

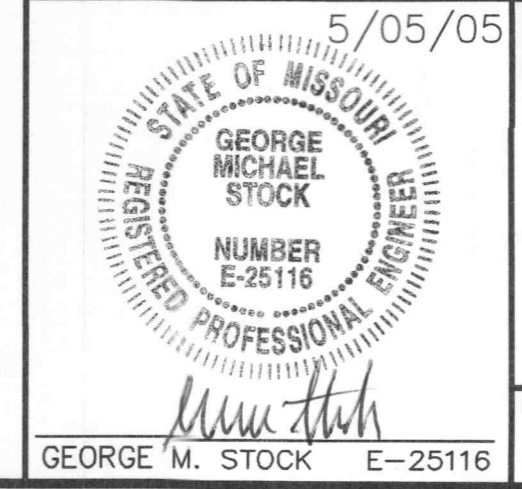
GUTTER SPREAD AT TURN LANE
 USING MANNING'S EQUATION FOR A TRIANGULAR GUTTER SECTION,
 $d = C \left(\frac{Q \cdot n \cdot S_x}{S} \right)^{0.375}$
 WHERE:
 d = depth of flow at face of curb (ft)
 C = 1.24 (constant)
 Q = total gutter flow rate (cfs) = 0.80 cfs
 n = manning's roughness coefficient (0.016)
 S_x = pavement and gutter cross slope (ft/ft) = 0.02 ft/ft
 S = longitudinal pavement slope (ft/ft) = .0066 ft/ft
 THEREFORE, d = 0.14 ft
 T = spread (width of gutter flow, ft) = d/S_x
 T = 7 ft at entrance to lot

AREA	ACRES	CFS/AC.	Q TOT
1	0.25	3.85	0.96 cfs
2	0.18	3.85	0.69 cfs
3	0.11	3.85	0.42 cfs
4	0.90	3.85	3.46 cfs
5	0.24	3.85	0.93 cfs
6	0.97	3.85	3.73 cfs
7	0.13	3.85	0.50 cfs
8	0.13	3.85	0.50 cfs
9	0.66	3.85	2.54 cfs
10	0.65	3.85	2.50 cfs
11	0.71	3.85	2.73 cfs
12	0.23	3.85	0.89 cfs
13	0.62	3.85	2.39 cfs
14	1.24	3.85	4.77 cfs

- ▲ 05/20/05 REVISED PER CITY COMMENT LETTER DATED 4-11-05
- ▲ 04/29/05 REVISED WATER LINE PER PWSD NO. 2 COMMENTS
- ▲ 04/26/05 REVISED FOR M&DOT COMMENTS
- ▲ 04-21-05 REVISED WATER LINE CONNECTION
- ▲ 04-15-05 REVISED SANITARY SEWER
- ▲ 04-12-05 REVISED SANITARY SEWER-EX. WATER LINE CONFLICT
- ▲ 04-07-05 REVISED SANITARY SEWER PER AS-BUILT CONDITIONS
- ▲ 02-15-05 REVISED SANITARY PROFILE-SHOWED EX. STORM CROSSING
- ▲ 01-20-05 REVISED PER M&DOT'S COMMENTS/RAISED SITE
- ▲ 12-16-04 REVISED PER ST. CHARLES COUNTY WATER NO. 2 COMMENTS
- ▲ 11-24-04 REVISED PER CITY COMMENT LETTER DATED 11-15-04

**DRAINAGE AREA MAP ONLY
 NOT FOR CONSTRUCTION !**

P&Z NOS: 98-126.03
 98-126.04



DRAINAGE AREA MAP
 TERRA RETAIL DEVELOPMENT/ASHLEY FURNITURE

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DATE: 10/20/04
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 SHEET: C13 of 23

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