



LEE'S SUMMIT MISSOURI

DEVELOPMENT REVIEW FORM TRANSPORTATION IMPACT

DATE: June 7, 2017
CONDUCTED BY: Michael K Park, PE, PTOE
SUBMITTAL DATE: May 23, 2017
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PROJECT NAME: WEST RIDGE AT THE LAKE
PROJECT TYPE: Prel Dev Plan (PDP)

SURROUNDING ENVIRONMENT (*Streets, Developments*)

The proposed development is located along the south side of Bowlin Road, east of Lakewood Way. The surrounding area consists of single family residential subdivision to the south, park grounds to the east and north, and mixed-use commercial property to the west.

ALLOWABLE ACCESS

The proposed development will be accessed from the relocation of Jamestown Road, which intersects Bowlin Road east of Lakewood Way. Bowlin Road has a nearby interchange at Interstate 470. The intersections proposed along Jamestown Road and the relocated intersection of Jamestown Road at Bowlin Road will have adequate sight distance.

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

Jamestown Road is a two-lane, 25 mph, undivided collector extending south of Bowlin Road that transitions from a commercial context to residential context connecting other residential collectors and local streets within single family residential subdivisions between Bowlin Road, Woods Chapel Road and Lakewood Way. Existing Jamestown Road south of Bowlin Road is built to an interim standard until entering the residential subdivision towards the south. However, the proposed development will relocate this section of Jamestown Road towards the west in support of the proposed land use and it will be built to typical urban standards with curb, gutter, sidewalks, etc. Bowlin Road is a two-lane commercial collector east of Lakewood Way built to interim standards and classed as a minor arterial west of Lakewood Way built to urban standards (Bowlin Road changes name to Lakewood Blvd. west of the interchange at Interstate 470). Bowlin Road/Lakewood Blvd has a 35 mph speed limit. Lakewood Way is a two-lane undivided commercial collector with a 45 mph speed limit near Bowlin Road. The intersection of Lakewood Way and Bowlin Road is traffic signal controlled with various turn lanes. The northbound ramp to/from I-470 at Bowlin Road is traffic signal controlled, but the southbound ramp to/from I-470 at Lakewood Blvd (Bowlin Road) is stop controlled. The interchange and interchange intersections along Bowlin Road/Lakewood Blvd. at Interstate 470 are owned and maintained by MoDOT. The intersection of relocated Jamestown Road and Bowlin Road will be stop controlled on Jamestown Road. There are no existing sight distance concerns among the aforementioned intersections.

ACCESS MANAGEMENT CODE COMPLIANCE? YES NO

The Access Management Code requires left-turn lanes on collectors serving non-residential development. There is not a westbound left-turn lane on Bowlin Road at the proposed

intersection of Jamestown Road. However, only park property exists east of Jamestown Road. Consequently, staff supports a waiver to the westbound left-turn lane in consideration of the current and future land use (i.e. park ground) that would not generate enough left-turn traffic to warrant its construction. Similarly, the Access Management Code requires right-turn lanes on collectors in non-residential areas where the right-turn volume may exceed 100 vehicles during a peak hour (which will likely occur along Bowlin Road at Jamestown Road). Since the volume of eastbound and westbound thru traffic is minimal and there is likely a lack of westbound left-turn conflict; all due to the existing and future land use east of Jamestown Road (i.e. park grounds), staff supports a waiver to the eastbound right-turn lane requirement.

The other intersection spacing, turn lanes and applicable conditions required by the Access Management Code have been substantially satisfied.

TRIP GENERATION

Time Period	Total	In	Out
Weekday	2,054	1,027	1,027
A.M. Peak Hour	167	46	121
P.M. Peak Hour	198	122	76

TRANSPORTATION IMPACT STUDY REQUIRED? Yes No

The proposed development will likely generate more than 100 vehicle trips during a weekday peak hour; the minimum condition for traffic impact study. A traffic impact study was completed by Transystems Corp., dated April 11, 2017.

The traffic study considered the AM and PM weekday peak hour traffic operations at the intersections along Bowlin Road from Jamestown Road (relocated) to the southbound ramp at I-470. The scenarios studied included existing conditions, existing plus approved but unbuilt development potentially impacting the area (i.e. Monticello), and existing plus approved plus proposed development. In summary, none of the studied scenarios require transportation improvements beyond those improvements to Bowlin Road and Jamestown Road from interim standard to urban standard as proposed by the development in compliance with the City's Unimproved Road Policy. Only the southbound left-turn movement at the southbound off ramp from I-470 at Lakewood Blvd./Bowlin Road has a level of service reported below the City's adopted level of service goal C. Level of service (LOS) for vehicular travel is a standardized measure of acceptable delay that ranges in representation from A to F, similar to a grade card with A the best and F the worst. The southbound left-turn movement modeled a LOS F during existing conditions. The field measured LOS for this movement is more consistent with LOS D that worsens to LOS E from the approved development scenario to proposed development scenario. The City's adopted level of service policy acknowledges a LOS D, E or F may be acceptable for stop control situations. MoDOT generally has a lower acceptance of level of service than the City. The intersection does not meet traffic signal warrants for any scenario studied. This intersection and associated traffic movement resides in MoDOT jurisdiction. MoDOT has reviewed the traffic study and concurs with the study recommendations.

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

The proposed development 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, street connectivity 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 stipulation(s):

1. Bowlin Road shall be improved to urban standards that typically include curb, gutter, sidewalk, etc. from the intersection of Lakewood Way to the relocated intersection of Jamestown Road.

The improvement(s) listed above shall be substantially completed prior to the issuance of any occupancy permit within the proposed development.