



LEE'S SUMMIT
MISSOURI
DEVELOPMENT REVIEW FORM
TRANSPORTATION IMPACT

DATE: February 19, 2020 **CONDUCTED BY:** Michael K Park, PE, PTOE
SUBMITTAL DATE: February 7, 2020 **PHONE:** 816.969.1800
APPLICATION #: PL2019412 **EMAIL:** Michael.Park@cityofls.net
PROJECT NAME: SEQUOIA **PROJECT TYPE:** Prel Dev Plan (PDP)

SURROUNDING ENVIRONMENT (*Streets, Developments*)

The proposed development project is located between the UPRR Corridor and Olive Street, near Orchard Street. The surrounding area includes a railroad to the west, a lumber yard to the northwest and residential properties to the south, east, and northeast.

ALLOWABLE ACCESS

The proposed residential lots within the development will be accessed from a proposed public street (cul-de-sac) that extends west of Olive Street in alignment with Orchard Street.

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

Olive Street and Orchard Street are two lane residential streets with a 25 mph speed limit. These streets in the vicinity of the project have no curb, shoulder or sidewalk. The lanes are generally narrower than typical residential streets and range in width from 10 feet to 11 feet wide. These conditions are generally defined as unimproved based on the City Council Unimproved Road Policy. Olive Street dead-ends south of Orchard Street and extends north approximately 1,300 feet to Chipman Road where the intersection is traffic signal controlled. Orchard Street extends east from Olive Street about 1,400 feet to Douglas Street; then to Independence Avenue. The portion of Orchard Street east of Douglas Street, a residential collector, has been improved to urban standards with wide lanes, curb, enclosed storm sewer, sidewalks, etc. Orchard Street is stop controlled at Douglas Street, Independence Avenue and Olive Street. Orchard Street and Olive Street are identified as bike routes in the Bicycle Transportation Plan. Sight distances at the existing intersections and proposed driveway location are adequate.

ACCESS MANAGEMENT CODE COMPLIANCE? Yes No

All criteria in the Access Management Code have been satisfied.

TRIP GENERATION

Time Period	Total	In	Out
Weekday	142	71	71
A.M. Peak Hour	12	3	9
P.M. Peak Hour	17	11	6

TRANSPORTATION IMPACT STUDY REQUIRED? Yes No

The proposed development will not likely generate more than 100 vehicle trips to the surrounding street system during any given peak hour as a minimum condition for a transportation impact

study. However, a transportation evaluation pertaining to a previously proposed development at this location (with a higher proposed residential density) and its applicability regarding the Unimproved Road Policy, adopted by City Council (Resolution 16-22), was conducted by Priority Engineers, dated October 8, 2018. That evaluation included some analysis of traffic, trip generation and the development impact on Olive Street and Orchard Street for reference. The proposed residential development, having comparably fewer residential units than previously evaluated, would presumably have a lesser transportation impact. The proposed development also fits within existing zoning, whereas the previous project required a rezoning for additional density.

Olive Street and Orchard Street, from Olive Street to Douglas Street, are defined according to the City Council adopted Unimproved Road Policy as built to unimproved road standards. Both roadways lack urban street design elements (e.g. curb, sidewalk) or shoulders present on interim standard roadways. The pavement width for Olive Street is approximately 20 feet to 22 feet wide between Orchard Street and Chipman Road (with exception of the curbed section of Olive Street from Chipman Road south about 270 feet). The pavement width of Orchard Street west of Douglas Street is about the same as the unimproved section of Olive Street. Parking is allowed on Orchard Street and Olive Street similar to most residential streets. Parking regulation requires at least 10 feet of passable pavement at all times for thru traffic and passing vehicles. Parking restrictions can be enacted at any time if parking is a resident concern or safety issue arises. Typical lane widths range from 10 feet to 12 feet on roadways; 12 feet is the current standard in Lee's Summit for two lane local roads and 11 feet lane width for multi-lane roadways. Other communities have accepted a 10 foot wide lane standard on multi-lane roadways. Lane width along Orchard Street and Olive Street is not considered a problem given the surrounding context of these streets, traffic volumes and use.

