Project: Gary Matzner Park Date: 10/16/2024
Flood Routing Description: POST-Development Calculations

Client : Village of Pincecrest Job Number: 13861.00
Design Engineer :
Project Address / Location : 6610 N. Kendall Drive City: Pinecrest County: Miami-Dade State: Florida Zipcode: 33156
Section/Township/Range: Section 01, Township 55, Range 40
Surfacewater License: N/A
FEMA FIRM Information: Zone: X 12086C0458L , Map Effective Date:09-11-2009
Project Description: Redevelopment of existing city owned lot with parking area, playground area and landscaping

Total Drainage Basin: 2.890 Acres

Hydrogeologic Information :

Table 1.	1 Day Storm Event			3 Day Storm Event		
RAINFALL DATA	Rainfall Inches	Runoff Inches	Runoff Ac-Ft	Rainfall Inches	Runoff Inches	Runoff Ac-Ft
100 Year Return Period	14.7	9.07	2.185	17.5	11.61	2.797
25 Year Return Period	10.6	5.51	1.328	12.9	7.48	1.801
10 Year Return Period	8.4	3.17	0.763	10.4	5.35	1.288
5 Year Return Period	7.0	2.65	0.639	9.4	4.57	1.099
3 Year Return Period	6.0	1.96	0.473	8.1	3.50	0.842
5 Yr Return Period - 1 Hr	2.9	0.04	0.010			

Runoff estimation - USDA SCS formula

$$\text{Runoff (in) } Q = \frac{(P-0.2S)^2}{P+0.8S}$$

Where: P = accumulated rainfall (in.)
S = Soil Storage Value

Table 2. SUMMARY OF FLOOD ROUTING	Agency maps	SBUH Calculated **with Q**-1 Day Storm		SBUH Calculated **with Q**-3 Day Storm		SBUH Calculated ***Zero Q**-3 Day Storm		Calc. 5Yr 1 hour Peak Stage (ft)
		Peak Stage(ft)	Peak Q (CFS)	Peak Stage(ft)	Peak Q (CFS)	Peak Stage(ft)	Peak Q (CFS)	
100 Year Return Period		9.81	4.25	9.82	4.25	9.82	4.25	Zero Q
25 Year Return Period		9.53	3.94	9.59	4.00	9.59	4.00	(Water
10 Year Return Period		9.20	3.56	9.43	3.82	9.43	3.82	Budget)
5 Year Return Period		9.01	3.35	9.32	3.70	9.32	3.70	7.90
3 Year Return Period		7.38	1.53	9.19	3.56	9.19	3.56	

For 5 yr - 1 hr rainfall, Calculate 5 yr Vol by subtracting Exfil vol in inches from 5 yr 1 h rainfall, then calc Runoff using SCS formula. From stage storage table find Zero Discharge Stage. Uses Max. Elev of Lookup Stage or highest top of EXFIL trench. If exfil vol exceeds 5 year 1 hour vol. Uses Max. Elev of highest top of EXFIL trench.

* Zero Q indicates there is no offsite discharge included in the calculations (only Exfil Trench and Wells). Hypothetical stage calc. for PRE-POST Analysis.

Table 3. WATER QUALITY STORAGE REQUIREMENTS:			
Based on Total Drainage Basin Acreage		Ac-Ft	
1" x Basin Area		0.241	
2.5" x WQPI x (Basin Area I	0.52 Inches	0.126	
Required Wet Detention (Total basin incl Offsite)			
0.5" Pretreatment-Com. Prjs,x(Basin Area - water area)		0.120	
Credit for Inlets in Grass Areas, GAC=0.2" x (TDA		0.048	N

Table 4. WATER QUALITY STORAGE SOURCE	**Basin Storage Elev.**	(Ac-Ft)	WQ Eq WDV (Ac-Ft)	WQ Eq WDV Inches
Retention (RV) @				
Dry Det. (DDV) @				
Wet Det. (WDV) @				
Equiv WDV=WDV+RV/.5+DDV/.75)			0.000	
Exfil Trench Storage		0.135	0.271	1.12
Total WQ EQ WDV - **Provided**			**0.271**	1.12
Total WQ EQ WDV - ***Required***			0.241	1.00

