

MILL POND APARTMENTS O'FALLON, MISSOURI

PINNACLE
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Summary of Drainage Calculations (TR55):

Drainage Area: 3.54 Acres
Soil Type: Hydrologic Soil Group D
Pre-Development CN: 78
Post-Development CN: 86

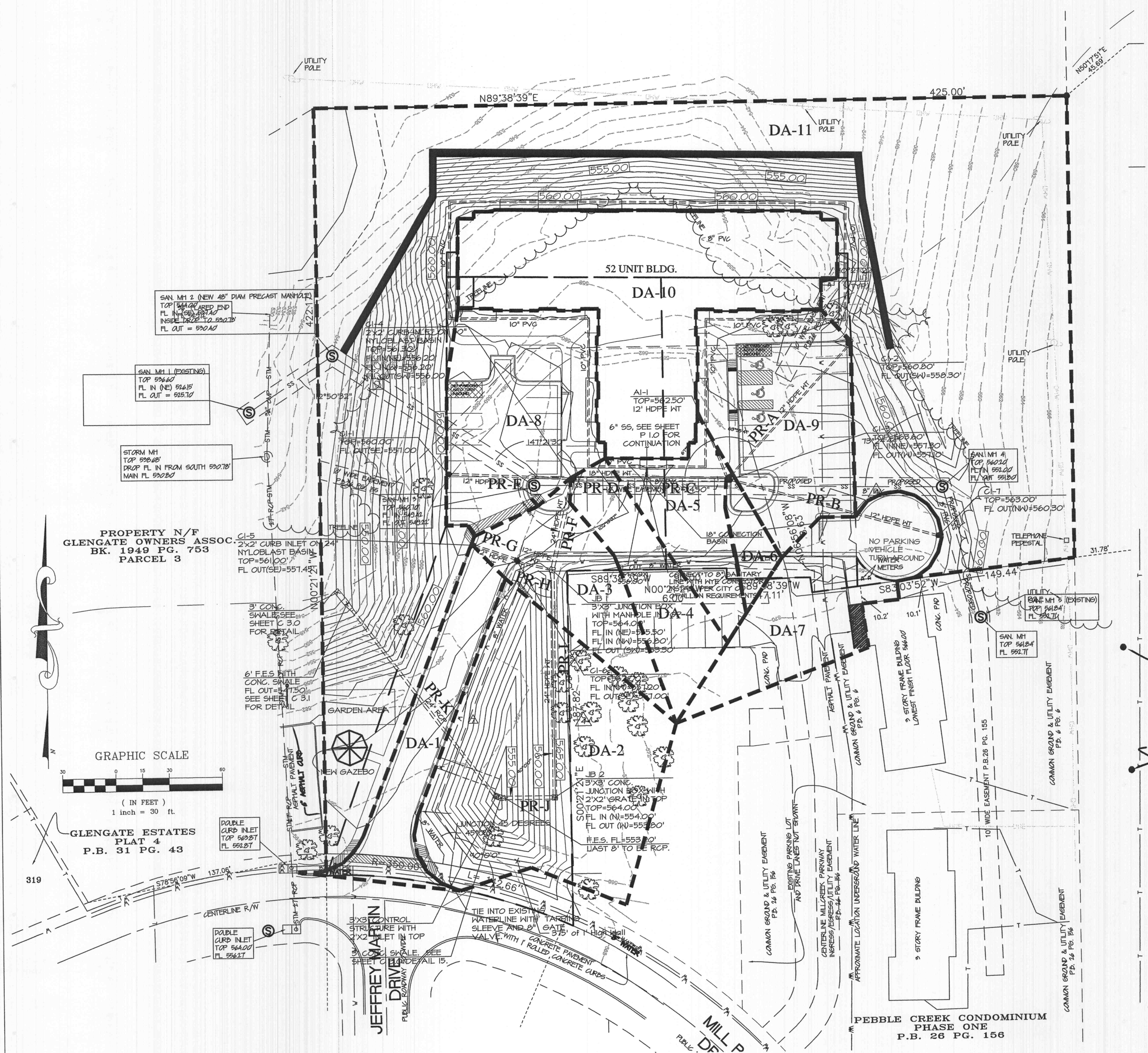
Design Storm (year)	Pre-Development Discharge (cfs)	Post-Development Discharge (cfs)	Required Detention Basin Size (CF)
2	1.50	2.10	10,200
5	2.21	2.91	13,200
10	2.80	3.56	15,600
25	3.40	4.22	18,200
100	4.66	5.56	23,100

Total Basin Volume - 36,315 CF

Pipe Sizing - Rational Method (15 yr. 20 min Storm):

Drainage Area	Total Area (Ac)	Impervious Area (Ac)	Pervious Area (Ac)	PI (ns)	Q(cfs)
DA-1	0.12	0.12	0.00	3.85	0.46
DA-2	0.38	0.00	0.38	1.87	0.71
DA-3	0.12	0.08	0.04	3.85	0.46
DA-4	0.10	0.07	0.03	3.85	0.39
DA-5	0.10	0.08	0.02	3.85	0.39
DA-6	0.03	0.02	0.01	3.85	0.12
DA-7	0.18	0.13	0.05	3.85	0.69
DA-8	0.22	0.15	0.07	3.85	0.85
DA-9	0.22	0.18	0.04	3.85	0.85
DA-10	0.38	0.38	0.00	3.85	1.46
DA-11	1.69	0.00	1.69	1.87	3.16

Pipe Run	Pipe Size (in)	Material	Manning's n	Length(ft)	Slope(%)	Capacity (cfs)	Flow (cfs)	Capacity (cfs)	Remaining
A	12	HDPE	0.010	101	1.0	4.63	0.85	3.78	
B	12	HDPE	0.010	121	2.5	7.32	0.69	6.63	
C	18	HDPE	0.010	45	1.0	13.65	1.66	11.99	
D	18	HDPE	0.010	41	1.0	13.65	3.51	10.14	
E	12	HDPE	0.010	68	1.5	5.67	0.85	4.82	
F	24	HDPE	0.010	50	1.0	29.41	4.75	24.66	
G	12	HDPE	0.010	25	1.0	4.63	0.46	4.17	
H	12	HDPE	0.010	18	1.1	4.86	0.92	3.94	
I	24	HDPE	0.010	126	1.0	29.85	5.67	24.18	
J	24	HDPE	0.010	28	2.8	49.38	5.67	43.71	
K	24	RCP	0.013	137	3.9	52.93	6.38	51.55	



25 SEPT 2006 THInc
30 MAR 2007 THInc
30 MAR 2007 THInc

SHEET NO.
C1.2
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