

DEVELOPMENT SERVICES

Commercial Final Development Plan Applicant's Letter

Date: Wednesday, February 23, 2022

To:

Property Owner: ROBINSON E L JR & LETHA M - Email:

TRUSTEES

Applicant: Dan Finn Email: dfinn@phelpsengineering.com

City Staff: Scott Ready Email: Scott.Ready@cityofls.net

From: Shannon McGuire, Planner

Re:

Application Number: PL2022038

Application Type: Commercial Final Development Plan

Application Name: Market Street Center, Lot 1 - Final Development Plan **Location:** 3501 SW MARKET ST, LEES SUMMIT, MO 64082

Electronic Plans for Resubmittal

All Planning application and development engineering plan resubmittals shall include an electronic copy of the documents as well as the required number of paper copies.

Electronic copies shall be provided in the following formats:

- Plats All plats shall be provided in mulit-page Portable Document Format (PDF).
- Engineered Civil Plans All engineered civil plans shall be provided in multipage Portable Document Format (PDF).
- Architectural and other plan drawings Architectural and other plan drawings, such as site electrical and landscaping, shall be provided in multi-page Portable Document Format (PDF).
- Studies Studies, such as stormwater and traffic, shall be provided in Portable Document Format (PDF).

Please contact Staff with any questions or concerns.

Excise Tax

On April 1, 1998, an excise tax on new development for road construction went into effect. This tax is levied based on the type of development and trips generated. If you require additional information about this development cost, as well as other permit costs and related fees, please contact the Development Services Department at (816) 969-1200.

Review Status:

Required Corrections:

Fire Review	Jim Eden	Assistant Chief	Corrections
	(816) 969-1303	Jim.Eden@cityofls.net	

1. All issues pertaining to life safety and property protection from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures and premises, and to the safety to fire fighters and emergency responders during emergency operations, shall be in accordance with the 2018 International Fire Code.

Additional fire protection requirements may apply depending on use and design of the spaces. Verified at building permit plan review.

2. IFC 503.1.1 - Approved fire apparatus access roads shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall comply with the requirements of this section and shall extend to within 150 feet (45 720 mm) of all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building or facility. Exception: The fire code official is authorized to increase the dimension of 150 feet (45 720 mm) where: 1. The building is equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3. 2. Fire apparatus access roads cannot be installed because of location on property, topography, waterways, nonnegotiable grades or other similar conditions, and an approved alternative means of fire protection is provided.

Action required- The 150 foot distance is slightly over. Do not make any changes to the building location that would increase it more.

3. IFC 507.5.1 - Where a portion of the facility or building hereafter constructed or moved into or within the jurisdiction is more than 300 feet from a hydrant on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains shall be provided where required by the fire code official.

Action required- Provide a hydrant plan.

4. IFC 503.2.3 - Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be surfaced so as to provide all-weather driving capabilities.

Action required- Confirm the "asphalt pavement" will carry the weight of a 75,000-pound fire apparatus.

Planning Review	Shannon McGuire	Planner	Corrections
	(816) 969-1237	Shannon.McGuire@cityofls.net	

- 1. Please provide completed ownership affidavit and application forms with signatures.
- 2. Please provide the location, height, intensity and type of outside lighting fixtures for buildings and parking lots.
- 3. Please provide photometric diagram indicating the foot candle levels throughout the site and at the property lines.
- 4. Please provide the manufacturer's specification sheets for proposed exterior lighting to include both parking lot pole mounted and wall mounted fixtures. The specification sheets shall indicate the exact fixture to be used.