	(Ac-FT)	(Inches)
Exfil Vol. in Stage Storage =	0.256	1.06

Project: Gary Matzner Park Date: 10/16/2024
Flood Routing Description: POST-Development Calculations

Client : Village of Pincecrest Job Number: 13861.00

Table 5. PRE - POST COMPARISON	PRE-DEVELOP. with Q - 3 Day Storm		POST-DEVELOP. with Q - 3 Day Storm		PRE-DEVELOP. *Zero Q - 3 Day Storm		POST-DEVELOP. *Zero Q - 3 Day Storm	
	Peak Stage(ft)	Peak Q (CFS)	Peak Stage(ft)	Peak Q (CFS)	Peak Stage(ft)	Peak Q (CFS)	Peak Stage(ft)	Peak Q (CFS)
100 Year Return Period					8.94		9.95	
25 Year Return Period					8.32		9.68	
10 Year Return Period					7.95		9.55	
5 Year Return Period					7.78		9.50	
3 Year Return Period					7.55		9.06	

Project: Gary Matzner Park Date: 10/16/2024
Flood Routing Description: POST-Development Calculations

Client : Village of Pincecrest Job Number: 13861.00

Routing Results from Analysis ZERO Offsite Discharge

Table 6. STAGE - DISCHARGE INFORMATION 100 - YEAR STORM - ZERO Offsite Discharge

TIME STEP (HOUR)	Rain Fall RATIO	Rain C*P (IN)	Q Scs (IN)	Inst Q In (CFS)	Sbuh Q (CFS)	Tot Q In (AC-FT)	Sumq Out (AC-FT)	Stored Vol (AC-FT)	Stage Lk-Up (FEET)	Inst Q Lkup (CFS)	Avg. Q Out (CFS)	Step Qout (AC-FT)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
4.00	0.02	0.31	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
8.00	0.05	0.63	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
12.00	0.07	0.94	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
16.00	0.10	1.25	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
20.00	0.12	1.57	0.01	0.02	0.02	0.00	0.00	0.00	4.04	0.00	0.00	0.00
24.00	0.15	1.88	0.05	0.05	0.03	0.01	0.00	0.01	4.17	0.00	0.00	0.00
28.00	0.18	2.34	0.15	0.12	0.09	0.03	0.00	0.03	4.52	0.00	0.00	0.00
32.00	0.22	2.79	0.29	0.10	0.11	0.07	0.00	0.07	5.02	0.00	0.00	0.00
36.00	0.25	3.25	0.46	0.12	0.12	0.11	0.00	0.11	5.64	0.00	0.00	0.00
40.00	0.29	3.71	0.66	0.14	0.15	0.16	0.02	0.14	6.14	0.16	0.16	0.00
44.00	0.32	4.17	0.90	0.24	0.18	0.21	0.07	0.14	6.15	0.17	0.17	0.00
48.00	0.36	4.62	1.14	0.17	0.18	0.27	0.13	0.14	6.17	0.19	0.19	0.00
52.00	0.40	5.20	1.48	0.37	0.30	0.35	0.20	0.15	6.25	0.28	0.28	0.01
56.00	0.50	6.39	2.26	0.82	0.75	0.53	0.36	0.17	6.63	0.70	0.69	0.01
58.00	0.57	7.37	2.96	1.21	1.17	0.69	0.49	0.20	6.98	1.09	1.06	0.02
59.00	0.63	8.09	3.50	1.83	1.71	0.81	0.59	0.21	7.55	1.73	1.61	0.03
59.50	0.68	8.73	4.00	2.93	2.65	0.90	0.67	0.24	8.42	2.69	2.41	0.05
59.75	0.85	10.91	5.77	20.66	8.75	1.09	0.72	0.37	9.23	3.60	3.15	0.07
60.00	1.02	13.07	7.63	21.65	17.02	1.44	0.78	0.66	9.60	4.01	3.81	0.08
60.50	1.09	14.01	8.46	4.78	8.06	1.90	0.94	0.96	9.81	4.24	4.21	0.09
61.00	1.13	14.50	8.89	2.54	3.40	2.08	1.12	0.96	9.81	4.24	4.25	0.09
62.00	1.18	15.16	9.48	1.48	1.66	2.25	1.47	0.78	9.69	4.11	4.13	0.09
64.00	1.24	15.95	10.20	0.95	1.02	2.44	2.12	0.32	9.12	3.48	3.54	0.07
68.00	1.31	16.88	11.05	0.55	0.62	2.65	2.48	0.17	6.55	0.62	0.62	0.01
72.00	1.36	17.50	11.61	0.41	0.41	2.79	2.63	0.16	6.37	0.41	0.41	0.01
				Peak stage		9.82	At hour	60.75				
				Peak discharge		4.25	At hour	60.75				

