MEMO

To:	Box Real Estate Development Attn: Russell Pearson
From:	Tom Fulton, Vice President Shannon Jeffries, PE, PTOE
RE:	New Longview Development – Lot 44 Trip Generation Comparison
Date:	March 11th, 2024
Olsson Project #:	023-07096

Introduction

This memorandum provides site plan review and a comparison of expected trip generation for a proposed development located in the northeast quadrant of Fascination Drive and Longview Boulevard in Lee's Summit, Missouri. The proposed plan is associated with lot 44 of the New Longview development master plan, as illustrated in **Figure 1**.

The proposed project represents a portion of a larger development plan for this area. Analysis of the full development plan was presented in the document *Traffic Impact Study – Kessler View* dated July 2018, and was referenced for the purposes of this memorandum. The referenced traffic impact study represents the total approved development. The approved development plan for this area was referenced as 'area C' and considered 10,950 square feet of shopping center development. The new development plan represents a portion of area C (further subdivided into lots 43 and 44). The proposed use for lot 44 is 6,021 square feet of strip retail development. The development is expected to support 3,984 square feet of specialty market and 2,037 square feet of bakery. This memorandum does not present development of lot 43.

Figure 1: Vicinity Map

Source: Google Earth

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Site Review

The proposed site plan was reviewed for access and site circulation. Lot 44 is currently vacant. The proposed development is located south of a CVS Pharmacy and bound by a private road to the east, Fascination Drive to the south, and Longview Boulevard to the west. The proposed site plan is attached to this memorandum.

Site Access

Access to the site is planned via an existing private unnamed street along Fascination Drive, approximately 255 feet east of Longview Boulevard. No new access is proposed to Fascination Drive or Longview Boulevard. Direct access to the site is provided along the private street approximately 160 feet north of Fascination Drive and 65 feet south of the existing CVS access drive. Existing driveways along the private unnamed roadway to the north of the proposed site are offset T-intersections with access spacing of 90 feet and 65 feet.

Internal to the site, a shared access is planned along the west side connecting the north and south lots. A curb cut for this shared access drive aisle is existing within the southwest quadrant of the existing CVS site. This internal shared drive aisle will provide access to an existing driveway located along Longview Boulevard.

Site Circulation

Vehicular site circulation is supported with access from the private road and internal shared access with the CVS property, allowing for two ingress/egress points to the site. Site circulation is expected to be adequate.

Currently, sidewalk is located along the west side of lot 44 adjacent to Longview Boulevard. A pedestrian ramp is provided in the southeast quadrant of the property with no connectivity to sidewalk. The site plan illustrates construction of new sidewalk along the north side of Fascination Drive providing connectivity from the existing pedestrian ramp to existing sidewalk located along Longview Boulevard. Sidewalk connections are proposed from Longview Boulevard and Fascination Boulevard internally to the site. A sidewalk connection to existing sidewalk located along the east side of the private road is not indicated; access to the existing sidewalk network is recommended.

Trip Generation Comparison

A comparison of trip generation for approved and proposed land uses was conducted for the site. The approved site plan, referenced from the July 2018 study, and the proposed site plan are attached to this memorandum.

Trip generation was conducted for the proposed site and compared to approved site trip generation. Trip generation for the proposed site was conducted using the ITE Trip Generation Manual (11th Edition). The site is expected to be developed as retail, subdivided to support a specialty market and bakery. Neither of these uses are presented in the ITE Trip Generation Manual, thus the land use that was determined to best represent the proposed site is *Strip Retail Plaza (<40k) (LU 822).*

Trips associated with the approved land use were referenced from the 2018 study. Trips presented in the approved traffic study were factored to develop trips associated with area C.

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Table 1 illustrates the land use comparison between the approved and proposed sites. **Table 2** illustrates the approved and proposed development expected trip generation for daily, AM and PM peak hour periods and compares the difference for each.