- 5. Will there be any ground mounted mechanical equipment? If so, please show the location, size, and type of material to be used in all screening of ground mounted mechanical equipment.
- 6. Please provide the manufacturer's specification sheets for proposed mechanical equipment to be used.
- 7. Please show the location, size and materials to be used in all screening of rooftop mechanical equipment.
- 8. On the elevations, please show a dashed line indicating the roof line and rooftop mechanical equipment.
- 9. Wall-mounted mechanical equipment. Wall-mounted mechanical equipment, except air conditioning equipment (e.g., window AC units), that protrudes more than six inches from the outer building wall shall be screened from view by structural features that are compatible with the architecture and color of the subject building. Wall-mounted mechanical equipment that protrudes six inches or less from the outer building wall shall be designed to blend with the color and architectural design of the subject building.
- 10. Elevations of all sides of proposed buildings shall include notation indicating building materials to be used on the exteriors and roofs.
- 11. Real wood is not an allowed material. Please propose a different material that meets the UDO requirements. Materials such as Nichiha or Trex are acceptable.
- 12. Parking stalls shall be 9' wide x 19' deep. 9' wide x 17' deep parking spaces shall be permitted when the parking space abuts a 6' wide sidewalk or when abutting a curbed open green/landscaped space. Please increase the depth of the sidewalks that are adjacent to the parking stalls.
- 13. All parking lots with 11 or more stalls must provide parking lot lighting. Please provide details on how you will be meeting this requirement.
- 14. CG-1 concrete curbing required around all parking areas and access drives in office, commercial and industrial districts. Please update the plans to reflect this requirement.
- 15. All proposed signs must comply with the sign requirements as outlined in the sign section of the ordinance.
- 16. Please provide details on how you are meeting the mandatory minimum Sustainability development requirements of M-150 Corridor Development Overlay District (UDO Sec. 5.510).

Engineering Review	Gene Williams, P.E.	Senior Staff Engineer	Corrections
	(816) 969-1223	Gene. Williams@cityofls.net	

- 1. Private force main is called out as a 2 inch HDPE on Sheet 3, but later on same note calls out 1.25 inch. Please reconcile.
- 2. Sheet C3: Sheet Private force main cannot tie direct to a public manhole, but shall be connected a minimum of 4.0 feet from the upstream manhole, as measured from the outside of the manhole to the outside of the wye (i.e., not the middle of the wye, but the closest point on the wye). Please revise as appropriate.
- 3. The "Final Stormwater Management Plan" dated Feb. 4, 2022 included a routing diagram within the appendix which only included "1S" hydrograph into the basin. Off-site contributors to drainage were missing, and shall be

included in the routing diagram and subsequent routing calculations. No further review of the routing for the detention basin was performed due to this omission. Please correct, and ensure all off-site contributors to flow are properly shown and included in the routing calculations.

- 4. Storm drainage layout does not agree or make sense compared to our GIS. For instance, a 48 inch storm line is shown on the topo entering the site from Market St., (later shown to be a proposed 42 inch HDPE line which contradicts the 48 inch callout) near the north side and middle of the project, and proceeding southeast through the site. Our GIS records are not showing this to be the case. Where was this information gathered? Was this based on a field survey?
- 5. ADA ramps are incorrect. Wings are not allowed on ADA accessible ramps, but rather, grading no more than 3 to 1 provided to transition from grade to the ADA-accessible ramp. Slope callout and elevations are incorrect on the west side, where it shows a slope reversal, and the slope callout on the east side is too high at 8.0%. The City requires a design slope of max. 7.5%. Finally, the ADA-accessible route with a minimum 5 foot width across the driveway entrance was missing with dimensions, elevation callouts, and cross-slope callouts. Please correct.
- 6. The swale at the south end of the project was shown on the topo with a 36 inch pipe discharing into the swale and detention basin. The hydrograph for this incoming stormwater was not included in the "Final Stormwater Management Plan" dated Feb. 4, 2022. Please re-evaluate and provide a revised plan as appropriate, as no further review was conducted on this report due to this omission. This will affect the storage requirements of the basin due to increased volume required to manage this "pass-through" flow.
- 7. Private sanitary sewer easement shall be dedicated for the private force main. It shall be of sufficient width to allow for future maintenance up to an including the wye connection at the main. Please show on the plans, and ensure this is carried through to the plat.
- 8. "Final Stormwater Management Plan" dated Feb. 4, 2022 was not signed and sealed. All reports shall be signed and sealed by a registered professional engineeer licensed in the State of Missouri.
- 9. "Final Stomwater Management Plan" dated Feb. 4, 2022 contains a table of contents that does not match the items contained in the report. For example, an Executive Summary is shown in the table of contents as the first item, but no Executive Summary was included as the first item. In fact, no Executive Summary is contained within the report. Please reconcile, and ensure all sections, pages, and appendices match what is shown in the table of contents.
- 10. "Final Stomwater Management Plan" dated Feb. 4, 2022 was missing the inflow hydrograph from the Walmart property (i.e., the incoming flow from the 48 inch pipe). Please see other comments concerning the questionable nature of the location of this line. Re-evaluate the stormwater conditions, and revise the report as necessary. No further review of this report was conducted due to this issue.
- 11. Calculations for the 100% clogged condition/zero available storage were not shown, nor were they shown on the plans. Please ensure all KCAPWA design standards for detention basins are followed in regard to this emergency spillway, including freeboard of 1.0 feet from the lowest point on the top of the dam, to the 100 year WSE for the clogged condition/zero available storage.
- 12. Water meter is shown in the middle of a swale. This is not allowed. Please show the water meters within an area not impacted by stormwater runoff, and please show their locations in an area that is accessible to Water Utilities staff.
- 13. Grading is being changed along the south property line during construction of the detention basin. The grading will create an adverse impact to adjacent property owner due to the fact that the swale will no be converted into a