Project: Gary Matzner Park Date: 10/16/2024
Flood Routing Description: POST-Development Calculations

Client : Village of Pincecrest Job Number: 13861.00

Routing Results from Analysis WITHOUT Offsite Discharge

Table 7. STAGE - DISCHARGE INFORMATION 25 - YEAR STORM - Zero Offsite Discharge

TIME STEP (HOUR)	Rain Fall RATIO	Rain C*P (IN)	Q Scs (IN)	Inst Q In (CFS)	Sbuh Q (CFS)	Tot Q In (AC-FT)	Sumq Out (AC-FT)	Stored Vol (AC-FT)	Stage Lk-Up (FEET)	Inst Q Lkup (CFS)	Avg. Q Out (CFS)	Step Qout (AC-FT)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
4.00	0.02	0.23	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
8.00	0.05	0.47	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
12.00	0.07	0.69	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
16.00	0.10	0.92	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
20.00	0.12	1.16	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
24.00	0.15	1.39	0.00	0.01	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
28.00	0.18	1.73	0.03	0.04	0.03	0.01	0.00	0.01	4.09	0.00	0.00	0.00
32.00	0.22	2.06	0.08	0.04	0.05	0.02	0.00	0.02	4.29	0.00	0.00	0.00
36.00	0.25	2.39	0.16	0.06	0.06	0.04	0.00	0.04	4.58	0.00	0.00	0.00
40.00	0.29	2.73	0.27	0.07	0.08	0.06	0.00	0.06	4.95	0.00	0.00	0.00
44.00	0.32	3.08	0.39	0.13	0.10	0.09	0.00	0.09	5.40	0.00	0.00	0.00
48.00	0.36	3.41	0.53	0.10	0.10	0.12	0.00	0.12	5.90	0.00	0.00	0.00
52.00	0.40	3.83	0.72	0.21	0.18	0.17	0.03	0.14	6.15	0.16	0.16	0.00
56.00	0.50	4.71	1.19	0.51	0.46	0.28	0.12	0.16	6.38	0.43	0.42	0.01
58.00	0.57	5.43	1.63	0.76	0.74	0.38	0.20	0.17	6.61	0.68	0.66	0.01
59.00	0.63	5.96	1.97	1.17	1.09	0.45	0.26	0.19	6.84	0.94	0.89	0.02
59.50	0.68	6.44	2.29	1.90	1.71	0.51	0.30	0.21	7.46	1.63	1.37	0.03
59.75	0.85	8.04	3.46	13.64	5.75	0.63	0.33	0.30	9.09	3.44	2.54	0.05
60.00	1.02	9.63	4.72	14.65	11.35	0.87	0.38	0.48	9.46	3.86	3.65	0.08
60.50	1.09	10.33	5.29	3.28	5.46	1.18	0.54	0.64	9.59	4.00	3.99	0.08
61.00	1.13	10.69	5.59	1.75	2.33	1.30	0.71	0.60	9.56	3.97	3.98	0.08
62.00	1.18	11.17	5.99	1.03	1.15	1.42	1.03	0.39	9.27	3.65	3.71	0.08
64.00	1.24	11.76	6.49	0.66	0.71	1.55	1.38	0.17	6.59	0.66	0.64	0.01
68.00	1.31	12.44	7.08	0.38	0.43	1.70	1.54	0.16	6.39	0.43	0.43	0.01
72.00	1.36	12.90	7.48	0.29	0.29	1.79	1.65	0.15	6.26	0.29	0.29	0.01
				Peak stage		9.59	At hour	60.50				
				Peak discharge		4.00	At hour	60.50				

Project: Gary Matzner Park Date: 10/16/2024
Flood Routing Description: POST-Development Calculations

