STORMWATER LAYOUT PLAN GUIDANCE	
	Stormwater facilities: ☐ Location of existing / proposed piping have been included and labeled. ☐ Location of existing / proposed stormwater facilities (i.e., manholes, catch basins, headwalls, inlets, stubs, etc.) have been included and labeled. ☐ Brief description of stormwater facilities have been included and labeled. ☐ Each facility has been labeled and numbered ☐ Labeling of stormwater facilities aligns with Pipe Chart. ☐ Stationing for all drainage structures has been included and labeled. ☐ Downspout connections have been identified and labeled.
	All connecting stormwater system piping and culverts on adjacent properties have been identified. ☐ Upstream stormwater connections have been identified. ☐ Downstream stormwater connections have been shown to maintain the capacity needed to receive stormwater from the new development. ☐ Calculations have been provided for, a minimum, of two downstream structures.
	Direction of flow (flow arrows) has been shown for all Ditches, Swales, Open Channels, and Pipes.
	Stormwater system alignment: ☐ In addition to typically accepted design standards, sharp bends in swales and ditches have been eliminated.
	Pipe Chart for all stormwater system pipes has been provided and includes the following (Ref j): ☐ Pipe Number. ☐ Contributing Area Drained (A). ☐ Total (Composite) Area Drained. ☐ Runoff Coefficient (C). ☐ A x C (individual). ☐ A x C (Composite). ☐ Intensity (I_{10} and I_{100}). ☐ Total Flow (Q_{10} and Q_{100}). ☐ Pipe Diameter. ☐ Minimum of 12 inches (Ref h – Section 10.3.1.4*). ☐ Manning's Coefficient (n). ☐ Pipe Length. ☐ Pipe Slope (minimum slope to satisfy minimum velocity at design flow). ☐ Pipe Material. ☐ Recommend pipe material as approved by MSD Standard Specifications (Ref h – Section 10.3.1.2*). ☐ Pipe Capacity. ☐ Velocity (V_{10} and V_{100}) . ☐ Recommended minimum of 2fps (design flow) or 3fps (full flow) whichever requires the greater slope (Ref h – Section 10.3.1.4*). ☐ Recommended maximum of 15fps (design flow). ☐ Headwaters (HW_{10} and HW_{100}).

STORMWATER LAYOUT PLAN GUIDANCE	
	☐ Depth (D_{10} and D_{100}). ☐ "Inlet" Time. ☐ "System" Time. Note: Rainfall intensity shall be obtained from the Rainfall Intensity-Duration-Frequency (IDF) curves developed for Metro Louisville (Ref b – Section 5).
	Manhole spacing has been addressed. (Ref h – Section 10.3.1.4*)
	Driveway Culverts have been designed to the following: ☐ Minimum 20-feet long. ☐ Sized for 10-year design storm. ☐ Minimum pipe diameter of 15 inches provided.
	Stubs: ☐ 1-foot long stubs have been provided. (Ref h – Section 10.3.1.4*).
	Detention Basin Details: ☐ Total site area has been indicated. ☐ Total area to basin (i.e., contributing drainage areas) has been indicated. ☐ Basin Volume Data has been indicated. ☐ Water surface elevation (WSE) for 10-year and 100-year storm has been indicated. ☐ Top of berm elevation has been indicated. ☐ Construction details for basin, embankment, and outlet devices (i.e., dam embankment compaction requirements, riser, barrel, perforations, trash rack, anti-seep collars, etc.) has been indicated. ☐ Construction drawings align with supporting calculations for the riser, barrel, perforation, and outlet details. (Ref d - 4.7.2) has been indicated. ☐ Emergency spillway has been provided and accommodates 100-year post development peak flow. ☐ Emergency spillway dissipater extends a minimum 4feet beyond the base of the dam (Ref b – Section 5). ☐ All Basins drain to an adequate outfall. Calculations demonstrate adequacy of the outfall (e.g., demonstrate that the selected outfall can contain the storm flow within its design limits). ☐ Detention basins comply with Ref h – Section 10.3.8*. ☐ Trees are not located within the detention basin or on detention basin embankments.
	Underground Detention has the following: ☐ Venting. ☐ Access for maintenance. ☐ Structurally designed for loads.
	Street Gutters and Inlets: ☐ Gutter details align with calculations. ☐ Gutter flows/spread and depth calculations at face-of-curb have been submitted (Ref h – Section 10.3.7*). ☐ Inlet placement has been based on calculations.