The proposed infill development is low density residential (duplex) and resides within an appropriately compatible existing zoning (RP-2). Road improvements to Orchard Street and Olive Street are not recommended as a condition of development approval based solely on the Unimproved Road Policy. A decision of policy non-applicability in this case considers the development plan (residential use, density, and location), the existing conditions of Orchard Street and Olive Street, the existing zoning, policy definitions and consistency with applied practice of said policy for residential developments that could be processed by a minor plat and/or where a proposed low density residential development is located within a corresponding and compatible Ag, R-1 or RP-2 zoning. No zoning change is needed for the proposed development. There is no prior commitments/agreements, conditions or phased development stipulations related to the adjacent roads for improvement associated with this proposed infill project. The City has discussed the possibility of a City Capital Improvement Project for Orchard and Olive, but funding has yet to be identified or prioritized.

Although the Unimproved Road Policy generally may not apply to low-density residential projects within properly zoned properties or minor plats, it may still apply to those same residential development situations if the development significantly increases traffic above that which the existing land use is planned and where defined policy volume thresholds of the adjacent unimproved or interim roads are surpassed. The aforementioned traffic volume thresholds noted in the Unimproved Road Policy that allow residential development on unimproved roads are approximately 50% of the road capacity. The Unimproved Road Policy and associated traffic capacity thresholds referenced therein pertain to two-lane unimproved and interim standard arterial roads. Residential street capacities can similarly be assumed based on criteria in the Highway Capacity Manual. Though a far less volume threshold for residential streets, the

combination of existing traffic and projected traffic from of this development does not reach 50% of a reasonably assumed capacity for a two-lane residential street like Olive or Orchard.

With regard to roadway capacity, Olive Street and Orchard Street have existing daily traffic volumes of less than 850 vehicles and 250 vehicles, respectively. This volume of traffic is low, even for residential streets, and the added trips generated by this proposed residential development are minimal. The existing 10-foot to 11-foot lanes are plenty capable of handling the existing traffic and projected trip generation from this residential project without creating poor operations, congestion, delay, etc. Staff is not aware of any existing correctable crash trends along Olive Street or Orchard Street. The intersections of Olive Street at Chipman Road and Orchard Street at Douglas Street should also have adequate level of service if this development were to proceed.

While this development may be exempted from interim or urban road improvements along Orchard Street and Olive Street, any one-way restrictions must be mitigated to comply with the policy. There are no known one-way restrictions along Orchard Street or Olive Street.

Similar exemptions to the Unimproved Road Policy were granted for residential developments in the PDP process along Orchard Street and Main Street to the immediate east of the subject project as well as other residential PDP projects along unimproved roads throughout the City. None of these residential PDP projects required rezoning and none had significant traffic impact or exceeded roadway capacity thresholds. This proposed development is consistent with those previously granted exemption. The new road(s) proposed as part of the residential development must be constructed to urban standards in compliance with the policy.

Even though staff has not recommended any road improvements, the City Council may consider policy intentions that differ from staff and/or established precedent; and require road improvements based on the Unimproved Road Policy in review of the development application for approval. The policy in this situation more so addresses acceptable community standards for development than roadway capacity.

Sidewalks are not addressed in the Unimproved Road Policy. There is an absence of sidewalks along Olive Street and Orchard Street. However, the City's current development standards do not require any type of development activity to extend sidewalk beyond the project area unless associated with off-site road improvements. The development will provide sidewalks adjacent to the project. Whenever Olive Street and/or Orchard Street are improved, the road improvements will require sidewalks similar to Orchard Street east of Douglas Street connecting to Douglas and Chipman.

LIVABLE STREETS (*Resolution 10-17*)

COMPLIANT

EXCEPTIONS

The proposed 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, landscaping and accessibility. Orchard Street and Olive Street are identified bike routes in the Bicycle Transportation Plan. Orchard Street and Olive Street also lack sidewalks. Future improvements to Orchard Street and Olive Street, whether conditioned upon this development by City Council, other redevelopment or Capital Improvement Project by the City, would include bikeway and sidewalk elements.

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 dedication of necessary right-of-way to the City as depicted on the preliminary development plans for improvements to Olive Street along the development east property line. At least 60 feet of right-of-way for Olive Street is needed.