Table 1. Land Use Comparison

Land Use	Approved Site Plan	Proposed Site Plan
Shopping Center (Lots 43 and 44)	10,950 Square Feet	-
Strip Retail Plaza (<40k) (Lot 44)	-	6,021 Square Feet

Table 2. Trip Generation Comparison

	Daily	AM Peak Hour			PM Peak Hour		
	Total	Total	Enter	Exit	Total	Enter	Exit
*Approved Site Plan**	800	36	22	14	70	34	36
Proposed Site Plan	484	21	13	8	54	27	27
Difference	**-316**	**-15**	**-9**	**-6**	**-16**	**-7**	**-9**

**Adjusted to represent area C only.*

The proposed land use (retail) is consistent with the approved land use. The proposed development trips are less than the total trips approved for area C.

Conclusion

The development of lot 44 is associated with the New Longview master development plan. Reviewing the approved and proposed land uses for the property, the proposed land use is expected to generate fewer trips then were approved for this area in the 2018 study.

No new access is proposed from public streets; access to the site will be provided along an existing private drive as well as a shared access with adjacent development. Planned sidewalk improvements will improve pedestrian connectivity within the vicinity of the site. A sidewalk connection from the northeast quadrant of the site connecting to existing sidewalk along the east side of the private road should be provided.

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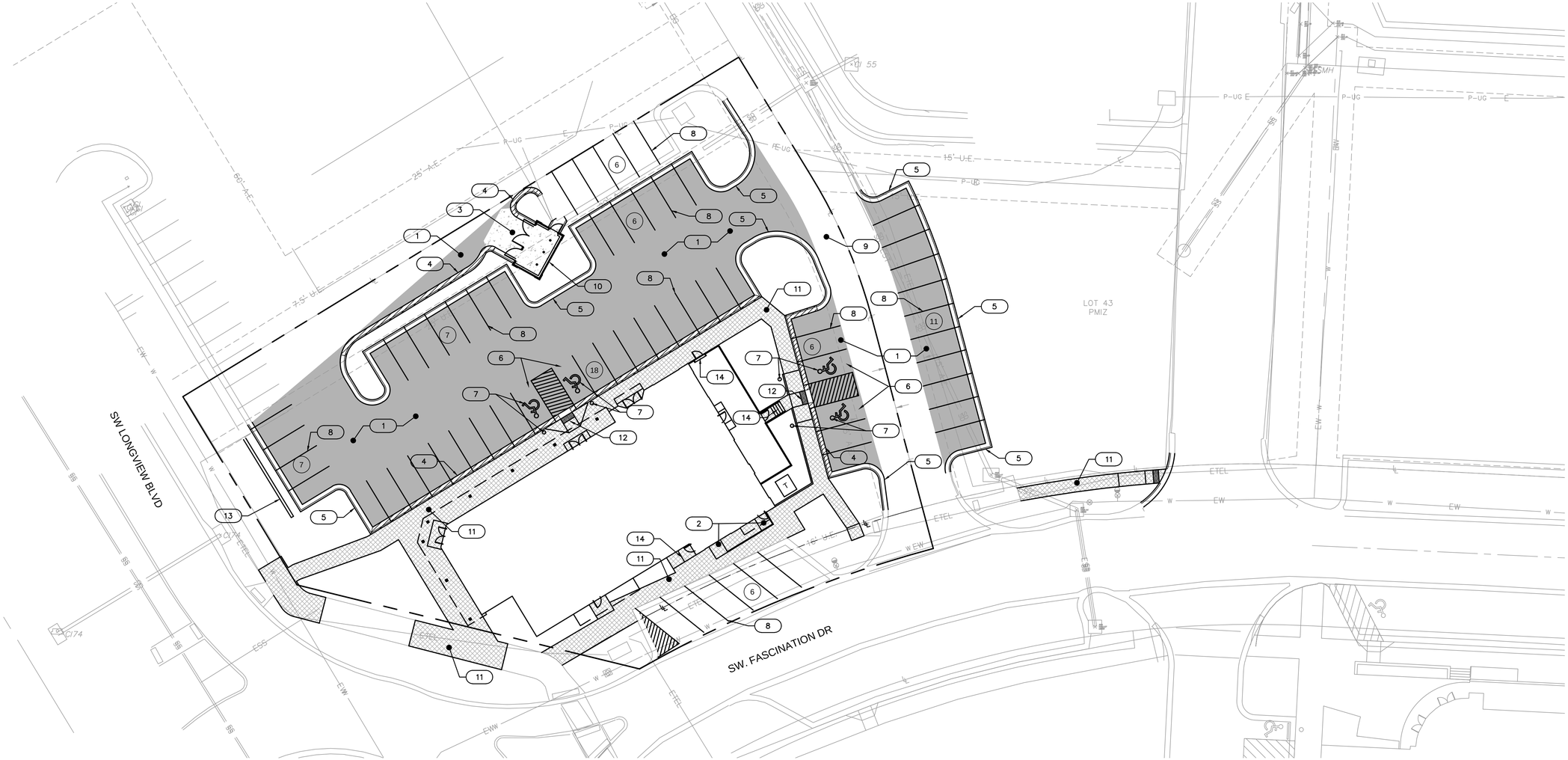