Client : Village of Pincecrest Job Number: 13861.00

Routing Results from Analysis WITHOUT Offsite Discharge

Table 8. STAGE - DISCHARGE INFORMATION 10 - YEAR STORM - Zero Offsite Discharge

TIME STEP (HOUR)	Rain Fall RATIO	Rain C*P (IN)	Q Scs (IN)	Inst Q In (CFS)	Sbuh Q (CFS)	Tot Q In (AC-FT)	Sumq Out (AC-FT)	Stored Vol (AC-FT)	Stage Lk-Up (FEET)	Inst Q Lkup (CFS)	Avg. Q Out (CFS)	Step Qout (AC-FT)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
4.00	0.02	0.18	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
8.00	0.05	0.37	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
12.00	0.07	0.56	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
16.00	0.10	0.74	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
20.00	0.12	0.93	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
24.00	0.15	1.12	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
28.00	0.18	1.39	0.00	0.01	0.01	0.00	0.00	0.00	4.00	0.00	0.00	0.00
32.00	0.22	1.66	0.02	0.02	0.02	0.00	0.00	0.00	4.07	0.00	0.00	0.00
36.00	0.25	1.93	0.06	0.03	0.03	0.01	0.00	0.01	4.21	0.00	0.00	0.00
40.00	0.29	2.20	0.11	0.04	0.04	0.03	0.00	0.03	4.41	0.00	0.00	0.00
44.00	0.32	2.48	0.19	0.08	0.06	0.04	0.00	0.04	4.67	0.00	0.00	0.00
48.00	0.36	2.75	0.27	0.06	0.06	0.06	0.00	0.06	4.98	0.00	0.00	0.00
52.00	0.40	3.09	0.40	0.14	0.11	0.09	0.00	0.09	5.42	0.00	0.00	0.00
56.00	0.50	3.80	0.71	0.34	0.31	0.16	0.02	0.15	6.25	0.28	0.27	0.01
58.00	0.57	4.38	1.00	0.53	0.51	0.23	0.07	0.16	6.42	0.47	0.46	0.01
59.00	0.63	4.81	1.25	0.82	0.76	0.28	0.11	0.17	6.59	0.66	0.62	0.01
59.50	0.68	5.19	1.48	1.35	1.21	0.33	0.14	0.19	6.85	0.95	0.86	0.02
59.75	0.85	6.48	2.32	9.89	4.15	0.41	0.16	0.26	8.96	3.30	2.12	0.04
60.00	1.02	7.77	3.26	10.86	8.30	0.59	0.20	0.38	9.26	3.63	3.46	0.07
60.50	1.09	8.33	3.68	2.46	4.06	0.82	0.35	0.47	9.43	3.82	3.81	0.08
61.00	1.13	8.62	3.91	1.32	1.75	0.91	0.51	0.40	9.29	3.67	3.72	0.08
62.00	1.18	9.01	4.22	0.78	0.87	1.00	0.80	0.20	7.07	1.19	2.10	0.04
64.00	1.24	9.48	4.59	0.50	0.54	1.10	0.93	0.16	6.49	0.54	0.54	0.01
68.00	1.31	10.03	5.04	0.29	0.33	1.21	1.06	0.15	6.29	0.33	0.33	0.01
72.00	1.36	10.40	5.35	0.22	0.22	1.28	1.14	0.14	6.20	0.22	0.22	0.00
				Peak stage		9.43	At hour	60.50				
				Peak discharge		3.82	At hour	60.50				

Project: Gary Matzner Park Date: 10/16/2024
Flood Routing Description: POST-Development Calculations

