KAW VALLEY ENGINEERING, INC.

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May 21, 2025
A24D2009

To: City of Lee's Summit, Missouri

Subject: Proposed Smalls Sliders (Lot 7, Oldham Village First Plat) – Lee's Summit, Missouri

Attention: Grant White

Introduction

Kaw Valley Engineering, Inc. (KVE) has prepared this memorandum to address the traffic impact of the proposed Smalls Sliders, which is part of the Oldham Village Preliminary Development Plan. The site is located at the southwest quadrant of US-50 and MO-291.

Reference

The projection of trip generation is based on the Institute of Transportation Engineers (ITE) Manual, 11th Edition, Land Use 935: Fast-Food Restaurant with Drive-Through Window and No Indoor Seating (**Appendix A**). The following description is provided in the Manual: "*This land use includes any fast-food restaurant that provides drive-through service only. The restaurant is typically housed in a very small building. It may provide a limited amount of outside seating at which there usually is no table service."*

Existing Conditions

The development of Small Sliders is proposed on Lot 7, which is part of the Oldham Village Preliminary Development Plan. Lot 7 is 0.88 acres. The existing site consists of an auto auction lot, with the entirety of Lot 7 being an impervious surface.

Proposed Conditions

Small Sliders is a fast-food chain restaurant which has a drive-through window and no indoor seating. The typical hours of operation at other locations across the United States range from 10:00 a.m. to 12:00 a.m. It is assumed no breakfast will be available during the AM peak hours. The PM peak hour was used as the governing hour for this traffic analysis. See **Appendix B** for Preliminary Site Plan.

Trip Generation

Trip generation is projected based on the number of Drive-Through Lanes of the proposed fast-food restaurant. **Table 1** below shows projected new trips based on the development. PM Peak Hour is the governing peak hour.

Table 1:
ITE (11th Ed.) Land Use 935: Fast-Food Restaurant with Drive-Through Window and No Indoor Seating (2 Drive-Through Lanes)

	Traffic Volume
	Hourly (PM Peak Hour of Generator)
Rate (Per Number of Drive-Through Lanes)*	59.50
Total Generated Trips	119
Entering (51%)	61
Exiting (49%)	58

*Average Rate Used

Access

The proposed development will have a single-shared access point from SW Jefferson Street via a drive aisle from Lot 6 of Oldham Village First Plat. The drive entrance Lot 6 will be constructed by the developer of either Lot 6 or 7, whoever develops first. The proposed entrance will be approximately 340 ft north of the intersection of SW Jefferson Street and SW Oldham Parkway.

This drive entrance will be a curbed two-way access, 28 ft wide (back of curb to back of curb) with 15 ft radius. The driveway is planned to accommodate pedestrians with sidewalk. This access will align with shared driveway access for Lots 9 and 10 across SW Jefferson Street.

Parking and Drive-Through Queuing

The proposed development has 19 stalls (1 ADA van-accessible stall). The drive-through queueing has 22 available spaces, 4 spaces measured from the menu board to the window at the building. All drive access lanes and parking area will have curb and gutter, which will have curb inlets to collect stormwater.

Conclusion and Recommendations

The proposed development is expected to generate 61 entering and 58 exiting vehicles.

KVE recommends the following:

- All signage should be mounted in accordance with the Manual of Uniform Traffic Control Devices.
- Care should be taken by the landscape architect/landscaper to not locate landscaping or signage within the driveway sight triangles.

Please feel free to contact us at 785-762-5040 with any questions regarding this study.

Respectfully Submitted,

STATE OF MISSOURI
DUSTIN JOSEPH DAY
NUMBER PE-2025005461
5-21-2025
PROFESSIONAL ENGINEER

Dustin J. Day, P.E.
Design Engineer

DJD:smw
\\VMJC-FILE\Projects\A24_2009\DSN\Traffic\Traffic Memo 20250519.Docx

Appendix A

ITE Land Use 935: Fast-Food Restaurant with Drive-Through Window and No Indoor Seating

Land Use: 935
Fast-Food Restaurant with Drive-Through Window and No Indoor Seating

Description

This land use includes any fast-food restaurant that provides drive-through service only. The restaurant is typically housed in a very small building. It may provide a limited amount of outside seating at which there usually is no table service. Fast casual restaurant (Land Use 930), high-turnover (sit-down) restaurant (Land Use 932), fast-food restaurant without drive-through window (Land Use 933), and fast-food restaurant with drive-through window (Land Use 934) are related uses.

