



# LEE'S SUMMIT

## MISSOURI

### DEVELOPMENT REVIEW FORM

### TRANSPORTATION IMPACT

**DATE:** November 2, 2016                      **CONDUCTED BY:** Michael K Park, PE, PTOE  
**SUBMITTAL DATE:** November 1, 2016                      **PHONE:** 816.969.1800  
**APPLICATION #:** PL2016167                      **EMAIL:** Michael.Park@cityofls.net  
**PROJECT NAME:** NLV COMMERCIAL PHASE II                      **PROJECT TYPE:** Prel Dev Plan (PDP)

#### **SURROUNDING ENVIRONMENT** (*Streets, Developments*)

The proposed mixed-use development is generally located at the southeast corner of Kessler Drive and Longview Boulevard. The development is surrounded by a partially constructed, otherwise approved, conceptual mixed-use plan consisting of single family residential subdivision to the south, various commercial services to the north, and office, restaurants, retail and apartments to the west. Some remaining undeveloped mixed-use property exists towards the east that abuts another single family subdivision.

#### **ALLOWABLE ACCESS**

The proposed development will be accessed from Longview Boulevard, Fascination Drive and Kessler Drive. Kessler Drive gives access to the development from nearby 3<sup>rd</sup> Street. Property access from Fascination Drive and Longview Boulevard is constructed, but currently serves no development. The access along Longview Boulevard is limited to right-in/right-out traffic by a raised median along Longview Boulevard. Various driveways, existing and proposed, along Fascination Drive and Kessler Drive that will serve the development should have adequate sight distance as shown on the preliminary development plan according to the developer's engineer, whom submitted an evaluation of sight distance that concluded safe conditions would be available upon construction of the planned development in consideration of existing opportunities for parking, intersection angles, and operating speeds for two-way stop control.

#### **EXISTING STREET CHARACTERISTICS** (*Lanes, Speed limits, Sight Distance, Medians*)

Longview Boulevard is a 35 mph four-lane median divided major arterial within the corporate limits of Lee's Summit. North of 3<sup>rd</sup> Street, Longview Boulevard is named View High Drive; a four-lane median divided 45 mph major arterial owned and maintained by the City of Kansas City, MO. All other streets referenced are within Lee's Summit. 3<sup>rd</sup> Street is a four/five-lane undivided major arterial with a 40 mph speed limit. The intersection of Longview Boulevard/View High Drive and 3<sup>rd</sup> Street is traffic signal controlled with multiple turn lanes and medians in each direction of travel. There are also raised medians and turn lanes along 3<sup>rd</sup> Street at various intersections, including Kessler Drive. Kessler Drive is a two/three lane, 25 mph, commercial collector. The intersection of Kessler Drive and 3<sup>rd</sup> Street is full access with left and right-turn lanes. The intersection of Longview Boulevard and Kessler Drive is controlled by a multi-lane roundabout. Fascination Drive is a two-lane commercial street with a 25 mph speed limit that extends between Longview Boulevard and Kessler Drive (also extending west of Longview Boulevard to Longview Road) with direct and primary access to Longview Community College. The intersection of Longview Boulevard and Fascination Drive is controlled by a multi-lane roundabout. Fascination

Drive is stop controlled at the intersection of Kessler Drive. Minimum sight distance at the intersection of Fascination Drive and Kessler Drive can be achieved, if determined inadequate due to on-street parking, by the removal of parking that may obstruct a driver's line of sight. Any sight distance obstructions shall be mitigated prior to final development activity.

**ACCESS MANAGEMENT CODE COMPLIANCE?**

Yes

No

The Access Management Code (AMC) requires intersection spacing of at least 300 feet along commercial collectors. The proposed driveway spacing along Kessler Drive does not meet this standard. The driveway proposed along Kessler Drive is located approximately 240 feet south of Fascination Drive. This proposed driveway is best aligned with drive aisles and access to the proposed parking garage internal to the site. This alignment encourages efficient traffic circulation and a desired proclivity for site generated traffic to use Kessler Drive in lieu of the limited access on Longview Boulevard or congested conditions along Fascination Drive. Kessler Drive also has a residential collector context south of Fascination Drive (200-foot minimum spacing requirement) and exists within a neotraditional development where standards are often balanced in mixed-use. Consequently, staff supports a waiver to meet the proposed access spacing in this situation. Driveways along Kessler Drive should also have left-turn lanes according to the Access Management Code and left-turn lanes are not shown on the plan for the proposed access since Kessler Drive has been constructed according to the neotraditional design scoped in the approved conceptual development plan. Staff also supports the omission of a left-turn lane along Kessler Drive at the proposed access in consideration of the built conditions and surrounding environment. Kessler Drive, a commercial collector, does not require right-turn lanes.

Other driveways along Fascination Drive and Longview Boulevard are existing. The access along Longview Boulevard is limited to right-in/right-out traffic. The Access Management Code requires right-turn lanes for any access along major arterials. Similar to design of Kessler Drive, Longview Boulevard has already been constructed without a right-turn lane at this existing driveway due to the approved neotraditional context. There are no required turn lanes along Fascination Drive, a commercial local street.

The minimum throat distance for driveways and separation from nearest intersections has been substantially met for all driveways in the proposed preliminary development plan. Where additional throat distance is necessary, if any, parking may be removed at final development plan.

All other criteria in the Access Management Code not discussed above or noted within the report sections describing street characteristics and allowable access have been addressed and are code compliant.

