



DEVELOPMENT REVIEW FORM
TRANSPORTATION IMPACT

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SUBMITTAL DATE:	July 14, 2023	PHONE:	816.969.1800
APPLICATION #:	PL2025207	EMAIL:	Erin.Ralovo@cityofls.net
PROJECT NAME:	EAST VILLAGE	PROJECT TYPE:	Prel Dev Plan (PDP)

SURROUNDING ENVIRONMENT (*Streets, Developments*)

The proposed development is located on the southeast corner of the US 50 and M291 interchange. It is bordered by M291 on the west, US 50 Highway on the north and 16th Street on the south. The area to the west is a large planned commercial development, Oldham Village, with a mix of uses. East of the development is a largely commercial/industrial area and to the south of 16th Street is mixed residential and commercial area. Phase 1 is north of the existing intersection of M291 and Oldham Parkway and will be built north of a newly constructed extension of Oldham Parkway. Phase 2 is south of Oldham Parkway and north of Bailey Road. Phase 3 is south of Bailey Road and north of 16th Street.

ALLOWABLE ACCESS

Phase 1 will be accessed from M291 via Oldham Parkway. Oldham Parkway will be constructed from M291, east to the Railroad tracks.

-Access 1 will be a Right Out only, approximately 350 feet east of M291.

-Access 2 will be a full access signalized intersection, constructed at approximately 660 feet east of M291.

-Access 3 will be at a full access on the far east end of the newly constructed Oldham Parkway, approximately 1,000 feet from M291, leading to the fuel station.

Phase 2 will be accessed from M291 via Oldham Parkway on the north and Bailey Road on the South. Phase 3 may also be accessed from Hamblen Road via Bailey Road.

-Access 1 on Oldham Parkway, referred to as the north/south collector, will be at the full access signalized intersection across from the main entrance to Phase 1 (also identified as Access 2 in Phase 1).

-Access 2, the most eastern access on the north of Phase 2 along Oldham Parkway, at the end of the new extension of Oldham Parkway and will turn south into a parking lot for the Multi-family development.

To the south, Phase 2 will be accessed along Bailey Road.

-Access 1, the north/south collector is proposed to be a Right-In Right-Out Left-In access point approximately 640 feet from the centerline of M291. This access was specified by staff to be a Right In Right Out only by staff and the Left In is not supported based on Access Management Code, anticipated vehicle queues, and the interest of public safety along a minor arterial such as Bailey Road in close proximity to M291 Highway with merging lanes of traffic.

-Access 2, labeled Tract D, along Bailey Road is a full access signalized intersection, approximately 1,065 feet east of M291. The intersection cannot be located farther east for better signal separation due to the physical constraints of the Bailey Road bridge and necessity for minimum left turn lane capacity.

Much of Phase 2 will be accessed from proposed roadways, Access 1 between Bailey Road and Oldham Parkway. The proposed north-south collector has multiple driveways serving various land uses as described below (Internal Access Points).

Phase 3 of the development will be accessed from M291 via Bailey Road on the north. and 16th Street on the South. Phase 3 may also be accessed from Hamblen Road via Bailey Road.

-Access 1 is a Right In, Right Out access at approximately 640 feet east of M291 along Bailey Road.

-Access 2 is at the full access signalized access at 1,065 feet east of M291 along Bailey Road.

To the south, Phase 3 will be accessed along 16th Street in two locations. 16th Street is an unimproved local roadway with a Right In Right Out access at M291.

-Access 1 will be a full access approximately 412 feet east of M291 along 16th Street, although no exact dimension is given in the TIS since this is part of the East Village Phase 2 PDP.

-Access 2 will be a full access at the end of 16th Street that will provide access to the townhome development on the southeast corner of the development with connectivity to the other Phase 3 development non-residential land uses. This access is approximately 1,170 feet east of the first access on 16th Street.

Internal access roads are as follows:

- North E/W Drive is a full access intersection on the east side of the north/south collector approximately 650 feet south of Oldham Parkway.

- South E/W Drive is a full access intersection along the north/south collector approximately 465 feet south of North E/W Drive.

