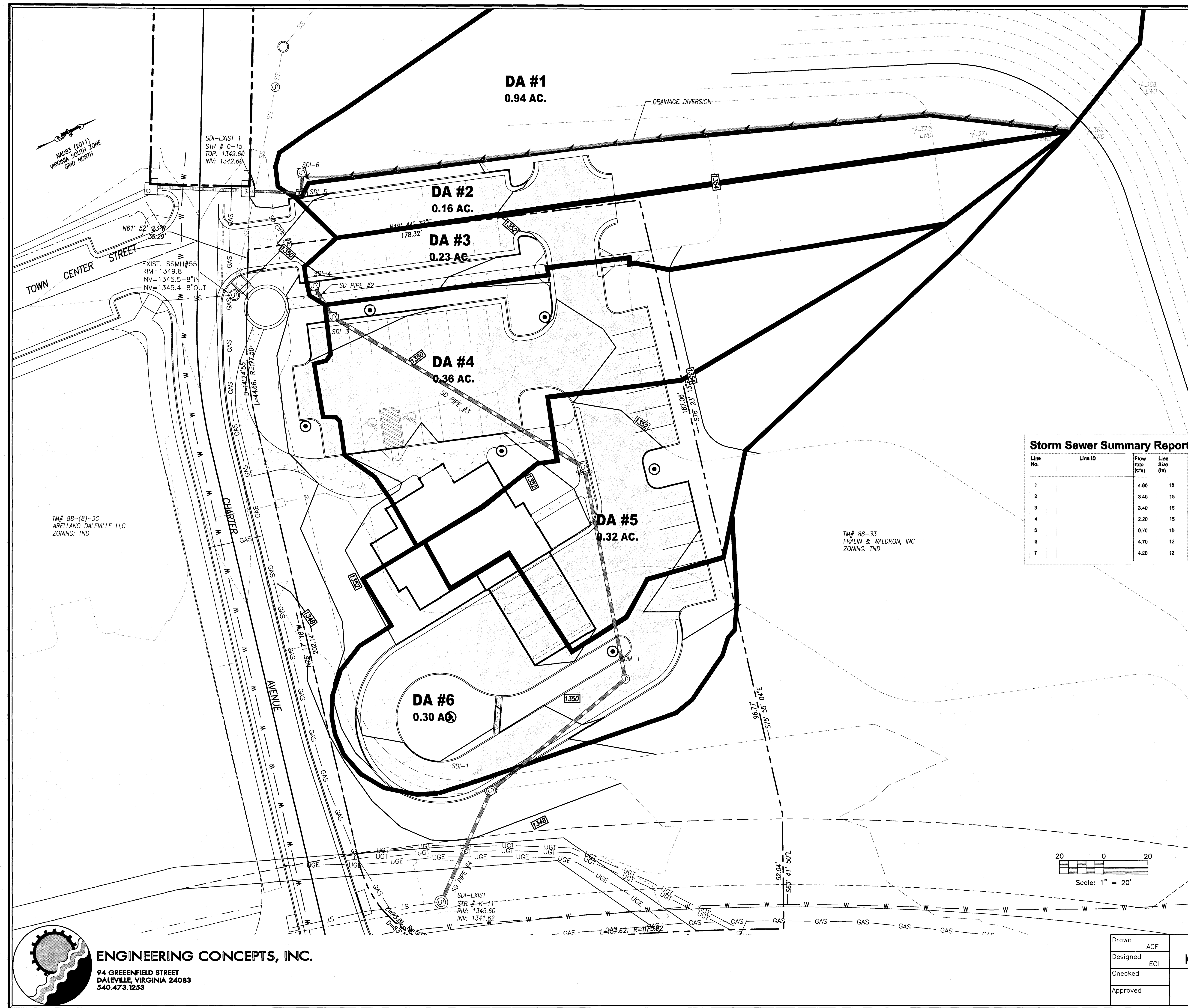
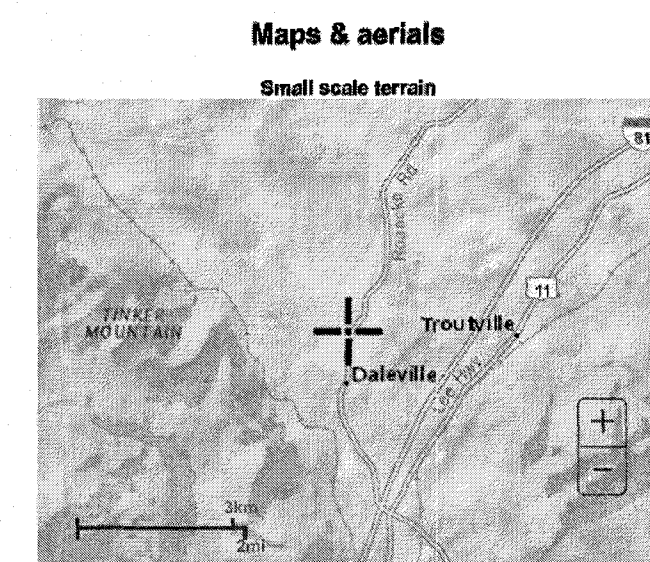




PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour)

Duration	1	2	5	10	25	50	100	200	500	1000
5-min	3.78 (3.42-4.18)	4.52 (4.10-4.93)	5.45 (4.91-6.04)	6.10 (5.48-6.78)	6.91 (6.17-7.64)	7.48 (6.64-8.29)	8.34 (7.37-9.34)	8.96 (7.85-10.3)	9.18 (7.85-10.3)	9.56 (8.22-11.0)
10-min	3.02 (2.72-3.34)	3.62 (3.28-3.94)	4.36 (3.92-4.84)	4.86 (4.32-5.40)	5.56 (4.91-6.29)	5.96 (5.29-6.81)	6.38 (5.62-7.10)	6.79 (5.91-7.87)	7.27 (6.26-8.18)	7.63 (6.47-8.60)
15-min	2.51 (2.28-2.79)	3.04 (2.73-3.39)	3.58 (3.21-4.08)	4.11 (3.72-4.58)	4.66 (4.15-5.14)	4.96 (4.45-5.58)	5.38 (4.73-5.98)	5.71 (4.97-6.37)	6.10 (5.24-6.87)	6.38 (5.42-7.24)

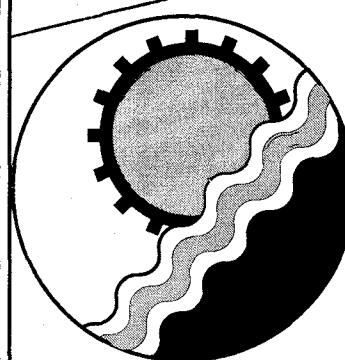


Cimpenious =	0.90					
Coverious =	0.33					
I2 =	4.52					
I10 =	6.10	(Worse case Tc = 5 min. Botetourt County)				
Structure	Amperious	Aperious	Atotal	Cweighted	Q2	Q10
DA1-SDI-6	0.66	0.28	0.94	0.73	3.1	4.2
DA2-SDI-5	0.06	0.10	0.16	0.54	0.4	0.5
DA3-SDI-4	0.08	0.15	0.23	0.53	0.5	0.7
DA4-SDI-3	0.23	0.13	0.36	0.69	1.1	1.5
DA5-SDI2	0.15	0.17	0.32	0.60	0.9	1.2
DA6-SDI-1	0.18	0.12	0.30	0.67	0.9	1.2

Storm Sewer Summary Report

Line No.	Line ID	Flow rate (cfs)	Line Size (in)	Line shape	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line Slope (%)	HGL Down (ft)	HGL Up (ft)	Minor loss (ft)	HGL Junct (ft)	Dns Line No.	Junction Type
1		4.80	15	Cir	59.910	1338.91	1336.51	1.001	1342.80	1343.10	0.20	1343.30	End	Curb-Horiz
2		3.40	15	Cir	78.690	1338.91	1340.40	0.993	1343.30	1343.62	0.11	1343.63	1	Manhole
3		3.40	15	Cir	82.780	1340.50	1341.33	1.003	1343.83	1343.96	0.12	1343.98	2	Curb-Horiz
4		2.20	15	Cir	138.940	1341.43	1342.62	1.001	1343.88	1344.14	0.03	1344.17	3	Curb-Horiz
5		0.70	15	Cir	16.690	1342.92	1343.08	0.984	1344.17	1344.18	0.01	1344.18	4	Curb-Horiz
6		4.70	12	Cir	24.090	1342.80	1344.00	5.812	1343.80	1344.80	n/a	1344.90	End	Grate
7		4.20	12	Cir	9.420	1344.20	1345.00	8.493	1344.90	1345.88	n/a	1345.88	8	Grate

Page 1



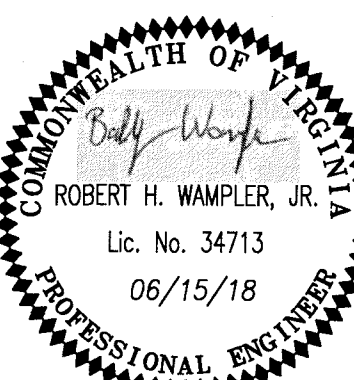
ENGINEERING CONCEPTS, INC.

94 GREENFIELD STREET
DALEVILLE, VIRGINIA 24083
540.473.1253

Drawn ACF
Designed ECI
Checked
Approved

DRAINAGE MAP
MEMBER ONE FEDERAL CREDIT UNION

DALEVILLE TOWN CENTER
BOUTETOURT COUNTY, VA



1" = 20'

DATE: JUNE 15, 2018

PROJECT: 17063

C06