing traffic is counted should generally coincide with the highest combination of existing traffic plus traffic expected to be generated by the proposed development. A minimum of one hour is required but the count periods should extend at least 15 minutes before and at least 15 minutes beyond the anticipated peak hour to ensure that the highest one hour of traffic is identified. Traffic volume counts at intersections shall document left-turn, through and right-turn movements on all approaches and shall be tabulated in no greater than 15-minute increments. The City Traffic Engineer shall determine, based on the nature of the development, additional time periods and locations in which current traffic volumes shall be documented.

9.6.A.4. Traffic Forecasts for Approved/Unbuilt Development

The City Traffic Engineer will determine which approved but unbuilt development influences the study area and will provide the traffic forecasts from those developments for each intersection and street segment in the study area.

9.6.A.5. Land Use Data

Identify the land use(s) shown in the Lee's Summit Comprehensive Plan for the proposed development site under study.

9.6.B. Operational Analysis

Capacity analyses shall be performed for each intersection in the study area. All capacity analyses shall be performed using a method or software approved by the City Traffic Engineer. In general, capacity analyses must be based on methodologies outlined in the latest edition of the Highway Capacity Manual (HCM). Planning level methods of analysis will not be accepted.

While other types of capacity analyses such as roundabout operations may be required for some transportation impact studies, most will include only signalized and unsignalized intersections.

9.6.B.1. Signalized Intersections

9.6.B.1.a. Analysis programs require input of intersection-specific information such as traffic volumes, number and types of lanes, signal phasing, etc., but also include a number of parameters reflecting traffic characteristics and signal operations that typically have preset default values. Care must be exercised to ensure that these parameters provide a true reflection of actual traffic operations and are based on normal practices of the City.

9.6.B.1.b. Cycle lengths used in these analyses must be reasonable based on the signal phasing and traffic demand at the intersection. For example, an arterial/arterial intersection with 8-phase control and protected-only left-turn phasing would likely use a cycle length of at least 100 seconds but possibly as high as 120 to 140 seconds. The cycle length to be used for the analyses shall be based on either existing operations or a cycle length optimization available with most capacity analysis software. Likewise, the green time (or cycle split) allocated to each phase must provide an accurate reflection of existing conditions. For isolated intersections, it is preferred that green times be determined through an optimization program in order to show how well the intersection could operate. For signalized intersections in coordination, actual timings should be used. Other means of developing green times shall be reviewed in advance with the City Traffic Engineer.

9.6.B.1.c. Other considerations in most analyses include the peak hour factor (PHF), percent trucks, clearance intervals, and the queuing model. The PHF should reflect the actual counts taken at the intersection. Some percentage of trucks should be input - either the amount measured or an estimate agreed to with the City Traffic Engineer. Clearance intervals shall be calculated based on practices recommended by the Institute of Transportation Engineers (ITE). These practices will typically yield clearance intervals (yellow plus all red) in the range of 5 to 6 seconds. Other clearance intervals related to pedestrian crossings shall also be accurately represented and comply with MUTCD, ADA and other requirements of the City. The type of queue model used should be applicable to the conditions and queue estimate should provide at least a 90 percent confidence level of the maximum anticipated queue.

9.6.B.1.d. On occasion, the lane utilization factor may need to be adjusted. Under some circumstances, near an interchange for example, the lane utilization may be imbalanced to such an extent that default values would not provide a likely representation of actual conditions.

9.6.B.1.e. The most important outputs of these analyses are the overall intersection level of service and the anticipated vehicle queuing in each lane.

9.6.B.1.f. Under some circumstances, traffic simulation modeling may be necessary or more appropriate to assess a street corridor. Closely-spaced traffic signals or corridors that employ traffic signal coordination are good candidates for simulation modeling. Any such model, however, must produce outputs comparable to HCM methodologies in order to estimate levels of service.

9.6.B.2. Unsignalized Intersections

9.6.B.2.a. The analysis on an unsignalized intersection is actually an analysis of only those movements that must yield to another movement. For example, at a two-way stop controlled intersection, the through and right-turn movements on the uncontrolled street are allowed free flow and are not subject to any delay.

9.6.B.2.b. Analysis results shall never be expressed as an overall intersection level of service; the term is meaningless.

9.6.B.2.c. The most important outputs of these analyses are the levels of service by lane or lane group and the anticipated vehicle queuing in each lane.

9.6.B.3. Acceptable Levels of Service

Refer to the City's Level of Service Policy adopted by City Council Resolution.

9.6.B.4. Vehicle Queuing Considerations

At signalized intersections, vehicle queues should be contained within turn lanes and should not extend into adjacent intersections. Vehicle queues in through lanes may influence the ability to access turn lanes and should be considered in assessing traffic operations.

At unsignalized intersections, vehicle queues should be contained within turn lanes. In the case of a side street or driveway serving a development site, vehicle queues should not impede site circulation, particularly inbound movements from public streets.

9.6.C. Background Traffic Growth

Background traffic is the expected increase in traffic volumes over time except for the specific development under study. Background traffic can be estimated out to the applicable horizon year in order to assess future traffic conditions. When the horizon year analysis is required, the Lee's Summit traffic model should be used to estimate background traffic growth in the following manner.

The model will need to be run four times to identify turning movement data for:

- Base Year Traffic Volumes;
- Base Year Select Zone Traffic Volumes;
- Future Year Traffic Volumes; and
- Future Year Select Zone Traffic Volumes.

Both the base year and future year models will need to be run two times. The first run will save the traffic volumes at the study intersections, as well as the select zone matrix for the TAZ's in which the development is being evaluated (the TAZ's under consideration will be identified by the City Traffic Engineer prior to the study). The model will need to be re-run using an all-or-nothing assignment of the select zone matrix based on the adjusted travel times for the previous runs. Details of this procedure are included in the model guideline documentation.

The City Traffic Engineer will establish the acceptable procedure for determining background traffic growth and future traffic volumes. Said procedure may be updated or revised from time to time at the discretion of the City Traffic Engineer.

The City Traffic Engineer may provide the applicant or applicant's traffic engineer background traffic growth for the horizon year.

9.6.D. Trip Generation

Trip generation is the process used to estimate the amount of travel associated with a specific land use or development. Trip generation is estimated through the use of "trip rates" that are based on some measure of the intensity of development, such as gross floor area (GFA).

Trip Generation, published by the Institute of Transportation Engineers (ITE), is the most comprehensive collection of trip generation available. The rates provided are based on nationwide data and numerous case studies. This manual is generally accepted as the industry standard and the latest edition shall be used for studies in the City of Lee's Summit. Caution needs to be applied when limited data points exist for a land use category. Local trip generation characteristics may be used if deemed to be properly collected, provide a broad and statistically valid collection of measures that represent the proposed land use, and are consistent with, but not exclusively unique to, the subject development application. The City Traffic Engineer shall make this determination.

In making the estimate of trips, the instructions and recommendations included in Trip Generation shall be followed. Typically, the trip generation equations, where available, provide the best estimates. Where data is provided for multiple independent variables, the one yielding the highest number of trips and is based on at least 10 samples (studies) shall be used.

Trip generation shall be estimated for the proposed development for daily, A.M. peak hour, and P.M. peak hour conditions. Other time periods may be necessary based on the land use and/or the inclusion of additional analysis periods in a particular study.

If the development site already has an approved plan, also estimate the number of trips that would be generated by the approved land uses. If the development application is proposing a land use that requires an amendment to the comprehensive plan, also estimate the number of trips that would be generated by the land use indicated in the Comprehensive Plan. The Director of Planning & Development shall approve the potential land use intensity in such cases for the purpose of estimating vehicle trips.

If internal capture rates and/or pass-by and diverted trips are used by the applicant, the applicable rates must be justified by the applicant and subject to approval by the City Traffic Engineer prior to use. In general, where pass-by trips are applicable, the number of pass-by trips should not exceed 10 percent of the adjacent street traffic during a peak hour or 25 percent of the development's external trip generating potential, whichever is less, and trips internally captured is highly dependent on proximity between compatible trip sharing land uses within a mixed-use development.

9.6.E. Trip Distribution

Trip distribution is the general direction of approach and departure to/from a development site. Trip distribution will typically be estimated using existing travel patterns exhibited in the area,

the position of the development in the community, capacity and classification of surrounding streets and the likely market area of the development. Data from similar development in the immediate vicinity could be useful as well. Good judgment is necessary to develop reasonable estimates of trip distribution.

9.6.F. Mode Split

Mode split is the estimate of number of travelers anticipated to use transportation modes other than automobiles. Data associated with most transportation impact studies is taken from suburban locations where there is little to no commuting alternative to automobile transportation. Further, the trip generation rates are based on the actual number of vehicles, not persons, entering and departing a particular land use. Therefore, mode split will not be applicable to most transportation impact studies.

Mode split, or modified trip generation rates, can be applied where the influence of alternative transportation modes is clearly demonstrated and documented. Prior approval must be received from the City Traffic Engineer.

9.6.G. Trip Assignment

Trip assignment involves the determination of traffic that will use each access point and route on the street network. While it certainly uses the trip distribution estimates, it is a different process. This is also the step where trip-reduction factors such as pass-by and diverted traffic are applied.

The assignments should reflect the conditions anticipated to occur in the analysis year. Assignments are estimates of how drivers will travel and need to account for physical and operational characteristics of the roadway and the habits of typical drivers. Some of these factors might include:

- The type of traffic control device at an intersection. For example, drivers might avoid a protected left-turn movement if they can reach their destination via the through movement and the left-turn phase has expired on approach.
- The design of internal circulation systems on the development site.
- The number of opportunities to enter from the same street. Typically, most drivers will use the first opportunity to enter but exiting trips tend to be more balanced.
- The difficulty turning left onto a major street at an unsignalized intersection.
- Drivers tend to travel in the most direct path towards their destination. In other words, drivers tend to avoid backtracking unless conditions either require it or an overall gain in safety and efficiency is expected.

Since some of these factors conflict, good judgment is necessary. Further, an iterative process might be necessary based on internal circulation alternatives and/or traffic mitigation alternatives considered. For example, the initial access plan may show a full-access driveway but the mitigation may call for it to be limited to right turns in and out.

9.6.H. Existing, Existing Plus Approved/Unbuilt, Existing Plus Development, and Existing Plus Approved/Unbuilt Plus Development Conditions Analysis

The analysis of existing plus approved/unbuilt, existing plus development, and existing plus approved/unbuilt plus development conditions are based on the combination of existing traffic,

traffic estimated for approved development yet to be built, and development traffic anticipated on opening. The development may be phased and have corresponding analysis scenarios to assess independent and compounding degrees of its completion. The methods of analysis shall be consistent and as described above.

Two sets of conditions should be analyzed for the Existing Plus Development and/or Existing Plus Approved/Unbuilt Plus Development scenarios:

- Existing Plus Development Traffic with No Improvements
- Existing Plus Development Conditions with Improvements
- Existing Plus Approved/Unbuilt Plus Development Traffic with No Improvements
- Existing Plus Approved/Unbuilt Plus Development Conditions with Improvements

In the first scenario for each condition, existing plus development and/or existing plus approved/unbuilt plus development traffic is analyzed with the current street geometry and traffic control except for the proposed access. The purpose is to demonstrate likely traffic conditions before mitigation and improvement measures are considered.

The second scenario is typically an iterative process where mitigation and improvement measures are necessary to achieve compliance with the Access Management Code, acceptable levels of service and/or to manage vehicle queuing. The final results of that process are to be documented along with the mitigation and improvement measures associated with those results. Improvements that become warranted by City design criteria or access management codes shall be identified and included in this process.

Mitigation measures might include:

- Additional turn lanes on the public streets and/or the site access.
- Additional through lanes on public streets.
- Revised traffic control, including new traffic signals.
- Access management strategies, e.g. build a raised median on the public street.
- Site plan or land use changes.

Mitigation and improvement measures should be logical for the conditions at a specific location, consistent with the corridor design and operations, and should contribute towards or at least be consistent with the ultimate configuration of the public street. The ramifications of mitigation and improvement measures must be clearly identified. For example, adding a second left-turn lane on one approach to an intersection will typically necessitate widening of the opposite approach.

In addition to achieving acceptable levels of service, anticipated vehicle queuing needs to be assessed to ensure that turn lanes are properly designed and that queues from one intersection do not impact operations at other intersections. This applies to the development site where access driveways connect to the public street system. In general, the site circulation layout should not create conditions where entering traffic might queue back onto the public street and/or the efficiency of exiting traffic is diminished. Further, the site plan and design should allow for all vehicle circulation to take place on-site and not on the public streets.

9.6.I. Future Conditions Analysis

The analysis of future conditions is important to further assess proposed access in relation to the configuration of the public streets at a more mature stage of development. What might be deemed acceptable today might not fit with the long-range configuration of a street corridor. It may also prove useful in determining when significant improvements to major streets need to be planned.

The analyses should reflect street improvements planned to occur prior to the horizon year. Traffic associated with approved/unbuilt development is included in the background traffic growth of a future horizon.

9.6.J. Pedestrian, Bicyclist, Transit and Truck Considerations

While transportation impact studies primarily address automobile traffic, recognition of other vehicle types and travel modes is appropriate, particularly in a community that strives for multi-modal choice and complete streets (livable streets). The following text by no means represents a comprehensive list of site planning elements but each must be addressed.

9.6.J.1. Pedestrians

Sidewalks along public streets or off-street paths provide mobility for pedestrians. Pedestrians should be provided the opportunity to readily travel between these public infrastructure and adjacent land uses. Pedestrians should also have efficient and safe mobility within the development and minimize conflicts with vehicular traffic. All development plans should provide this accessibility, connectivity and mobility.

9.6.J.2. Bicyclists

Similar to pedestrians, development sites should provide reasonable opportunities to travel between adjacent public streets, shared-use paths or bicycle trails and the land use. This does not imply that separate facilities are always needed; rather, the conditions within a development site should be comparable to conditions adjacent to and near the site. Adequate and properly placed parking facilities for bicycles are a key component to encouraging bicycle travel. At a minimum, bicycle accommodations identified in the Bicycle Transportation Plan and/or Greenway Master Plan shall be incorporated in the development.

9.6.J.3. Public Transportation

Bus transportation is currently provided by several private and publicly funded agencies. More widespread public transit, whether demand service models, fixed routes and/or mass commute systems, could be implemented or expanded in the future. Site development should account for both current and potential transit services. Some of these considerations are similar to trucks due to the relatively large size of vehicle; however, the primary difference is that transit vehicles need to circulate with customer traffic flow. Turnouts may be planned for specific corridors or intersections, or adjacent to major trip generators.

9.6.J.4. Trucks

Site driveways and internal circulation must be designed to accommodate the largest truck anticipated to serve the development or potential land use. Vehicle turning paths need to be provided such that trucks do not encroach over curbs and medians. Encroachment into opposing turning lanes should be minimized, but can be consistent with the scale of the development, the frequency and timing of truck movements and roadway functional classification. Truck circulation through a development site should minimize conflicts with

customer traffic and loading docks should be configured such that parked trucks do not impede normal traffic flow.

9.6.K. Documentation

The transportation impact study shall be documented in a typewritten, bound report outlining the findings and conclusions of the study, including exhibits illustrating the site plan, traffic volumes for each analysis scenario, and existing and proposed street conditions (lane configurations and intersection traffic controls). Exhibits shall also include level of service, delay and vehicle queuing results for each analysis scenario. The report, or an appendix, shall include all analysis worksheets and traffic volume count spreadsheets listing data by the minimum time increment in which the data was collected (not less than 15-minute increments). Two (2) bound copies, one unbound copy and one electronic disk/media containing all of the analysis files and a PDF of the final report shall be submitted with the development application. The bound copies and electronic disk/media will be routed internally by City staff to the Public Works Department - Traffic Engineering Division.

The report shall be well organized and generally follow the study process chronology. The report should be divided into sections to clearly distinguish between the site plan details, assessment of existing conditions, assessment of existing plus development conditions, and the assessment of future conditions. The concluding section of the report shall summarize the significant findings and outline the mitigations and improvements needed to meet accepted standards. Trip generation information, trip distribution assumptions, and analysis results should be organized in tables or exhibits and page numbering should be used.

Documentation of the mitigation and improvement measures shall include a detailed description of the proposed improvements. For example, turn lanes shall include a recommended length. It is expected that sufficient due diligence has been conducted to reasonably conclude that the mitigation and improvement measures can be implemented without disruption to existing roadside facilities, other public street facilities, e.g., another turn lane, and/or existing access. If proposed access or a mitigation or improvement measure will cause such a disruption, the impact shall be clearly described.

It is not appropriate to define or suggest funding responsibilities in the study report.

Any deviation from established guidelines/policies shall be clearly identified and justification provided as to the basis for such a condition and its potential ramifications on the public street system.

All assumptions and analysis methodologies should also be identified. The final report should be complete to the extent that the reviewer could find all information necessary to understand how analyses were conducted and could even recreate those analyses and achieve the same results.

The professional engineer responsible for completing the study shall sign and seal the final report.

Section 10 - Interchange Areas

The purpose of this section is to preserve the safe and efficient operation of traffic on interchange crossroads and interchanges, while preserving the accessibility of interchange areas for economic development. Specific purposes are to ensure adequate storage and maneuver distances for drivers between the first signalized intersection and the highway ramp and to avoid access connections to interchange crossroads that would interfere with traffic operations at interchange ramps. In addition, this section seeks to promote the development of local streets and service roads for access in the functional area of interchanges as an alternative to individual driveway access.

The standards in this section apply to areas where grade-separated facilities, e.g. Interstates and other freeways, interchange with surface streets, highways, and roads. In such cases, adequate areas need to be provided for traffic to make the transition from a high-speed highway to the surface street system.

10.1. Interchange Functional Area Standards

These requirements shall be applied in the vicinity of interchanges. These requirements should be applied within interchange areas and generally reflect the access management criteria provided by the Missouri Department of Transportation (MoDOT) for MoDOT rights-of-ways. Consequently, these requirements should be considered in consultation with the MoDOT which may recommend more stringent requirements in the interest of safety and operation of their facilities. The City does not exercise control over MoDOT right-of-way; but will coordinate the recommendations of MoDOT and support such recommendations applicable to the state highway system in the review of development applications that impact MoDOT interchanges and where such interchange operations influence the vicinity of interchanges that may or may not be MoDOT managed. In developed areas, these standards may be difficult to achieve, however they should be considered the desirable standard and achieved to the extent reasonably possible. In undeveloped areas, these connection spacing standards should be the minimum standards.

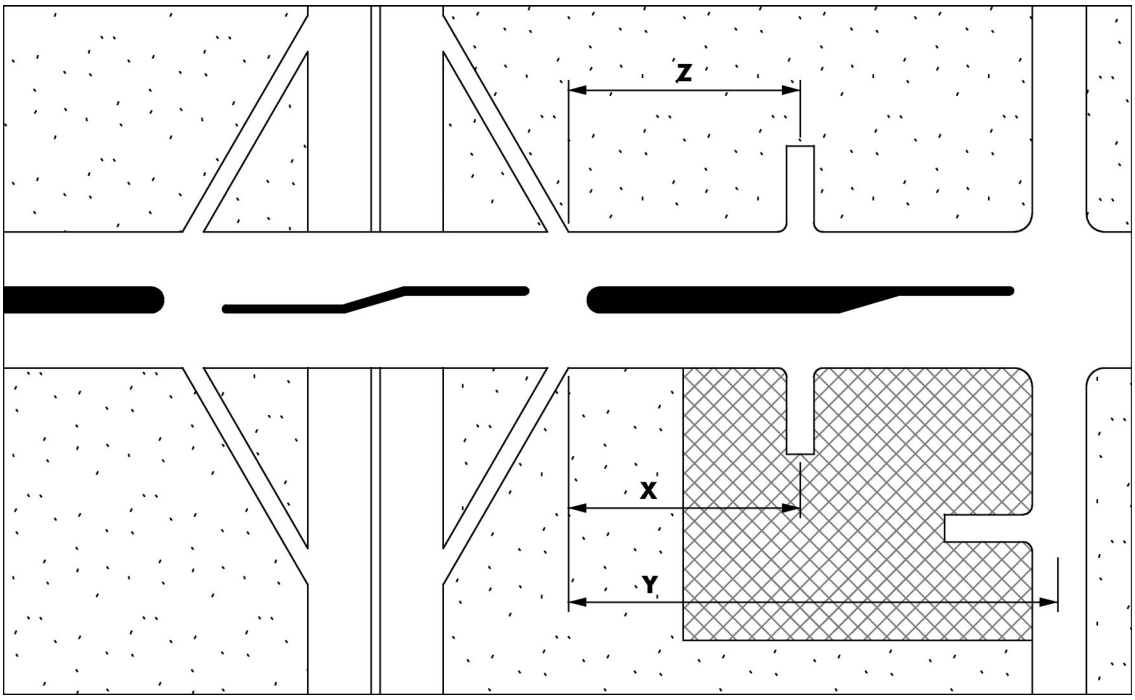
10.1.A. Requirements:

10.1.A.1. In order to provide a safe distance for transitional activity to occur, the spacings identified in ***Figure 10-1*** shall be provided from the end of the off ramp to the first private driveway, median opening, or intersection with a public road.

10.1.A.2. The measurement basis for this standard is from the near edge of the ramp to the center of the intersection. At "diamond" type interchanges where traffic (including right turns) is controlled by a stop sign or traffic signal, the distance is measured from center to center of the intersections. At "diverging diamond", roundabout or other continuous flow type interchanges, the distance is measured from the stop line or yield line.

10.1.A.3. Local roads or service roads shall be used for direct access to property within interchange areas.

.



X = 750 feet
Y = 1,320 feet
Z = 750 feet

Figure 10-1
Connection Spacing Near Interchanges

Section 11 - Intersection Functional Area

The functional area of an intersection consists of more than the area bounded by the stop lines, yield lines or crosswalks. The functional area of the intersection also includes the area upstream of the intersection where vehicles have to react to slowing traffic in front of them, decelerate and wait in queues. The downstream functional area includes the area where through traffic merges with traffic turning from the cross street. It also includes the distance required to accelerate back to driving speeds. The intersection functional area is shown schematically in ***Figure 11-1***.

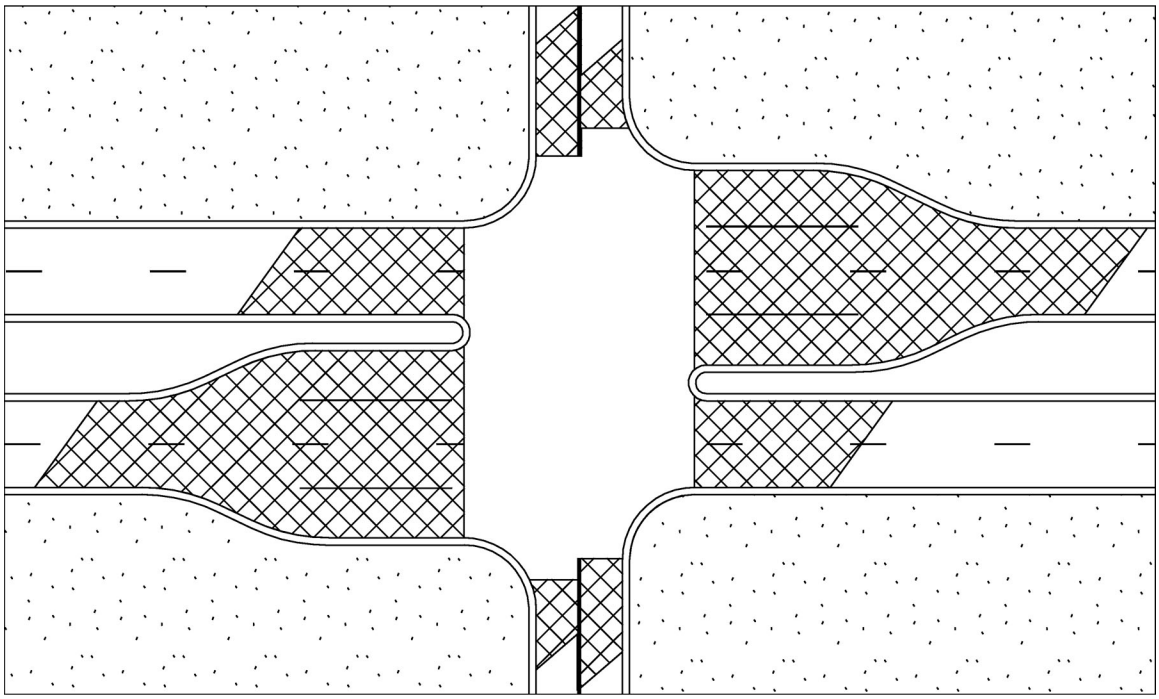


Figure 11-1
Intersection Functional Area

11.1. Upstream Intersection Functional Area

The upstream intersection functional area can be determined by summing two primary components, the Reaction/Deceleration Time and the Storage Length:

11.1.A. Reaction/Deceleration Time

This is the distance traveled while the driver recognizes that action is required, i.e. sees vehicles stopping ahead, reacts, i.e. presses break pedal, and decelerates i.e., slows to a stop. These values can be calculated from ***Table 11-1***. The City Traffic Engineer shall determine where limiting conditions can be applied.