- East N/S Drive is a full access intersection approximately 425 feet east of the north/south collector along Bailey Road and continues south into Phase 2 of the PDP (Phase 3 of TIS).

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

Oldham Parkway is currently undeveloped east of M291 and will be fully constructed with this development. It will be classified as a Commercial Collector, the same as Oldham Parkway to the west of M291. Bailey Road is a two-lane Minor Arterial roadway with curb and gutters and turn lanes along the length of the development. Bailey Road continues east to Ranson Road and continues west of M291 as Persels Road. Bailey Road has on-road bicycle accommodations in the form of wide outside lanes in conformance with the Bicycle Transportation Master Plan and 10-foot shared use path from Jefferson Street east to Ranson Road, across the proposed development, per the Greenway Master Plan. The speed limit is 35 MPH and there are no areas of limited sight distance. 16th Street is an unimproved Local two-lane roadway east of M291. It intersects M291 with a Right-In-Right-Out intersection and has a speed limit of 25 MPH. M291 Highway is a multi-lane MoDOT facility.

UNIMPROVED ROAD POLICY COMPLIANCE?

YES ☐

NO ☒

This development is subject to the Unimproved Road Policy (URP) considering the existing typical section and street classification of SE 16th Street. The URP adopted by City Council resolution provides guidance for staff to use in consideration of development that impacts adjacent roadways which are not constructed to "urban standards". Per the URP, an unimproved road is narrow in width (< 22' of pavement) and consistent with a rural character. 16th Street meets these conditions and therefore by the URP shall be updated to full urban standards to include, but not limited to, widening to a minimum of 12 foot lanes in each direction, stormwater and gutter improvements, and sidewalks.

ACCESS MANAGEMENT CODE COMPLIANCE?

YES ☐

NO ☒

The Access Management Code includes requirements for minimum spacing between street connections depending on street classifications, turn lanes, volume/capacity and queuing, intersection function area, and the type of access. Along Commercial Collector streets, such as Oldham Parkway, the minimum spacing for full access intersections is 300 feet, measured between centerlines. Other minimum conditions may extend the 300 feet including for sight distance, vehicle queuing and turn lane design, intersection functional area, and traffic signal spacing. The access points in Phase 1 meet this basic commercial collector minimum spacing, but not the minimum spacing required for other criteria. The minimum spacing for signalized intersections along a city roadway is at least 1/4 of a mile (1,320 feet) but shall not be less than 1/8 of a mile where extraordinary circumstances exist. The signalized intersection at Oldham Parkway and the warehouse entrance (Access 2)/north-south collector (Access 1), Node 6 in the traffic study, is 660 feet, 1/8 of a mile, from the signal at M291. Due to the extreme volumes expected at this intersection, and the high number of expected left turns, staff would consider this an extraordinary circumstance in which the intersection meets traffic signal warrants. Given the extremely close proximity to adjacent traffic signal at M291, congestion should be expected due to challenging signal coordination and vehicle queues may be significant at peak hours. For these reasons, any other access between the intersection and M291 or near the signal shall not allow left turn movements and access shall be minimized. The impact of these signals in close proximity should not affect M291 and there are no other public streets in the vicinity besides those which service the development. That too was considered in the determination of an extraordinary circumstance. Alternatives were not viable given the surrounding development bound by M291 to the west, US50 to the north and the railroad to the east.