detention basin with grade and stormwater now directed towards the south. Revision is required to eliminate the alteration of the drainage patterns that are creating the adverse impact. Recommend not disturbing this area, and revising the footprint location of the detention basin to allow this swale to remain "as-is", and allowing this drainage to "pass through" undetained. As previously commented, the drainage from this swale was not properly accounted for in the "Final Stormwater Managment Plan" dated Feb. 4, 2022, and if properly accounted will require the basin to be expanded considerably from its current storage volume. Please re-evaluate and provide a re-design.

- 14. Sheet C6: This sheet was missing the following items: 1) location of emergency spillway (not overlflow weir as shown on your plan view), 2) profile view of outlet structure in relation to proposed grade, 3) top of the dam elevation callout, 4) elevation of the emergency spillway, preferably in section view format showing the 100 year WSE (nominal) in relation to the emergency spillway elevation, 4) freeboard between the nominal 100 year WSE and the emergency spillway (0.5 feet is minimum required), 5) freboard between the 100 year clogged condition/zero available storage and the top of dam (assuming the top is flat, otherwise the low point on the dam), 6) cross-section of dam, showiing a minimum 3 foot flat area at top of dam, 7) design storage for the 2, 10, and 100 year events, (only the 90 percent mean annual event storage was provided), 8) graphic representation of the 100 year WSE for the clogged/zero available storage condition (an outline within the basin is sufficient, along with notes showing the extent), 9) dimensions from these WSEs to the nearest property line or building, 10) design allowable release rates for the 2, 10, and 100 year events.
- 15. A portion of the site near the periphery in the vicinity of the building footprint does not appear to meet the allowable release rates and 40 hour extended detention for the 90 percent mean annual event. This is the area proposed for "free-release" without detention. A waiver to the Design and Construction Manual will be required for this area, and shall be submitted on forms provided by the City. The form shall be completed along with the citations within the Design and Construction Manual, along with a summary, and exhibt. The summary shall include the following: 1) brief summary of the "peripheral drainage" issue in relation to the building footprints being re-graded in the vicinity of the area proposed for "free-release", 2) magnitude of the existing condition flow rate at a point of interest related to this drainage area, along with the developed condition peak discharge for the various events in relation to the existing condition, and the percentage decrease in peak flow rate from this drainage area, 3) rationale behind the waiver, and 4) an exhibit showing the drainage area to be "free-released". The summary attachment and exhibit shall be signed and sealed by a registered professional engineeer licensed in the State of Missouri.
- 16. Drainage area is greater than 2 acres for the area of sheetflow to be directed to the detention basin. An engineered system is required for stormwater drainage areas greater than 2 acres in size. Please evaluate and revise as appropriate.
- 17. Grading plan shows several areas greater than 3 to 1 slope which is not allowed without a geotechnical report stating this is acceptable. Please show grading no greater than 3 to 1 slope, or provide a geotechnical report showing this is acceptable. The geotechnical report (if desired) shall be based on actual field samples being obtained rather than assumptions.
- 18. Note M on Sheet C1.1 is referencing the incorrect drawing. Generic details are not suffcient for design of ADA-accessible ramps. Site specific design is required. The question, however, is later on in the plans on Sheet C2.1, a site-specific design is provided. Please correct the error in the reference on Sheet C1.1 by directing the reader to he correct sheet number.
- 19. Turf reinforcement mat is warranted for the large area to north of the detention basin. Please provide a design for the inclusion of turf reinforement mat in this area, along with design calculations showing the type of TRM is appropriate for the conditions.
- 20. If private fire hydrants are being installed to serve the site as per Fire Dept. comments, a backflow vault is required for the private fire hydrant. The backflow vault shall follow the City of Lee's Summit standard detail, along

with sufficient notes showing how the vault will drain at the sump. The vault shall be located within 6 feet of the main, outside of any easement, and shall include a gate valve just prior to the backfilow vault. The connection point at the main shall be via a cut-in tee. Please correct.