Table 11-1
Upstream Intersection Area Excluding Storage, in Feet

Speed (MPH)	Desirable Conditions[2]		Limiting Conditions[3]	
	Deceleration[4]	PIEV Plus Deceleration[5]	Deceleration[4]	PIEV Plus Deceleration
30	225	315	170	215
35	295	370	220	270
40	375	490	275	335
45	465	595	340	405
50	565	710	410	485
55	675	835	485	565
60	785	960	565	605

[1]all distances rounded to 5ft
[2]2.0 second perception-reaction time; 3.5 fps^2 average deceleration while moving laterally into turn lane, 6.0 fps^2 average deceleration thereafter; speed differential < 10 mph
[3]1.0 second perception-reaction time; 4.5 fps^2 average deceleration while moving laterally into turn lane, 9.0 fps^2average deceleration thereafter; speed differential <10 mph
[4]distance to decelerate from through traffic speed to a stop while moving laterally into a left-turn or right-turn lane
[5]distance traveled during perception-reaction time plus deceleration distance

11.1.B. Storage Length

Queue lengths should be calculated based on existing (or existing plus development for new development projects) and future (horizon-year) traffic conditions. For development projects, turn lane storage improvements may be based on existing plus development conditions, however, site access and right-of-way should be planned to accommodate ultimate (horizon-year) conditions.

Queue lengths should be calculated for left-turn, through and right-turn lanes. Queue lengths should consider 90th percentile queues and should be calculated using established procedures or software that reports 90th percentile or maximum back of queue. As traffic signals on most arterial corridors have the potential to be coordinated, it is recommended that a cycle length of at least 120 seconds be used. Analysis should conform to Highway Capacity Manual methods. In areas with closely spaced or coordinated signals, software that analyzes coordinated signal timings, e.g. SIMTRAFFIC, TRANSYT, CORSIM, VISSIM, etc., may be needed to supplement the analysis. In these cases, queue lengths should be evaluated for both coordinated arrival and random vehicle arrival and the larger of the two values used, as future changes in coordination timings can significantly change queue patterns. In no case should the queue storage length used for calculating the upstream functional area be less than the maximum total length of any turn lane including taper at the intersection approach.

The City Traffic Engineer may elect to define the upstream functional area at a value less than that calculated by the aforementioned method based on existing or anticipated conditions at an intersection.

11.2. Downstream Functional Area

The functional area of an intersection extends some distance downstream from the crosswalk location because of the need to establish guidance and tracking after having passed through the area in which there are no lane lines. This is especially true following a left turn. It can be argued that a vehicle should clear a major intersection before the driver is required to respond to vehicles entering, leaving or crossing the roadway. The logic of this criterion is to simplify the driving task

and thus minimize the chances of driver mistakes and collisions. Stopping sight distance is one criterion which would allow the driver to clear the intersection before having to rapidly decelerate in response to a maneuver at a downstream intersection. Downstream functional areas based on AASHTO stopping sight distances are given in ***Table 11-2***. The downstream intersection area should also extend beyond any U-turn design element.

Table 11-2
Downstream Intersection Area, in Feet

Speed	AASHTO Stopping Distance[1]
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570

[1]Level Roadways

Section 12 - Medians and Continuous Center Turn Lanes

Restrictive ("raised" or "non-traversable") medians and well designed median openings are known to be some of the most important features in a safe and efficient street system. The design and placement of these medians and openings is an integral part of the access management practice. Raised medians are important for several reasons.

- Vehicular Safety - to prevent crashes caused by crossover traffic, headlight glare distraction and traffic turning left from through lanes.
- Pedestrian Safety - to provide a refuge for pedestrians crossing the street.
- Vehicular Efficiency - to remove turning traffic from through lanes thereby maintaining desired operating speed. This reduces fuel consumption and emissions which is an environmental benefit.
- Improved Aesthetics - Landscaped and grass medians offer aesthetic benefits over paved turn lanes or undivided roadways.

Properly implemented median management will result in improvements to traffic operations, minimize adverse environmental impacts, and increase transportation safety. As traffic flow is improved, delay is reduced as are vehicle emissions. In addition, roadway capacity and fuel economy are increased, and most importantly, crashes are less numerous and/or less severe due to fewer conflict points, moderated interruptions in traffic flow and simplified driver decisions.

Continuous two-way center turn lanes ("two-way left-turn lanes" or "TWLTL" or "traversable" medians) do not provide all of the safety benefits of restrictive medians, but do offer some safety improvements over roadways where no left-turn lanes are provided, particularly in areas with frequent and low volume driveways. These facilities provide more flexibility than restrictive medians and operate safely and efficiently under appropriate circumstances. However, once the driveway density, left-turning traffic volumes, and through traffic volumes reach certain levels, the safety benefits diminish rapidly. Under such conditions, restrictive medians are the more effective alternative with regard to safety and operations.

12.1. Median Standards

Restrictive medians shall prohibit vehicles from crossing the median except at designated median openings through the use of a barrier curb or wide landscaped median treatment. Restrictive medians shall be required under any of the following conditions:

- On all major arterial streets.
- On minor arterial and collector streets where existing daily traffic volumes are in excess of 18,000 (where traffic volumes are projected to exceed 18,000 in the future, the roadway and access should be designed to accommodate the future installation of a raised median, e.g. identify potential median opening locations, use 16-foot wide center turn lane).
- Speeds are posted at 45 MPH or above.
- Adjacent to left-turn lanes at signalized intersections (existing or planned signal locations) where driveways are present or would otherwise be located within the intersection functional area.
- Adjacent to all dual left-turn lanes.

- On multi-lane roadways (two or more through lanes in each direction) within the functional area of an interchange.
- On roadways with three or more through lanes in each direction.
- At roundabout controlled intersections.

12.2. Continuous Two-Way Center Turn Lanes

Continuous two-way center turn lanes may be considered under the following conditions (except where restrictive medians are required as described above):

12.2.A. On minor arterial and collector streets adjacent to property that is already developed or planned for low density commercial use or in areas where there is a need for frequent left-turn lanes and low left-turn volume.

Section 13 - Median Openings

Openings in restrictive medians should only be provided to accommodate turning traffic in locations where this can be safely done. Where openings are provided, adequate spacing between them is necessary to allow for required vehicle storage, adequate entry taper and weaving of traffic so as to preserve traffic flow and provide for safe lane changes and turns.

A full opening allows turns to be made in both directions; a directional opening allows turns to be made in only one direction. An example of a directional median would be one that allows left turns into a driveway, but does not allow left turns to be made out.

Examples of these median opening types are shown on ***Figure 13-1*** and ***Figure 13-2***.

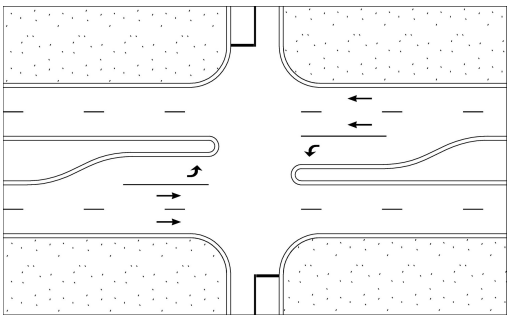


Figure 13-1
Full Median Opening

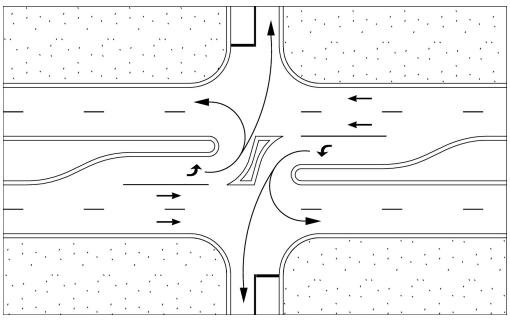


Figure 13-2
Directional Median Opening

13.1. Median Opening Standards

The minimum spacing standards for full median openings shall be subject to the limitations listed below.

13.1.A. No median openings shall be permitted within the functional area of an interchange or intersection.

13.1.B. Median openings shall not be permitted where an opening would be unsafe due to inadequate sight distance.

13.1.C. Full median openings along major arterials must meet the minimum requirement of one-quarter mile spacing and full median openings along any roadway must meet the minimum connection spacing requirements noted in Section 15.

13.1.D. Directional median openings may be provided at any connection that meets the connection spacing requirements, and is found to be an acceptable location based on a transportation impact study.

13.1.E. Left-turn lanes shall be required at all median openings. Median openings shall not be permitted where minimum required queue storage and taper cannot be provided for the left-turn lanes.

13.2. U-Turns

As access management principles and standards are applied, the U-turn becomes an increasingly important movement for accessing local streets and driveways along arterials. A standard passenger vehicle cannot easily make a U-turn from a left-turn lane with minimal median width, e.g. 4 feet, and only two lanes in the opposing direction. In order to accommodate U-turn movements at median openings on a four-lane roadway, there are two options - provide a wide median near the intersection (30 feet or more) or provide some sort of widening of the downstream approach near the U-turn location. Downstream widening can be accommodated by allowing vehicles to turn on the shoulder or by flaring the pavement width at the U-turn locations. Ultimately, the width between the left edge of the left-turn lane and the right edge of the downstream travel lane needs to be at least 44 feet for a typical automobile to make a U-turn. An assessment of the design vehicle wheel path for U-turns should be done where U-turn accommodations are desired to ensure the appropriate area is available without encroachment and is not excessively overbuilding the pavement which can mislead lane identification. Special care should also be given to U-turns at traffic signal controlled intersections for the left-turn/U-turn phase interaction with protected or permitted or overlap right-turn operations. Examples of these techniques are illustrated on ***Figure 13-3*** and ***Figure 13-4***.

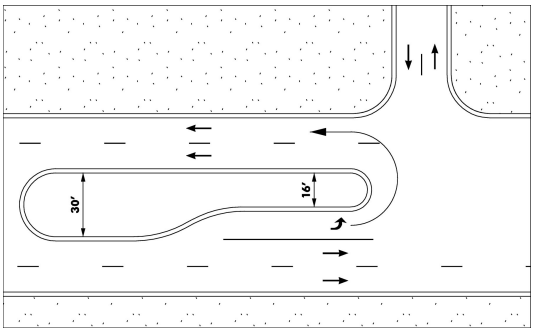


Figure 13-3
U-Turns at Wide Median

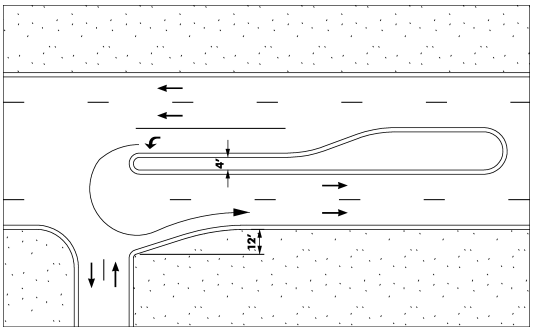


Figure 13-4
U-Turns onto Flared Approach

Section 14 - Traffic Signals

This section addresses the distance between signalized at-grade intersections on public streets. Minimum spacing is mainly intended to preserve efficient traffic flow and progression on urban arterial streets; for instance, a quarter or half-mile spacing allows traffic signals to be effectively interconnected and synchronized. Effective signal coordination will also tend to reduce rear-end collisions and stop-and-go driving that increases congestion, delay, and air pollution.

14.1. Traffic Signal Standards

An intersection should meet the following requirements to be considered for installation of a traffic signal.

14.1.A. The intersection shall meet a warrant or warrants in the Manual on Uniform Traffic Control Devices (MUTCD). Installation of a traffic signal based solely on the peak hour warrant will only be considered at the intersection of an arterial street with another arterial street, collector street, or at the intersection of an expressway, highway or freeway and ramp terminal. Other locations must meet additional signal warrant criteria and be supported by engineering study.

14.1.B. For intersections where one or more of the roadways is a collector street, existing traffic volumes shall be utilized in evaluating the signal warrants (installation of a traffic signal based on existing plus proposed development traffic volumes may be approved if the projected traffic volume will likely realize within 12 months of occupancy). Signals warranted based on future phases of development would have conditions of approval for signal installation coincidental to the phase of development that merits the signal warrant. Approved development trip generation that has not yet realized may be considered in the traffic signal warrant evaluation.

14.1.C. The location of the traffic signal should be at least one-quarter mile (1/4) from another traffic signal, either existing or anticipated and shall not be less than one-eighth mile (1/8) from another traffic signal where extraordinary conditions exist and by approval of the City Traffic Engineer

14.1.D. Traffic signal interconnect conduit and fiber optic lines shall be installed between traffic signals within 3,000 feet of the proposed location, potentially within one mile for wireless communications

14.1.E. Roundabouts should be considered, where applicable and practical based on engineering study, in lieu of traffic signals except where the intersection is within the influence of an adjacent traffic signal and coordinated corridor.

Section 15 - Connection Spacing

This standard governs the minimum allowable spacing between connections (e.g. streets and private driveways) on various classifications of streets. Access points introduce conflicts and friction into the traffic stream. Each conflict point increases the crash opportunity and exposure along a corridor. Each friction point reduces the corridor capacity to efficiently move traffic. Vehicles entering and leaving the main roadway often slow the through traffic, and the difference in speeds between through and turning traffic increases crash potential. The many proven benefits of managed access can be read in more detail from various Transportation Research Board references, papers, reports and studies as well as multiple documents published by AASHTO, including A Policy on Geometric Design of Highways and Streets.

The professional consensus is that increasing the spacing between access points improves arterial flow and safety by reducing the number of conflicts per mile, by providing greater distance to anticipate and recover from turning maneuvers, and by providing opportunities for use of turn lanes. Many studies have shown that driveway spacing is one of the key factors that influence crash frequency.

15.1. Connection Spacing Standards

Connections (a street or driveway, public or private) to public roadways shall conform to the following requirements. All applicable criteria must be met to be deemed conforming.

15.1.A. Connections along any arterial or collector shall be outside any interchange or intersection functional area.

15.1.B. Connections shall be sufficiently separated to accommodate warranted and/or required right-turn lanes and left-turn lanes.

15.1.C. Connections along any arterial or collector shall be aligned with existing or planned connectors on the opposite side of the street, except where a restrictive median is in place and the spacing criteria in 15.1.E are satisfied. The alignment and angle of intersection of connections at the intersecting connector shall meet the criteria described in the City's Design and Construction Manual.

15.1.D. Connections where no restrictive median is in place, minimum separations (measured from centerline to centerline) include:

15.1.D.1. Major Arterial - 660 feet
15.1.D.2. Minor Arterial - 400 feet
15.1.D.3. Industrial/Commercial Collector - 300 feet
15.1.D.4. Residential Collector - 200 feet
15.1.D.5. Local or Access – Minimum separation as required by the Unified Development Ordinance (UDO), except such connector shall also be spaced from any collector or arterial intersection in accordance with minimum throat length criteria described in Table 18-2 and not be located within the intersection sight triangle (not to obstruct sight distance).

15.1.E. Connections where a restrictive median is in place shall meet the following requirements and the minimum requirements of Section 13. Any access having restricted movement shall be controlled through the use of a restrictive median conforming to Section 12.

15.1.E.1. Connections with restricted left-turns out and cross-street traffic (LIRIRO) shall meet all of the requirements in sections 15.1.A, 15.1.B, and should meet the requirements of 15.1.D where adjacent to LIRIRO or full access.

15.1.E.2. Connections limited to right-turns in and right-turns out (RIRO) shall meet all of the requirements in sections 15.1.A and 15.1.B.

15.1.F. Multiple (2) residential driveways for a single residential property may be approved on local and access streets at the discretion of the City Traffic Engineer, so long as sight distance is not obstructed, access to mail box or fire hydrant is not impeded, or a negative impact caused to on-street parking availability for adjacent owners (next to or across from such driveway). Multiple driveways for a single residential property are not permitted on collectors and arterials and access to collectors and arterials for residential properties shall conform to other provisions of this code which preclude such access if an alternative exists from a local street, access street or shared access condition.

Section 16 - Turn Lanes

Vehicles slowing to turn right or left onto cross streets or into driveways cause disruptions to through street traffic flow and increase crashes along a corridor. Thus, the treatment of turning vehicles has an important bearing on the safety and movement along roadways. Turn lanes are one of the most influential and important components of access management.

Left turns may pose problems at driveway and street intersections. They may increase conflicts, delays, and crashes and often complicate traffic signal timing. These issues are especially acute at major suburban arterial intersections where heavy left-turn movements take place, but occur also where left turns enter or leave driveways serving adjacent land development. The following illustrate these problems:

- More than two-thirds of all driveway-related crashes involve left-turning vehicles.
- Where there are more than six left turns per traffic signal cycle, virtually all through vehicles in the shared lane may be blocked by the left-turning vehicles.

16.1. Left-Turn Lane Standards

16.1.A. Left-turn lanes shall be provided on all approaches to intersections controlled by, or planned to be controlled by, traffic signals.

16.1.B. Left-turn lanes shall be provided on all arterial streets at the intersection with other arterial and collector streets. Left-turn lanes shall be provided on minor arterial streets at the intersection with any local street or driveway where the left-turn volume is at least 20 vehicles in any hour. On major arterial streets, left-turn lanes shall be at the intersection with all connectors (an exception may be granted for a singular, existing, residential lot).

16.1.C. Left-turn lanes shall be provided on collector streets at the intersection with a connector serving non-residential development where the left-turn volume is at least 30 vehicles in any hour and should be provided where the left-turn volume is less than 30 vehicles in any hour.

16.1.D. Left-turn lanes shall be provided on non-residential connectors intersecting with major arterial streets (where left-turn egress is permitted). Left-turn lanes shall be provided on non-residential connectors intersecting minor arterial streets (where left-turn egress is permitted) where the left-turn volume is at least 20 vehicles in any hour. Left-turn lanes should be provided on any connector at any location as recommended by a traffic study or where the left-turn lane provides design efficiencies desired by the owner/developer with exception of access associated with residential property.

16.1.E. Left-turn lanes shall be provided at all median openings on roadways with medians.

16.1.F. Continuous two-way left turn lanes may be used in lieu of individual left-turn lanes where permitted by the City Traffic Engineer and in consideration of conditions listed in Section 12. Continuous left-turn lanes in the presence of a median will not be allowed.

16.1.G. Dual-left-turn lanes should be planned for all approaches of an arterial/arterial intersection. The outside receiving lane for a dual-left-turn lane condition should be designed with a tapered entrance to accommodate a wider turning radius.

16.1.H. The minimum length of left-turn lane should be 250 feet plus taper on an arterial street intersecting another arterial street and 200 feet plus taper on an arterial street at other locations. The minimum length of left-turn lane on collectors should be 150 feet plus taper. The minimum length of left-turn lane on connectors should meet the driveway throat length requirements.

16.1.I. The length of the left-turn lane shall be increased as necessary to accommodate estimated queue length. The length of the left-turn lane at intersections controlled by traffic signals should be increased, if necessary, based on the longer of the queues in the turn lane or the adjacent through lane.

16.1.J. Left-turn lane lengths cover the full-width segment between the taper and the end of the lane at an intersection. The end of the lane at the intersection should be determined as the stop line, or if none, as the point of curvature for the corner radius.

16.1.K. The introductory taper should be a reverse curve using a 150-foot radius for a single left-turn lane and 300-foot radii for a dual left-turn lane. The reverse curve does not define the redirection taper where a left-turn lane is introduced.

16.1.L. The beginning of a taper should not encroach the interchange or intersection functional area of an adjacent traffic signal or roundabout, whether existing or planned.

16.2. Right-Turn Lane Standards

16.2.A. Required on arterial streets at each intersecting street or driveway where the right-turn volume on the major arterial street is or is projected to be at least 30 vehicles in any hour, or the right-turn volume on the minor arterial street is or is projected to be at least 60 vehicles in any hour. Minimum length should be 250 feet plus the taper on a major arterial at the intersection of another arterial street or 200 feet plus the taper on a minor arterial at the intersection with another arterial street or on a major arterial at the intersection of a collector and 150 feet plus the taper at other locations along arterial streets.

16.2.B. Required on collector streets in non-residential areas at the intersection with any street or driveway where the right-turn volume on the collector street is or is projected to be at least 100 vehicles in any hour. The minimum length should be 100 feet plus the taper.

16.2.C. The length of the right-turn lane shall be increased as necessary to accommodate estimated queue length. The length of the right-turn lane at intersections controlled by traffic signals or roundabouts should be increased, if necessary, based on the longer of the queues in the turn lane or the adjacent through lane.

16.2.D. Right-turn lane lengths cover the full-width segment between the taper and the end of the lane at an intersection. The end of the lane at the intersection should be determined as the stop line or yield line, or if none, as the point of curvature for the corner radius.

16.2.E. The introductory taper should be a straight line and its length should be determined by using a rate of 12.5 to 1 based on the width of the right-turn lane.

16.2.F. The beginning of a taper should be no closer than 100 feet from the nearest point of curvature on the intersection corner radius of the nearest connector preceding the turn lane along arterials and 50 feet from the same of the nearest connector preceding the turn lane along collectors and other locations. The beginning of a taper should not encroach the interchange or

intersection functional area of an adjacent traffic signal or roundabout, whether existing or planned.

16.2.G. Continuous right-turn lanes will not be allowed.

16.3. Variances

The standards outlined in the section may be altered or waived by the City Traffic Engineer for a specific situation in which extraordinary conditions are encountered.

Section 17 - Sight Distance

Sight distance for driveway and street construction should be considered essential in the design and issuance of permits for all connectors. If there is a request to construct a driveway or street at a questionable location, the transportation impact study must include a field inspection to evaluate the sight distance. Sight distance is the most important consideration in allowing, not allowing, or placing driveway and roadway intersections. Both vertical and horizontal alignment can limit sight distance. Special consideration is required for skewed intersections.

The sight distance standards include stopping sight distance, intersection sight distance, passing sight distance and other sight distances referenced in the 2011 AASHTO "Green Book" A Policy on Geometric Design of Highways and Streets, as may be amended in the publication of future editions.

17.1. Sight Distance Standards

17.1.A. Stop-Controlled Intersections

The intersection sight distance is based on a gap-acceptance concept. It is assumed that drivers on the major road should not need to reduce speed to less than 70 percent of the initial speed. The intersection sight distance is determined from the size of acceptable gap that a driver requires to enter the roadway.

The acceptable gaps that drivers require to enter a major roadway for left turns and right turns from the stop are given in ***Table 17-1***. Adjustments for roadway width and approach grades are given in footnotes to the table. Sight distances for left-turns for passenger cars on various width roadways at a stop controlled approach are summarized on ***Table 17-2***. Sight distances for right-turns and cross-over maneuvers for passenger cars are generally less than the distances required for left-turns. The speed used to calculate the minimum sight distance shall be the posted speed, design speed or the 85th percentile speed, whichever is known and greatest.

Table 17-1
Gap Time for Stop Controlled Intersections

Design Vehicle[1]	Time Gap [2,3]
Passenger Car	7.5 sec.
Single Unit Truck	9.5 sec.
Combination Truck	11.5 sec.

[1]Passenger car design vehicle is typically sufficient for streets and drives serving residential, commercial and office development. For industrial developments, or on major streets with more than 3% trucks, consider using truck categories.
[2]Adjustment for multilane highways:
For left turns onto two-way highways with more than two lanes, add 0.5 sec for passenger cars or 0.7 sec for trucks for each additional lane, in excess of one, to be crossed by the turning vehicle. For right turns, no adjustment is necessary.
[3]Adjustment for approach grades:
If the approach grade on the minor road is an upgrade that exceeds 3 percent: Add 0.1 sec per percent grade for right turns, add 0.2 sec per percent grade for left turns.

Table 17-2
Sight Distance for Stop Controlled Intersections, in Feet
Passenger Cars, Grades Less Than 4%

Speed[2] (MPH)	Lanes to Cross[1]			
	One	Two	Three	Four
20	225	240	250	265
25	280	295	315	335
30	335	355	375	400
35	390	415	440	465
40	445	475	500	530
45	500	530	565	600
50	555	590	625	665
55	610	650	690	730
60	665	710	750	795
65	720	765	815	860
70	775	825	875	930

[1]Lanes to cross for left-turning vehicles (lanes with vehicles approaching from left including left and right-turn lanes, add one lane for each 15 feet of median width not including left turn lane) ; except where a left-turn movement can be staged by design within a median of sufficient width, the left-turn may be evaluated as a right-turn.
[2]Greater of posted speed, design speed or 85th percentile speed.