Bailey Road is classified as a Minor Arterial, requiring the spacing between intersections to be a minimum of 400 feet. However, the 400 foot minimum may require additional separation as previously noted and described in the Access Management Code. The access points along Bailey meet this minimum spacing for a Minor Arterial, but not the minimum spacing required for other criteria, such as intersection functional area, turn lane design, and traffic signal separation. The full access signalized intersection on Bailey Road, Node 20 in the traffic study, shows a maximum PM Peak hour left turn queue length of 331 feet. This exceeds the 250 foot left turn lane length. The Right- In-Right-Out-Left-In access at Bailey and the north/south collector, Node 7 in the traffic study, prohibits the lengthening of this left-turn lane at the traffic signal to meet the vehicle queue length. If the Left-In were eliminated at Node 20, the left turn lane at the proposed traffic signal could comply with code requirements. Additionally, the peak left turn volume at Node 7 is 202 vehicles and the opposing movements have a total of 993 vehicles. This leads staff to believe that there will be insufficient breaks in traffic to provide opportunity for left turns at Node 7 and reasonable cause for safety concerns. The proposed traffic signal along Bailey Road is 1065 feet from M291, less than the 1/2 Mile spacing criteria. However, the location is as planned by the City when Bailey Road was constructed and cannot be any farther east without impacting the Bailey Road bridge. Staff supports the proposed traffic signal location on Bailey Road.

There are several driveways shown along the proposed north-south collector that do not have minimum throat lengths to avoid access conflicts. These conflicts are typically limited to impacting property circulation and do not affect the public roadways. However, where those conflicts and minimum lengths could impact public roadways, there are opportunities to revise the design to cause additional throat length (such as reducing adjacent parking). Those driveway modifications and site plan modifications can be done in preparation of the Final Development Plan at the direction of Staff without substantially impacting the Preliminary Development Plan.

Other than the aforementioned driveway throat lengths, which can be revised to substantially comply with code, and Node 7, which could be code compliant if it were limited to Right-In Right-Out, and which would also address the eastbound left-turn lane code issue (inadequate storage capacity) associated with the proposed traffic signal along Bailey Road, all other intersections and turn lanes comply with the Access Management Code as shown on the Preliminary Development Plan (subject to PDP conditions of approval, final development plan revisions and engineering design per Access Management Code and Design and Construction Manual).

TRIP GENERATION

Time Period	Total	In	Out
Weekday	32,669	N/A	N/A
A.M. Peak Hour	1,070	466	604
P.M. Peak Hour	1,781	963	819
Saturday Peak Hour	3,664	1,892	1,772

The values shown above are for the overall development, Phases 1 through 3. A breakdown of trips by phase is shown below.

Phase 1 Trip Generation:

Weekday Total: 11,704 vehicles per day (vpd)

AM Peak Hour: 322, 179 In, 143 Out

PM Peak Hour: 776, 373 In, 404 Out

SATURDAY Peak Hour: 1,207, 599 In, 608 Out

Phase 1 trips were generated using historical data provided by Costco from a Trip Generation Technical Memorandum prepared by Kittleson Associates dated July 9, 2025. Kittleson maintains a continually updated database for the warehouse retailer based on 40 similar sites. The ITE code of 857 - Discount Club provides a much lower trip generation with a weekday total of only 6,836 vehicles per day. Because the Kittleson numbers are significantly more conservative, staff feels comfortable with this generation. The trip generation data prepared by Kittleson Associations adhered to the ITE Trip Generation Study requirements for establishing trip rates.

Phase 2 Trip Generation:

Weekday Total: 11,147 vpd

AM Peak Hour: 448, 175 In, 273 Out

PM Peak Hour: 614, 365 In, 249 Out

SATURDAY: 1,272, 681 In, 591 Out

Phase 2 trips were generated using ITE Codes in the ITE Trip Generation Manual 11th Edition using ITE codes 220 -Multifamily Housing (Low-Rise), 931 - Fine Dining Restaurant, 932 - High-Turnover (Sit-Down) Restaurant, 930 - Fast Casual Restaurant, 934 - Fast-Food with Drive Thru Window, 822 - Strip Retail Plaza (<40K), 936 - Coffee/Donut Shot w/o Drive Thru Window, and 411 - Public Park. The total trips were determined based on the anticipated use for each pad site. The total daily trips were not separated into Trips In and Trips Out. Staff does not agree with the high number of Fine Dining Restaurants included in the study as shown in this phase of the project and feel that a more conservative look at the trip generation is needed. This would mean that it is very likely that some of the studied land uses, specifically Fine Dining, could

change to High-Turnover Sit-Down Restaurant or Fast Casual. Fine Dining has a significantly lower trip generation than High-Turnover Sit-Down Restaurant or Fast Casual. Staff is requesting an updated Traffic Impact Study after Phase 1 is completed and as Phase 2 sites are more determined so that conditions of approval that require additional turn lanes, turn lane capacity or limited access can be identified and imposed as part of the development project rather than future mitigating taxpayer capital improvements. As restaurants come forward for Final Development Plan and permitting, staff will determine the most appropriate category for the proposed site and a revised Traffic Impact Study may be required if the number of trips increased substantially due to the change in category.