LEGEND

	CONCRETE SIDEWALK
	STANDARD DUTY ASPHALT PAVEMENT
	REINFORCED CONCRETE PAVEMENT
	CG-1 CURB & GUTTER (See Detail Sheet)
	MODIFIED CG-1 CURB & GUTTER (See Detail Sheet)
(1)	# OF PARKING STALLS

PARKING INFORMATION	
PARKING PROVIDED (INCLUDES 4 ACCESSIBLE SPACES)	67 CARS

KEYNOTE LEGEND

1. STANDARD DUTY ASPHALT PAVEMENT SECTION, SEE DETAIL SHEET FOR PAVEMENT SECTION. (TYP.)
2. PROPOSED RAMP AND LANDING TO OUTER DOOR WITH HANDRAIL (SEE SPOT ELEVATION SHEET FOR DETAIL)
3. REINFORCED CONCRETE PAVEMENT SECTION, SEE DETAIL SHEET FOR PAVEMENT SECTION. (TYP.)
4. MODIFIED TYPE CG-1 CONCRETE CURB AND GUTTER (TYP.)
5. TYPE CG-1 CONCRETE CURB AND GUTTER (TYP.)
6. PROPOSED ACCESSIBLE PARKING STALLS (TYP.)
7. PROPOSED ACCESSIBLE SIGNAGE AND STRIPING (TYP.) (SEE DETAIL SHEET)
8. PROPOSED 4" WIDE PAVEMENT MARKING (TYP.)
9. EXISTING PRIVATE DRIVE
10. PROPOSED TRASH ENCLOSURE
11. PROPOSED CONCRETE SIDEWALK
12. PROPOSED ADA RAMPS W/ DETECTABLE WARNING (SEE SPOT ELEVATION SHEET FOR DETAIL)
13. PROPOSED SCREENING WALL. MATCH EXISTING HEIGHT AND STYLE
14. PROPOSED SIDEWALK STEPS (SEE SPOT ELEVATION SHEET FOR DETAIL)

SITE DEVELOPMENT DATA

LOTS	EXISTING ZONING	GROSS AREA (AC.)	PROPOSED STREET R/W (AC.)	NET AREA (AC.)	LAND USE DESCRIPTION	IMPERVIOUS COVERAGE (AC.)	NUMBER OF FLOORS	GROSS BUILDING / FLOOR AREA	BUILDING COVERAGE (SF)	FAR	PARKING STALLS REQUIRED			
					Existing/Proposed						Market (retail) Ratio	Bakery (restaurant) Ratio	Required	Provided
1	PMIX	0.82	0.00	0.82	Undeveloped/ Commercial	0.70	One-Story	6,021	6,021	0.17	5 per 1000 sf	14 per 1000 sf	48	67 Including 4 ADA Spaces

site is included in parking model

SCALE IN FEET: 0' 10' 20' 40'

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REV. NO.	DATE	REVISIONS DESCRIPTION	BY

SITE PLAN
SITE DEVELOPMENT PLANS
NEW LONGVIEW
LOT 44
LEE'S SUMMIT, MISSOURI
2024

drawn by: DWP
checked by: SS
designed by: DWP
QA/QC by: SS
project no.: 023-07096
date: 03.11.2024