17.1.B. Traffic Signal Controlled Intersections

The intersection sight distance at signal-controlled intersections requires that the first vehicle on each approach should be visible to the drivers of the first vehicle on all other approaches. If the signal is to be placed on two-way flashing operation, the requirements for left and right turns from a stop controlled intersection must be met. If right turns on red are permitted, an expected operation in Lee's Summit by default, the departure sight triangle for right turns for stop controlled intersections should be provided.

17.1.C. All-Way Stop Controlled Intersections

The first vehicle stopped on each approach should be visible to the drivers of the first vehicles stopped on all other approaches.

17.1.D. Left Turns from a Major Road

The required intersection sight distance for left-turns from the major road when the left-turn is not controlled is the distance traveled by an approaching vehicle at the design speed of the major roadway for the distances shown in ***Table 17-3***.

Table 17-3 Gap Time for Left Turns from Uncontrolled Street	
Design Vehicle	**Travel Time [1]**
Passenger Car	5.5 sec.
Single Unit Truck	6.5 sec.
Combination Truck	7.5 sec.
[1]Adjustment for multilane highways: For left turns that must cross more than one opposing lane, add 0.5 sec for passenger cars and 0.7 sec for trucks for each additional lane to be crossed	

Generally, no separate check for this condition is necessary where sight distance for stop intersections is available. Checks are required at three-legged intersections and at mid-block approaches or driveways. Locations on horizontal curves and with sight obstructions present in the median need to be checked as well.

17.2. Exceptions to Sight Distance Requirements

Sight distance should be considered a key element in the location of all driveways and roadway intersections with particular emphasis placed upon public street approaches, high volume commercial and industrial driveways, and all driveways on arterial streets. All driveway and roadway intersection locations shall meet or exceed the requirements listed above**.**

If no location on the applicant's frontage meets or exceeds the sight distance requirements, but a location does meet or exceed the distances shown in the ***Minimum Stopping Sight Distance*** column on ***Table 17-4***, a driveway or roadway may be located with the City Traffic Engineer's approval, in accordance with the all the following criteria:

- The proposed driveway location has the maximum sight distance available on the entire property frontage.
- The classification for the street is not expressway or major arterial.
- The proposed location is not for a public street approach or a high-volume commercial driveway (more than 50 trips (in plus out) existing or projected during the peak hour).
- There is no other available access, having equal or greater sight distance.
- The Applicant will submit a letter to the City Traffic Engineer stating the following: "Applicant is aware that the sight distance of this driveway is restricted. The sight distance is the minimum necessary for a vehicle traveling at the posted speed to come to a complete stop prior to the driveway." The permit may also be issued with conditions limiting the number and types of vehicles using the driveway.

If these conditions are not met the permit shall not be issued for the driveway. The applicant should be advised of work that could improve sight distance for the location, such as grading or brush removal.

Table 17-4
Minimum Stopping Sight Distance, in Feet

Speed[1]	25	30	35	40	45	50	55	60	65
Distance[2]	155	200	250	305	360	425	495	570	645

[1]Greater of design speed or 85th percentile speed.
[2]Distances shown for level roadways. Additional stopping sight distance is required for downgrade conditions.

17.3. How to Measure Sight Distance

The sight distance for the proposed driveway is measured for each direction of travel and turning movement considered and the smaller distance is then located in the sight distance chart for the speed (greater of the design speed and 85th percentile speed) of the roadway to determine which sight distance criteria is met, if any.

Acceptable sight distance measurement methods are described in the AASHTO "Green Book". For example: To measure actual sight distance limited by vertical alignment in the field for a proposed driveway, place a sighting target 3.50 feet above the edge of pavement at a point 20 feet from the edge of the nearest travel lane to represent the approximate location of a driver waiting to exit the driveway at the proposed driveway location. On streets classified minor arterial and below, the target may be placed at a point 15 feet from edge of the nearest travel lane. Sighting from a height of 3.5 feet for cars (7.6 feet for trucks), move along the roadway away from the proposed driveway site to a point beyond where the target disappears. Move toward the target until it can first be seen and place a mark on the pavement. The target should remain visible as you continue toward the driveway. The line of sight should stay within the limits of the right-of-way. Measure the distance along the roadway between the mark and the target. This measured distance is the sight distance.

Sight distance should take into account both the horizontal and vertical profile of the roadway. Consideration may also be given to vegetation both on the right-of-way and adjacent to the right-of-way as it may impede vision more or less during certain times of the year. Where providing adequate sight distance requires visibility across private property, provisions must be made to preserve sight lines across the property.

Section 18 - Driveway/Connection Geometry

The design of driveways is important in access management in that it affects the speed of traffic turning into and out of driveways. This in turn affects the speed differential between through traffic and turning traffic where auxiliary lanes are not provided. Large speed differentials are created where driveways are inadequately designed and these higher speed differentials are associated with higher crash rates and diminished traffic operations. The design of driveways also impacts the safety of pedestrians crossing driveways and delay associated with pedestrian driveway crossing activity.

Another critical aspect of the driveway or connection design is the potential for traffic operations off of the public street to become congested and spill or queue back onto the public street. The proper separation of internal conflict points from the public street is necessary to eliminate or diminish this potential.

Driveway designs should always be based on the results of a study of the traffic likely to use them.

18.1. Driveway/Connection Standards

18.1.A. Lining Up Driveways Across Roadways

Driveways shall align with driveways across the roadway on roadways without non-traversable medians or shall be offset as described in the connection spacing standards.

18.1.B. Angle of Intersection to the Public Roadway

18.1.B.1. Driveways that serve two-way traffic should have angles of intersection with the public street of 90 degrees or very near 90 degrees. The minimum acceptable angle for driveways that serve two-way traffic is 80 degrees.

18.1.B.2. Driveways that serve one-way traffic may have an acute angular placement of from 60 to 90 degrees.

18.1.C. Corner Radius

The corner radius at intersections should be large enough to allow entering vehicles to do so at a reasonable rate of speed and avoid encroachments of adjacent lanes by turning vehicles of frequent use (e.g. typically a passenger vehicle and/or single unit truck), but should otherwise be minimized to reduce the negative impacts associated with larger radii. Large corner radii can adversely impact safety and operations by acute view angles, increased pedestrian crossing exposures, indistinct lane definition, greater intersection area, and other considerations. The Design and Construction Manual describes minimum corner radii, measured from the back of curb or edge of roadway when curb is not present. Corner radii for driveways shall not exceed the radii standards for street intersections and should be less than those for streets so as not to confuse the identification of driveway intersections as street intersections along a roadway. Corner radii of greater than 50 feet should not be used.

18.1.D. Driveway Width

Driveway widths shall be measured exclusive of any curb or curb and gutter. If monolithic curb is used, a 2-foot section measured from the back of curb shall be deemed a de facto curb and gutter section. Any medians contained in the driveway are above and beyond the minimum widths in the table. Driveway widths shall be minimized and accommodate the required number of lanes and all traffic movements for the expected design vehicle. Typical minimum and maximum widths for various levels of traffic and directions of access are shown on ***Table 18-1***.

18.1.D.1. All commercial and industrial driveways shall be curbed.

18.1.D.2. All parking lots and driveways leading to or connecting with parking lots shall also be curbed.

18.1.D.3. All commercial and industrial driveways with four or more lanes shall have a raised median separating the inbound and outbound lanes. The median should be at least 4 feet in width with aesthetically enhanced materials of contrasting color and texture to that of the pavement surface. A landscaped median with minimum width of 8 feet is desired. On industrial drives with primarily heavy truck traffic, medians may be omitted unless provided to comply with controlled access conditions.

18.1.D.4. Single inbound or outbound lanes on driveways with a median shall be 16 to 18 feet in width.

18.1.D.5. The width of any residential driveway shall conform to the requirements noted as general conditions herein, the Unified Development Ordinance and/or Design & Construction Manual whichever applies and is most restrictive. Generally, residential driveway width at the right-of-way shall be minimized to the extent practical and not exceed a typical three-car width (a typical two-car drive width preferred).

18.1.D.6. Low volume driveways may be permitted to have a width of 24 feet (back of curb to back of curb) on local and access roadways or in the Downtown Core provided trucks are prohibited or the site, throat depth and driveway are designed to accommodates truck traffic.

Table 18-1
Commercial/Industrial Driveway Widths
(Back of Curb to Back of Curb)

Driveway Traffic Category	Average Daily Traffic Using Driveway	Peak Hour Traffic Using Driveway	Two-Way Access		One-Way Access	
			Min. Width	Max. Width	Min. Width	Max. Width
Low Volume	< 1500	< 150	28 feet[2]	42 feet[3]	16 feet[1]	18 feet[1]
Medium Volume	1500-4000	150-400	42 feet[3]	56 feet[4]	18 feet[1]	30 feet[2]
High Volume	>4000	>400	42 feet[3]	To Be Determined Through a Traffic Study	Generally Not Applicable	Generally Not Applicable

[1]One-lane driveways.
[2]Driveway accommodates two-lanes.
[3]Driveway is striped for three lanes.
[4]Driveway is striped for four lanes. Driveway may require a width greater than 56 feet where additional lane(s) are needed based on a traffic impact study or other Access Management Code provision.

18.1.E. Driveways and Accommodation of Pedestrians

In current and future urban places, all driveways must adequately accommodate pedestrians using sidewalks or paths. The crosswalk location should be placed to balance the pedestrian crossing distance and the width of the intersection for vehicular traffic (typically this is at about the center point of the corner radius). Crosswalks should not be placed where pedestrians would likely have to cross behind or between stopped vehicles. Where four or more driveway lanes are created, the driveway should be designed so that the pedestrian has a refuge from entering and exiting traffic unless such driveway is traffic signal controlled. Driveway widths and corner radii should be minimized, not maximized, to reduce the pedestrian crossing distance. This will also reduce the pedestrian crossing time making traffic operations more efficient.

18.1.F. Driveways and Accommodation of Bicycles

Where a new driveway crosses a bicycle facility (such as a dedicated bike path or an on-street bike lane), the driveway should be designed so as to accommodate the safe crossing of bicyclists. Likewise, when a new bicycle facility is built that crosses existing driveways, the bicycle facility should be designed with safe crossings in mind. Developments that accommodate cyclists should have driveways that also accommodate cyclists or separated bicycle facilities.

18.1.G. Driveway Throat Length

The driveway throat length should minimize or eliminate the condition where inbound traffic queues onto a public street (see ***Figure 18-1***). The throat length also provides a place for vehicles to queue without adversely affecting site circulation, gives better definition of the driving lanes, and separates the parking area from the adjacent street or drive. Driveway throat lengths shall meet or exceed the requirements of Table 18-2 and should be based on the ultimate public street

section and land development anticipated. Residential driveway throat depth shall meet the requirements of the UDO, typically dictated by building setback.

Table 18-2
Driveway Throat Depths

Project Peak Hour Vehicles Per Hour (vph) (two-way traffic)	Adjacent Roadway Classification		
	Local	Collector	Arterial
< 10 vph	30 feet[1] 50 feet	30 feet[1] 50 feet	30 feet[1] 50 feet
10 vph to 50 vph	50 feet	50 feet	75 feet
50 vph to 100 vph	50 feet	75 feet	100 feet
100 vph to < 400 vph	Greater of 75 feet or as calculated by Transportation Impact Study	Greater of 100 feet or as calculated by Transportation Impact Study	Greater of 125 feet or as calculated by Transportation Impact Study
400 vph or more	Greater of 100 feet or as calculated by Transportation Impact Study	Greater of 125 feet or as calculated by Transportation Impact Study	Greater of 150 feet or as calculated by Transportation Impact Study

[1] For driveways serving extremely low volumes (10 vehicles or less in the peak hours) on low volume (less than 100 vehicles existing or projected in any hour), low speed (25 miles per hour speed limit) streets, a throat depth of 30 feet may be permitted at the City Traffic Engineer's discretion.

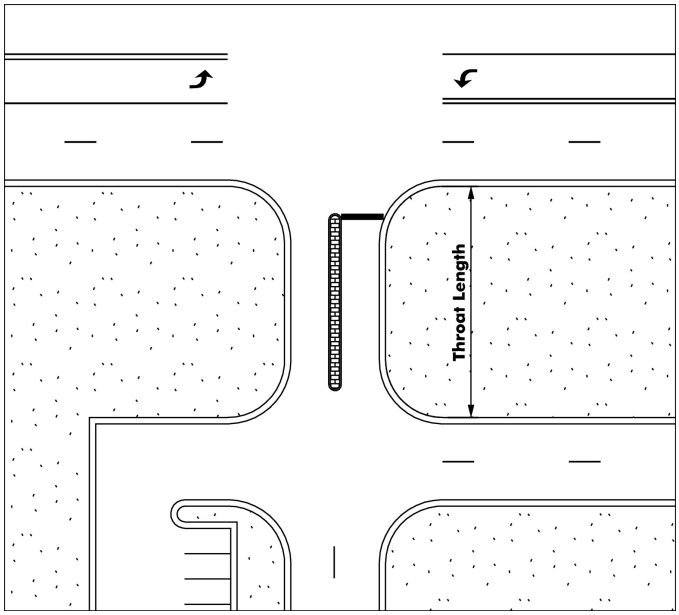


Figure 18-1
Driveway Throat Length

18.1.H. Turning Radius

The path that a vehicle follows when turning left to or from a cross street or drive is defined as the turning radius. This path should be a continuous, smooth curve from the stopping point e.g. the stop line, the end of the median nose, or the location the vehicle typically waits to make a left turn, to beyond the farthest conflicting travel lane. Left-turning drivers should not have to pull out straight into the intersection and then begin the turn maneuver. The minimum turning radii are as follows:

- For low volume drives or streets (less than 100 vehicles in the peak hour) serving primarily passenger cars, 40 feet minimum.
- For dual left-turn movements, 75 feet minimum (for the inner left-turn movement).
- For all other situations, 60 feet minimum.

Opposing left-turn movements, e.g. eastbound left turns and westbound left turns, at the same intersection shall provide at least 10 feet of separation between the outside edges of the two turning paths.

Lee's Summit, Missouri
Access Management Code

~~November 2004~~

March 2018

Originally Drafted by TranSystems Corp. and Adopted by Ordinance #5832 on November 4, 2004
Revisions Drafted by Staff and Amended by Ordinance #XXXX on Date, 2018

Section 1 - Introduction

1.1. Introduction

Throughout the country, problems on our street system such as midblock ~~accidents~~ crashes and delays to through traffic caused by turning vehicles can be traced to the access provided to abutting property via side streets and driveways. Historically, decisions to allow access were typically made relative to individual properties and not the function and characteristic of the street to which access was allowed. This piece-meal approach to access planning has frequently resulted in an illogical and excessive number of access points that have led to increased congestion and ~~accidents~~crashes.

"Access management" takes a comprehensive view of property access relative to the function of the streets from which it is provided. The objective of access management is to optimize, or find that right balance, between property access and traffic safety and efficiency, particularly along arterial streets. In other words, access is viewed in the context of the street system instead of just the individual property. Even further, access should be viewed in the context of the ultimate traffic volumes. What might appear acceptable one day may well be perceived differently in a long-term perspective.

Access management is the careful planning and design of driveways, median openings, interchanges, and street connections to a roadway. It also involves the application of median treatments and turning lanes, and the appropriate separation of traffic signals. This is done to maintain the viability of major roadways to safely and efficiently accommodate traffic volumes commensurate with their function. It is the arterial street network that is key to the success of transportation within a community and it represents perhaps the greatest financial infrastructure investment.

Access management requires that all properties have reasonable access to the public roadway system. Existing access ~~will be allowed to continue and some areas~~ may be improved as to comply with best practices in access management as redevelopment, surrounding development or capital projects occur, but due to existing constraints, some access may never be fully improved. The objective of this Access Management Code is to avoid further degradation caused by access in already developed areas and to prevent the creation of problems in the future. The net effect of access management along arterial streets is that the supporting networks of collector and local streets, and even inter-parcel connectivity, become more critical to effective circulation and property access.

The ultimate configuration of a street and its function are typically the result of land use planning, transportation planning, and traffic engineering. The concept of access management integrates these activities in order to optimize the safety and performance of the public street network, a significant infrastructure investment vital to the public health, safety and ~~well being~~well-being of the community.

1.2. Experience

Every community has experienced safety and traffic operational problems associated with too much or poorly planned access to abutting properties. Many have also found it necessary to retrofit solutions to solve these problems. In the course of this experience, it has been discovered that managing access to major roadways has significant positive effects, including reducing

~~accident~~ crash ~~experience~~frequency, minimizing crash severity, lessening congestion, facilitating economic growth, enhancing community character, and improving air quality.

Studies to date indicate that an effective access management program can result in significant decreases in ~~accidents~~ crashes and travel delays. Obviously the degree of impact will vary based on the specific circumstances of any street segment, but this experience has provided valuable insight into the factors that have a negative influence on traffic safety and efficiency. Some of these factors include:

- Driveways or side streets in close proximity to major intersections;
- Driveways or side streets spaced too close together;
- Lack of left-turn lanes to store turning vehicles;
- Deceleration of turning traffic in through lanes; and
- Traffic signals too close together.

Sometimes ~~these problems~~congestion and crash experience on major streets have unintended and undesirable consequences such as encouraging drivers to find alternate routes on collector and local streets.

Requirements for well-designed road and access systems further the orderly layout and use of land and help improve the design of residential subdivisions and commercial circulation systems. However, the "change" to a system of shared or unified access to property along major roadways often causes concern among property owners or business operators, due to the perception that loss of individual driveway access could adversely impact property values or income.

The appearance of corridors and gateways is also critical to the image of a community and its overall attractiveness to investors. Minimizing the number of curb cuts, consolidating access drives, constructing landscaped medians, and buffering parking lots from adjacent thoroughfares results in a visually pleasing and efficient corridor that, in turn, can help attract new investment. Effective management of roadway corridors also protects property values over time and fosters healthy economies.

1.3. Conflicts and Revisions

While every effort has been made to ensure that this Access Management Code has no conflicts with ~~either the~~the Code of Ordinances, Unified Development Ordinance or the Design and Construction Manual, there may be occasions where discrepancies between these documents arise. Upon such an occasion, the City Engineer (or designee) shall determine the more restrictive provision and it shall apply. This decision can be appealed to the City Council.

Should a discrepancy be identified, city staff will work to modify the affected ordinances in a timely manner.

Section 2 - Glossary

AASHTO - The American Association of State Highway and Transportation Officials.

Access - Any way or means of approach to provide vehicular or pedestrian entrance to a property.

Access Management - Measures to assure the appropriate location, design, and operation of driveways, median openings, interchanges, and street connections to a roadway, as well as the application of median treatments and turning lanes in roadway design, and the appropriate separation of traffic signals for the purpose of maintaining the safety and operational performance of roadways.

Access Management Program - The whole of all actions taken by a governing council, board, or agency to maintain the safety and traffic carrying capacity of its roadways.

~~**Annual Average Daily Traffic (ADT)** - The annual average two-way daily traffic volume on a route. AADT represents the total traffic on a road per year, divided by 365.~~

At Grade - When two or more facilities that meet in the same plane of elevation.

Auxiliary Lane - A lane adjoining a roadway that is used for acceleration, deceleration, or storage of turning vehicles.

Average Daily Traffic (ADT) - The average two-way daily traffic volume on a route.

Backage Road - A local road that is used to provide alternative access to a road with higher functional classification; backage roads typically run parallel with the main route and provide access at the back of a line of adjacent properties. Also known as a "Reverse Frontage Road" or "Parallel Access Road".

Change in Use -- A change in use may include, but is not limited to, structural modifications, remodeling, a change in the type of business conducted, expansion of an existing business, a change in zoning, or a division of property creating new parcels, but does not include modifications in advertising, landscaping, general maintenance or aesthetics that do not affect internal or external traffic flow or safety.

City Engineer - City staff position that is responsible for directing the technical engineering element of the Public Works Department. Staff position in responsible charge of design and construction criteria and specifications, inspections and interpretations for public transportation infrastructure.

City Traffic Engineer - City staff position established by ordinance with powers and duties with respect to traffic. Staff position that is responsible for determining and directing the installation and operation of ~~the~~traffic control devices and management of transportation, including access management ~~Technical Engineering Element of the Engineering Group in the Public Works Department. The Technical Engineering Element encompasses capital improvement management~~, development ~~review~~related traffic/transportation impacts, traffic engineering, transportation planning, operations and maintenance for transit, bicycle, pedestrian, and vehicular ~~and public works inspections~~transportation/traffic operations. The City Engineer shall act as the City Traffic Engineer in his or her absence. The City Traffic Engineer may delegate duties with respect to this code to a qualified professional engineer as appropriate.

Commercial - Property developed for the purpose of retail, wholesale, recreation, med- and high-density multi-family, educational or industrial activities~~, and which typically generate higher numbers of trips and traffic volumes than residential properties~~. Generally, not residential property as residential is defined with limited uses herein.

Conflict - A traffic-related event that causes evasive action by a driver to avoid a collision.

Conflict Point - Any point where the paths of two through or turning vehicles diverge, merge, or cross and create the potential for conflicts.

Congestion - A condition resulting from more vehicles trying to use a given road during a specific period of time than the road is designed to handle with what are considered acceptable levels of delay or inconvenience.

Connection/Connector - Any driveway, street, turnout or other means of providing for the movement of vehicles to or from the public roadway system.

Connection Spacing - The distance between connections, measured from centerline to centerline (center of right-of-way for public streets) along the edge of the traveled way.

Controlled-Access Highway - Every highway, street or roadway in respect to which owners or occupants of abutting lands and other persons have no legal right of access to or from the highway, street or roadway except at such points only and in such manner as may be determined by the public authority having jurisdiction over the highway, street or roadway.

Cross Access - A service drive that provides vehicular access between two or more abutting sites so that the driver need not enter the public street system to move between them.

Deceleration Lane - A speed-change lane that enables a vehicle to leave the through traffic lane and decelerate to stop or make a slow-speed turn.

Directional Median Opening - An opening in a raised median that provides for specific traffic movements and physically restricts other movements. For example, a directional median opening may allow only right turns at a particular location.

Design Traffic Volume - The traffic volume which a roadway or driveway was designed to accommodate, and against which its performance is evaluated.

Downstream - The next feature (e.g. a driveway) in the same direction as the traffic flow.

Downtown Core - An area ~~bordered by Chipman Road on the north, Route 291 on the east and U.S. 50 on the south and west.~~defined in the Unified Development Ordinance for Downtown Central Business District (CBD).

Driveway - A (typically) private roadway or entrance used to access residential, commercial, or other property from an abutting ~~public~~ roadway.

Driveway Density - The number of driveways divided by the length of a particular roadway.

Driveway Spacing - (see Connection Spacing)

Driveway Width - The width of a driveway measured from one side to the other at the point of tangency.

Easement - A grant of one or more property rights by a property owner. For example, one property owner may allow a neighbor to access public roads across his or her property.

Entering (or Intersection) Sight Distance - The distance of minimum visibility needed for a passenger vehicle to safely enter a roadway and accelerate without unduly slowing through traffic.

Facility - A transportation asset designed to facilitate the movement of traffic, including roadways, intersections, auxiliary lanes, frontage roads, backage roads, bike paths, etc.

FHWA - The Federal Highway Administration of the U.S. Department of Transportation.

Flag Lot - A lot not meeting minimum frontage requirements where access to a public road is provided by a narrow strip of land carrying a private driveway.

Frontage - The length of a property that directly abuts a highway.

Frontage Road - A ~~local~~ roadway that is used to provide alternative access to property from a roadway with higher functional classification; frontage roads typically run parallel to the mainline roadway and provide access at the front of a line of adjacent properties.

Functional Area - The area surrounding an interchange or intersection that includes the space needed for drivers to make decisions, accelerate, decelerate, weave, maneuver, and queue for turns and stop situations.

Functional Classification System - A system used to categorize the design and operational standards of roadways according to their purpose in moving vehicles; higher functional classification implies higher traffic capacity and speeds, and typically longer traveling distances.

Functional Integrity - Incorporating appropriate access management standards and controls that allow a roadway to maintain its classified purpose.

Geometric Design Standards - The acceptable physical measurements that allow a facility to maintain functional integrity.

Grade Separated - Two or more facilities that intersect in separate planes of elevation.

Highway - The entire width between the boundary lines of every way maintained when any part thereof is open to the use of the public for purposes of vehicular travel.