Phase 3 Trip Generation:

Weekday Total: 9,818 vpd

AM Peak Hour: 300, 112 In, 188 Out

PM Peak Hour: 391, 225 In, 166 Out

SATURDAY Peak Hour: 1,185, 612 In, 573 Out

Phase 3 trips were generated using ITE Codes in the ITE Trip Generation Manual 11th Edition using ITE codes 220 - Multifamily Housing (Low-Rise), 215 - Single-Family Attached Housing, 930 - Fast Casual Restaurant, and 934 - Fast-Food with Drive Thru Window. The total trips were determined based on the anticipated use for each pad site. The total daily trips were not separated into Trips In and Trips Out.

TRANSPORTATION IMPACT STUDY REQUIRED?

Yes ☒

No ☐

The proposed development will likely generate more than 100 vehicle trips to the surrounding street system during a peak hour based on industry standard methods for trip generation estimates, a minimum requirement for a traffic impact study in the Access Management Code. A traffic impact study was prepared by BHC, dated October 24, 2025. The traffic study was prepared to assess traffic impacts associated with the development and to provide public improvement recommendations or waivers requested by the development that mitigate delay and/or meet minimum standards defined by City and/or MoDOT policies.

The traffic study evaluated existing conditions and proposed development conditions of the subject development. The existing conditions included forecasted traffic volumes from the approved Oldham Village Development (previous traffic impact study). The analysis included morning and evening commuter peak hours at the intersections of M291 and Oldham Parkway, M291 and Persels Road/Bailey Road, M291 and SE 16th Street, M291 and Scherer Road, and at Bailey Road and Hamblen Road. The proposed intersections associated with the development along Oldham Parkway, Bailey Road, and internal to the site were also studied. The study considered several scenarios: Existing Conditions, Existing plus Phase 1 (Costco), Existing plus Phase 1-2 (Development between Oldham Parkway and Bailey Road), Existing plus full development (Development between Bailey Road and SE 16th Street), and Future Conditions for year 2045.

The traffic study looked at each intersection for turn lane requirements based on roadway classification, operational capacity/queues, projected turning movements, and minimum standards in the Access Management Code. The available space and storage lengths were reviewed in coordination with the required turn lane lengths to provide recommendations for the subject development. The study found that the following the following improvements would be required:

PHASE 1

1. Oldham Parkway and M291
 - Extend the existing southbound dual left-turn lanes to provide a minimum of 430 FT of storage, or as much as feasible within existing geometrics.
2. Oldham Parkway and North/South Collector
 - Construct a full intersection with traffic signal installation, including the future south leg and pedestrian facilities.
3. Lot 1 Access Drive
 - Retail tenant could post signage at the western Right-Out restricting use to northbound M291 patrons to discourage Oldham Parkway weaving movements.

PHASE 2

1. M291 corridor Improvements
 - Construct a third southbound through-lane from south of Oldham Parkway through Persels and continue to (or through) Scherer Road. This should include removal of existing shoulder, new paved lane and new paved shoulder.
 - Include associated shoulder, lane, and signal modifications primarily along the western half of M291.
2. Traffic Impact Study Update
 - Upon completion of Phase 1, update the TIA to confirm southbound widening limits and validate prior recommendations.
3. Bailey Road at North/South collector
 - Implement center median and lane improvements to accommodate future Phase 3 traffic and establish this intersection as a westbound right-in/right-out with eastbound left-turn in capability.
4. Bailey Road at Drive 8
 - Implement lane improvements to accommodate future Phase 3 traffic and the signalization of this intersection.