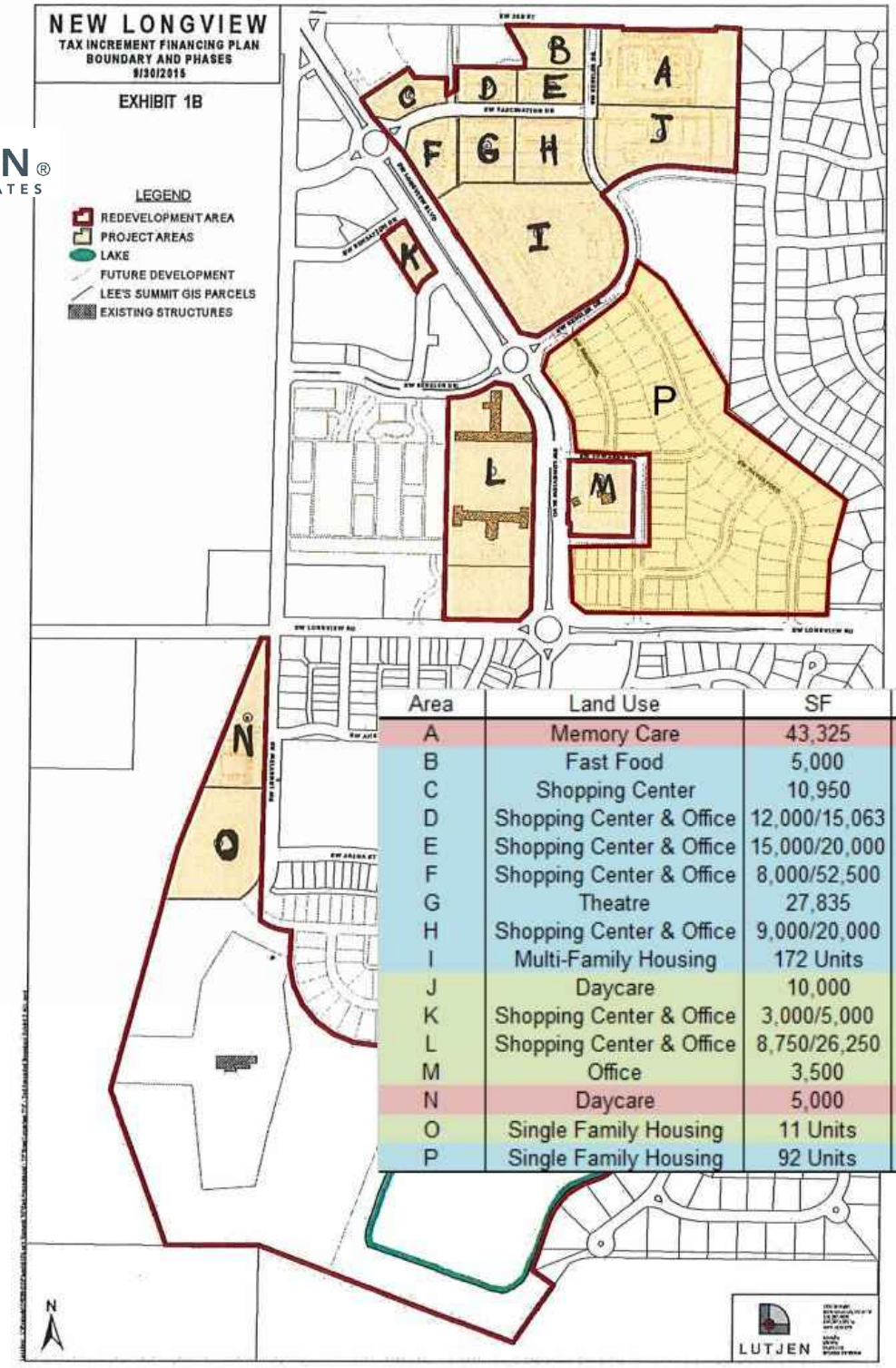
SHEET C004

F:\2023\07001-075000\023-07096\40-Design\AutoCAD\Final Plans\Sheets\GNCVIC_SIT01_02307096.dwg
DATE: Mar 11, 2024 8:01am USER: ssaylor