Client : Village of Pincecrest Job Number: 13861.00

Routing Results from Analysis WITHOUT Offsite Discharge

Table 9. STAGE - DISCHARGE INFORMATION 5 - YEAR STORM - Zero Offsite Discharge

TIME STEP (HOUR)	Rain Fall RATIO	Rain C*P (IN)	Q Scs (IN)	Inst Q In (CFS)	Sbuh Q (CFS)	Tot Q In (AC-FT)	Sumq Out (AC-FT)	Stored Vol (AC-FT)	Stage Lk-Up (FEET)	Inst Q Lkup (CFS)	Avg. Q Out (CFS)	Step Qout (AC-FT)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
4.00	0.02	0.17	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
8.00	0.05	0.34	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
12.00	0.07	0.51	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
16.00	0.10	0.67	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
20.00	0.12	0.85	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
24.00	0.15	1.01	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
28.00	0.18	1.26	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
32.00	0.22	1.51	0.01	0.01	0.01	0.00	0.00	0.00	4.02	0.00	0.00	0.00
36.00	0.25	1.75	0.03	0.02	0.02	0.01	0.00	0.01	4.11	0.00	0.00	0.00
40.00	0.29	2.00	0.07	0.03	0.03	0.02	0.00	0.02	4.25	0.00	0.00	0.00
44.00	0.32	2.25	0.13	0.06	0.05	0.03	0.00	0.03	4.45	0.00	0.00	0.00
48.00	0.36	2.50	0.19	0.05	0.05	0.05	0.00	0.05	4.69	0.00	0.00	0.00
52.00	0.40	2.81	0.29	0.11	0.09	0.07	0.00	0.07	5.04	0.00	0.00	0.00
56.00	0.50	3.45	0.54	0.28	0.25	0.13	0.00	0.13	5.91	0.00	0.00	0.00
58.00	0.57	3.98	0.79	0.44	0.43	0.18	0.03	0.15	6.35	0.39	0.38	0.01
59.00	0.63	4.36	1.00	0.70	0.65	0.23	0.06	0.16	6.50	0.55	0.52	0.01
59.50	0.68	4.71	1.19	1.15	1.03	0.26	0.09	0.18	6.72	0.81	0.73	0.02
59.75	0.85	5.89	1.92	8.49	3.55	0.34	0.10	0.24	8.35	2.62	1.71	0.04
60.00	1.02	7.05	2.73	9.43	7.16	0.49	0.14	0.35	9.19	3.55	3.09	0.06
60.50	1.09	7.56	3.10	2.16	3.53	0.69	0.28	0.41	9.32	3.70	3.70	0.08
61.00	1.13	7.83	3.30	1.16	1.53	0.77	0.43	0.34	9.17	3.53	3.58	0.07
62.00	1.18	8.18	3.57	0.68	0.76	0.84	0.67	0.17	6.60	0.67	0.86	0.02
64.00	1.24	8.61	3.90	0.44	0.47	0.93	0.77	0.16	6.43	0.48	0.48	0.01
68.00	1.31	9.11	4.30	0.26	0.29	1.03	0.88	0.15	6.26	0.29	0.29	0.01
72.00	1.36	9.45	4.57	0.20	0.20	1.10	0.95	0.14	6.18	0.20	0.20	0.00
				Peak stage		9.32	At hour	60.25				
				Peak discharge		3.70	At hour	60.25				

Project: Gary Matzner Park Date: 10/16/2024
Flood Routing Description: POST-Development Calculations