PHASE 3 (Full Development)

1. M291 and Persels/Bailey
 - Add a second southbound left-turn lane (380 FT storage) and improve the westbound right-turn configuration. Westbound left-turn storage should strive for 320 FT of storage pending an updated TIS.
 - Include shoulder, lane, and signal improvements along the eastern half of M291 at Bailey Road.
2. Bailey Road and Drive 8
 - Install a traffic signal to provide protected northbound left-turn and eastbound U-turn movements for Phase 3 traffic to provide full access to M291.
3. 16th Street
 - In accordance with the Unimproved Road Policy (URP), SW 16th Street shall be updated to full urban standards in include, but not limited to, widening to a minimum of 12 foot lanes in each direction, stormwater and gutter improvements, and sidewalk. SW 16th Street improvements are associated with Phase 3 of the TIS, but will be provided in the future Phase 2 PDP for East Village.

Other Intersection-Specific Recommendations

-M291 and Scherer - Continue monitoring corridor traffic growth; an additional southbound through-lane may be necessary in Phase 2 or Phase 3 or as traffic grows from other developments in the region.

-North /South collector Intersections - Provide southbound right-turn lanes (minimum 100 FT + taper) and revise lot access throat lengths to accommodate projected Saturday peak-hour queues.

-Private Street Option: The City and the Developer may consider classifying the North/South collector from Bailey Road to 16th Street as a private street, which could alleviate spacing and access control issues under current AMC requirements.

The traffic study looked at each noted intersection to be analyzed for traffic operations and assigned a Level of Service (LOS) associated with their delay. Level of Service (LOS) is an industry accepted performance measure for traffic operations based on delay represented by the A to F lettered scale, with A the best and F the worst. City policy has established a LOS goal C for traffic signal operations and LOS D (where LOS E and F may be acceptable) for stop controlled movements. MoDOT has a similar performance standard, but LOS D is acceptable for signal operations. These LOS targets indicate acceptable operational performance or adequate operational conditions for the transportation network.

In addition to measured vehicle delay, vehicle queues were analyzed. With exception of a couple movements, all of the overall LOS meet the City's goals and queues were maintained in the planned turn lane capacities. This will be re-evaluated by staff when a new TIS is received after Phase 1 is open to traffic.

LIVABLE STREETS (*Resolution 10-17*)

COMPLIANT ☒

EXCEPTIONS ☐

The proposed development plan will provide required sidewalks, shared use path/trail, on-road bicycle accommodations and all elements otherwise required by ordinances and standards and comprehensive plan (i.e. Bicycle Transportation Plan and Greenway Master Plan) including but not limited to property landscaping, lighting, parking, and ADA accessibility. No exceptions to the Livable Streets Policy adopted by Resolution 10-17 are requested. The proposed development as presented intends to incorporate "place making" elements with multi-modal complete streets providing access to/from and within the mixed land use project, including open spaces, recreational areas, and other non-motorized accommodations and an active environment with purposeful connections to surrounding developments, networks and downtown Lee's Summit less than 1 mile to the north. Furthermore, the Oldham Village project will be interconnected with the Fieldhouse less than 1/2 mile to the west.

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 conditions noted below and any such public improvements shall be substantially completed prior to any issued occupancy permit associated with the phase of development described therein:

1. Construct all public improvements recommended in the Traffic Impact Study and other public improvements as stated above and shown on the plans, including but not limited to those restated below (in case of differing conditions the condition whichever has the most capacity shall apply):

PHASE 1 (North of Oldham Pkwy)

A. Oldham Parkway and M291

- Extend the existing southbound dual left-turn lanes to provide a minimum of 430 FT of storage, or as much as feasible within existing geometrics.

B. Oldham Parkway and North/South Collector

- Construct a full intersection with traffic signal installation, including the future south leg and pedestrian facilities. The traffic signal shall include fiber optic network interconnect to the adjacent traffic signals owned by the City of Lee's Summit and MoDOT.

C. Lot 1 Access Drive

- Access shall be Right-Out only. There is a discrepancy between the PDP and the TIS; the PDP shows RIRO and TIS shows RIRO-Left-In eastbound.
- Retail tenant could post signage at the western Right-Out restricting use to northbound M291 patrons to discourage Oldham Parkway weaving movements.