FIGURE 3
Site Plan

Kessler View
Lee's Summit, MO

Referenced from Kessler View TIS, dated July 2018



Area	Land Use	SF	Status
A	Memory Care	43,325	Built
B	Fast Food	5,000	Phase 1
C	Shopping Center	10,950	Phase 1
D	Shopping Center & Office	12,000/15,063	Phase 1
E	Shopping Center & Office	15,000/20,000	Phase 1
F	Shopping Center & Office	8,000/52,500	Phase 1
G	Theatre	27,835	Phase 1
H	Shopping Center & Office	9,000/20,000	Phase 1
I	Multi-Family Housing	172 Units	Phase 1
J	Daycare	10,000	Phase 2
K	Shopping Center & Office	3,000/5,000	Phase 2
L	Shopping Center & Office	8,750/26,250	Phase 2
M	Office	3,500	Phase 2
N	Daycare	5,000	Built
O	Single Family Housing	11 Units	Phase 2
P	Single Family Housing	92 Units	Phase 1

Referenced from Kessler View TIS, dated July 2018

4.2 Phase 1 Development Trip Generation and Distribution

Trip generation and distribution was conducted for Phase 1 development south of 3rd Street. Trip distribution followed previously approved studies. **Table 3** provides a summary of trip generation for the approved and proposed projects south of 3rd Street.

TABLE 3: PHASE 1 DEVELOPMENT TRIP GENERATION

Land Use	Size	Average Weekday	AM Peak Hour			PM Peak Hour		
			Total	Enter	Exit	Total	Enter	Exit
Shopping Center	54,950 SF	4,002	180	112	68	349	168	181
Movie Theater with Matinee*	7 Screens	1,420	-	-	-	142	57	85
General Office Building	107,563 SF	1,139	128	110	18	123	20	103
Fast-Food Restaurant with Drive-Through Window	5,000 SF	2,355	201	103	98	164	86	78
Mid-Rise Apartment*	172 DU	936	59	16	43	75	46	29
Single-Family Detached Housing	92 DU	963	71	18	53	94	60	34
	Total	**10,935**	**577**	**328**	**249**	**859**	**400**	**459**

*No ITE AM Trip Estimation Available

Pass-by characteristics were determined for the Fast-Food Restaurant with Drive-Through Window land use using the *ITE Trip Generation Handbook (10th Edition)*. Pass-by trips are made by traffic already on the roadway and passing the site, versus making a direct trip to the development (primary trips). According to the *ITE Trip Generation Handbook*, the pass-by trips during the AM and PM peak hour periods for the described land use varies from 25% to 71%. To be conservative, 30% pass-by trips during the AM and PM peak hour was used for this study. Trip generation data considering pass-by trips for the restaurant land uses are illustrated in **Table 4**.

TABLE 4: EXISTING PLUS PHASE 1 DEVELOPMENT – PASS-BY

Land Use	Pass-by Percentage	AM Peak Hour				PM Peak Hour			
		Pass-by		Primary		Pass-by		Primary	
		Enter	Exit	Enter	Exit	Enter	Exit	Enter	Exit
Fast-Food Restaurant with Drive-Through Window	30%	31	30	72	68	26	23	60	55

Trip distribution and site trips (including pass-by) are shown in **Figure 4** for the study intersections. Existing plus Phase 1 development volumes are illustrated in **Figure 5.** More detailed trip distribution information for the previously approved developments can be found in **Appendix C.**

4.3 Existing plus Phase 1 Development Warrant Analysis

Existing plus Phase 1 Development Signal Warrants: Based on the existing plus Phase 1 volumes, none of the unsignalized intersections are expected to meet Warrant 3 for signalization. Only warrant 3 was evaluated based on available volume data.

Existing plus Phase 1 Development Lane Warrants: The *Access Management Code* for Lee's Summit was used to determine whether auxiliary turn lanes are warranted at the study intersections and study drives. Lee's Summit's *Access Management Code* requires that right-turn lanes be provided at all arterial roadway intersections and along collector roadway intersections where the right-turning volume on the collector street is or is projected to be at least 100 vehicles per hour. Currently all arterial study intersections provide right-turn lanes at intersections with the