Highway Capacity - The maximum number of vehicles a ~~highway~~ roadway can handle during a particular amount of time and at a given level of service.

Highway ~~System~~ Network - ~~–~~ Collectively ~~A~~all ~~public highways and~~ roadways, including controlled access highways, interstates, freeways, expressways, ~~other~~ arterials, collectors, and local streets that facilitate vehicular movement within the transportation system.

Industrial/Commercial Collector ~~Street~~ - ~~Street~~ Roadway that collects traffic to and from commercial or industrial areas and distributes it to arterials ~~streets~~.

Industrial/Commercial Local Street – Street that carries traffic between commercial or industrial lots to industrial/commercial collector streets or arterial streets.

Interchange - A grade-separated facility that provides for movement between two or more roadways.

Internal Circulation - Traffic flow that occurs inside a private property.

Internal Site Design - The layout of a private property, including building placement, parking lots, service drives, and driveways.

Intersection - An at-grade facility that provides mobility between two or more roadways.

Interstate - A federally-designated roadway system for relatively uninterrupted, high-volume mobility between states.

Joint (or Shared) Access - A private access facility used by two or more adjacent sites.

Lane - The portion of a roadway used in the movement of a single line of vehicles.

Left-Turn Lane - A lane used for acceleration, deceleration, and/or storage of vehicles conducting left-turning maneuvers.

Level of Service - The factor that rates the performance of a roadway by comparing operating conditions to ideal conditions described in the Highway Capacity Manual; "A," is the best, to "F," which is worst.

Major Arterial ~~**Street**~~ - ~~Street~~ Roadway that serves the highest traffic volume corridors and the longest trips. Typically provides travel between business districts and outlying residential areas, between major inner city communities and between major suburban centers, and connects communities to major state and interstate highways. Access is generally limited and partially controlled. Spacing of major arterials ~~streets~~ is typically from one to five miles.

Median - A barrier that separates opposing flows of traffic. Raised medians (with curbs and a paved or landscaped area in the center) are generally used in urban areas. Raised medians should not be confused with more obtrusive Jersey barriers. Flush median (with no curbs and a grass-covered area in the center) are generally used in rural areas. Medians can be both functional and attractive.

Median Width - The distance between the near edge of the through travel lanes in each direction when separated by a median.

Mid-Block Crossing - A crossing that is provided so that pedestrians can conveniently cross a roadway in the middle of a block or segment of roadway.

Minor Arterial ~~**Street**~~ - ~~Street~~ Roadway that interconnects and augments the major arterials ~~streets~~. Accommodates trips of moderate length at a lower level of travel mobility than major arterial streets with typically similar operating speed and less volume. Access is generally limited and ~~partially~~mostly controlled. Spacing of minor arterials in combination with major arterials ~~streets~~ is generally from one-half mile to three miles.

~~**Multi-Purpose**~~**Shared-Use Path** - A paved surface typically constructed parallel to a street to serve pedestrian and bicycle traffic.

NCHRP - The National Cooperative Highway Research Program, a program that sponsors research on highway safety, operations, standards, and other topics.

Peak Hour Traffic - The number of vehicles passing over a section of roadway during its most active 60-minute period each day.

Police Power - The general power vested in the legislature to make reasonable laws, statutes and ordinances where not in conflict with the Constitution that secure or promote the health, safety, welfare and prosperity of the public.

Private Street - A highway, street or road, open for use by the general public and which is under private jurisdiction or control. A private street is generally constructed to the same standards as a public street, named and used in reference addressing property.

Public ~~Road~~ Street - A highway, street or road, open for use by the general public and which is under the jurisdiction or control of a public body. Public Streets are generally classified as various highways, arterials, collectors, local and access based on function.~~.~~

Queue Storage - That portion of a traffic lane that is used to temporarily hold traffic that is waiting to make a turn or proceed through a traffic control device such as a stop sign or traffic signal.

Raised Median - The elevated section of a divided road that separates opposing traffic flows.

Residential - Property developed for the purpose of single family, low-density multi-unit, agricultural or other housing quarters.

Residential Access Street - ~~Street~~ Roadway that carries traffic between residential lots and residential local street or residential collector streets. Residential access streets usually carry no through traffic and include short loop streets, cul-de-sacs, and courts that provide direct access to property. Desirable maximum ADT = 200 for cul-de-sacs and 400 for loop streets.

Residential Collector ~~Street~~ - ~~Street~~ Roadway that collects traffic to and from residential areas via residential local and residential access streets and distributes it to arterial streets. Limited access is allowed from residential lots when no local street or access street is available. Desirable maximum ADT = 3,000.

Residential Local Street - Street that usually carry through traffic ~~carries traffic~~ having its origin or destination within the immediate neighborhood and provide direct access to property. Desirable maximum ADT = 1,500.

Reviewing Engineer - An individual or individuals designated by the City Engineer to review development projects and make decisions as outlined in this Policy. The review should include input from the appropriate departments (fire, police, public works, planning & development, etc.).

Right-In, Right-Out (RIRO) - A driveway where left turns and cross-overs at an intersection are prohibited ~~either by physical or regulatory means~~.

Right-of-Way - Land reserved, used, or slated for use for a highway, street, alley, walkway, drainage facility, or other public purpose related to transportation or utilities.

Roadway - The portion of a highway improved, designed or ordinarily used for vehicular travel. That portion of a street which only includes the travel lanes.

Roadway Classification System - See "Functional Classification System"

Service ~~Road~~ Street - A local ~~road~~ street that is used to provide alternative access to a ~~road~~ street with higher functional classification; service roads may include internal circulation systems, frontage roads, or backage roads.

Shared Driveway - A single, private driveway serving two or more lots.

Side Friction - Driver delays and conflicts caused by vehicles entering and exiting driveways.

Sidewalk - A paved surface designed specifically to serve permitted non-motorized transportation users. Refer to sidewalk definitions in the Code of Ordinances. ~~pedestrian traffic.~~

Sight Distance - The distance visible to the driver of a passenger vehicle measured along the normal travel path of a roadway to a specified height above the roadway when the view is unobstructed to oncoming traffic. Sight distance would include intersection sight distance, roadway sight distance, stopping sight distance, passing sight distance, etc.

Spacing - For purposes of this policy, the distance between two roadways and or drives measured from the center of one roadway to the center of the next roadway, unless otherwise defined for a specific application.

Speed Differential - The difference in travel speed between through traffic, and traffic entering or exiting a roadway.

Stopping Sight Distance - The minimum distance required for a vehicle traveling on a roadway to come to a complete stop upon the driver seeing a potential conflict; it includes driver reaction and braking time and is based on a wet pavement.

Storage Length - see Queue Length.

Street - The pavement and sub-grade of an access, local, collector or arterial roadway, inclusive of shoulder, curb, on-street parking, etc.

Strip Development - A linear pattern of roadside commercial development, typically with relatively shallow lots and frequent drives. Also typically lacks a network of side streets permitting efficient traffic circulation between adjacent developments.

Taper - The transitional area of a roadway where lanes are added or dropped.

Throat Length -The distance parallel to the centerline of a driveway to the first on-site location at which a driver can make a right-turn or a left turn. On roadways with curb and gutter, the throat length shall be measured from the back of the curb. On roadways without a curb and gutter, the throat length shall be measured from the edge of the shoulder.

Through Street –A through street shall be defined as any part of any ~~street~~roadway or street functionally classified as a Local, Collector, Arterial, Frontage Road, or Highway that assumes priority or which may be designated priority over another roadway at intersections based on the highest functional classification

of intersecting roadways, except when otherwise may be determined by the City Traffic Engineer upon the basis of an engineering and traffic study and such condition is appropriately signed or controlled to give notice thereof.~~.~~

Traffic Flow - The actual amount of traffic movement.

Transportation Impact Study - A report that compares relative roadway conditions with and without a proposed development; typically including an analysis of mitigation measures.

Trip Generation - The estimated volume of entering and exiting traffic caused by a particular development.

Turning Radius - The radius of an arc that approximates the turning path of a vehicle.

Two-Way Left-Turn Lane (TWLTL) – A lane located between opposing traffic flows which provides a transition area for left-turning vehicles.

Uncontrolled Access - A situation that results in the incremental development of an uncontrolled number, spacing, and/or design of access facilities.

Upstream - Against (behind) the direction of the traffic flow.

Vehicle Trip - A vehicle moving from a point of origin to a point of destination.

Warrant - The standardized condition under which traffic management techniques are justified.

Weaving - Crossing of traffic streams moving in the same general direction through merging and diverging, for instance near an interchange or intersection.

Section 3 - Street Classification System

3.1. Street Classifications

Safe and efficient operation of ~~streets and highways~~roadways requires that these facilities be classified and designed for the functions that they will perform. The entire ~~road system~~highway network is traditionally classified by relating the proportion of through movement to the proportion of access. Interstates and ~~F~~freeways, which have full control of access and serve only the movement function, are at one end of the scale; access and local streets, which predominately provide for land ~~access~~connections, are at the other end of the scale because they have little or no through movement. Collector and arterial streets normally must provide a balance between movement and access functions; it is along these streets that access management actions become most important.

Interstates, ~~Freeways~~ freeways and expressways~~-~~ in Lee's Summit are generally the responsibility of the Missouri Department of Transportation (MoDOT). As such, those facilities should generally reference the state and federal classification systems and applicable requirements. City streets generally range from ~~residential~~ access streets to arterial streets. ~~Six~~ Seven ~~street~~ roadway classifications are defined in ~~the Design and Construction Manual maintained by the Lee's Summit Public Works Department~~Section 2; also referenced in more detail and context in the Thoroughfare Master Plan. These include:

- Major Arterial
- Minor Arterial
- Industrial/Commercial Collector
- Residential Collector
- Industrial/Commercial Local
- Residential Local
- Residential Access

A number of highway frontage roads exist in Lee's Summit, some owned by MoDOT and some by the City. These ~~F~~frontage roads are unique ~~only~~ by their proximity to fully~~access~~-controlled highways but the function of each ~~should~~ may be categorized by one of the ~~six~~ seven aforementioned classifications.

3.2. Typical Sections

A typical section for each ~~of the street~~ classification ~~types~~ is ~~included~~ described in the Lee's Summit Public Works Department Design and Construction Manual. Some of the considerations that go into defining the needed cross section of any given street segment are described below.

3.2.A. Traffic Lanes

The number and types of lanes on any street should be determined by existing and projected traffic volumes and the nature of land use activity adjacent to it. Turn lanes are essential at many intersections. Reference the Thoroughfare Master Plan and Access Management Code for lane requirements and planning.

3.2.B. Bicyclists

Bicycle routes are established on some city streets. Considerations for bicyclists could include a wider traffic lane, marked bike lanes, or ~~multi-purpose~~shared-use paths. Reference the Bicycle Transportation Plan and Greenway Master Plan for bicyclist accommodation types and locations.

3.2.C. Pedestrians

Sidewalks or ~~multi~~shared-use ~~-purpose~~ paths are generally required on one or both sides of a public street. Requirements are outlined in the Design and Construction Manual and the Unified Development Ordinance. Reference the Greenway Master Plan for shared-use path locations.

3.2.D. Right-of-Way

Providing sufficient right-of-way to meet the long term growth potential of a street is one of the most important elements of the transportation ~~network~~system. Once development occurs adjacent to the street~~roadway~~, additional expansion of the roadway ~~street~~ may become very expensive or impractical if sufficient right-of-way is not available. This may in turn limit additional development if sufficient capacity cannot be provided ~~on the street~~.

In addition to the basic number of through lanes, street elements that influence the amount of right-of-way required include left-turn lanes (double left-turn lanes at some arterial street intersections), right-turn lanes, bike lanes, medians, sidewalks and ~~multi~~shared-use paths.

3.2.E. Corner Right-of-Way Triangles

A minimum 25-foot triangle of additional right-of-way shall be provided at the corners of two intersecting streets as noted in the Unified Development Ordinance. ~~that both have a designated classification of arterial or collector.~~ The triangle is determined by measuring along both right-of-way lines 25 feet from their point of intersection and striking a line to connect the two points (see ***Figure 3-1***). A larger triangle may be required at intersecting streets that both have a designated classification of arterial or collector and/or where any street alignments require additional sight distance. A triangle of additional right-of-way may be required at intersections with driveways if the conditions are deemed appropriate by the City Traffic Engineer. The purpose of this triangle is to allow room for utilities, traffic control devices, sight distance, ~~and~~ sidewalks and shared-use paths behind the corner radius of the intersection. ~~Additional right-of-way or other provisions may be required to provide appropriate sight distances at the corner.~~

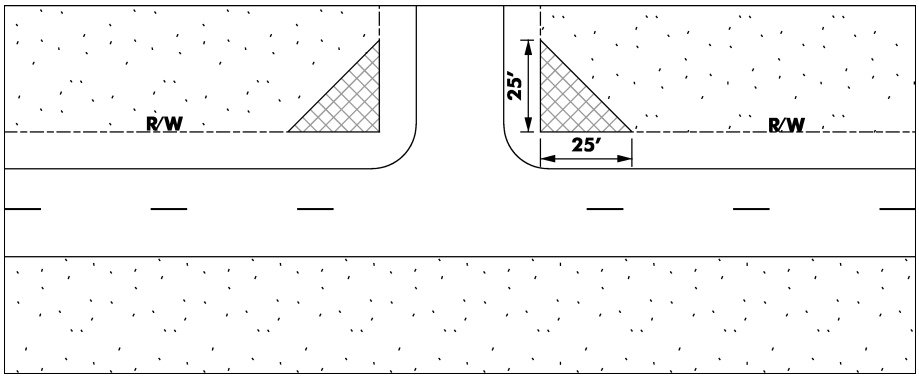


Figure 3-1
Corner Right-of-Way Triangle

Section 4 - ~~Collector~~ Street Planning

The location and spacing of arterial streets should reference the Thoroughfare Master Plan. Arterials have highly controlled alignments associated with long-term community planning considerations and predetermined connectivity to fully-controlled highways. Collectors are also depicted in the Thoroughfare Master Plan, but to a much lesser extent than arterials with more flexibly in location and alignment to better accommodate development activity. Collector streets are the backbone of effective access management. These streets, both those classified as collector streets and those within or adjacent to developments that serve in this capacity, allow many developments to be efficiently served from a limited number of connections to the ~~major~~arterial street ~~system~~network.

4.1. Planning Requirements

The following requirements shall be applied in the development of the collector street ~~system~~network.

4.1.A. Prior to the approval of any new development, the ~~City~~Thoroughfare Master Plan shall be reviewed and the development compared with ~~develop a~~ consideration of the planned conceptual collector street ~~system~~network, or the modification thereto that maintains continuity thereof, for the area bounded by the ~~section line~~arterial ~~roads~~ streets or section lines containing the development and projected future land uses based on zon~~ed~~ing and supporting transportation system ~~and master planned land uses~~ within the area. Consideration must also be given to existing or planned connections and collector streets in adjacent sections, nearby developments, existing property lines and topographic features.

4.1.B. The proposed development plan may propose an alternative collector street ~~system~~ network as long as the principles described above are followed. The alternative collector street network ~~system~~ must be approved along with the development plan. Within exclusively residential areas, continuous collector streets are desirable, but not essential. In these areas, a less defined collector ~~system~~ network may be utilized, but should provide connectivity between developments and relatively direct access ~~to~~ between the designated collector street connections to the arterial street network~~system~~ (note that access at other connections to the arterial street ~~system~~ network may be restricted per this policy).

4.1.C. Collector streets shall be public streets.

4.1.D. A collector street may serve both residential and ~~commercial~~ non-residential development, but should be planned to discourage use by commercial traffic into residential areas.

4.1.E. Collector streets should connect to arterial streets at full median opening locations in accordance with the standards in this policy. Where feasible, the connection should also be made at a location suitable for a traffic signal ~~installation~~.

4.2. Example

An example of a collector street network is shown on ***Figure 4-1***. Note that in order to maintain good connection spacing on the arterial roadways, commercial development areas should be at least 1/4 mile by 1/4 mile in size, larger where adjacent to major arterial streets.

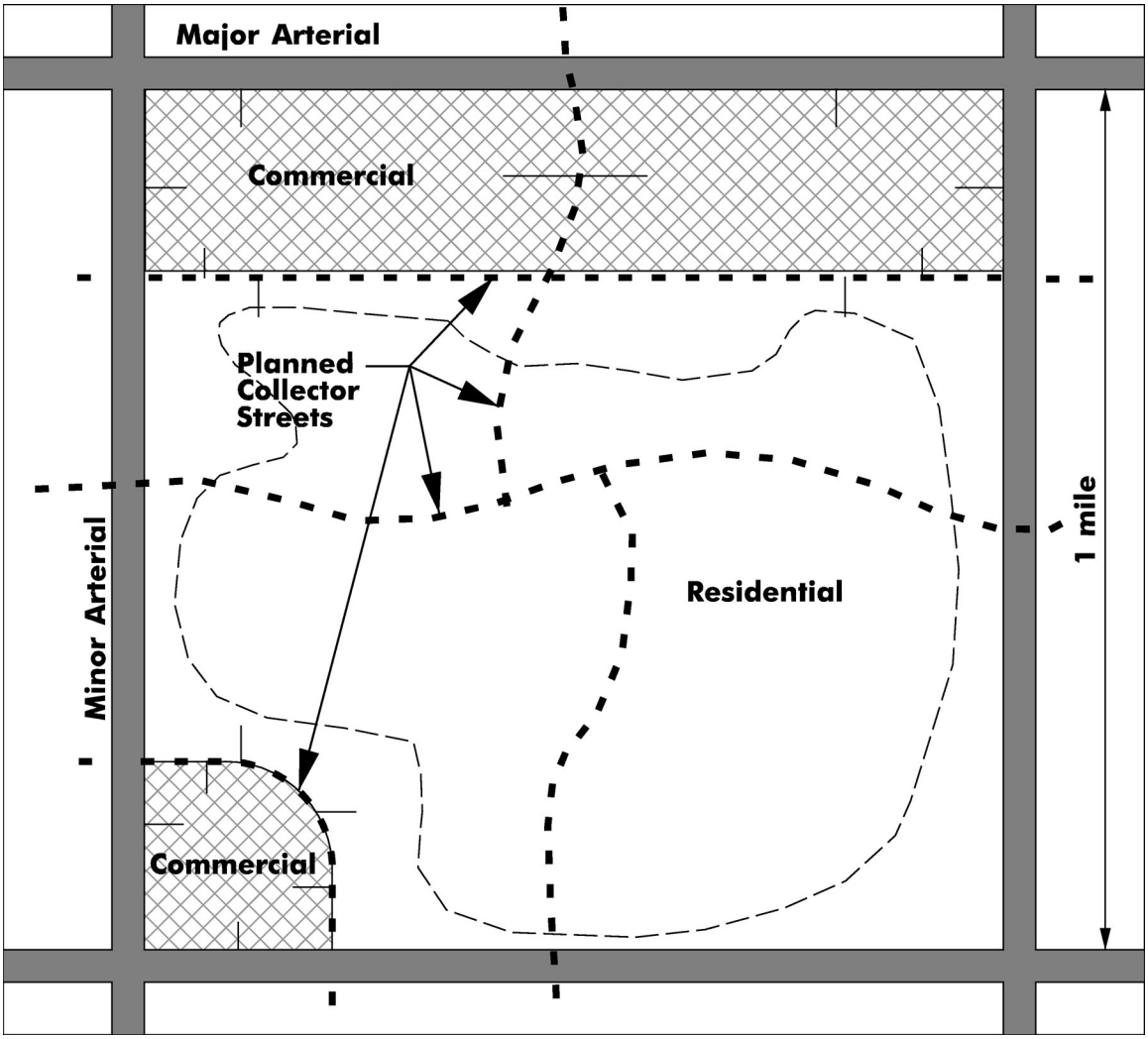


Figure 4-1
Collector Street Planning Example

Section 5 - Review/Exceptions Process

Flexibility is essential when administering access spacing requirements to balance access management objectives with the needs and constraints of a development site. The following administrative procedures are intended to provide flexibility, while maintaining a fair, equitable and consistent process for access management decisions. The exception/waiver process described below applies to all of the standards in this policy.

5.1. Approval Required

5.1.A. No person shall construct or modify any access connection to a Lee's Summit street without approval from the City. Approval is typically granted through the preliminary and final development plan processes, plats and/or engineering approval of construction plans for streets. All requests for connections to a roadway, including those requests by Right-of-Way permit, within the City shall be reviewed for conformance with this Access Management Code.

5.1.B. Access connections that do not conform to this policy and were constructed before the effective date of this policy, as may be applicable to the original policy of 2004, shall be considered legal nonconforming connections and may continue until a change ~~in use~~ occurs as provided in Section 8. Temporary access connections are legal nonconforming connections until such time as the temporary condition expires. Access connections and legal nonconforming conditions do not limit the City's ability to restrict access or relocate access as the extent, number and location of access, whether full or partial, for existing legal conforming or legal nonconforming conditions is not guaranteed at any time.

5.1.C. Any access connection constructed without approval after the adoption of this policy shall be considered an illegal nonconforming connection and shall be issued a violation notice and may be closed or removed.

5.2. Requests for Modification

5.2.A. Access connections deemed in conformance with this policy may be authorized by the City Traffic Engineer ~~(or designee)~~. Any requests for modification shall require approval by the City Traffic Engineer ~~(or designee)~~. Any appeal of the decision of the City Traffic Engineer ~~(or designee)~~ shall be to the city council which has final authority. Note: some access restrictions are also described on the recorded plat and the subject plat should be referenced in review of any request for modification.

5.2.B. Modifications of greater than 10 percent of the allowable spacing standard or 100 feet, whichever is less, shall require documentation justifying the need for the modification and an access management plan for the site that includes site frontage plus the distance of connection spacing standards from either side of the property lines. The analysis shall address existing and future access for study area properties, evaluate impacts of the proposed plan versus impacts of adherence to standards, and include improvements and recommendations necessary to implement the proposed plan.

5.3. Waiver for Nonconforming Situations

Where the existing configuration of properties and driveways in the vicinity of the subject site precludes spacing of an access point in accordance with the spacing standards of this policy, the City

Traffic Engineer ~~(or designee)~~, in consultation with appropriate City departments, shall be authorized to waive the spacing requirement if all of the following conditions have been met:

5.3.A. No other reasonable access to the property is available.

5.3.B. The connection does not create a potential safety or operational problem as reasonably determined by the City Traffic Engineer ~~(or designee)~~ based on a review of a transportation impact study prepared by the applicant's professional engineer.

5.3.C. The access connection along the property line farthest from the intersection may be allowed. The construction of a median may be required on the street to restrict movements to right-in/right-out and only one drive shall be permitted along the roadway having the higher functional classification.

5.3.D. Joint access shall be considered with the property adjacent to the farthest property line. In these cases:

- A joint-use driveway with cross-access easements will be established to serve two abutting building sites,
- The building site is designed to provide cross access and unified circulation with abutting sites; and
- The property owner agrees to close any pre-existing curb cuts after the construction of both sides of the joint use driveway.

Where the spacing requirement is waived, the requirements for turn lanes may also be amended accordingly at the discretion of the City Traffic Engineer due to physical constraints and limitations of access separation.

5.4. Temporary Access

A development that cannot meet the connection spacing standards of this policy and has no reasonable alternative means of access to the public road ~~system~~ network may be allowed a temporary connection. When adjoining parcels develop which can provide joint or cross access, permission for the temporary connection shall be rescinded and the property owner must remove the temporary access and apply for another connection.

Conditions shall be included in the approval of a temporary connection including, but not limited to the following:

- Applicants must sign an agreement to participate in any future project to consolidate access points.
- Applicants must sign an agreement to abandon the interim or temporary access when adequate alternative access becomes available.
- The transportation impact study should consider both the temporary and final access/circulation plan.

A limit may be placed on the development intensity of small corner properties with inadequate corner clearance, until alternative access becomes available.

Section 6 - Access Management and Subdivision Practices

The design of property access is established when land is subdivided for commercial or residential development. Therefore, all new lot splits and commercial and residential plats will be reviewed to assure that property access is designed in accordance with the access management ~~guidelines of this policy~~code. The following standards shall also apply.

6.1. Creation of New Lots

New lots shall not be created on any arterial or collector ~~roadway~~ street unless they comply with the access spacing standards of this plan through existing, shared, or alternative access.

6.2. Subdivision Access

6.2.A. When a subdivision is proposed that would abut or contain an arterial or ~~industrial/commercial~~ collector street, it shall be designed to provide lots abutting the classified roadway with access from an interior local or access street. On arterial streets, appropriate measures may be required to buffer residential properties from the noise and traffic of the through street.

6.2.B. Direct residential driveway access to individual one-family and two-family dwellings ~~should~~ shall be avoided from any arterial or ~~industrial/commercial~~ collector street.

