EXHIBIT D-3
(Section 17-82)

HOPEWELL TOWNSHIP
STORM SEWER CALCULATIONS

JOB DESCRIPTION _____
JOB NUMBER _____
BY _____
CHK'D _____
DATE _____

DESIGN STORM ____ YEAR FREQUENCY ROUGHNESS COEFFICIENT η = ____

FROM	TO	ADD INLET AREA DRAINED	TOTAL BASIN AREA (ac.)	C	ΔAC	ΣAC	LAND FLOW d (ft)	AVG. LAND SLOPE %	LINE FLOW d (ft)	TIME LAND (min.)	TIME LINE (min.)	CONC. TIME (min.) INLET	CONC. TIME (min.) PIPE	I in/hr INLET	I in/hr PIPE	Q (cfs) max. flow INLET	Q (cfs) max. flow PIPE	Q_{50}	LINE SLOPE S %	PIPE DIA. (in.)	MIN. SLOPE %	VEL. (f.p.s.)	REMARKS
							---	---		---													
							---	---		---													
							---	---		---													
							---	---		---													
							---	---		---													
							---	---		---													
							---	---		---													
							---	---		---													
							---	---		---													
							---	---		---													
							---	---		---													
							---	---		---													
							---	---		---													
							---	---		---													
							---	---		---													
							---	---		---													
							---	---		---													

RATIONAL FORMULA USED i.e. Q=ACi
ALL LINE FLOW AT A MINIMUM OF 3 ft/sec AND A MAXIMUM OF 12 ft/sec
REFERENCE CHAPTER 18 BY E. E. BEELYE

HOPEWELL TOWNSHIP
STORM SEWER CALCULATIONS

JOB DESCRIPTION JOB NAME
JOB NUMBER 0000
BY J. D.
CHK'D J. S.
DATE 7-21-89

DESIGN STORM 25 YEAR FREQUENCY ROUGHNESS COEFFICIENT η = 0.013

FROM	TO	ADD INLET AREA DRAINED	TOTAL BASIN AREA (ac.)	C	ΔAC	ΣAC	LAND FLOW d (ft)	AVG. LAND SLOPE %	LINE FLOW d (ft)	TIME LAND (min.)	TIME LINE (min.)	CONC. TIME (min.) INLET	CONC. TIME (min.) PIPE	I in/hr INLET	I in/hr PIPE	Q (cfs) max. flow INLET	Q (cfs) max. flow PIPE	Q_{50}	LINE SLOPE S %	PIPE DIA. (in.)	MIN. SLOPE %	VEL. (f.p.s.)	REMARKS
1	2	1.2	1.2	.65	0.78	0.78	200 / 100	2.3 / 1.5	250	15.2 / 4.3	0.8	19.5	19.5	4.97	4.97	3.88	3.88	4.83	1.00	15"	0.36	5.4	
2	3	2.0	3.2	.40	0.80	1.58	300 / —	3.0 / —	120	16.8 / —	0.3	16.8	20.3	5.28	4.88	4.22	7.71	9.66	0.88	18"	0.54	6.2	
							Grass / Pvmt	% / %		---													
							---	---		---													
							---	---		---													
							---	---		---													
							---	---		---													
							---	---		---													
							---	---		---													
							---	---		---													
							---	---		---													
							---	---		---													
							---	---		---													
							---	---		---													
							---	---		---													
							---	---		---													

EXAMPLE

RATIONAL FORMULA USED i.e. Q=ACi
ALL LINE FLOW AT A MINIMUM OF 3 ft/sec AND A MAXIMUM OF 12 ft/sec
REFERENCE CHAPTER 18 BY E. E. BEELYE