- 21. Sheet C4 does not make sense. Please see previous comments related to the stormwater entering from Market St. This is a questionable design, and should be re-evaluated based on existing conditions, which do not appear to be correct.
- 22. Sheet C3.1 Enlarged Utillity Plan: Water meter tap location note does not match what is shown on the plan view. I am showing 3 locations, not 2 locations. Please revise as appropriate.
- 23. Sheet C3.1 Enlarged Utillity Plan: Note for water meter tap is incorrect. The City shall perform the tap after the contractor has coordinated with the Development Services field inspector. Please correct.
- 24. Sheet C3.1 Enlarged Utillity Plan: The note concerning the meter and pit is incorrect. The City shall provide the meter, the pit, and all other materials necessary for its installation for a fee based on the most current fee schedule at time of installation. The labor shall be performed by the contractor. Please correct.
- 25. Sheet C3.1 Enlarged Utillity Plan: The note W3 is shown in the upper right hand corner, but no corresponding locations are shown on the plans. Please correct.
- 26. Sheet C3.1 Enlarged Utillity Plan: Note W3 is not entirely correct. The contractor shall always coordinate with the Development Services inspector, not Water Utilities. Please correct.
- 27. Sheet C3.1 Enlarged Utillity Plan: The private force main S4 shown on this sheet is too close to the southwest lot line. Recommend a minimum of 5 feet from the lot line. Please revise.
- 28. The 100 year WSE for the nominal condition is at the property line at the west end of the detention basin. This is not allowed. A minimum 20 foot setback is required between the 100 year WSE for the clogged condition/zero available storage, and any property line or building. In addition, no WSE for the clogged/zero available storage was provided, but it is fairly self-evident it will be over the property line. Please revise as appropriate.
- 29. Grading and stormwater modifications are shown within MoDOT right of way, which will require a permit from MoDOT. Please provide the permit prior to formal approval of the Final Development Plan.
- 30. Sheet C5: The outlet pipe is noted as being undersized, which is not allowed by KCAPWA Section 5600. All discharge pipes from detention basins shall be designed to manage the 100 year event without utilizing the emergency spillway. The only time the emergency spillway shall be utilized is when: 1) the actual flow exceeds the 100 year event, or 2) clogging of the primary outlet structure. The note shall be revised as well as the "Final Stormwater Management Plan" dated Feb. 4, 2022.
- 31. All Sheets related to grading: The stormwater being discharged from the existing Firestone detention basin was not properly engineered in terms of how it will be directed to the detention basin without severe erosion and backcutting toward the Firestone property. This shall likely require it be piped to the basin, not allowed to direct discharge on the ground. Please provide a re-design that eliminates concentrated flow from dischargiing on slopes in excess of 2%.
- 32. Sheet C6: Outgoing elevation of the pipe matches the incoming elevation of the outlet structure. A drop of 0.20 feet is required to minimize siltation. Please revise.