Additional Data

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

Source Numbers

404, 713, 720, 886

Fast-Food Restaurant with Drive-Through Window and No Indoor Seating (935)

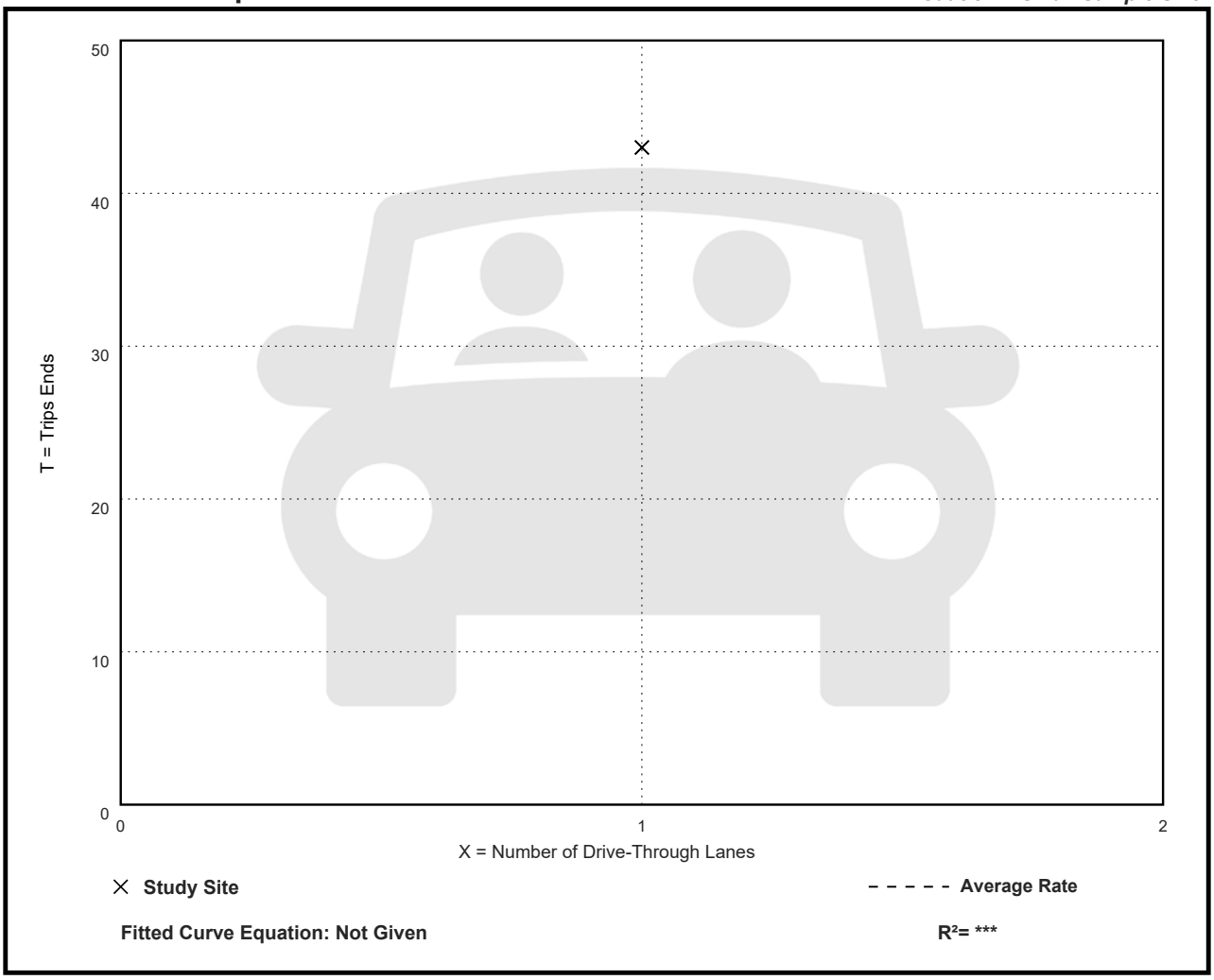
Vehicle Trip Ends vs: Drive-Through Lanes
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Drive-Through Lanes: 1
Directional Distribution: 47% entering, 53% exiting