**TRIP GENERATION**

Time Period	Total	In	Out
Weekday	4,850	2,425	2,425
A.M. Peak Hour	326	233	93
P.M. Peak Hour	515	185	330

The trip generation tabulated above represents full development of the preliminary development plan.

**TRANSPORTATION IMPACT STUDY REQUIRED?**

Yes

No

The proposed development will likely generate more than 100 vehicle trips to the surrounding street system during any given peak hour. The surrounding street system has been planned and constructed to adequately accommodate the projected traffic impact of this development in consideration of the improvements listed in the recommendations of approval. A traffic study was completed by Olsson Associates, dated September 2016.

The traffic study considered the following scenarios to assess the development impact and required improvements to mitigate inadequate infrastructure/operations: Existing Conditions that includes Approved Development (development in the area under construction such as Winterset Valley, Goddard School, Residences at Longview Apartments, NLV Commercial Phase I, Summit Church and Autumn Leaves), and Existing Plus Approved Plus Proposed Development Conditions. The proposed development scenario was considered in two construction phases; the first phase limited to the theatre, senior apartments and senior townhomes only. Approved development considered in the traffic study did not include the recent planned mixed use project located at the northeast corner of 3<sup>rd</sup> Street and View High Drive. Each analysis scenario was evaluated for AM and PM peak hours at nearby intersections along 3<sup>rd</sup> Street, Longview Boulevard, Fascination Drive and Kessler Drive. The study also included an assessment of site circulation, design, and compliance with access management codes/criteria.

The City of Lee's Summit has adopted a level of service goal C or better for traffic signal controlled intersections. Stop controlled approaches with a level of service D or below may be acceptable. Level of service is a measure of acceptable vehicle delay reported at A-F; with A being the optimal operation and F representing failed operations.

The traffic study shows adequate traffic operations for the existing plus approved development scenario during both peak hours at all of the studied intersections with exception of the stop controlled left-turn movements at the intersections of 3<sup>rd</sup> Street at Kessler Drive and Bridlewood Drive during the PM peak hour. The northbound and southbound stop controlled left-turn movements at these two intersections during the PM peak hour may experience long delay represented by a level of service F. However, the poor operations impact few vehicles and are a result of the high traffic volume on 3<sup>rd</sup> Street that cannot be mitigated without a warranted traffic signal. Furthermore, the vehicle queuing associated with these movements is less than 100' at the worst of reported periods. A traffic signal is not warranted at either intersection for existing plus approved development conditions.

When proposed development trips associated with Phase 1 are considered in the traffic study, no significant change in traffic operations is projected. All vehicle queues would be maintained within the existing turn lane capacity. Intersection operations, with exception of those stop controlled intersections noted for existing plus approved scenario, remain acceptable. Some individual traffic movements at the traffic signal controlled intersection of 3<sup>rd</sup> Street and Longview Boulevard degrade, but do not exceed capacity and the overall intersection operations attains adequate performance. No new traffic signals are warranted in this analysis scenario.

The evaluation of development full build continues the operational trend reviewed in the analysis of Phase 1 development. However, the stop controlled movements at the intersections of 3<sup>rd</sup> Street and Kessler Drive and Bridlewood Drive incur longer delay and longer vehicle queues in the PM peak hour (still LOS F) and show signs of poor operations that change from LOS C to LOS D in the AM peak hour too. The vehicle queues in all traffic movements are still maintained within available capacity. A traffic signal would not likely be warranted at the intersection of 3<sup>rd</sup> Street

and Bridlewood Drive based on the impact of the proposed development's full build. A traffic signal may be warranted at the intersection of 3<sup>rd</sup> Street and Kessler Drive at proposed full build. At least one of the peak hours meets the traffic signal warrant criteria. In consideration of this project, the traffic analysis for full build and a recent development application at the northeast corner of 3<sup>rd</sup> Street and View High Drive that relies on principle access via Kessler Drive (and which this referenced development also has conditions of traffic signal installation at the intersection of 3<sup>rd</sup> Street and Kessler Drive), staff recommends a traffic signal be installed or escrow deposited with the City for installation of traffic signal at 3<sup>rd</sup> Street and Kessler Drive prior to the commencement of full build (Phase II) occupancy.

**LIVABLE STREETS (Resolution 10-17)**

**COMPLIANT**

**EXCEPTIONS**

The proposed preliminary development plan includes all Livable Streets elements identified in the City's adopted Comprehensive Plan, associated Greenway Master Plan and Bicycle Transportation Plan attachments, and elements otherwise required by ordinances and standards, including but not limited to sidewalk, shared-use path, network connectivity, landscaping, and accessibility. No exceptions to the Livable Streets Policy adopted by Resolution 10-17 have been proposed.

**RECOMMENDATION:**

**APPROVAL**

**DENIAL**

**N/A**

**STIPULATIONS**

*Recommendations for Approval refer only to the transportation impact and do not constitute an endorsement from City Staff.*

Staff recommends approval of the proposed preliminary development plan subject to the following conditions:

1. Construct a traffic signal at the intersection of 3<sup>rd</sup> Street and Kessler Drive with interconnect to the adjacent traffic signal at Longview Boulevard. The improvement shall be substantially completed prior to the issuance of occupancy permits associated with Phase 2 of proposed development. An escrow deposit for the full cost of these improvements may be provided in lieu of construction if no more than one traffic signal warrant is satisfied.
2. Execute an agreement between the City and development that addresses ownership, permitted uses, maintenance responsibilities and assignments of easements, right-of-ways and adjacent property pertaining to on-street parking, parking lanes along Longview Boulevard, right-of-way encroachments, private tracts within right-of-way and potential right-of-way vacation.