Client : Village of Pincecrest Job Number: 13861.00

Routing Results from Analysis WITHOUT Offsite Discharge

Table 10. STAGE - DISCHARGE INFORMATION 3 - YEAR STORM - Zero Offsite Discharge

TIME STEP (HOUR)	Rain Fall RATIO	Rain C*P (IN)	Q Scs (IN)	Inst Q In (CFS)	Sbuh Q (CFS)	Tot Q In (AC-FT)	Sumq Out (AC-FT)	Stored Vol (AC-FT)	Stage Lk-Up (FEET)	Inst Q Lkup (CFS)	Avg. Q Out (CFS)	Step Qout (AC-FT)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
4.00	0.02	0.14	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
8.00	0.05	0.29	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
12.00	0.07	0.43	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
16.00	0.10	0.58	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
20.00	0.12	0.73	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
24.00	0.15	0.87	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
28.00	0.18	1.08	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
32.00	0.22	1.29	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
36.00	0.25	1.50	0.01	0.01	0.01	0.00	0.00	0.00	4.02	0.00	0.00	0.00
40.00	0.29	1.71	0.03	0.02	0.02	0.01	0.00	0.01	4.09	0.00	0.00	0.00
44.00	0.32	1.93	0.06	0.04	0.03	0.01	0.00	0.01	4.20	0.00	0.00	0.00
48.00	0.36	2.14	0.10	0.03	0.03	0.02	0.00	0.02	4.36	0.00	0.00	0.00
52.00	0.40	2.40	0.17	0.08	0.06	0.04	0.00	0.04	4.59	0.00	0.00	0.00
56.00	0.50	2.95	0.34	0.20	0.18	0.08	0.00	0.08	5.20	0.00	0.00	0.00
58.00	0.57	3.40	0.53	0.33	0.31	0.12	0.00	0.12	5.83	0.00	0.00	0.00
59.00	0.63	3.74	0.68	0.52	0.48	0.15	0.00	0.15	6.28	0.31	0.25	0.01
59.50	0.68	4.03	0.82	0.87	0.77	0.18	0.02	0.17	6.52	0.58	0.51	0.01
59.75	0.85	5.04	1.38	6.54	2.73	0.24	0.03	0.21	7.48	1.65	1.12	0.02
60.00	1.02	6.04	2.02	7.42	5.56	0.35	0.05	0.30	9.10	3.45	2.55	0.05
60.50	1.09	6.47	2.32	1.72	2.79	0.51	0.17	0.34	9.16	3.53	3.54	0.07
61.00	1.13	6.70	2.48	0.93	1.22	0.57	0.32	0.25	8.93	3.27	3.35	0.07
62.00	1.18	7.00	2.69	0.55	0.61	0.64	0.47	0.16	6.50	0.56	0.57	0.01
64.00	1.24	7.37	2.96	0.36	0.38	0.71	0.55	0.15	6.35	0.39	0.39	0.01
68.00	1.31	7.80	3.28	0.21	0.23	0.79	0.64	0.14	6.21	0.23	0.23	0.00
72.00	1.36	8.09	3.50	0.16	0.16	0.84	0.70	0.14	6.14	0.16	0.16	0.00
				Peak stage		9.19	At hour	60.25				
				Peak discharge		3.56	At hour	60.25				

Project: Gary Matzner Park Date: 10/16/2024
Flood Routing Description: POST-Development Calculations

Client : Village of Pincecrest Job Number: 13861.00

Routing Results from Analysis WITH Offsite Discharge

Table 11. STAGE - DISCHARGE INFORMATION 100- YEAR STORM - with Offsite Discharge

TIME STEP (HOUR)	Rain Fall RATIO	Rain C*P (IN)	Q Scs (IN)	Inst Q In (CFS)	Sbuh Q (CFS)	Tot Q In (AC-FT)	Sumq Out (AC-FT)	Stored Vol (AC-FT)	Stage Lk-Up (FEET)	Inst Q Lkup (CFS)	Avg. Q Out (CFS)	Step Qout (AC-FT)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
4.00	0.02	0.31	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
8.00	0.05	0.63	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
12.00	0.07	0.94	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
16.00	0.10	1.25	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
20.00	0.12	1.57	0.01	0.02	0.02	0.00	0.00	0.00	4.04	0.00	0.00	0.00
24.00	0.15	1.88	0.05	0.05	0.03	0.01	0.00	0.01	4.17	0.00	0.00	0.00
28.00	0.18	2.34	0.15	0.12	0.09	0.03	0.00	0.03	4.52	0.00	0.00	0.00
32.00	0.22	2.79	0.29	0.10	0.11	0.07	0.00	0.07	5.02	0.00	0.00	0.00
36.00	0.25	3.25	0.46	0.12	0.12	0.11	0.00	0.11	5.64	0.00	0.00	0.00
40.00	0.29	3.71	0.66	0.14	0.15	0.16	0.02	0.14	6.14	0.16	0.16	0.00
44.00	0.32	4.17	0.90	0.24	0.18	0.21	0.07	0.14	6.15	0.17	0.17	0.00
48.00	0.36	4.62	1.14	0.17	0.18	0.27	0.13	0.14	6.17	0.19	0.19	0.00
52.00	0.40	5.20	1.48	0.37	0.30	0.35	0.20	0.15	6.25	0.28	0.28	0.01
56.00	0.50	6.39	2.26	0.82	0.75	0.53	0.36	0.17	6.63	0.70	0.69	0.01
58.00	0.57	7.37	2.96	1.21	1.17	0.69	0.49	0.20	6.98	1.09	1.06	0.02
59.00	0.63	8.09	3.50	1.83	1.71	0.81	0.59	0.21	7.55	1.73	1.61	0.03
59.50	0.68	8.73	4.00	2.93	2.65	0.90	0.67	0.24	8.42	2.69	2.41	0.05
59.75	0.85	10.91	5.77	20.66	8.75	1.09	0.72	0.37	9.23	3.60	3.15	0.07
60.00	1.02	13.07	7.63	21.65	17.02	1.44	0.78	0.66	9.60	4.01	3.81	0.08
60.50	1.09	14.01	8.46	4.78	8.06	1.90	0.94	0.96	9.81	4.24	4.21	0.09
61.00	1.13	14.50	8.89	2.54	3.40	2.08	1.12	0.96	9.81	4.24	4.25	0.09
62.00	1.18	15.16	9.48	1.48	1.66	2.25	1.47	0.78	9.69	4.11	4.13	0.09
64.00	1.24	15.95	10.20	0.95	1.02	2.44	2.12	0.32	9.12	3.48	3.54	0.07
68.00	1.31	16.88	11.05	0.55	0.62	2.65	2.48	0.17	6.55	0.62	0.62	0.01
72.00	1.36	17.50	11.61	0.41	0.41	2.79	2.63	0.16	6.37	0.41	0.41	0.01
				Peak stage		9.82	At hour	60.75				
				Peak discharge		4.25	At hour	60.75				