6.2.C. Residential corner lots shall obtain access from the street with the lowest functional classification, and access shall be placed as far from the intersection as possible to achieve the maximum available corner clearance. Residential corner lots located at the intersection of two local or access streets may have one access from each street so long as minimum corner clearances are met, the access does not impact the intersection functional area, ~~and~~or encroach the sight distance triangle~~s are preserved~~. Access shall also reference the connection spacing standards in Section 15 and consider any restrictions that may be noted on the recorded plat.

6.2.D. Access locations to subdivisions shall provide appropriate sight distance, driveway spacing, and include a review of related considerations.

6.3. Connectivity of Supporting Streets

As the City of Lee's Summit continues to grow and land is subdivided for development, it will be essential to provide for a balanced network of local and collector streets to avoid traffic congestion on ~~major~~ arterial roadways. Without a supporting well connected minor street ~~system~~network, all local trips are forced onto a few major streets resulting in significant traffic delays and driver frustration. Reasonable connectivity of the local street network is ~~also~~ important. Fragmented street networks~~systems~~ impede emergency access, focus congestion, diminish operational and maintenance efficiencies (e.g. snow removal, service deliveries, etc.) and increase the number and length of individual trips. A network of ~~R~~residential ~~street~~ local and access streets ~~systems~~ should be designed in a manner that fosters appropriate operating speeds, diversity of routes, access to collectors, shorter block lengths, and fewer through trips~~discourages through traffic~~, without eliminating connectivity.

To accomplish these objectives, the following standards shall apply:

6.3.A. New residential subdivisions shall be designed to coordinate with existing, proposed and anticipated streets.

6.3.B. All new developments shall be designed to discourage the use of access and local roadways ~~and residential collector streets~~ by non-local traffic while maintaining the overall connectivity with the surrounding system of roadways. This may be accomplished through the use of well-connected local streets to centrally located collectors, shorter block lengths between streets that increase route choice, modified grid systems, T-intersections, roadway jogs, or other appropriate traffic calming or street design measures within the development.

6.3.C. Proposed streets should be extended to the boundary lines of the proposed development where such an extension would connect with streets in another existing, platted, approved, planned or ~~planned~~potential development. The extension or connection should be based upon traffic circulation and/or public safety ~~issues~~enhancement opportunities and compatibility of adjacent land uses, development requirements for access and to reasonably support the highest and best anticipated use of the property in conformance with the Comprehensive Plan.

6.3.D. When a proposed development abuts unplatted land or a future development phase of the same development, stub streets should be provided to provide access to abutting properties or to logically extend the street ~~system~~ network into the surrounding areas. All street stubs serving more ~~or other~~ than two residential units (or exceeds the allowable maximum length of dead-end street considering provisions of the Fire Code or Unified Development Ordinance) should be provided with a temporary ~~turn around or~~ cul-de-sac, and the restoration and extension of the street would be the responsibility of any future developer of the abutting land.

Section 7 - Unified Access and Circulation

Internal connections between neighboring properties and shared driveways allow vehicles to circulate from one business or development to the next without having to reenter a ~~major~~ collector or arterial street~~roadway~~. Unified access and circulation improves the overall ease of access to development and reduces the need for individual driveways. The purpose of this section is to accomplish unified access and circulation systems for commercial development.

7.1. Outparcels and Shopping Center Access

Outparcels are lots on the perimeter of a larger parcel that break its frontage along a roadway. They are often created along arterial street frontage of shopping center sites, and leased or sold separately to businesses that desire the visibility of major street locations. Outparcel access policies foster unified access and circulation systems that serve outparcels as well as interior development, thereby reducing the need for driveways on an arterial street.

In the interest of promoting unified access and circulation systems, development sites under the same ownership or consolidated for the purposes of development and comprised of more than one building site shall prepare a unified access and circulation plan. In addition, the following shall apply:

7.1.A. The number of connections shall be the minimum number necessary to provide reasonable access to the overall development site and not the maximum available for that frontage under the connection spacing requirements in this policy.

7.1.B. Access to outparcels shall be internalized using the shared circulation system of the principal development.

7.1.C. All necessary easements and agreements shall be recorded in an instrument that runs with the deed to the property.

7.1.D. Unified access for abutting properties under different ownership and not part of an overall development plan shall be addressed through the Joint and Cross Access provisions below.

7.1.E. Where properties are under the same ownership or consolidated for the purposes of development, the shared access, driveway or street(s) shall be constructed by the developer.

7.2. Joint and Cross Access

Joint and cross access policies promote connections between ~~major~~ developments, interactions of land use varieties, as well as ~~between smaller businesses~~continuity of properties along a corridor without thoroughfare conflicts. These policies help to achieve unified access and circulation systems for individual developments under separate ownership that could not otherwise meet access spacing standards or that would benefit from interconnection, i.e., adjacent shopping centers or office parks that abut shopping centers, apartments and restaurants.

7.2.A. Adjacent commercial or office properties and major traffic generators, e.g. shopping plazas, shall provide a cross-access drive and pedestrian access way to allow circulation between adjacent properties. This requirement shall also apply to a building site that abuts an existing

developed property unless the City Traffic Engineer ~~(or designee)~~ finds that this would be impractical.

7.2.B. To promote efficient circulation between smaller development sites, the City Traffic Engineer ~~(or designee)~~ may require dedication of a 30-foot easement that extends to the edges of the property lines of the development site under consideration to provide for the development of ~~a service road system~~shared access. The ~~service road~~shared access shall be of sufficient width to accommodate two-way travel aisles and incorporate stub-outs and other design features that make it visually obvious that abutting properties may be tied in to it. Abutting properties shall be required to continue the shared access~~service road~~ as they develop or redevelop in accordance with the requirements of this policy. The easement may be provided to the front or rear of the site or across the site where it connects to a public roadway.

7.2.C. Property owners shall record all necessary easements and agreements, including an easement allowing cross access to and from the adjacent properties, an agreement to close driveways provided for access in the interim after construction of the joint use driveway(s) or ~~service road system~~shared access (or private road), and a joint maintenance agreement defining maintenance responsibilities of property owners that share the joint-use driveway and cross-access system (or private road).

7.2.D. Joint and cross access requirements may be waived by the City Traffic Engineer ~~(or designee)~~ for special circumstances such as incompatible uses, e.g. a gas station next to a child care center, or major physical constraints, e.g. change in grade between properties makes connection impractical.

Section 8 - Redevelopment

Access management policies are not retroactive, but existing legal non-conforming access is not immune to the problems associated with inept access management; and the absence of access management policies in the past does not diminish the benefits of proactive improvement. Existing nonconforming properties may continue in the same manner as they existed before this policy was adopted and until such time redevelopment of the property, significant change of property use or street improvement occurs. This allowance, commonly known as "grandfathering", protects the substantial investment of property owners and recognizes the expense ~~of~~ a property owner may incur bringing nonconforming properties into conformance.

Yet nonconforming access situations may pose safety dilemmas, contribute to traffic congestion, deter economic development, or undermine community character. To address the public interest in these matters, without posing an undue burden on property owners, access to existing nonconforming properties is ~~best~~ addressed when a change in use, expanded use or redevelopment occurs so applicants can finance access improvements as part of the overall property improvement. In some instances, opportunities to improve the location or design of property access can also occur during the public roadway improvement process. The extent of access to a property is not guaranteed and such access may be limited directly by improvements to the street where access exists or indirectly through access restrictions to the subject street at intersecting streets. This plan includes the following conditions or circumstances where property owners or permittees may be required to relocate or reconstruct nonconforming access features and/or pursue alternative access measures.

8.1. Requirements

Properties with nonconforming access connections shall be allowed to continue, but must be brought into compliance with this Access Management Code to the maximum extent possible when modifications to the roadway are made or when a change in use or density results in one or more of the following conditions:

8.1.A. When a new connection is requested or required.

8.1.B. When a preliminary and/or final development plan is required.

8.1.C. When a preliminary and/or final plat is required.

8.1.D. When a site experiences an increase of ten percent (10%) or greater in peak hour trips or 100 vehicles per hour in the peak hour, whichever is less, as determined by any one of the following methods:

8.1.D.1. An estimation based on the ITE Trip Generation manual (latest edition) for typical land uses, or

8.1.D.2. Traffic counts made at similar traffic generators in the metropolitan area, or

8.1.D.3. Actual traffic monitoring conducted during the peak hour of the adjacent roadway traffic for the property.

8.1.E. If the principal activity on a property is discontinued for a period of one year or more, or construction has not been initiated for a previously approved final development plan or final plat within a period of one year from the date of approval, or the, previously approved preliminary

development plan or preliminary plat has expired in accordance with the Unified Development Ordinance, then that property must thereafter be brought into conformance with all applicable access management requirements of this policy (, unless otherwise exempted by the permitting authority) and any previous waivers granted through prior approvals are nullified. This shall include the need to update any previously approved transportation impact study where new traffic projections are available for the proposed development or redevelopment project. For uses or approved plats in existence upon adoption of this policy, the initial one-year period for the purposes of this section ~~begins~~already ~~-~~ended as the effective date of these requirements was established in 2004.~~upon the effective date of these requirements.~~

8.1.F. Access to all change-in-use or change-in-density activities shall ~~be~~ require ~~approved~~ approval by the City Traffic Engineer ~~(or designee)~~. All relevant requirements of this policy shall apply. When a development has been approved with a waiver or modification to these access management requirements, the final development plan and or final plat carries the approval of such waiver or modification in accordance with the approved preliminary plan and or preliminary plat provided by City Council until such time as the preliminary plan and or preliminary plat has expired in accordance with the Unified Development Ordinance. Conformance to these requirements may otherwise be dictated by the remaining provisions of Section 8.1.

Section 9 - Transportation Impact Study Requirements

9.1. Background and Purpose

Land use and transportation are strongly interdependent. Transportation facilities and services are essential for development to occur, and high levels of mobility and accessibility are needed to attract the economic development to provide and maintain a high quality of life.

The primary purpose for evaluating the impact of development through transportation impact studies is to protect the integrity of the transportation systems and ensure adequate transportation infrastructure exists to support not only the proposed development but existing users. Neither public nor private interests are well served if transportations systems needlessly degrade due to poor planning and design.

In order to accomplish this objective, the review of transportation systems associated with development needs to be extensively scrutinized and needs to take a long-term perspective. What might be acceptable today may not be as an area develops and matures. This is certainly consistent with the City's long-range planning for land use, ~~major~~ streets and other infrastructure.

~~These~~ A transportation impact study ~~guidelines~~, and the resulting work products, will allow for more informed decision-making and could lead to necessary ~~a framework for the negotiation of~~ mitigation measures for the impacts created by development to maintain or provide safe and adequate performance of the transportation systems.

9.2. Extent of Study Required

The necessity to review all land development applications from a transportation perspective as well as the wide variety of land use types and intensities suggest that multiple thresholds or triggers be established to warrant a transportation impact study. The following ~~guidelines~~ thresholds and associated scope of study will be followed.

9.2.A. All Applications

9.2.A.1. Identify the specific development plan under study and any existing development on and/or approved plans for the site (land use types and intensities and the arrangement of buildings, parking and access). Also identify land uses (including types and the arrangement of buildings, parking and access) on property abutting the proposed development site, including property across public streets.

9.2.A.2. Identify the land uses shown in the Lee's Summit Comprehensive Plan for the proposed development site under study, as well as the ultimate arterial and collector street network in the vicinity of the site.

9.2.A.3. Identify the functional classification of the public street(s) within the development, bordering the site and those streets on which access for the development is proposed.

9.2.A.4. Identify allowable access to the development site as defined by the City ~~design~~ Design and Construction Manual, Unified Development Ordinance~~criteria~~ and/or ~~access~~ Access ~~management~~ Management ~~guidelines~~criteria.

9.2.A.5. Document current public street characteristics adjacent to the site, including the nearest arterial and collector streets (number and types of lanes, speed limits or 85th percentile speeds, and sight distances along the public street(s) from proposed access).

9.2.A.6. Compare proposed access with established ~~design~~ standards and criteria (driveway spacing, alignment with other streets and driveways, width of driveway, and minimum sight distances). Identify influences or impacts of proposed access to existing access for other properties. If appropriate, assess the feasibility of access connections to abutting properties, including shared access with the public street system.

9.2.A.7. Estimate the number of trips generated by existing and proposed development on the site for a typical weekday, weekday commuter peak hours (commonly referred to as A.M. and P.M. peak hours), and other peak hour(s). Calculate the net difference in trips between existing and proposed uses. If the development site already has an approved plan, also estimate the number of trips that would be generated by the approved land uses. If the development application is proposing a land use different than indicated in the Comprehensive Plan, also estimate the number of trips that would be generated by the land use indicated in the Comprehensive Plan. The Director of Planning & Development shall approve the potential land use intensity in such cases.

9.2.B. Rezoning, Preliminary Development Plan, Preliminary Plat, and Conceptual Development Plan applications.

9.2.B.1. Development or Site Plan Generates 100 to 499 Trips in a Peak Hour

A transportation impact study will be required. The study area may tend to be confined to the street or streets on which access is proposed but should be extended to at least the first major intersection in each direction.

9.2.B.2. Development or Site Plan Generates 500 or More Trips in a Peak Hour

A transportation impact study will be required. The study area will include the street or streets on which access is proposed to at least the first major intersection in each direction but may also extend beyond the first major intersection and/or include other streets.

9.2.B.3. Proposed Land Use Modifies the Comprehensive Plan

Determine the extent of a transportation impact study based on anticipated trip generation. Conduct comparative analyses using the proposed land use and the land use identified in the comprehensive plan.

Table 9-1 lists several land use types and the approximate amount of development that would generate 100 or 500 trips in a typical weekday peak hour.

Table 9-1
Typical Development Size Thresholds

ITE Code	Land Use	Units	Size to Generate 100 Trips	Size to Generate 500 Trips
110	Light Industry	Sq. Ft.	~~185~~160,000	~~460~~800,000
130	Industrial Park	Sq. Ft.	~~75~~250,000	~~600~~1,250,000
140	Manufacturing	Sq. Ft.	~~145~~140,000	~~640~~750,000
150	Warehouse	Sq. Ft.	~~120~~500,000	~~1~~2, ~~000~~650,000
210	Single Family	Units	~~90~~100	~~550~~510
220	Apartments	Units	~~150~~180	n/a
310	Hotel	Units	170	n/a
565	Daycare	Sq. Ft.	~~89~~,000	n/a
~~710~~712	Small Office ~~(5th ed.)~~	Sq. Ft.	~~45~~40,000	~~375,000~~n/a
~~715~~	~~Single Tenant Office~~	~~Sq. Ft.~~	~~45,000~~	~~290,000~~
720	Medical Office	Sq. Ft.	30,000	n/a
812	Bldg Materials	Sq. Ft.	~~20~~50,000	n/a
813	Discount Superstore	Sq. Ft.	all	~~130~~115,000
816	Hardware Store	Sq. Ft.	~~16~~40,000	n/a
820	Shopping Center	Sq. Ft.	~~6~~10,000	~~70~~90,000
~~831~~	~~Quality Restaurant~~	~~Sq. Ft.~~	~~15,000~~	~~n/a~~
~~832~~932	Sit Down Rest.	Sq. Ft.	~~1,700~~10,000	n/a
~~834~~934	Fast Food w/DT	Sq. Ft.	~~5~~3,000	n/a
~~843~~	~~Auto Parts~~	~~Sq. Ft.~~	~~12,000~~	~~n/a~~
~~845~~945	Gas Sta. w/Conv. Store	Sq. Ft.	~~2,200~~all	~~11,000~~n/a
~~853~~	~~Conv. Store w/Gas~~	~~Sq. Ft.~~	~~13,500~~	~~n/a~~
881~~853~~	Pharmacy w/DT~~Conv. Store w/Gas~~	Sq. Ft.~~Pumps~~	9,500~~8,700~~	n/a~~n/a~~
912~~881~~	Bank w/DT~~Pharmacy w/DT~~	Lanes~~Sq. Ft.~~	~~4~~1,~~900~~	n/a~~n/a~~
912	Bank w/DT	Sq. Ft.	~~1~~5,000	n/a

Institute of Transportation Engineers (ITE) *Trip Generation*, ~~7th~~ 10th Edition

9.3. Qualifications to Conduct and Review a Study

The parties involved in a land development application sometimes have different objectives and perspectives. Further, the recommended elements of a transportation impact study require skills found only in a trained professional engineer with specific experience in the field of traffic engineering and transportation planning.

For these reasons, the person conducting and the person reviewing the study must be registered professional engineers licensed in the State of Missouri with at least five years of demonstrated experience either in the preparation or review of transportation impact studies for land development. A registered Professional Traffic Operations Engineer, certified by the Transportation Professional Certification Board, is preferred.

The City Traffic Engineer ~~(or designee)~~ shall determine whether an individual professional engineer is qualified to conduct a transportation impact study. Credentials shall be provided upon request. Any appeal shall be made to the City Council.

9.4. Review and Use of a Study

A transportation impact study should be viewed as a technical assessment of existing and projected transportation conditions. The extent to which individual professional judgment has to be applied will be minimized by provision of community policies and practices with respect to street and traffic control design and land development.

Ultimately, a transportation impact study will be used by professional staff to make recommendations to the ~~planning~~ Planning ~~commission~~ Commission and ~~governing body~~City Council. Transportation is one element amongst many that must be considered.

City personnel charged with reviewing transportation impact studies have several functions to consider:

9.4.A. Determine whether the impacts of development have been adequately assessed.

9.4.B. Ensure that proposed access is properly coordinated with existing and planned facilities, fits into the ultimate configuration of the street ~~system~~network, and is appropriately designed at its connection to the public street ~~system~~network.

9.4.C. Determine whether proposed improvements for the public street ~~system~~ network are necessary and sufficient to mitigate the impacts created, ~~and~~ that the improvements meet local requirements, and that adequate transportation infrastructure is available to support the existing transportation users as well as the proposed development in the interest of protecting public health, safety and welfare. The expectations for adequate infrastructure relate to safety and operations in reference to not only the Access Management Code, but also the other standards, policies and ordinances of the City; including but not limited to the Level of Service Policy and Unimproved Road Policy.

9.4.D. Ensure that the development plan considers the needs of pedestrians, bicyclists, and transit users.

9.4.E. Determine whether the development layout can accommodate all anticipated vehicle types and that such vehicles can be accommodated on-site without adverse impact to the public street network.

9.4.F. Invite other responsible and applicable transportation agencies or entities, e.g., Missouri Department of Transportation, to participate in the study and review processes.

9.4.G. Provide consistent, fair, and legally defensible reviews.

9.5. Standard Transportation Impact Study Procedures

9.5.A. Study Methodology Determination

Prior to conducting any transportation impact study it is necessary to determine the minimum technical responsibilities and analyses that will be performed. It is the applicant's responsibility

to ensure that the study utilize the techniques and practices accepted by the City and other participating agencies.

The following items shall be considered, discussed and agreed to by the City Traffic Engineer ~~(or designee)~~ and the applicant for transportation impact studies. The City Traffic Engineer ~~will~~can provide a general scope of services for a traffic impact study upon request from the applicant or applicant's traffic engineer.

- Definition of the proposed development, including type and intensity of the proposed land uses and proposed access.
- Study area limits based on the magnitude of the development.
- Impact or influence on access for adjacent and nearby properties.
- Time periods to be analyzed, e.g., weekday A.M. and P.M. peak hours.
- Scenarios or conditions to be analyzed, e.g. existing conditions, existing plus approved/unbuilt, existing plus approved/unbuilt plus development conditions, and future conditions (consistent with horizon year in City traffic model).
- Future analysis year(s), including special study procedures for multi-phase development plans.
- General assumptions for trip generation, trip distribution, mode split, and traffic assignment.
- Traffic analysis tools and acceptable parameters.
- Availability and applicability of known data.
- Traffic data collection requirements and responsibilities, including time periods in which traffic counts will be collected.
- Transportation system data, e.g. traffic signals, transit stops, etc.
- Planned transportation system improvements, including the anticipated ~~timing~~schedule, for all modes of transportation, e.g. street widening, bicycle trails, transit stops, etc.
- Planned/Approved development in the vicinity and any associated improvement conditions/mitigations.
- Methodology for projecting future traffic volumes.
- Current level of service, road condition and access management requirements.
- Acceptable mitigation strategies.

9.5.B. Study Area

The study area and the intersections and street segments to be included will vary for a number of reasons - the type and intensity of the development, the maturity of other development in the vicinity, the condition of the street network, etc. The study area should be large enough to assess the impact or influence of proposed access along street segments and to evaluate the ability of streets and intersections to absorb the additional traffic.

The study area should at least include those street segments onto which access is proposed and should typically extend to the next major intersection (arterial/arterial, arterial/collector, or collector/collector) in each direction.

9.5.C. Analysis Periods

Transportation impact studies should be based on peak-hour analyses. The analysis period(s) should be based on the peaking characteristics of both the public transportation systems and development traffic. The typical analysis periods for most development are the weekday A.M. and P.M. peak hours, often coincidental with peak commuter activity. Retail development that is typically not open early in the morning may not warrant study for the A.M. peak hour. On the other hand, intense retail activity in an area may warrant study during the Saturday peak hour.

Some development generates its highest traffic volumes outside these time periods, such as Church and Recreation/Entertainment Facilities, and may require unique study to ascertain the impact of its peak traffic activity.

9.5.D. Analysis Years

In general, the analysis years should be the current period, development build-year, and the horizon year in the City's traffic model. Not all development will require a horizon year analysis; depending on the scale and land use proposed, consistency with the Comprehensive Plan and Thoroughfare Master Plan, rights-of-way impact for ultimate buildout of adjacent and inclusive roadways and other factors that may be considered by the City Traffic Engineer for its waiver.

9.5.E. Method of Determining Future Traffic Volumes

Future traffic volumes on arterial and collector streets ~~shall~~ may be identified from the City's traffic model used to develop the long-range transportation plan for each arterial and collector street segment in the study area. The City Traffic Engineer shall provide future traffic projections based on the long-range transportation model or provide a method of derivation to be used in the analysis based on the scope of services. Some large-scale projects that significantly change the land use or transportation network may require long-range transportation modeling, in which case the City may share its transportation demand model for reference. Future traffic volumes are not applicable if the analysis of future year is not included in the scope of study.

9.6. Transportation Impact Assessment ~~Analysis of Existing Conditions~~

Once the parameters for the transportation impact study have been established, the ~~first~~ steps in the study process ~~is~~require the applicant to collect relevant data, ~~and~~ assess existing conditions, assess the impact of development, and project future conditions. Actually, two baseline conditions will be studied for existing conditions unless there are no approved developments in the vicinity - one called "Existing Conditions" that is based on conditions in the study area at the time of the study and another called "Existing Plus Approved/Unbuilt Conditions" that is comprised of existing conditions plus traffic forecasts linked to development projects in the vicinity that have been approved but not yet built.

9.6.A. Data Collection

The applicant is responsible for collecting, assembling, analysis and presentation of all data. Typically, the following types of data are required for the study area.

9.6.A.1. Proposed Site Development Characteristics

Identify the specific development plan under study and any existing development on and/or approved plans for the site. This includes land use types and intensities and the arrangement of buildings, parking and access. Also identify land uses (including types and the arrangement of buildings, parking and access) on property abutting the proposed development site, including property across public streets.

Information for the proposed development shall be displayed on a scaled drawing. If detailed information regarding abutting property is not shown on the development plan, it may be exhibited on a current aerial photograph, or other drawing, along with the proposed development.

This information is needed to assess the proposed access in relation to existing driveways and side streets at the site and along the street corridors on which access is proposed. This process should also take into account potential access for undeveloped land in the vicinity.

9.6.A.2. Transportation System Data

This includes the physical and functional characteristics of the transportation systems in the study area. Data to be collected includes:

- The functional classification and jurisdiction responsible for each street.
- The number and types of lanes for all intersections and street segments.
- Traffic control devices such as traffic signals (including left-turn control type(s) and phasing), other intersection control, and speed limits.
- Transit, bicycle, and pedestrian routes and facilities.
- Available sight distances to/from each proposed point of access.
- Planned streets not yet built.
- Planned transit, bicycle and pedestrian routes and facilities not yet built.
- Planned improvements for each street and/or intersection (either programmed for construction or included in the long-range transportation plan).

9.6.A.3. Transportation Demand Data

This includes current traffic volumes (intersection turning movement counts), percent trucks, peak hour factors, transit patronage, bicycle usage, and pedestrian usage. For some studies, additional data such as right-turn-on-red usage, traffic distribution by lane, or other similar data may be required.