- 33. Sheet C6: Stormwater is shown entering the basin from the questionable 48 inch pipe on northeast corner of basin. This shall be located further away from outlet structure to minimize "short-circuiting" of the water quality aspect of the basin. Please revise as appropriate to move the discharge point as far away as possible from the outlet structure.
- 34. Sheet C6: Rip rap is shown being installed on a 3:1 slope, which is not allowed. All rip rap shall be installed no greater than 2.0%. Please revise.
- 35. Due to extensive comments related to the "Final Stormwater Management Plan" dated Feb. 4, 2022, no further review of Sheet C6 was performed at this time. Please ensure all details previously requested above in this comment letter are addressed on the revised detention basin sheet C6, and ensure the elevations shown on the outlet structure match what is shown on the pond setup tables with the stormwater report.
- 36. Sheet C7: Erosion control plan is very basic, and missing silt fence or other erosion control measures to be installed along the wide expansive area to be re-graded and TRM installed. Suggest at a minimum to include silt fence in accordance with the Design and Construction Manual in this area.
- 37. Sheet C7: The detention basin should be utilized as a temporary silt basin. Please provide details including skimmer installation, notation that it be constructed as the first item, and notation for its conversion to a permanent detention basin after the project has been stabilized in terms of vegetation.
- 38. Sheet C7: No phasing plan was provided for the various items shown on this sheet. This is required. Please provide a phasing schedule, perhaps in the form of a table.
- 39. Sheet C7: Turf reinforcement mat appears warranted for this site, in particular and at a minimum in the large expansive area north of the detention basin. Please see previious comments related to its design, and show on the erosion and sediment control plan. Please ensure it is included on the required phasing plan discussed earlier in this comment letter.
- 40. Rip rap calculations were missing on the plans. Please provide all rip rap calculations on the plans. In addition, wherever rip rap is called-out, provide standard drafting references to the Sheet number and detail for the rip rap installation.
- 41. Wherever rip rap is called-out on the plans, sufficient information for its design is required. It did not appear this was provided. Dimensions shall be required, along with thickness, the sizing of rip rap, the approximate cubic yardage of rip rap, and notation concerning the placement of geofabric in accordance with City standards. Reference to the detail shown on Sheet C8.3 shall also be noted using standard drafting techniques of referencing sheets shown elsewhere in the plan set. Please correct.
- 42. Sheet C1.1: Scored concrete sidewalk shall be a minimum 6 inches thickness to manage heavy traffic, preferably 8 inch with a 6 inch aggregate base on top of either geogrid or chemically-stabilized subgrade. Note I shall be revised to reference the standard detail utilized for its construction, including standard drafting notation of Sheet number and detail number. Please revise the detail shown on Sheet C8.1 within the plans to include the thickness, and please revise the detail shown on Sheet C8.1 to include either geogrid or subgrade stabilization and aggegate base.
- 43. Sheet C1.1: Notes are provided in upper right hand corner without standard drafting technique of referencing the proper plan sheet and detail number shown elsewhere within the plan set. Please correct.
- 44. Sheet C1.1: Heavy duty pavement areas were not noted on the plan view. These are areas where trash trucks, semi-trucks, or emergency vehicles such as fire trucks will need to access. This shall be shown on the plans.

Denotion of heavy duty pavement versus standard pavement shall be noted, along with a reference to the sheet number and detail number provided elsewhere in the plan using standard drafting notation.

- 45. Sheet C1.1: A monument sign is proposed in an area with undefined dashed lines. What do these dashed lines represent? What is "P/S"? There appear to be conflicts in its placement. No portion of a monument sign can be within an easement, including the footing of the monument sign or any electrical connections to the monument sign.
- 46. Section view for asphaltic concrete pavement does not follow the Unified Development Ordinance. Please see specific requirements for regular asphaltic concrete, and heavy duty asphaltic concrete. Particular attention shall be given to the subgrade requirements, as the City requires the subgrade design to include either geogrid or chemically-stabilized subgrade on top of 95% proctor compacted suitable subgrade in addition to thickness of the asphaltic concrete and aggregate base.
- 47. Where are the ADA-accessible routes from the ADA parking spaces to the building? It did not appear they were shown, nor did it appear an ADA-accessible route exists between these spaces and the building. Please correct.
- 48. Was Autoturn or other method used to determine whether the entrances will work adequately? It appears emergency vehicles or trash trucks will not be able to navigate these extreme curves. Please evaluate and revise as appropriate.
- 49. Profile view on Sheet C4 for the large pipe entering the basin does not match the detention basin plan. The profile view shows the pipe entering flat, but the detention basin plan shows the rip rap installed on an unallowed 3 to 1 slope at the discharge of this large pipe. Although rip rap installed relatively flat is good, it needs to match what is shown elsewhere within the plans, inclduing the grading plan, the enlarged grading plan, and the dedicated detention basin plan sheet. in addition, it does not match the detail provided on Sheet C8.3 which shows a forebay depression. Please also see additional comments related to rip rap design notation on the plans, and ensure the rip rap is thorougly detailed. Also ensure the grading plan matches what is shown on the profile view. Finally, ensure the notes on Sheet C8.3 regarding dimensions shown on the plans, etc. are noted on the plan view on Sheet C4.
- 50. Sheet C6: Slope callouts are required on the bottom of the basin are required. It appears the west portion is shown at 2.0%, and the east portion at 0.7%. Is 0.7% sufficient slope for this basin bottom? The Design and Construction Manual requires 2%, but MARC manual allows for lesser slope. The question, however, is whether 0.7% slope is adequate to drain the pond without issue. Please evaluate and revise as appropriate.
- 52. Wil the project include the installation of parking lot lighting? If so, where? They cannot be contained within an easement or within 10 feet of any public water line, storm line, or sanitary sewer line.
- 53. Prior to formal approval of the plans, the off-site sanitary sewer improvements shall be in an approvable form, and an Engineer's Estimate of Probable Construction Costs submitted for determination of the Engineering Plan Review and Inspection Fee. This estimate shall include all sitework necessary to construct the project. Please do not include the buldiing, site lighting, trees, shrubs, monument sign, parking lot striping and signage, trash enclosure, railings, or other items not reviewed or inspected by Development Services engineering or inspections.
- 54. A "payment in lieu of" agreement may be required for the missing sidewalk to the northeast of the southern commercial entrance. Please check with the project manager for specific instructions regarding this requirement.
- 55. The "Final Stormwater Management Plan" dated Feb. 3, 2022 did not include a pre-development (i.e., existing) drainage map with points of interest downstream of the project where stormwater converges to concentrated flow, nor was the proposed drainage area diagram shown with these points of interest. Therefore, all calculations of allowable release rate for the various events are suspect. There was an unlabeled diagram in the appendix that may