PHASE 2 (Area Between Oldham Parkway and Bailey Road)

D. M291 corridor Improvements

- Construct a third southbound through-lane from south of Oldham Parkway through Persels and continue to (or through) Scherer Road. This should include removal of existing shoulder, new paved lane, and new paved shoulder.
- Include associated shoulder, lane, and signal modifications primarily along the western half of M291.

E. Traffic Impact Study Update

- Upon completion of Phase 1, update the TIS (including land uses in Phase 2) to confirm southbound widening limits and validate prior recommendations. Any additional public improvements or modifications described in the updated TIS or at the direction of the City Traffic Engineer shall become conditions of approval the same as any other listed condition of approval herein applicable to Phase 2.

F. Bailey Road at North/South collector

- Implement center median and lane improvements to accommodate future Phase 3 traffic and establish this intersection as a westbound right-in/right-out with eastbound left-turn-in capability (refer to Condition #4 regarding the left-in). The eastbound left-turn may be omitted from initial construction as it is not required or it may be removed in the future.

G. Bailey Road at Drive 8

- Implement lane improvements to accommodate future Phase 3 traffic and install a traffic signal with fiber optic network interconnect to adjacent traffic signals owned by the City of Lee's Summit and MoDOT.

PHASE 3 (South of Bailey Rd)

H. M291 and Persels/Bailey

- Add a second southbound left-turn lane with 380 feet of storage and improve the westbound right-turn configuration. Westbound left-turn storage shall have 320 feet minimum of storage plus taper pending an updated TIS.
- Shoulder, lane, and signal improvements along the eastern half of M291 at Bailey Road.

I. Bailey Road and Drive 8

- Install a traffic signal with modifications to provide protected northbound left-turn and eastbound U-turn movements.

2. The public improvements shall include preservation or construction of new shared use paths and on-road bicycle facilities consistent with the Greenway Master Plan and Bicycle Transportation Plan, respectively, including but not limited to Bailey Road, wherever such roadways are directly impacted by or adjacent to the proposed development or related public improvements.

3. At the time this memo was written MoDOT had not completed their review of the traffic study and the improvements recommended within. The developer will be required to construct any improvements required by MoDOT. MoDOT may add or waive any public improvements tied to the MoDOT facilities or MoDOT right-of-way as owner of the state transportation facilities and state (MHTC) right-of-way.

4. The Developer shall construct the roadway as required, full pavement and median doveled on top of the pavement so as to minimize any structural disruption work, public impact, etc. This would allow the City, within its inherent and absolute right, to manage City right-of-way, to easily remove the island and close the left lane if it is determined that this turn lane is a safety or operational concern or it is determined that there is a need for safety or operational improvement at adjacent intersections (e.g. a longer left turn lane is needed at nearby full access traffic signal).

a. If the developer moves forward with constructing the left-turn lane along Bailey Road at the unsignalized North/South Collector (Right-In-Right-Out-Left-In), the Developer shall escrow \$100,000 for the future reconstruction of the median in the subject area to limit the intersection to Right-In-Right-Out only. The decision to limit access and cause expenditure of said escrow for reconstruction shall exclusively reside with the City Traffic Engineer. Escrow shall be required prior to any occupancy permit within Phase 2 (the area between Oldham Pkwy and Bailey Road). Escrow payment may be released when the development reaches 75% of occupancy of total square footage of non-residential area of Phases 2 and 3 (the area between Oldham Pkwy and 16th St.) but not less than 10 years.

b. If the Developer moves forward as recommended, without a left-turn lane, updated plans shall be submitted at the time of permit review.

5. The Developer is required to improve 16th Street from M291 Highway to the easternmost connection with the proposed development to meet full urban standards in accordance with the Unimproved Road Policy.

6. The Developer shall re-evaluate minimum throat lengths ahead of Final Development Plan submittals. Staff will review and determine the impact of a substandard throat length at that time and require changes as needed.