Intersection turning movement counts shall be taken on a typical Tuesday, Wednesday, and/or Thursday for weekday conditions. It is preferred that morning and afternoon counts be taken on the same day. For a study requiring traffic counts at several intersections that cannot be accomplished all in one day, the counting program should be organized so that adjacent intersections are counted as close in time as possible and volumes adjusted to balance the highest movements measured. As a minimum, traffic volumes should be measured at any existing site driveway and on the adjacent streets, including the nearest arterial/arterial or arterial/collector intersection in each direction along streets bordering the development site. If a proposed driveway or street will line up with an existing driveway or street opposite it, traffic volumes shall be collected at the existing intersection. The time periods in which existing traffic is counted should generally coincide with the highest combination of existing traffic plus traffic expected to be generated by the proposed development. A minimum of one hour is required but the count periods should extend at least 15 minutes before and at least 15 minutes beyond the anticipated peak hour to ensure that the highest one hour of traffic is identified. Traffic volume counts at intersections shall document left-turn, through and right-turn movements on all approaches and shall be tabulated in no greater than 15-minute increments. The City Traffic Engineer ~~(or designee)~~ shall determine, based on the nature of the development, additional time periods and locations in which current traffic volumes shall be documented.

9.6.A.4. Traffic Forecasts for Approved/Unbuilt Development

The City Traffic Engineer ~~(or designee)~~ will determine which approved but unbuilt development influences the study area and will provide the traffic forecasts from those developments for each intersection and street segment in the study area.

9.6.A.5. Land Use Data

Identify the land use(s) shown in the Lee's Summit Comprehensive Plan for the proposed development site under study.

9.6.B. Operational Analysis

Capacity analyses shall be performed for each intersection in the study area. All capacity analyses shall be performed using a method or software approved by the City Traffic Engineer ~~(or designee)~~. In general, capacity analyses must be based on methodologies outlined in the latest edition of the Highway Capacity Manual (HCM). Planning level methods of analysis will not be accepted.

While other types of capacity analyses such as roundabout operations may be required for some transportation impact studies, most will include only signalized and unsignalized intersections.

9.6.B.1. Signalized Intersections

9.6.B.1.a. Analysis programs require input of intersection-specific information such as traffic volumes, number and types of lanes, signal phasing, etc., but also include a number of parameters reflecting traffic characteristics and signal operations that typically have preset default values. Care must be exercised to ensure that these parameters provide a true reflection of actual traffic operations and are based on normal practices of the City.

9.6.B.1.b. Cycle lengths used in these analyses must be reasonable based on the signal phasing and traffic demand at the intersection. For example, an arterial/arterial intersection with 8-phase control and protected-only left-turn phasing would likely use a cycle length of at least 100 seconds but possibly as high as 120 to 140 seconds. The cycle length to be used for the analyses shall be based on either existing operations or a cycle length optimization available with most capacity analysis software. Likewise, the green time (or cycle split) allocated to each phase must provide an accurate reflection of existing conditions. For isolated intersections, it is preferred that green times be determined through an optimization program in order to show how well the intersection could operate. For signalized intersections in coordination, actual timings should be used. Other means of developing green times shall be reviewed in advance with the City Traffic Engineer ~~(or designee)~~.

9.6.B.1.c. Other considerations in most analyses include the peak hour factor (PHF), percent trucks, clearance intervals, and the queuing model. The PHF should reflect the actual counts taken at the intersection. Some percentage of trucks should be input - either the amount measured or an estimate agreed to with the City Traffic Engineer ~~(or designee)~~. Clearance intervals shall be calculated based on practices recommended by the Institute of Transportation Engineers (ITE). These practices will typically yield clearance intervals (yellow plus all red) in the range of 5 to 6 seconds. Other clearance intervals related to pedestrian crossings shall also be accurately represented and comply with MUTCD, ADA and other requirements of the City. The type of queue model used should be applicable to the conditions and queue estimate should provide at least a 90 percent confidence level of the maximum anticipated queue.

9.6.B.1.d. On occasion, the lane utilization factor may need to be adjusted. Under some circumstances, near an interchange for example, the lane utilization may be imbalanced to such an extent that default values would not provide a likely representation of actual conditions.

9.6.B.1.e. The most important outputs of these analyses are the overall intersection level of service and the anticipated vehicle queuing in each lane.

9.6.B.1.f. Under some circumstances, traffic simulation modeling may be necessary or more appropriate to assess a street corridor. Closely-spaced traffic signals or corridors that employ traffic signal coordination are good candidates for simulation modeling. Any such model, however, must produce outputs comparable to HCM methodologies in order to estimate levels of service.

9.6.B.2. Unsignalized Intersections

9.6.B.2.a. The analysis on an unsignalized intersection is actually an analysis of only those movements that must yield to another movement. For example, at a two-way stop controlled intersection, the through and right-turn movements on the uncontrolled street are allowed free flow and are not subject to any delay.

9.6.B.2.b. Analysis results shall never be expressed as an overall intersection level of service; the term is meaningless.

9.6.B.2.c. The most important outputs of these analyses are the levels of service by lane or lane group and the anticipated vehicle queuing in each lane.

9.6.B.3. Acceptable Levels of Service

~~*(Refer to Resolution Number 2004-15)*~~*Refer to the City's Level of Service Policy adopted by City Council Resolution.*

9.6.B.4. Vehicle Queuing Considerations

At signalized intersections, vehicle queues should be contained within turn lanes and should not extend into adjacent intersections. Vehicle queues in through lanes may influence the ability to access turn lanes and should be considered in assessing traffic operations.

At unsignalized intersections, vehicle queues should be contained within turn lanes. In the case of a side street or driveway serving a development site, vehicle queues should not impede site circulation, particularly inbound movements from public streets.

9.6.C. Background Traffic Growth

Background traffic is the expected increase in traffic volumes over time except for the specific development under study. Background traffic ~~needs~~ can ~~to~~ be estimated out to the applicable horizon year in order to assess future traffic conditions. When the horizon year analysis is required, ~~T~~the Lee's Summit traffic model ~~shall~~ should be used to estimate background traffic growth in the following manner.

The model will need to be run four times to identify turning movement data for:

- Base Year Traffic Volumes;
- Base Year Select Zone Traffic Volumes;
- Future Year Traffic Volumes; and
- Future Year Select Zone Traffic Volumes.

Both the base year and future year models will need to be run two times. The first run will save the traffic volumes at the study intersections, as well as the select zone matrix for the TAZ's in which the development is being evaluated (the TAZ's under consideration will be identified by the City Traffic Engineer ~~(or designee)~~ prior to the study). The model will need to be re-run using an all-or-nothing assignment of the select zone matrix based on the adjusted travel times for the previous runs. Details of this procedure are included in the model guideline documentation.

The City Traffic Engineer ~~(or designee)~~ will ~~provide instructions~~establish ~~on~~ the acceptable procedure for determining background traffic growth and future traffic volumes. Said procedure may be updated or revised from time to time at the discretion of the City Traffic Engineer.

The City Traffic Engineer ~~will~~may provide the applicant or applicant's traffic engineer background traffic growth for the horizon year.

9.6.D. Trip Generation

Trip generation is the process used to estimate the amount of travel associated with a specific land use or development. Trip generation is estimated through the use of "trip rates" that are based on some measure of the intensity of development, such as gross ~~leasable~~ floor area (~~GLA~~GFA).

Trip Generation, published by the Institute of Transportation Engineers (ITE), is the most comprehensive collection of trip generation available. The rates provided are based on nationwide data ~~but many rates are not supported with a large amount of data~~and numerous case studies. ~~Nevertheless, t~~This manual is generally accepted as the industry standard and the latest edition shall be used for studies in the City of Lee's Summit. Caution needs to be applied when limited data points exist for a land use category. Local trip generation characteristics may be used if deemed to be properly collected, provide a broad and statistically valid collection of measures that represent the proposed land use, and are consistent with, but not exclusively unique ~~with the~~to, the subject development application. The City Traffic Engineer ~~(or designee)~~ shall make this determination.

In making the estimate of trips, the instructions and recommendations included in Trip Generation shall be followed. Typically, the trip generation equations, where available, provide the best estimates. Where data is provided for multiple independent variables, the one yielding the highest number of trips and is based on at least 10 samples (studies) shall be used.

Trip generation shall be estimated for the proposed development for daily, A.M. peak hour, and P.M. peak hour conditions. Other time periods may be necessary based on the land use and/or the inclusion of additional analysis periods in a particular study.

If the development site already has an approved plan, also estimate the number of trips that would be generated by the approved land uses. If the development application is proposing a land use that requires an amendment to the comprehensive plan, also estimate the number of trips that would be generated by the land use indicated in the Comprehensive Plan. The Director of Planning & Development shall approve the potential land use intensity in such cases for the purpose of estimating vehicle trips.

If internal capture rates and/or pass-by and diverted trips are used by the applicant, the applicable rates must be justified by the applicant and subject to ~~approved~~ approval by the City Traffic Engineer ~~(or designee)~~ prior to use. In general, where pass-by trips are applicable, the number of pass-by trips should not exceed 10 percent of the adjacent street traffic during a peak hour or 25

percent of the development's external trip generating potential, whichever is less, and trips internally captured is highly dependent on proximity between compatible trip sharing land uses within a mixed-use development.~~.~~

9.6.E. Trip Distribution

Trip distribution is the general direction of approach and departure to/from a development site. Trip distribution will typically be estimated using existing travel patterns exhibited in the area, the position of the development in the community, capacity and classification of surrounding streets and the likely market area of the development. Data from similar development in the immediate vicinity could be useful as well. Good judgment is necessary to develop reasonable estimates of trip distribution.

9.6.F. Mode Split

Mode split is the estimate of number of travelers anticipated to use transportation modes other than automobiles. Data associated with most transportation impact studies is taken from suburban locations where there is little to no commuting alternative to automobile transportation. Further, the trip generation rates are based on the actual number of vehicles, not persons, entering and departing a particular land use. Therefore, mode split will not be applicable to most transportation impact studies.

Mode split, or modified trip generation rates, can be applied where the influence of alternative transportation modes is clearly demonstrated and documented. Prior approval must be received from the City Traffic Engineer ~~(or designee)~~.

9.6.G. Trip Assignment

Trip assignment involves the determination of traffic that will use each access point and route on the street network. While it certainly uses the trip distribution estimates, it is a different process. This is also the step where trip-reduction factors such as pass-by and diverted traffic are applied.

The assignments should reflect the conditions anticipated to occur in the analysis year. Assignments are estimates of how drivers will travel and need to account for physical and operational characteristics of the roadway and the habits of typical drivers. Some of these factors might include:

- The type of traffic control device at an intersection. For example, drivers might avoid a protected left-turn movement if they can reach their destination via the through movement and the left-turn phase has expired on approach.
- The design of internal circulation systems on the development site.
- The number of opportunities to enter from the same street. Typically, most drivers will use the first opportunity to enter but exiting trips tend to be more balanced.
- The difficulty turning left onto a major street at an unsignalized intersection.
- Drivers tend to travel in the most direct path towards their destination. In other words, drivers tend to avoid backtracking unless conditions either require it or an overall gain in safety and efficiency is expected.

Since some of these factors conflict, good judgment is necessary. Further, an iterative process might be necessary based on internal circulation alternatives and/or traffic mitigation alternatives

considered. For example, the initial access plan may show a full-access driveway but the mitigation may call for it to be limited to right turns in and out.

9.6.H. Existing, Existing Plus Approved/Unbuilt, Existing Plus Development, and Existing Plus Approved/Unbuilt Plus Development Conditions Analysis

The analysis of existing plus approved/unbuilt, existing plus development, and existing plus approved/unbuilt plus development conditions ~~is~~are based on the combination of existing traffic, traffic estimated for approved development yet to be built, and development traffic anticipated on opening. The development may be phased and have corresponding analysis scenarios to assess independent and compounding degrees of its completion. The methods of analysis shall be consistent and ~~the same~~ as described above. ~~in Step 2.~~

Two sets of conditions ~~shall~~ should be analyzed for the Existing Plus Development and/or Existing Plus Approved/Unbuilt Plus Development scenarios~~in this step~~:

- Existing Plus Development Traffic with No Improvements
- Existing Plus Development Conditions with Improvements
- Existing Plus Approved/Unbuilt Plus Development Traffic with No Improvements
- Existing Plus Approved/Unbuilt Plus Development Conditions with Improvements

In the first scenario for each condition, existing plus development and/or existing plus approved/unbuilt plus development traffic is analyzed with the current street geometry and traffic control except for the proposed access. The purpose is to demonstrate likely traffic conditions before mitigation and improvement measures are considered.

The second scenario is typically an iterative process where mitigation and improvement measures are necessary to achieve compliance with the Access Management Code, acceptable levels of service and/or to manage vehicle queuing. The final results of that process are to be documented along with the mitigation and improvement measures associated with those results. Improvements that become warranted by City design criteria or access management ~~guidelines~~ codes shall be identified and included in this process.

Mitigation measures might include:

- Additional turn lanes on the public streets and/or the site access.
- Additional through lanes on public streets.
- Revised traffic control, including new traffic signals.
- Access management strategies, e.g. build a raised median on the public street.
- Site plan or land use changes.

Mitigation and improvement measures should be logical for the conditions at a specific location, consistent with the corridor design and operations, and should contribute towards or at least be consistent with the ultimate configuration of the public street. The ramifications of mitigation and improvement measures must be clearly identified. For example, adding a second left-turn lane on one approach to an intersection will typically necessitate widening of the opposite approach.

In addition to achieving acceptable levels of service, anticipated vehicle queuing needs to be assessed to ensure that turn lanes are properly designed and that queues from one intersection do not impact operations at other intersections. This applies to the development site where access

driveways connect to the public street system. In general, the site circulation layout should not create conditions where entering traffic might queue back onto the public street and/or the efficiency of exiting traffic is diminished. Further, the site plan and design should allow for all vehicle circulation to take place on-site and not on the public streets.

9.6.I. Future Conditions Analysis

The analysis of future conditions is important to further assess proposed access in relation to the configuration of the public streets at a more mature stage of development. What might be deemed acceptable today might not fit with the long-range configuration of a street corridor. It may also prove useful in determining when significant improvements to major streets need to be planned.

~~The analysis methods are outlined in Steps 2 and 8.~~ The analyses should reflect street improvements planned to occur prior to the horizon year. Traffic associated with approved/unbuilt development is included in the background traffic growth of a future horizon.

9.6.J. Pedestrian, Bicyclist, Transit and Truck Considerations

While transportation impact studies primarily address automobile traffic, recognition of other vehicle types and travel modes is appropriate, particularly in a community that strives for multi-modal choice and complete streets (livable streets). The following text by no means represents a comprehensive list of site planning elements but each must be addressed.

9.6.J.1. Pedestrians

Sidewalks along public streets or off-street paths provide mobility for pedestrians. Pedestrians should be provided the opportunity to readily travel between these public infrastructure and adjacent land uses. Pedestrians should also have efficient and safe mobility within the development and minimize conflicts with vehicular traffic. All development plans should provide this accessibility, connectivity and mobility.

9.6.J.2. Bicyclists

Similar to pedestrians, development sites should provide reasonable opportunities to travel between adjacent public streets, shared-use paths or bicycle trails and the land use. This does not imply that separate facilities are always needed; rather, the conditions within a development site should be comparable to conditions adjacent to and near the site. Adequate and properly placed parking facilities for bicycles are a key component to encouraging bicycle travel. At a minimum, bicycle accommodations identified in the Bicycle Transportation Plan and/or Greenway Master Plan shall be incorporated in the development.

9.6.J.3. Public Transportation

Bus transportation is currently provided by several private and publicly funded agencies~~, generally to targeted customers~~. More widespread public transit, whether demand service models, fixed routes and/or mass commute systems, could be implemented or expanded in the future. Site development should account for both current and potential ~~bus~~ transit services. Some of these considerations are similar to trucks due to the relatively large size of ~~buses~~vehicle; however, the primary difference is that ~~buses~~ transit vehicles need to circulate with customer traffic flow. ~~Bus t~~Turnouts may be planned for specific corridors or intersections, or adjacent to major trip generators.

9.6.J.4. Trucks

Site driveways and internal circulation must be designed to accommodate the largest truck anticipated to serve the development or potential land use. Vehicle turning paths need to be provided such that trucks do not encroach over curbs and medians. Encroachment into opposing turning lanes should be minimized, but can be consistent with the scale of the development, ~~and~~ the frequency and timing of truck movements and roadway functional classification. Truck circulation through a development site should minimize conflicts with customer traffic and loading docks should be configured such that parked trucks do not impede normal traffic flow.

9.6.K. Documentation

The transportation impact study shall be documented in a typewritten, bound report outlining the findings and conclusions of the study, including exhibits illustrating the site plan, traffic volumes ~~(current and projected)~~for each analysis scenario, and existing and proposed street conditions (lane configurations and intersection traffic controls). Exhibits shall also include level of service, delay and vehicle queuing results for each analysis scenario. The report, or an appendix, shall include all analysis worksheets and traffic volume count spreadsheets listing data by the minimum time increment in which the data was collected (not less than 15-minute increments). ~~Four~~ Two (42) bound copies, one unbound copy and one electronic disk/media containing all of the analysis files and a PDF of the final report shall be submitted with the development application. The bound copies and electronic disk/media will be routed internally by City staff to ~~to~~ the ~~Planning & Development~~Public Works Department - Traffic Engineering Division.

The report shall be well organized and generally follow the study process chronology. The report should be divided into sections to clearly distinguish between the site plan details, assessment of existing conditions, assessment of existing plus development conditions, and the assessment of future conditions. The concluding section of the report shall summarize the significant findings and outline the mitigations and improvements ~~measures~~ needed to meet accepted standards. Trip generation information, trip distribution assumptions, and analysis results should be organized in tables or exhibits and page numbering should be used.

Documentation of the mitigation and improvement measures shall include a detailed description of the proposed improvements. For example, turn lanes shall include a recommended length. It is expected that sufficient due diligence has been conducted to reasonably conclude that the mitigation and improvement measures can be implemented without disruption to existing roadside facilities, other public street facilities, e.g., another turn lane, and/or existing access. If proposed access or a mitigation or improvement measure will cause such a disruption, the impact shall be clearly described.

It is not appropriate to define or suggest funding responsibilities in the study report.

Any deviation from established guidelines/policies shall be clearly identified and justification provided as to the basis for such a condition and its potential ramifications on the public street system.

All assumptions and analysis methodologies should also be identified. The final report should be complete to the extent that the reviewer could find all information necessary to understand how analyses were conducted and could even recreate those analyses and achieve the same results.

The professional engineer responsible for completing the study shall sign and seal the final report.

Section 10 - Interchange Areas

The purpose of this section is to preserve the safe and efficient operation of traffic on interchange crossroads and interchanges, while preserving the accessibility of interchange areas for economic development. Specific purposes are to ensure adequate storage and maneuver distances for drivers between the first signalized intersection and the highway ramp and to avoid access connections to interchange crossroads that would interfere with traffic operations at interchange ramps. In addition, this section seeks to promote the development of local streets and service roads for access in the functional area of interchanges as an alternative to individual driveway access.

The standards in this section apply to areas where grade-separated facilities, e.g. Interstates and other freeways, interchange with surface streets, highways, and roads. In such cases, adequate areas need to be provided for traffic to make the transition from a high-speed highway to the surface street system.

10.1. Interchange Functional Area Standards

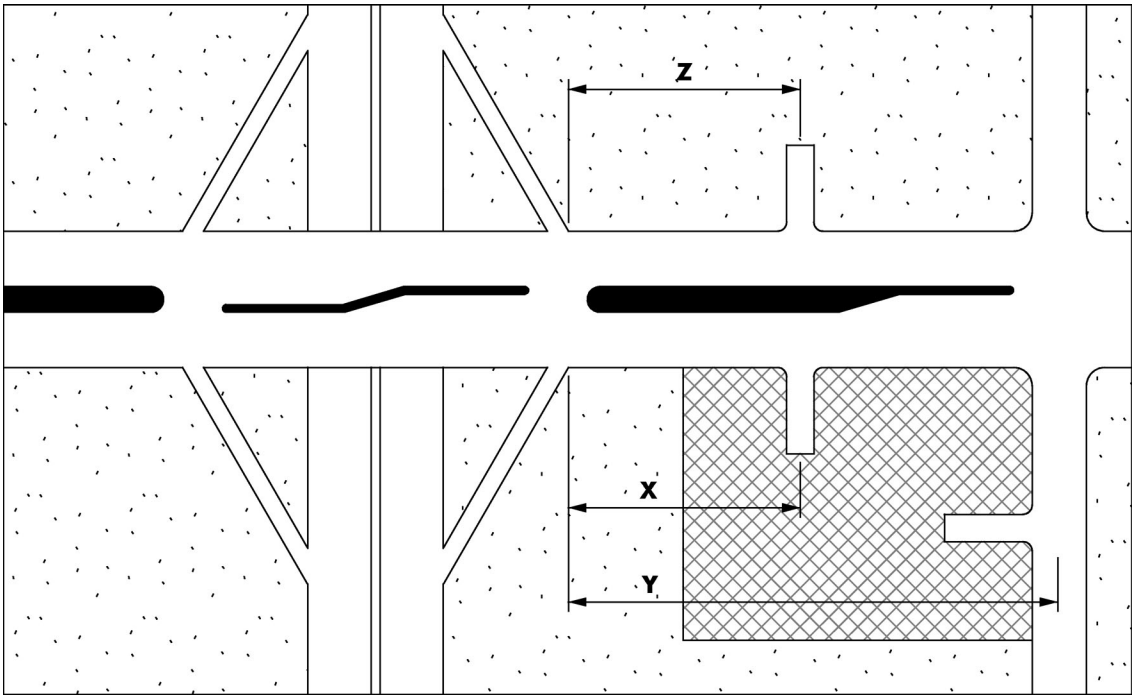
These requirements shall be applied in the vicinity of interchanges. These requirements~~.~~ should be applied within interchange areas and generally reflect the access management criteria provided by the Missouri Department of Transportation (MoDOT) for MoDOT rights-of-ways. Consequently, these requirements should be considered in consultation with the MoDOT which may recommend more stringent requirements in the interest of safety and operation of their facilities.~~where substantial development has not yet occurred, as determined by the City Traffic Engineer (or designee).~~ The City does not exercise control over MoDOT right-of-way; but will coordinate the recommendations of MoDOT and support such recommendations applicable to the state highway system in the review of development applications that impact MoDOT interchanges and where such interchange operations influence the vicinity of interchanges that may or may not be MoDOT managed. In developed areas, these standards may be difficult to achieve, however they should be considered the desirable standard and achieved to the extent reasonably possible. In undeveloped areas, ~~T~~these connection spacing standards ~~will~~ should be the minimum standards.

10.1.A. Requirements:

10.1.A.1. In order to provide a safe distance for transitional activity to occur, the spacings identified in ***Figure 10-1*** shall be provided from the end of the off ramp to the first private driveway, median opening, or intersection with a public road.

10.1.A.2. The measurement basis for this standard is from the near edge of the ramp to the center of the intersection. At "diamond" type interchanges where traffic (including right turns) is controlled by a stop sign or traffic signal, the distance is measured from center to center of the intersections. At "diverging diamond", roundabout or other continuous flow type interchanges, the distance is measured from the stop line or yield line.

10.1.A.3. Local roads or service roads shall be used for direct access to property within interchange areas.
~~Where properties are under the same ownership or consolidated for the purposes of development, the local street shall be constructed by the developer. Where the street will serve properties under separate ownership, a method will be established by the City Traffic Engineer (or designee) to apportion the costs of initiating and constructing the street~~.



X = 750 feet
Y = 1,320 feet
Z = 750 feet

Figure 10-1
Connection Spacing Near Interchanges

Section 11 - Intersection Functional Area

The functional area of an intersection consists of more than the area bounded by the stop lines, yield lines or crosswalks. The functional area of the intersection also includes the area upstream of the intersection where vehicles have to react to slowing traffic in front of them, decelerate and wait in queues. The downstream functional area includes the area where through traffic merges with traffic turning from the cross street. It also includes the distance required to accelerate back to driving speeds. The intersection functional area is shown schematically in ***Figure 11-1***.

