SECTION 5600 - STORM DRAINAGE SYSTEMS & FACILITIES

CITY OF LEE'S SUMMIT, MISSOURI
DESIGN CRITERIA

This is Lee's Summit, Missouri's supplement to Section 5600 of the Kansas City Metropolitan Chapter of APWA Design Criteria, current edition. The following additions, deletions and/or revisions are adopted as a part of Section 5600 for use within Lee's Summit, Missouri.

5601.2 Definitions
Delete the definitions for Private Detention Facility and Public Detention Facility and replace with the following:

Detention Facility: A structural stormwater management facility controlling stormwater runoff from a site or watershed. The intended purpose of detention facilities designed in accordance with this Section is to manage stormwater release rates in order to minimize flooding and does not specifically address impacts on downstream erosion, water quality or the environment.

5601.5 System Types and Applications

Under A. General Guidelines, delete the fourth paragraph and replace it with the following:

The engineered drainage system shall when the tributary area reaches 2 acres.

5601.8.A. Protection of Property
Add the following subparagraphs 3 and 4.

3. Master Drainage Plans

To address level of service issues on an individual building lot basis, the Developer shall submit a Master Drainage Plan with the engineering plans for each development. The plan shall cover all portions of the development whether it is to be developed as single or multiple final plats, and shall cover all areas outside of the existing or proposed public rights-of-way. All lots must be graded in accordance with the approved Master Drainage Plan. Information on the plan shall include, but not be limited to, the following.

a. Overall drainage map, including off-site tributary areas contributing to the runoff in the development.
b. Existing and proposed contours at two-foot or smaller contour intervals.
c. Property boundary, lot lines and numbers, and streets.
d. Location(s) of all existing and proposed swales and channels, either natural or improved, along with design flows, typical sections, details, upstream and downstream elevations, and approximate slope.
e. Limits of regulatory floodplain, where applicable.

f. ***Limits of 1% storm water surface elevation for all swales and channels not within regulatory floodplain.***

g. ***Required buffer zones for natural streams.***

h. ***The elevation of the minimum, or lowest, building opening elevation (MBOE) for each lot. If a lot is adjacent to or contains a designated swale or channel, the MBOE must be set at the 1% water surface elevation plus two feet. If there is significant change in elevation along a swale or channel, as determined by the City Engineer, multiple MBOEs may be required for different sides of the building.***

i. ***Lots where walkout basements and daylight basement plans will be allowed.***

j. ***Finished elevations at all corners of each lot with a minimum of four elevations per lot.***

4. ***The Developer shall include on the plats for the development covered by the Master Drainage Plan, a restriction that the individual lot owner(s) shall not change or obstruct the drainage flow lines or paths on the lots, as shown on the Master Drainage Plan, unless specific application is made and approved by the City Engineer.***

<u>5604.1.A Inlet Design - Type</u>
Revise the dimension for opening length as follows:

Opening length, inside	4.0 ft (min), ***8.0 ft. (max)***

<u>5604.1.C Inlet Design – Design Method</u>
Revise references to Figures 5604-37 and 5604-38 to Figures 5604-19 and 5604-21 respectively.

Add the following sentences to the paragraph:

Figures 5604-2 through 5604-19 apply to a curb inlet with a 10-inch throat opening height, similar to Standard Drawing CI-2. For curb inlets with different opening heights, specific design calculations must be submitted.

<u>5604.1 Inlet Design</u>
Add the following as Paragraph D:

D. ***Location: Curb inlets shall not be located in the radius of two intersecting streets. Maximum spacing of inlets shall be 400 feet.***

<u>5608.2 Easements</u>
Delete paragraph and add the following:

Easements dedicated to the City are not required since detention facilities shall remain private unless an agreement has been reached with the City for a public facility. Access

easements are required on or through adjacent private property to allow the owner(s) of the facility ingress and egress to maintain the basin.

Table 5603-1
Delete the reference to Table 5603-1A for Corrugated Metal Pipe and add the following:

Corrugated Metal Pipe (CMP)	0.023
High Density Polyethylene Pipe (HDPE)	0.010

Table 5603-1A – Delete table.