Vehicle Trip Generation per Drive-Through Lane

Average Rate	Range of Rates	Standard Deviation
43.00	43.00 - 43.00	***

Data Plot and Equation

Caution – Small Sample Size



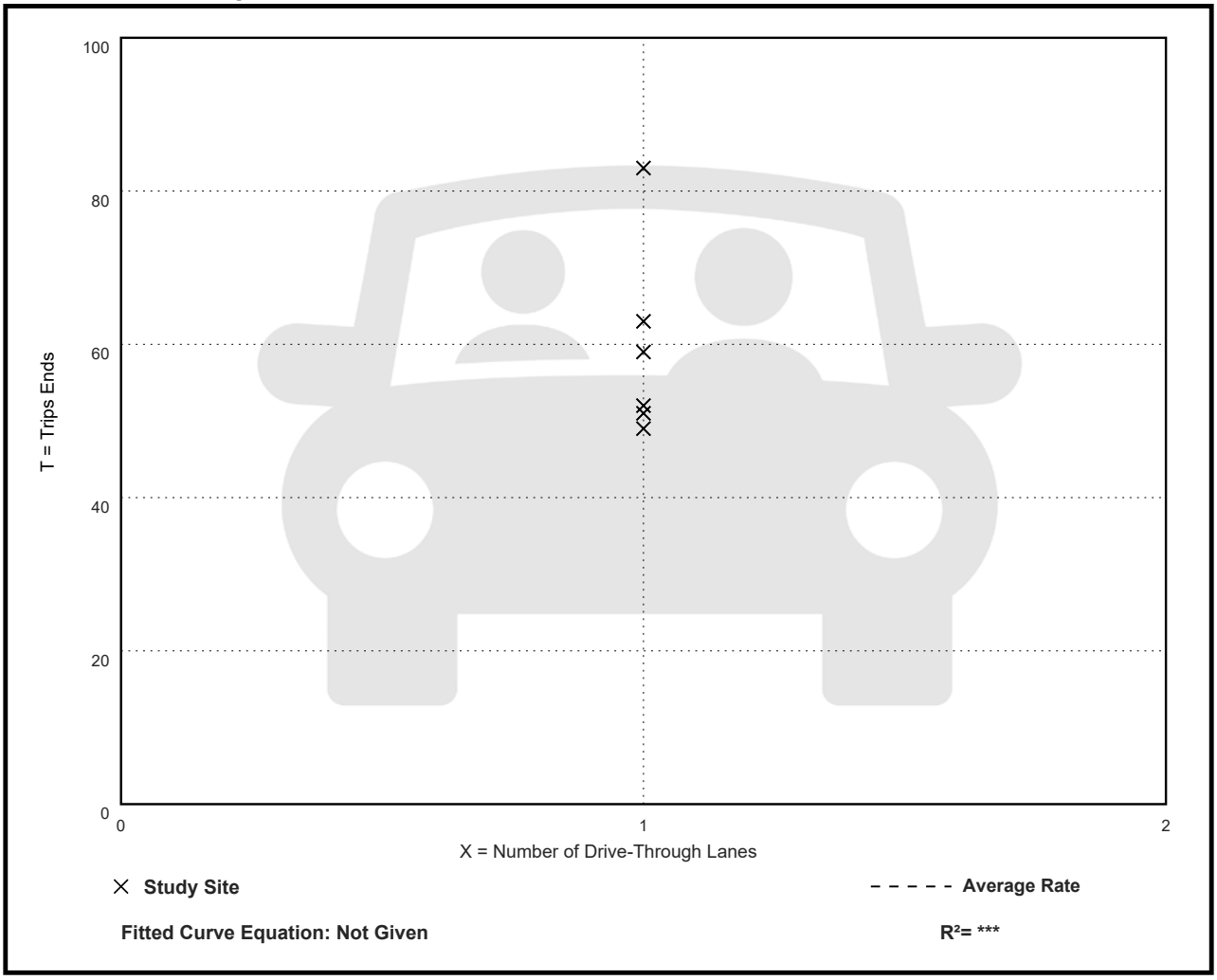
Fast-Food Restaurant with Drive-Through Window and No Indoor Seating (935)