have been an attempt to show the existing conditions, but it did not show the point of interest near the existing discharge point in the southeast corner of the site. This would appear to be the most important point of interest where the allowable would be calculated, and it is unclear why it was not analyzed. Please re-evaluate, and provide:

1) an existing drainage condition and proposed condition diagram with points of interest that match what is shown in the report and match what is shown on either the existing and proposed condition, 2) points of interest shall be where stormwater has already converged to flow in a concentrated pattern, and 3) clear indications of where stormwater will be "free-released" near the periphery and where a waiver is required.

- 56. The "Final Stormwater Management Plan" dated Feb. 4, 2022 presented a questionable method to determine the allowable release rate for the various storm events. Typical method is to provide: 1) on-site contributors to peak flows for the various events, 2) off-site contributors to peak flow for the various events, 3) calculation of the allowable for each point of interest (see prevous comment since points of interest provided in the report do not appear to make sense) for the site, allowing credit for "pass through" peak flows, and 4) ensuring the routing calculations for the detention basin meet the allowable release rate. For this particular project, the point of interest near the southeast corner where stormwater is discharged onto MoDOT right of way is the most significant point of interest, and that would appear to be the most logical point of interest to show the allowable release rate. Please call me if further discussion is needed on this topic, since it appears the method used to determine the allowable release rate did not follow any recognized method for determination.
- 57. A profile view of the 8 inch storm line behind the building should be shown. It should also include any potential utility conflicts such as domestic water service lines, etc.
- 58. Sheet C3.1: The storm lines on the north side of Market St. do not match our records. How was this information obtained? Was this based on a field survey?
- 59. Profile Views of All Storm Lines: The design storm HGL shall be shown on the profile view. In general, the 10 year event should be below the crown of the pipe, and the 100 year event should be below any inlet throat or top, a minimum distance of 6 inches. If not, a suitable overflow route for the 100 year event shall be required. Please revise and evaluate as necessary.
- 60. All interior storm lines shall be labeled "PRIVATE", including any storm lines connected to public curb inlets. Please revise, and place the label on the profile view at a minimum.
- 61. Calculations of the HGL within the storm lines did not appear to account for the various storm events and subsequent HGL calculations for the detention basin for the 42 inch storm line entering the basin from the north. Please re-evaluate and provide calculations of the HGL within the basin in relation to this line.
- 62. What will be the affect on the hydraulics of the existing storm line along the south property line when installing a detention basin? It appears the clogged condition 100 year WSE will create subcritical flow at this location, and if this pipe is flowing under outlet control conditions, will negatively affect public storm system upstream of this point. This shall be evaluated, unless the applicant wishes to use the "bypass" method to leave the southern swale "as is", and bypass this stormwater and thereby eliminate it from the detention routing. Please evaluate and revise as appropriate.

Traffic Review	Susan Barry, P.E.	City Traffic Engineer	Approved with Conditions
	(816) 969-1800	Susan.Barry@cityofls.net	

1. Please verify that Autoturn was used to check that large vehicles are able to access both entrances into the site.

220 SE Green Street Lee's Summit, MO 64063 816.969.1200 816.969.1201 Fax cityofLS.net/Development