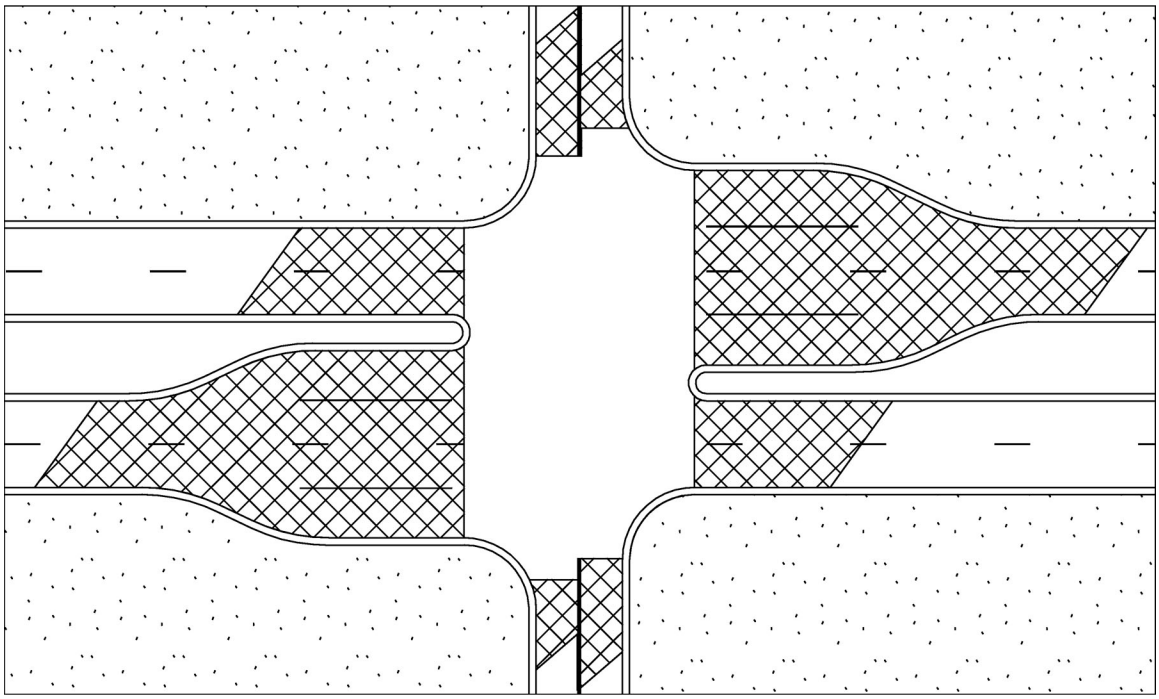


Figure 11-1
Intersection Functional Area

11.1. Upstream Intersection Functional Area

The upstream intersection functional area can be determined by summing two primary components, the Reaction/Deceleration Time and the Storage Length:

11.1.A. Reaction/Deceleration Time

This is the distance traveled while the driver recognizes that action is required, i.e. sees vehicles stopping ahead, reacts, i.e. presses break pedal, and decelerates i.e., slows to a stop. These values can be calculated from ***Table 11-1***. The City Traffic Engineer ~~(or designee)~~ shall determine where limiting conditions can be applied.

Table 11-1
Upstream Intersection Area Excluding Storage, in Feet

Speed (MPH)	Desirable Conditions[2]		Limiting Conditions[3]	
	Deceleration[4]	PIEV Plus Deceleration[5]	Deceleration[4]	PIEV Plus Deceleration
30	225	315	170	215
35	295	370	220	270
40	375	490	275	335
45	465	595	340	405
50	565	710	410	485
55	675	835	485	565
60	785	960	565	605

[1]all distances rounded to 5ft
[2]2.0 second perception-reaction time; 3.5 fps^2 average deceleration while moving laterally into turn lane, 6.0 fps^2 average deceleration thereafter; speed differential < 10 mph
[3]1.0 second perception-reaction time; 4.5 fps^2 average deceleration while moving laterally into turn lane, 9.0 fps^2average deceleration thereafter; speed differential <10 mph
[4]distance to decelerate from through traffic speed to a stop while moving laterally into a left-turn or right-turn lane
[5]distance traveled during perception-reaction time plus deceleration distance

11.1.B. ~~Queue~~ Storage Length

Queue lengths should be calculated based on existing (or existing plus development for new development projects) and future (horizon-year) traffic conditions. For development projects, turn lane storage improvements may be based on existing plus development conditions, however, site access and right-of-way should be planned to accommodate ultimate (horizon-year) conditions.

Queue lengths should be calculated for left-turn, through and right-turn lanes. Queue lengths should consider 90th percentile queues and should be calculated using established procedures or software that reports 90th percentile or maximum back of queue. As traffic signals on most arterial corridors have the potential to be coordinated, it is recommended that a cycle length of at least 120 seconds be used. Analysis should conform to Highway Capacity Manual methods. In areas with closely spaced or coordinated signals, software that analyzes coordinated signal timings, e.g. SIMTRAFFIC, TRANSYT, CORSIM, VISSIM, etc., may be needed to supplement the analysis. In these cases, queue lengths should be evaluated for both coordinated arrival and random vehicle arrival and the larger of the two values used, as future changes in coordination timings can significantly change queue patterns. In no case should the queue storage length used for calculating the upstream functional area be less than the maximum total length of any turn lane including taper at the intersection approach.

The City Traffic Engineer ~~(or designee)~~ may elect to define the upstream functional area at a value less than that calculated by the aforementioned method based on existing or anticipated conditions at an intersection.

11.2. Downstream Functional Area

The functional area of an intersection extends some distance downstream from the crosswalk location because of the need to establish guidance and tracking after having passed through the area in which there are no lane lines. This is especially true following a left turn. It can be argued that a vehicle should clear a major intersection before the driver is required to respond to vehicles entering, leaving or crossing the ~~major~~ roadway. The logic of this criterion is to simplify the

driving task and thus minimize the chances of driver mistakes and collisions. Stopping sight distance is one criterion which would allow the driver to clear the intersection before having to rapidly decelerate in response to a maneuver at a downstream intersection. Downstream functional areas based on AASHTO stopping sight distances are given in ***Table 11-2***. The downstream intersection area should also extend beyond any U-turn design element.

Table 11-2
Downstream Intersection Area, in Feet

Speed	AASHTO Stopping Distance[1]
20	~~125~~115
25	15~~50~~
30	200
35	250
40	30~~535~~
45	360~~400~~
50	42~~575~~
55	495~~550~~
60	570~~650~~

[1]~~Source: Reference (1) Table III-1, page 120, 1990 AASHTO "Green Book" (rounded to 25 ft.)~~Level Roadways

Section 12 - Medians and Continuous Center Turn Lanes

Restrictive ("raised" or "non-traversable") medians and well designed median openings are known to be some of the most important features in a safe and efficient street system. The design and placement of these medians and openings is an integral part of the access management practice. Raised medians are important for several reasons.

- Vehicular Safety - to prevent ~~accidents~~ crashes caused by crossover traffic, headlight glare distraction and traffic turning left from through lanes.
- Pedestrian Safety - to provide a refuge for pedestrians crossing the street.
- Vehicular Efficiency - to remove turning traffic from through lanes thereby maintaining~~/increasing~~ desired operating speed. This reduces fuel consumption and emissions which is an environmental benefit.
- Improved Aesthetics - Landscaped and grass medians offer aesthetic benefits over paved turn lanes or undivided roadways.

Properly implemented median management will result in improvements to traffic operations, minimize adverse environmental impacts, and increase ~~highway~~ transportation safety. As traffic flow is improved, delay is reduced as are vehicle emissions. In addition, roadway capacity and fuel economy are increased, and most importantly, ~~accidents~~ crashes are less numerous and/or less severe due to fewer conflict points, moderated interruptions in traffic flow and simplified driver decisions.

Continuous two-way center turn lanes ("two-way left-turn lanes" or "TWLTL" or "traversable" medians) do not provide all of the safety benefits of restrictive medians, but do offer ~~substantial~~ some safety improvements over roadways where no left-turn lanes are provided, particularly in areas with frequent and low volume driveways. These facilities provide more flexibility than restrictive medians and operate safely and efficiently under appropriate circumstances. However, once the driveway density, left-turning traffic volumes, and through traffic volumes reach certain levels, the safety benefits diminish rapidly. Under such conditions, restrictive medians are the more effective alternative with regard to safety and operations.

12.1. Median Standards

Restrictive medians shall prohibit vehicles from crossing the median except at designated median openings through the use of a barrier curb or wide landscaped median treatment. Restrictive medians shall be required under any of the following conditions:

- On all major arterial streets.
- On minor arterial and collector streets where existing daily traffic volumes are in excess of ~~24~~18,000 (where traffic volumes are projected to exceed ~~24~~18,000 in the future, the roadway and access should be designed to accommodate the future installation of a raised median, e.g. identify potential median opening locations, use 16-foot wide center turn lane).
- Speeds are posted at 45 MPH or above.
- Adjacent to left-turn lanes at signalized intersections (existing or planned signal locations) where driveways are present or would otherwise ~~s are present within~~be located within the intersection functional area.
- Adjacent to all dual left-turn lanes.

- On multi-lane roadways (two or more through lanes in each direction) within the functional area of an interchange.
- On roadways with three or more through lanes in each direction.
- At roundabout controlled intersections.

12.2. Continuous Two-Way Center Turn Lanes

Continuous two-way center turn lanes ~~shall~~ may be considered under the following conditions (except where restrictive medians are required as described above):

12.2.A. On ~~all~~ minor arterial and collector streets adjacent to property that is already developed ~~as~~ or planned for low density commercial use~~development~~ or in areas where there is a need for frequent left-turn lanes and low left-turn volume.

Section 13 - Median Openings

Openings in ~~raised~~ restrictive medians should only be provided to accommodate turning traffic in locations where this can be safely done. Where openings are provided, ~~an~~ adequate spacing between them is ~~required~~ necessary to allow for required vehicle storage, adequate entry taper and weaving of traffic so as to preserve traffic flow and provide for safe lane changes and turns.

A full opening allows turns to be made in both directions; a directional opening allows turns to be made in only one direction. An example of a directional median would be one that allows left turns into a driveway, but does not allow left turns to be made out.

Examples of these median opening types are shown on ***Figure 13-1*** and ***Figure 13-2***.

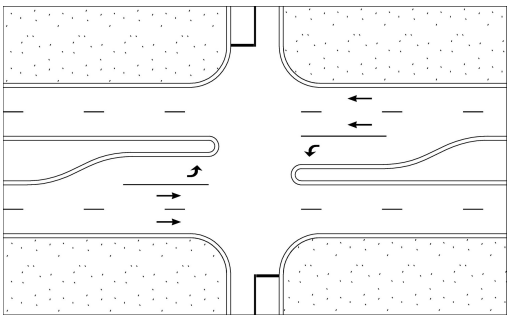


Figure 13-1
Full Median Opening

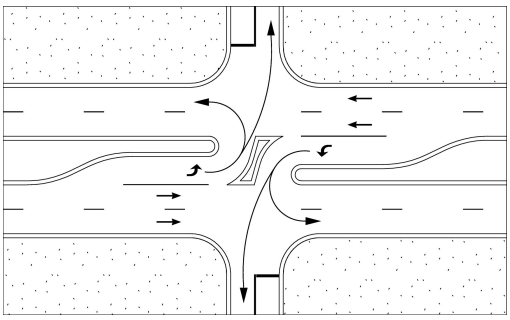


Figure 13-2
Directional Median Opening

13.1. Median Opening Standards

The minimum spacing standards for full median openings shall be ~~one-quarter (1/4) mile~~ subject to the limitations listed below.

13.1.A. No median openings shall be permitted within the functional area of an interchange or intersection.

13.1.B. Median openings shall not be permitted where an opening would be unsafe due to inadequate sight distance.

13.1.C. Full median openings along major arterials must meet the minimum requirement~~s~~ of ~~both~~ one-quarter mile spacing and full median openings along any roadway must meet the ~~and the~~ minimum connection spacing requirements noted in Section 15.

13.1.D. Directional median openings may be provided at any connection that meets the connection spacing requirements, and is found to be an acceptable location based on a transportation impact study.

13.1.E. Left-turn lanes shall be required at all median openings. Median openings shall not be permitted where ~~adequate~~ minimum required queue storage and taper cannot be provided for the left-turn lanes.

13.2. U-Turns

As access management principles and standards are applied, the U-turn becomes an increasingly important movement for accessing local streets and driveways along arterials. A standard passenger vehicle cannot easily make a U-turn from a left-turn lane with minimal median width, e.g. 4 feet, and only two lanes in the opposing direction. In order to accommodate U-turn movements at median openings on a four-lane roadway, there are two options - provide a wide median near the intersection (30 feet or more) or provide some sort of widening of the downstream approach near the U-turn location. Downstream widening can be accommodated by allowing vehicles to turn on the shoulder or by flaring the pavement width at the U-turn locations. Ultimately, the width between the left edge of the left-turn lane and the right edge of the downstream travel lane needs to be at least 44 feet for a typical automobile to make a U-turn. An assessment of the design vehicle wheel path for U-turns should be done where U-turn accommodations are desired to ensure the appropriate area is available without encroachment and is not excessively overbuilding the pavement which can mislead lane identification. Special care should also be given to U-turns at traffic signal controlled intersections for the left-turn/U-turn phase interaction with protected or permitted or overlap right-turn operations. Examples of these techniques are illustrated on ***Figure 13-3*** and ***Figure 13-4***.

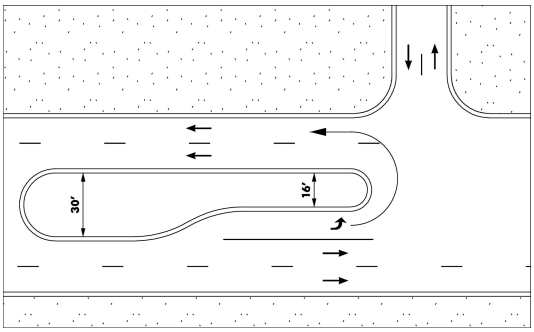


Figure 13-3
U-Turns at Wide Median

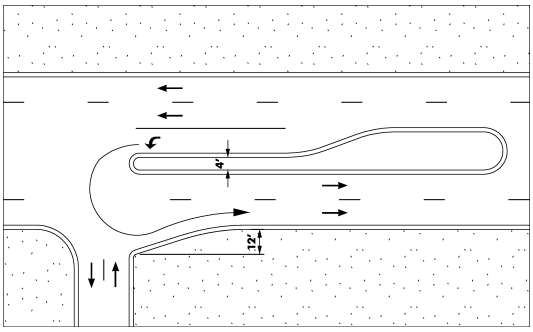


Figure 13-4
U-Turns onto Flared Approach

Section 14 - Traffic Signals

This section addresses the distance between signalized at-grade intersections on public streets. Minimum spacing is mainly intended to preserve efficient traffic flow and progression on urban arterial streets; for instance, a quarter or half-mile spacing allows traffic signals to be effectively interconnected and synchronized. Effective signal coordination will also tend to reduce rear-end collisions and stop-and-go driving that increases congestion, delay, and air pollution.

14.1. Traffic Signal Standards

An intersection should meet the following ~~requir~~requirements to be considered for installation of a traffic signal.

14.1.A. The intersection shall meet a warrant or warrants in the Manual on Uniform Traffic Control Devices (MUTCD). Installation of a traffic signal based solely on the peak hour ~~or four-hour~~ warrant will only be considered at the intersection of an arterial street with a ~~n~~nother arterial street, ~~major~~ collector street, or at the intersection of an expressway, highway or freeway ~~intersection~~ and ramp terminal~~s~~. Other locations must meet additional signal warrant criteria and be supported by engineering study.

14.1.B. For intersections where one or more of the roadways is a collector street, existing traffic volumes shall be utilized in evaluating the signal warrants (installation of a traffic signal based on existing plus proposed development traffic volumes may be approved ~~based~~ if ~~on~~the projected traffic volume ~~increases projected to occur~~will likely realize within ~~the next~~ 12 months of occupancy). Signals warranted based on future phases of development would have conditions of approval for signal installation coincidental to the phase of development that merits the signal warrant. Approved development trip generation that has not yet realized may be considered in the traffic signal warrant evaluation.

14.1.C. The location of the traffic signal ~~shall~~ should be at least one-quarter mile (1/4) from another traffic signal, either existing or anticipated and shall not be less than one-eighth mile (1/8) from another traffic signal where extraordinary conditions exist and by approval of the City Traffic Engineer~~.~~

14.1.D. Traffic signal interconnect ~~(~~conduit and fiber optic lines ~~conduit and cable)~~ shall be installed between traffic signals within 3,000 feet of the proposed location, potentially within one mile for wireless communications~~.~~

14.1.E. Roundabouts should be considered, where applicable and practical based on engineering study, in lieu of traffic signals except where the intersection is within the influence of an adjacent traffic signal and coordinated corridor.

Section 15 - Connection Spacing

This standard governs the minimum allowable spacing between connections (e.g. ~~side~~ streets and private driveways) on various classifications of streets. Access points introduce conflicts and friction into the traffic stream. Each conflict point increases the crash opportunity and exposure along a corridor. Each friction point reduces the corridor capacity to efficiently move traffic. Vehicles entering and leaving the main roadway often slow the through traffic, and the difference in speeds between through and turning traffic increases ~~accident~~ crash potential. ~~As stated in the~~The many proven benefits of managed access can be read in more detail from various Transportation Research Board references, papers, reports and studies as well as multiple documents published by ~~-~~AASHTO, including A Policy on Geometric Design of Highways and Streets.~~, "Driveways are, in effect, at-grade intersections. . . . The number of accidents is disproportionately higher at driveways than at other intersections; thus their design and location merit special consideration."~~

The professional consensus is that increasing the spacing between access points improves arterial flow and safety by reducing the number of conflicts per mile, by providing greater distance to anticipate and recover from turning maneuvers, and by providing opportunities for use of turn lanes. Many studies have shown that driveway spacing is one of the key factors that influence ~~accidents~~crash frequency.

15.1. Connection Spacing Standards

Connections (a street or driveway, public or private) to public roadways ~~to major streets~~ shall conform to the following requirements. All applicable criteria must be met to be deemed conforming.

15.1.A. Connections along any arterial or collector shall be outside any interchange or intersection functional area.

15.1.B. Connections shall be~~Provide~~ sufficiently separated ~~separation~~ to accommodate~~for provision of~~ warranted and/or required right-turn lanes and left-turn lanes.

15.1.C. Connections along any arterial or collector shall be aligned with existing or planned connectors on the opposite side of the street ~~except where movements are limited to right turns in and right turns out~~, except where a restrictive median is in place and the spacing criteria in 15.1.E are satisfied. The alignment and angle of intersection of connections at the intersecting connector shall meet the criteria described in the City's Design and Construction Manual.

~~15.1.C.1.).~~

15.1.D. ~~If offset from~~Connections ~~on the opposite side of the street~~where no restrictive median is in place, minimum separations (measured from centerline to centerline) include:

15.1.D.1. Major Arterial - 660 feet
15.1.D.2. Minor Arterial - 400 feet
15.1.D.3. Industrial/Commercial Collector - 300 feet
15.1.D.4. Residential Collector - 200 feet
15.1.D.5. Local or Access – Minimum separation ~~A~~as ~~required~~required by the Unified Development Ordinance (UDO), except such connector shall also be spaced from any collector or arterial intersection in accordance with minimum throat length criteria described in Table 18-2 and not be located within the intersection sight triangle (not to obstruct sight distance).

~~15.1.D.5. Left in only movements must be controlled through the use of a restrictive median.~~

15.1.E. Connections where a restrictive median is in place shall meet the following requirements and the minimum requirements of Section 13. Any access having restricted movement shall be controlled through the use of a restrictive median conforming to Section 12.

15.1.E.1. Connections with restricted left--turns out and cross--street traffic (LIRIRO) shall meet all of the requirements in sections 15.1.A, 15.1.B, and should meet the requirements of 15.1.D where adjacent to LIRIRO or full access.

~~15.1.D.6.~~ 15.1.E.2. Connections limited to right--turns in and right--turns out (RIRO) shall meet all of the requirements in sections 15.1.A and 15.1.B.

15.1.F. Multiple (2) residential driveways for a single residential property may be approved on local and access streets at the discretion of the City Traffic Engineer, so long as sight distance is not obstructed, access to mail box or fire hydrant is not impeded, or a negative impact caused to on-street parking availability for adjacent owners (next to or across from such driveway). Multiple driveways for a single residential property are not permitted on collectors and arterials and access to collectors and arterials for residential properties shall conform to other provisions of this code which preclude such access if an alternative exists from a local street, access street or shared access condition.

Section 16 - Turn Lanes

Vehicles slowing to turn right or left onto cross streets or into driveways cause disruptions to through street traffic flow and increase ~~accidents~~ crashes along a corridor. Thus, the treatment of turning vehicles has an important bearing on the safety and movement along ~~arterial~~ roadways. Turn lanes are~~It is~~ one of the most influential and important components of ~~major~~ access management. ~~concerns.~~

Left turns may pose problems at driveway and street intersections. They may increase conflicts, delays, and ~~accidents~~ crashes and often complicate traffic signal timing. These ~~problems~~ issues are especially acute at major suburban arterial intersections where heavy left-turn movements take place, but occur also where left turns enter or leave driveways serving adjacent land development. The following illustrate these problems:

- More than two-thirds of all driveway-related ~~accidents~~ crashes involve left-turning vehicles.
- Where there are more than six left turns per traffic signal cycle, virtually all through vehicles in the shared lane may be blocked by the left-turning vehicles.

16.1. Left-Turn Lane Standards

16.1.A. Left-turn lanes ~~should~~ shall be provided on all approaches to intersections controlled by, or planned to be controlled by, traffic signals.

16.1.B. Left-turn lanes ~~should~~ shall be provided on ~~minor~~ all arterial streets at the intersection with other arterial and collector streets. Left-turn lanes shall be provided on minor arterial streets at the intersection with any local street or driveway where the left-turn volume is at least 20 vehicles in any hour. On major arterial streets, left-turn lanes ~~should~~ shall be at the intersection with all connectors (an exception may be granted for a singular, existing, residential lot).

16.1.C. Left-turn lanes shall be provided on collector streets at the intersection with a connector serving non-residential development where the left-turn volume is at least 30 vehicles in any hour and should be provided where the left-turn volume is less than 30 vehicles in any hour.

~~16.1.C.~~16.1.D. Left-turn lanes ~~should~~ shall be provided on non-residential connectors intersecting with major arterial streets (where left-turn egress is permitted). Left-turn lanes shall be provided on non-residential connectors intersecting minor arterial streets (where left-turn egress is permitted) where the left-turn volume is at least 20 vehicles in any hour. Left-turn lanes should be provided on any connector at any location as recommended by a traffic study or where the left-turn lane provides design efficiencies desired by the owner/developer with exception of access associated with residential property.

~~16.1.D.~~16.1.E. Left-turn lanes ~~should~~ shall be provided at all median openings on roadways with medians.

~~16.1.E. Left-turn lanes should be provided on collector streets at the intersection with a connector serving non-residential development.~~

16.1.F. Continuous two-way left turn lanes may be used in lieu of individual left-turn lanes where permitted by the City Traffic Engineer and in consideration of conditions listed in Section 12. Continuous left-turn lanes in the presence of a median will not be allowed.

16.1.G. Dual-left-turn lanes should be planned for all approaches of an arterial/arterial intersection. The outside receiving lane for a dual-left-turn lane condition should be designed with a tapered entrance to accommodate a wider turning radius.

16.1.H. The minimum length of left-turn lane should be 250 feet plus taper on an arterial street intersecting another arterial street and 200 feet plus taper on an arterial street at other locations. The minimum length of left-turn lane on collectors should be 150 feet plus taper. The minimum length of left-turn lane on connectors should meet the driveway throat length requirements.

16.1.I. The length of the left-turn lane ~~should~~ shall be increased as necessary to accommodate estimated queue length. The length of the left-turn lane at intersections controlled by traffic signals should be increased, if necessary, based on the longer of the queues in the turn lane or the adjacent through lane.

16.1.J. Left-turn lane lengths cover the full-width segment between the taper and the end of the lane at an intersection. The end of the lane at the intersection should be determined as the stop line, or if none, as the point of curvature for the corner radius.

16.1.K. The introductory taper should be a reverse curve using a 150-foot radius for a single left-turn lane and 300-foot radii for a dual left-turn lane. The reverse curve does not define the redirection taper where a left-turn lane is introduced.

~~16.1.J.~~16.1.L. The beginning of a taper should not encroach the interchange or intersection functional area of an adjacent traffic signal or roundabout, whether existing or planned.

16.2. Right-Turn Lane Standards

16.2.A. Required on arterial streets at each intersecting street or driveway where the right-turn volume on the major arterial street is or is projected to be at least 30 vehicles in any hour, or the right-turn volume on the minor arterial street is or is projected to be at least 60 vehicles in any hour. Minimum length should be 250 feet plus the taper on a major arterial at the intersection of another arterial street or 200 feet plus the taper on a minor arterial at the intersection with another arterial street or on a major arterial at the intersection of a collector and 150 feet plus the taper at other locations along arterial streets.