Vehicle Trip Ends vs: **Drive-Through Lanes**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 6
Avg. Num. of Drive-Through Lanes: 1
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per Drive-Through Lane

Average Rate	Range of Rates	Standard Deviation
59.50	49.00 - 83.00	12.68

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= ***

Fast-Food Restaurant with Drive-Through Window and No Indoor Seating (935)

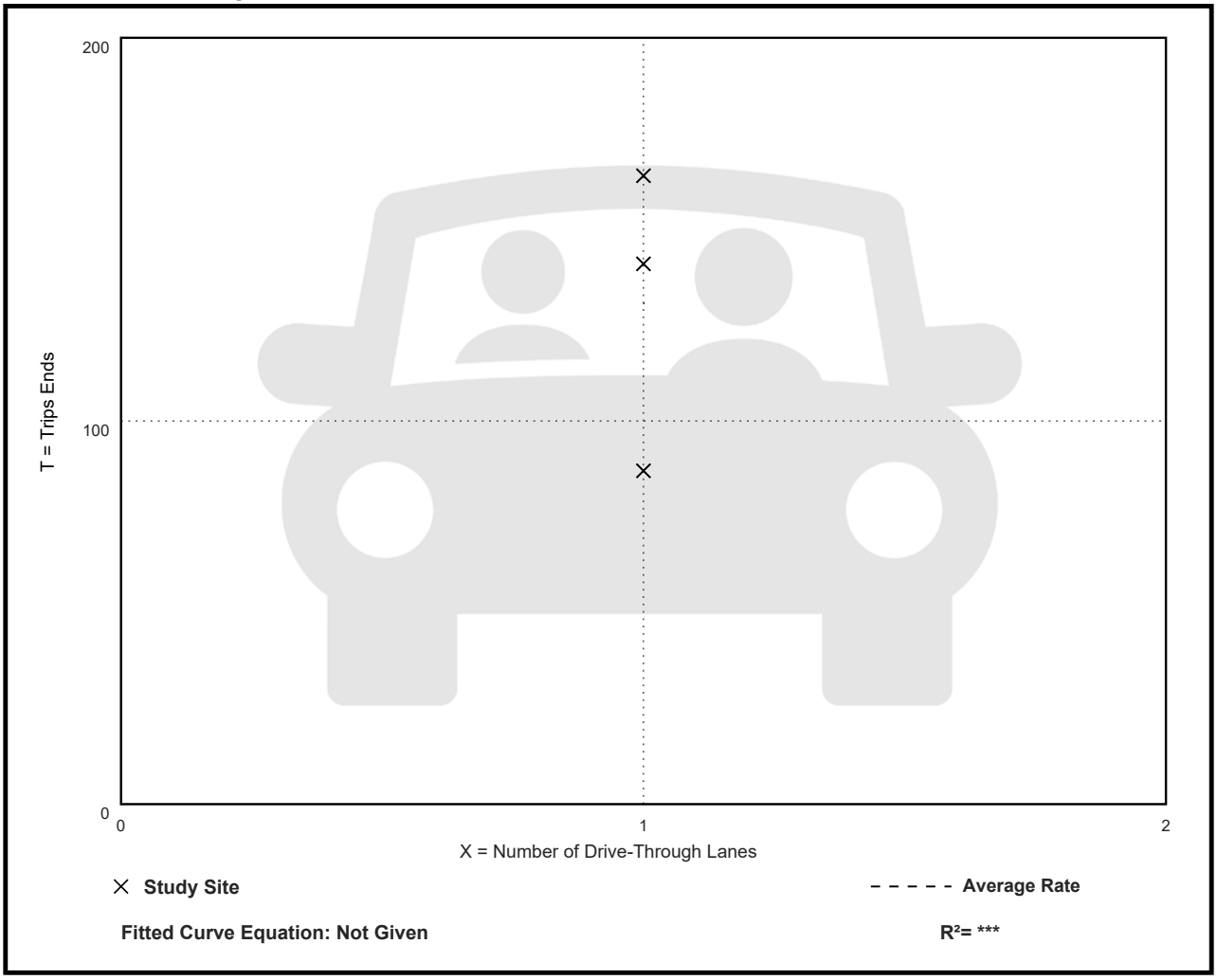
Vehicle Trip Ends vs: Drive-Through Lanes
On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 3
Avg. Num. of Drive-Through Lanes: 1
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Drive-Through Lane

