Drainage Calculations:

Client Name:	Saralinda Hooker
Job #:	21-227
Calculations by:	MCF
Date:	3/31/2022

Rational Equation: Q= C*I*A

Q=Discharge Rate (cubic feet per second, cfs)
I= Rainfall (10 year 24 hour rain event = 3.25 inches/24 hours
C= Coeficient of runoff
C=0.2 Grass Lawn/Forest
C=0.95 Paved Parking/Roof Areas

Existing Site: (Disturbed Area)

Total Area (ac)=	0.27	
Disturbed Area (sq.ft) =	11679.3	
Acre (sq.ft) =	43560	
Ex.Roof/Parking Area (sq. ft) =	8804.2	0.20 ac
Ex. Grass Area (sq. ft) =	39064.4	0.90 ac
Q=	0.17 cfs	
C=	0.2	0.95
I=	3.25	
A=	0.27	
Existing Grass Q =	0.58 cfs	
Existing Roof/Parking Q =	0.62 cfs	
Total Existing Q =	1.21 cfs	

Proposed Site:

Total Area =   11679.3 sq. ft

	sq.ft	ac
Grass =	36665	0.84
Roof =	11203	0.26
Grass Q =	0.55 cfs	
Roof Q =	0.79 cfs	
Total Site cfs =	1.34 cfs	
Total cfs Increase =	0.13 cfs	

Increase Stormwater Runoff:

Typical Storm Duration = 1 Hours

Q =	0.13 cfs	
D =	cu ft / sec	(1 hours)*(3600 sec / hour)
V=Q*D		
V =	483.21 cu ft	

Volume Stored Above Chambers (Swale) =	520 cu ft	
Volume Stored In Chambers =	36.3 cu ft	
Total Storage =	556.3 cu ft	