16.2.B. Required on collector streets in non-residential areas at the intersection with any street or driveway where the right-turn volume on the collector street is or is projected to be at least 100 vehicles in any hour. The minimum length should be 100 feet plus the taper.

16.2.C. The length of the right-turn lane shall be increased as necessary to accommodate estimated queue length. The length of the right-turn lane at intersections controlled by traffic signals or roundabouts should be increased, if necessary, based on the longer of the queues in the turn lane or the adjacent through lane.

16.2.D. Right-turn lane lengths cover the full-width segment between the taper and the end of the lane at an intersection ~~with a public street or driveway~~. The end of the lane at the intersection should be determined as the stop line or yield line, or if none, as the point of curvature for the corner radius.

~~16.2.E. The minimum length on controlled approaches should be exceeded based on the estimated queue length determined for 20-year traffic volume projections. The turn lane length should be based on the longer of the queues in the turn lane or the adjacent through lane.~~

~~16.2.F.~~16.2.E. The introductory taper should be a straight line and its length should be determined by using a rate of 12.5 to 1 based on the width of the right-turn lane.

~~16.2.G.~~16.2.F. The beginning of a taper should be no closer than 100 feet from the ~~centerline~~ nearest point of curvature on the intersection corner radius of the nearest connector preceding the turn lane along arterials and 50 feet from the ~~centerline~~same of the nearest connector preceding the turn lane along collectors and other locations. The beginning of a taper should not encroach the interchange or intersection functional area of an adjacent traffic signal or roundabout, whether existing or planned.

~~16.2.H.~~16.2.G. Continuous right-turn lanes will not be allowed.

16.3. Variances

The standards outlined in the section may be altered or waived by the City Traffic Engineer ~~(or designee)~~ for a specific situation in which extraordinary conditions are encountered.

Section 17 - Sight Distance

Sight distance for driveway and street construction should be considered essential in the design and issuance of permits for all ~~driveways~~connectors. If there is a request to construct a driveway or street at a questionable location, the transportation impact study must include a field inspection to evaluate the sight distance. Sight distance is ~~always~~ the most important consideration in allowing, not allowing, or placing driveway~~s~~ and roadway intersections. Both vertical and horizontal alignment can limit sight distance. Special consideration is required for skewed intersections.

The sight distance standards include stopping sight distance, intersection sight distance, passing sight distance and other sight ~~are based~~ distances referenced in~~on criteria in~~ the ~~2001~~ 2011 AASHTO "Green Book" A Policy on Geometric Design of Highways and Streets, as may be amended in the publication of future editions.

17.1. Sight Distance Standards

17.1.A. Stop-Controlled Intersections

The intersection sight distance is based on a gap-acceptance concept. It is assumed that drivers on the major road should not need to reduce speed to less than 70 percent of the initial speed. The intersection sight distance is determined from the size of acceptable gap that a driver requires to enter the roadway.

The acceptable gaps that drivers require to enter a major roadway for left turns and right turns from the stop are given in ***Table 17-~~Table 17-~~1***. Adjustments for roadway width and approach grades are given in footnotes to the table. Sight distances for left-turns for passenger cars on various width roadways at a stop controlled approach are summarized on ***Table 17-2~~Table 17-2~~***. Sight distances for right-turns and cross-over maneuvers for passenger cars are generally less than the distances required for left-turns. The speed used to calculate the minimum sight distance shall be the posted speed, design speed or the 85th percentile speed, whichever is known and greate~~r~~st.

Formatte
Bold

Formatte
Bold

Table 17-1
Gap Time for Stop Controlled Intersections

Design Vehicle[1]	Time Gap [2,3]
Passenger Car	7.5 sec.
Single Unit Truck	9.5 sec.
Combination Truck	11.5 sec.

[1]Passenger car design vehicle is typically sufficient for streets and drives serving residential, commercial and office development. For industrial developments, or on major streets with more than 3% trucks, consider using truck categories.
[2]Adjustment for multilane highways:
For left turns onto two-way highways with more than two lanes, add 0.5 sec for passenger cars or 0.7 sec for trucks for each additional lane, in excess of one, to be crossed by the turning vehicle. For right turns, no adjustment is necessary.
[3]Adjustment for approach grades:
If the approach grade on the minor road is an upgrade that exceeds 3 percent: Add 0.1 sec per percent grade for right turns, add 0.2 sec per percent grade for left turns.

Table 17-2
Sight Distance for Stop Controlled Intersections, in Feet
Passenger Cars, Grades Less Than 4%

Speed[2] (MPH)	Lanes to Cross[1]			
	One	Two	Three	Four
20	~~220~~225	240	250	26~~0~~
25	280	29~~0~~	31~~0~~	33~~0~~
30	33~~0~~	35~~0~~	37~~0~~	400
35	390	41~~0~~	440	46~~0~~
40	44~~0~~	47~~0~~	500	530
45	500	530	56~~0~~	600
50	55~~0~~	590	62~~0~~	66~~0~~
55	610	650	690	730
60	66~~0~~	710	750	79~~0~~
65	720	76~~0~~	81~~0~~	860
70	77~~0~~	82~~0~~	87~~0~~	930

[1]Lanes to cross for left-turning vehicles (lanes with vehicles approaching from left including left and right-turn lanes, add one lane for each 15 feet of median width not including left turn lane) ; except where a left-turn movement can be staged by design within a median of sufficient width, the left-turn may be evaluated as a right-turn.
[2]Greater of posted speed, design speed or 85th percentile speed.

17.1.B. Traffic Signal Controlled Intersections

The intersection sight distance at signal-controlled intersections requires that the first vehicle on each approach should be visible to the drivers of the first vehicle on all other approaches. If the signal is to be placed on two-way flashing operation, the requirements for left and right turns from a stop controlled intersection must be met. If right turns on red are permitted, an expected operation in Lee's Summit by default, the departure sight triangle for right turns for stop controlled intersections should be provided.

17.1.C. All-Way Stop Controlled Intersections

The first vehicle stopped on each approach should be visible to the drivers of the first vehicles stopped on all other approaches.

17.1.D. Left Turns from a Major Road

The required intersection sight distance for left-~~-~~turns from the major road when the left-turn is not controlled is the distance traveled by an approaching vehicle at the design speed of the major roadway for the distances shown in ***Table 17-3***.

Table 17-3 Gap Time for Left Turns from Uncontrolled Street	
Design Vehicle	**Travel Time [1]**
Passenger Car	5.5 sec.
Single Unit Truck	6.5 sec.
Combination Truck	7.5 sec.
[1]Adjustment for multilane highways: For left turns that must cross more than one opposing lane, add 0.5 sec for passenger cars and 0.7 sec for trucks for each additional lane to be crossed	

Generally, no separate check for this condition is necessary where sight distance for stop intersections is available. Checks are required at three-legged intersections and at mid-block approaches or driveways. Locations on horizontal curves and with sight obstructions present in the median need to be checked as well.

17.2. Exceptions to Sight Distance Requirements

Sight distance should be considered a key element in the location of all driveways and roadway intersections with particular emphasis placed upon public street approaches, high volume commercial and industrial driveways, and all driveways on arterial streets. All driveway and roadway intersection locations shall meet or exceed the requirements listed above.

If no location on the applicant's frontage meets or exceeds the sight distance requirements, but a location does meet or exceed the distances shown in the ***Minimum Stopping Sight Distance*** column on ***Table 17-4~~Table 17-4~~***, a driveway or roadway may be located with the City Traffic Engineer's ~~(or designee's)~~ approval, in accordance with the all the following criteria:

Formatte
Roman, 1

- The proposed driveway location has the maximum sight distance available on the entire property frontage.
- The classification for the street is not expressway or major arterial.
- The proposed location is not for a public street approach or a high-volume commercial driveway (more than 50 trips (in plus out) existing or projected during the peak hour).
- There is no other available access, having equal or greater sight distance.
- The Applicant will submit a letter to the City Traffic Engineer ~~(or designee)~~ stating the following: "Applicant is aware that the sight distance of this driveway is restricted. The sight distance is the minimum necessary for a vehicle traveling at the posted speed to come to a complete stop prior to the driveway." The permit may also be issued with conditions limiting the number and types of vehicles using the driveway.

If these conditions are not met the permit shall not be issued for the driveway. The applicant should be advised of work that could improve sight distance for the location, such as ~~minor~~ grading or brush removal.

Table 17-4
Minimum Stopping Sight Distance, in Feet

Speed[1]	~~30~~25	~~30~~35	~~35~~40	~~40~~45	~~45~~50	~~50~~55	~~55~~60	~~60~~65	~~65~~70
Distance~~[2]~~	~~200~~15 5	~~200~~22 ~~5~~	~~250~~27 ~~5~~	~~305~~32 ~~5~~	~~360~~40 ~~0~~	~~425~~45 ~~0~~	~~495~~52 ~~5~~	~~570~~5 ~~50~~	~~645~~62 ~~5~~

[1]Greater of design speed or 85th percentile speed.
[2]Distances shown for level roadways. Additional stopping sight distance is required for downgrade conditions.

17.3. How to Measure Sight Distance

The sight distance for the proposed driveway is measured for each direction of travel and turning movement considered and the smaller distance is then located in the sight distance chart for the speed (greater of the design speed and 85th percentile speed) of the roadway to determine which sight distance criteria is met, if any.

Acceptable sight distance measurement methods are described in the AASHTO "Green Book". For example: To measure actual sight distance limited by vertical alignment in the field for a proposed driveway, place a sighting target 3.50 feet above the edge of pavement at a point 20 feet from the edge of the nearest travel lane ~~(~~to represent the approximate location of a driver waiting to exit the driveway~~)~~ at the proposed driveway location. On streets classified minor arterial and below, the target may be placed at a point 15 feet from edge of the nearest travel lane. Sighting from a height of 3.5 feet for cars (7.6 feet for trucks), move along the roadway away from the proposed driveway site to a point beyond where the target disappears. Move toward the target until it can first be seen and place a mark on the pavement. The target should remain visible as you continue toward the driveway. The line of sight should stay within the limits of the right-of-way. Measure the distance along the roadway between the mark and the target. This measured distance is the sight distance.

Sight distance should take into account both the horizontal and vertical profile of the roadway. Consideration may also be given to vegetation both on the right-of-way and adjacent to the right-of-way as it may impede vision more or less during certain times of the year. Where providing adequate sight distance requires visibility across private property, provisions must be made to preserve sight lines across the property.

Section 18 - Driveway/Connection Geometry

The design of driveways is important in access management in that it affects the speed of traffic turning into and out of driveways. This in turn affects the speed differential between through traffic and turning traffic where auxiliary lanes are not provided. Large speed differentials are created where driveways are inadequately designed and these higher speed differentials are associated with higher crash rates and diminished traffic operations. The design of driveways also impacts the safety of pedestrians crossing driveways and delay associated with pedestrian driveway crossing activity.

Another critical aspect of the driveway or connection design is the potential for traffic operations off of the public street to become congested and spill or queue back onto the public street. The proper separation of internal conflict points from the public street is necessary to eliminate or diminish this potential.

Driveway designs should always be based on the results of a study of the traffic likely to use them.

18.1. Driveway/Connection Standards

18.1.A. Lining Up Driveways Across Roadways

Driveways shall align with driveways across the roadway on roadways without non-traversable medians or shall be offset as described in the connection spacing standards.

18.1.B. Angle of Intersection to the Public Roadway

18.1.B.1. Driveways that serve two-way traffic should have angles of intersection with the public street of 90 degrees or very near 90 degrees. The minimum acceptable angle for driveways that serve two-way traffic is 80 degrees.

18.1.B.2. Driveways that serve one-way traffic may have an acute angular placement of from 60 to 90 degrees.

18.1.C. Corner Radius

The corner radius at intersections should be large enough to allow entering vehicles to do so at a reasonable rate of speed and avoid encroachments of adjacent lanes by turning vehicles of frequent use (e.g. typically a passenger vehicle and/or single unit truck), but should otherwise be minimized to reduce the negative impacts associated with larger radii. Large corner radii can adversely impact safety and operations by acute view angles, increased pedestrian crossing exposures, indistinct lane definition, greater intersection area, and other considerations. The Design and Construction Manual describes minimum corner radii, measured from the ~~edge of the driving surface of the roadway~~back of curb or edge of roadway when curb is not present. Corner radii for driveways shall not exceed the radii standards for street intersections and should be less than those for streets so as not to confuse the identification of driveway intersections as street intersections along a roadway. ~~Larger approach radii are allowable for driveways, however the impact on lane definition, the view angle of right turning traffic to see cross traffic, and the impact on pedestrian crossing times should all be considered.~~ Corner radii of greater than ~~75~~ 50 feet should not be used.

18.1.D. Driveway Width

Driveway widths shall be measured exclusive of any curb or curb and gutter. If monolithic curb is used, a 2-foot section measured from the back of curb shall be deemed a de facto curb and gutter section. Any medians contained in the driveway are above and beyond the minimum widths in the table. Driveway widths shall be minimized and accommodate the required number of lanes and all traffic movements for the expected design ~~Minimum~~vehicle. Typical minimum ~~acceptable~~ and maximum ~~acceptable~~ widths for various levels of traffic and directions of access are shown on ***Table 18-1***.

18.1.D.1. All commercial and industrial driveways shall be curbed.

18.1.D.2. All parking lots and driveways leading to or connecting with parking lots shall also be curbed.

18.1.D.3. All commercial and industrial driveways with four or more lanes shall have a raised~~, landscaped~~ median separating the inbound and outbound lanes. The median should be at least 4 feet in width with aesthetically enhanced materials of contrasting color and texture to that of the pavement surface. A landscaped median with minimum width of 8 feet is desired ~~at least 8 feet in width~~. On industrial drives with primarily heavy truck traffic, medians may be omitted unless provided to comply with controlled access conditions~~, or "rollover" or mountable type median may be used but should be constructed with a pavement surface of a contrasting color~~.

18.1.D.4. Single inbound or outbound lanes on driveways with a median shall be 16 to 18 feet in width.

18.1.D.5. The width of any residential driveway shall conform to the requirements noted as general conditions herein, the Unified Development Ordinance and/or Design & Construction Manual whichever applies and is most restrictive. Generally, residential driveway width at the right-of-way shall be minimized to the extent practical and not exceed a typical three-car width (a typical two-car drive width preferred).

18.1.D.6. Low volume driveways may be permitted to have a width of 24 feet (back of curb to back of curb) on local and access roadways or in the Downtown Core provided ~~no~~ trucks are prohibited or the site, throat depth and driveway are designed to accommodates truck traffic ~~traffic will be allowed to use the driveway~~. ~~In areas outside of the Downtown Core additional driveways must be provided for truck traffic.~~

Table 18-1
Commercial/Industrial Driveway Widths
(Back of Curb to Back of Curb)

Driveway Traffic Category	Average Daily Traffic Using Driveway	Peak Hour Traffic Using Driveway	Two-Way Access		One-Way Access	
			Min. Width	Max. Width	Min. Width	Max. Width
Low Volume	< 1500	< 150	28 feet[2]	42 feet[3]	16 feet[1]	~~20~~ 18 feet[1]
Medium Volume	1500-4000	150-400	42 feet[3]	~~54~~ 56 feet[4]	~~20~~ 18 feet[1]	30 feet[2]
High Volume	>4000	>400	42 feet[3]	To Be Determined Through a Traffic Study	Generally Not Applicable	Generally Not Applicable

[1]One-lane driveways.
[2]Driveway accommodates~~striped for~~ two-lanes.
[3]Driveway is striped for three lanes.
[4]Driveway is striped for four lanes. Driveway may require a width greater than 56 feet where additional lane(s) are needed based on a traffic impact study or other Access Management Code provision.

18.1.E. Driveways and Accommodation of Pedestrians

In current and future urban places, all driveways must adequately accommodate pedestrians using sidewalks or paths. The crosswalk location should be placed to balance the pedestrian crossing distance and the width of the intersection for vehicular traffic (typically this is at about the center point of the corner radius). Crosswalks should not be placed where pedestrians would likely have to cross behind or between stopped vehicles. Where four or more driveway lanes are created, the driveway ~~y~~ should be designed so that the pedestrian~~s~~ ha~~ves~~ a refuge from entering and exiting traffic unless such driveway is traffic signal controlled. Driveway widths and corner radii should be minimized, not maximized, to reduce the pedestrian crossing distance. This will also reduce the pedestrian crossing time making traffic operations more efficient.

18.1.F. Driveways and Accommodation of Bicycles

Where a new driveway crosses a bicycle facility (such as a dedicated bike path or an on-street bike lane), the driveway should be designed so as to accommodate the safe crossing of bicyclists. Likewise, when a new bicycle facility is built that crosses existing driveways, the bicycle facility should be designed with safe crossings in mind. Developments that accommodate cyclists should have driveways that also accommodate cyclists or separated bicycle facilities.

18.1.G. Driveway Throat Length

The driveway throat length should minimize or eliminate the condition where inbound traffic queues ~~back~~ onto a public street (see ***Figure 18-1***). The throat length also provides ~~for~~ a place for ~~exiting~~ vehicles to queue without adversely affecting site circulation, gives better definition of the driving lanes, and ~~separationes between~~ the parking area from ~~and~~ the adjacent street or drive. Driveway throat lengths shall ~~meet~~ meet or exceed the ~~following~~ requirements of Table 18-2 and

should be based on the ultimate public street section and land development anticipated. Residential driveway throat depth shall meet the requirements of the UDO, typically dictated by building setback. ~~:~~

Table 18-2
Driveway Throat Depths

Project Peak Hour Vehicles Per Hour (vph) (two-way traffic)	Adjacent Roadway Classification		
	Local	Collector	Arterial
< 10 vph	30 feet[1] 50 feet	30 feet[1] 50 feet	30 feet[1] 50 feet
10 vph to 50 vph	50 feet	50 feet	75 feet
50 vph to 100 vph	50 feet	75 feet	100 feet
100 vph to < 400 vph	Greater of ~~100~~75 feet or as calculated by Transportation Impact Study	Greater of 100 feet or as calculated by Transportation Impact Study	Greater of 125 feet or as calculated by Transportation Impact Study
400 vph or more	Greater of 100 feet or as calculated by Transportation Impact Study	Greater of 125 feet or as calculated by Transportation Impact Study	Greater of 1~~25~~50 feet or as calculated by Transportation Impact Study

[1] For driveways serving extremely low volumes (10 vehicles or less in the peak hours) on low volume (less than 100 vehicles existing or projected in any hour), low speed (25 miles per hour speed limit) streets, a throat depth of 30 feet may be permitted at the City Traffic Engineer's discretion.

~~All driveways shall provide at least 50 feet of throat length adjacent to local streets and 100 feet adjacent to collector and arterial streets.~~
~~For driveways serving between 100 and 400 vehicles in the peak hour (two-way traffic volumes) the driveways shall provide at least 125 feet of throat length.~~
~~For driveways serving over 400 vehicles per hour (two-way traffic volume) and for all driveways controlled by a traffic signal, adequate throat length shall be determined by a transportation impact study.~~
~~For driveways serving extremely low volumes (10 vehicles or less in the peak hours) on low volume (less than 100 vehicles existing or projected in any hour), low speed (25 miles per hour speed limit) streets, a throat depth of 30 feet may be permitted at the City Engineer's (or designee's) discretion.~~

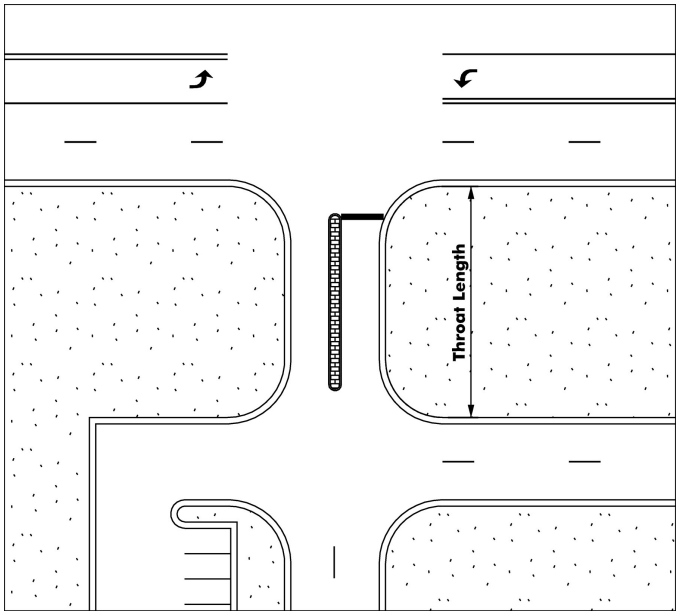


Figure 18-1
Driveway Throat Length

18.1.H. Turning Radius

The path that a vehicle follows when turning left to or from a cross street or drive is defined as the turning radius. This path should be a continuous, smooth curve from the stopping point e.g. the stop line, the end of the median nose, or the location the vehicle typically waits to make a left turn, to beyond the farthest conflicting travel lane. Left-turning drivers should not have to pull out straight into the intersection and then begin the turn maneuver. The minimum turning radii are as follows:

- For low volume drives or streets (less than 100 vehicles in the peak hour) serving primarily passenger cars, 40 feet minimum.
- For dual left-turn movements, 75 feet minimum (for the inner left-turn movement).
- For all other situations, 60 feet minimum.

Opposing left-turn movements, e.g. eastbound left turns and westbound left turns, at the same intersection shall provide at least 10 feet of separation between the outside edges of the two turning paths.

City of Lee's Summit
Department: Public Works - Engineering
Memorandum

To:	Stephen Arbo, City Manager
From:	Michael Park, P.E., PTOE, City Traffic Engineer
Date:	March 27, 2018
Re:	Clarifications for Bill #18-40

This memo serves to describe and clarify Bill #18-40 (AN ORDINANCE AMENDING THE CITY'S ACCESS MANAGEMENT CODE AS ADOPTED AND MADE A PART OF THE CODE OF ORDINANCES BY SECTION 26-308 OF THE CODE OF ORDINANCES OF THE CITY OF LEE'S SUMMIT, MISSOURI). Bill #18-40 is simply an ordinance amending the existing Access Management Code. The existing Access Management Code was adopted in 2004 by Ordinance 5832 in Chapter 26, Article IV, of the Code of Ordinances and has not been revised since that time.

The purpose of the Access Management Code is to optimize, or find that right balance between, property access and traffic safety and efficiency. Access management is the careful planning and design of driveways, median openings, interchanges, and street connections to a roadway, which involves the application of median treatments and turning lanes, and the appropriate separation of intersections, driveways and traffic signals to maintain the viability of major roadways, to safely and efficiently accommodate traffic volumes commensurate with their function.

The 2004 Access Management Code applies to all new connections within City right-of-way, whether constructed by the City or by private persons or entities, and to all applications required by the City's Unified Development Ordinance seeking approval from the City to develop property, including, but not limited to, applications for rezoning, preliminary and final development plan approval, and preliminary and final plat approval. The proposed Access Management Code amendment does not change the applicability whatsoever.

<u>Bill #18-40</u>

Bill #18-40 amends the 2004 Access Management Code to clarify various code provisions and better align its definitions with recent changes in the Thoroughfare Master Plan, Design and Construction Manual, Unified Development Ordinance and industry standards. All of the aforementioned references have been updated since 2004 unlike the Access Management Code. The amendment also revises some standard criteria to more consistently reflect current roadway conditions/property access and common, practical variances granted since the original adoption. These revisions should bring more existing non-compliant properties into compliance without any modification or waiver required.

Generally, the proposed standard criteria in the amended Access Management Code are less restrictive than originally drafted and approved in 2004. For example, the minimum driveway throat length required is more varied and has been reduced for certain conditions under the revised provisions; a proposed volume dependent criteria. Similarly, revisions are proposed to the right-turn lane conditions for driveways on certain road classifications that also use a traffic volume basis in lieu of current requirements which have no

minimum warrants. These two examples of traffic volume based criteria reflect evolving engineering best practice and references related to Access Management. The proposed amendments do not add restriction or extend public improvements for turn lanes, access spacing, or driveway throat length described in the 2004 edition. These changes should benefit the development community while preserving the safety and operational interests of the City and its transportation users. These changes should reduce the number of waivers and variances typically granted by Preliminary Development Plan and Preliminary Plat approvals throughout the history of the Access Management Code.

The Jefferson Street Improvement Project has been designed using City adopted standards, specifications, policies, master plans and ordinances. Bill #18-40, an amendment to the Access Management Code described above is not related to the Jefferson Street Improvement Project. The proposed amendments to the Access Management Code were not initiated or influenced by the Jefferson Street Improvement Project and have been under development for several years. The timing of Bill #18-40 is only coincidental with the Jefferson Street Improvement Project and the outcome of Bill #18-40 has no impact on the Jefferson Street Improvement Project.