Average Rate	Range of Rates	Standard Deviation
130.67	87.00 - 164.00	39.53

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= *

Appendix B
Preliminary Site Plan

LOT 6
DEVELOPMENT
BY OTHERS

OLDHAM VILLAGE FIRST PLAT

LOT 6

SIDEWALK
BY OTHERS

S 87°49'29" E 221.71'

6.00'

PROPOSED
20' BUILDING
SETBACK

PROPOSED
10' UTILITY
EASEMENT

SIDEWALK
BY OTHERS

12.50'
12.00'
5.50'
13.00'
27.15'
20.00'
TYP

L=186.58'
R=298.00'

LOT 7
38,272 SF

2.00'
13.00'
20.50'
24.00'
9.00'
9.50'
9.00'
TYP
6.00'
19.00'

DO NOT ENTER

65.67'
PROPOSED
SMALLS SLIDERS
930 SF
50.08'

8.83'
15.58'
6.99'
40.00'
12.50'
20.00'
TYP
34.55'
34.19'
8.50'
50.08'
9.10'
36.67'

S 87°24'12" E 148.82'

N 15°39'50" E
49.53'

S 74°20'10" E
55.55'

25.78'

R15.00'

26.00'

20.00'

1.00'

5.00'

PROPOSED
20' BUILDING
SETBACK

PROPOSED
10' UTILITY
EASEMENT

N 15°39'50" E 200.89'

20.00'

SW JEFFERSON STREET
(PRIVATE - PLATTED AS TRACT C)
(TO BE CONSTRUCTED BY OTHERS)

SW OLDHAM PARKWAY
(PUBLIC R/W)
(TO BE CONSTRUCTED BY OTHERS)

OLDHAM VILLAGE FIRST PLAT

TRACT B

0 10 20 40

SCALE: 1" = 20'

NOTES:

1 CG-1 CONCRETE CURB & GUTTER
2 CURB INLET
3 TRASH ENCLOSURE (SEE ARCH PLANS)
4A OUTDOOR DINING AREA
4B OUTDOOR DINING CANOPY
5 TRENCH DRAIN (SEE GRADING PLAN)
6 BICYCLE RACK
7 SIDEWALK RAMP
8 CONCRETE SIDEWALK
9A DRIVE-THRU CANOPY
9B DRIVE-THRU MENU BOARD
9C DRIVE-THRU CLEARANCE SIGN

REV	DATE	DESCRIPTION	DSN	DWN	CHK

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KAW VALLEY ENGINEERING

SMALLS SLIDERS
SW JEFFERSON STREET
LEE'S SUMMIT, MISSOURI

PRELIMINARY DEVELOPMENT PLAN
SITE PLAN

PROJ. NO.	A24D2009
DESIGNER	RCP
DRAWN BY	JP
CFN	2009SP_PDP
SHEET	2
REV	