Project: Gary Matzner Park Date: 10/16/2024
Flood Routing Description: POST-Development Calculations

Client : Village of Pincecrest Job Number: 13861.00

Routing Results from Analysis WITH Offsite Discharge

Table 12. STAGE - DISCHARGE INFORMATION 25- YEAR STORM - with Offsite Discharge

TIME STEP (HOUR)	Rain Fall RATIO	Rain C*P (IN)	Q Scs (IN)	Inst Q In (CFS)	Sbuh Q (CFS)	Tot Q In (AC-FT)	Sumq Out (AC-FT)	Stored Vol (AC-FT)	Stage Lk-Up (FEET)	Inst Q Lkup (CFS)	Avg. Q Out (CFS)	Step Qout (AC-FT)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
4.00	0.02	0.23	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
8.00	0.05	0.47	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
12.00	0.07	0.69	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
16.00	0.10	0.92	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
20.00	0.12	1.16	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
24.00	0.15	1.39	0.00	0.01	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
28.00	0.18	1.73	0.03	0.04	0.03	0.01	0.00	0.01	4.09	0.00	0.00	0.00
32.00	0.22	2.06	0.08	0.04	0.05	0.02	0.00	0.02	4.29	0.00	0.00	0.00
36.00	0.25	2.39	0.16	0.06	0.06	0.04	0.00	0.04	4.58	0.00	0.00	0.00
40.00	0.29	2.73	0.27	0.07	0.08	0.06	0.00	0.06	4.95	0.00	0.00	0.00
44.00	0.32	3.08	0.39	0.13	0.10	0.09	0.00	0.09	5.40	0.00	0.00	0.00
48.00	0.36	3.41	0.53	0.10	0.10	0.12	0.00	0.12	5.90	0.00	0.00	0.00
52.00	0.40	3.83	0.72	0.21	0.18	0.17	0.03	0.14	6.15	0.16	0.16	0.00
56.00	0.50	4.71	1.19	0.51	0.46	0.28	0.12	0.16	6.38	0.43	0.42	0.01
58.00	0.57	5.43	1.63	0.76	0.74	0.38	0.20	0.17	6.61	0.68	0.66	0.01
59.00	0.63	5.96	1.97	1.17	1.09	0.45	0.26	0.19	6.84	0.94	0.89	0.02
59.50	0.68	6.44	2.29	1.90	1.71	0.51	0.30	0.21	7.46	1.63	1.37	0.03
59.75	0.85	8.04	3.46	13.64	5.75	0.63	0.33	0.30	9.09	3.44	2.54	0.05
60.00	1.02	9.63	4.72	14.65	11.35	0.87	0.38	0.48	9.46	3.86	3.65	0.08
60.50	1.09	10.33	5.29	3.28	5.46	1.18	0.54	0.64	9.59	4.00	3.99	0.08
61.00	1.13	10.69	5.59	1.75	2.33	1.30	0.71	0.60	9.56	3.97	3.98	0.08
62.00	1.18	11.17	5.99	1.03	1.15	1.42	1.03	0.39	9.27	3.65	3.71	0.08
64.00	1.24	11.76	6.49	0.66	0.71	1.55	1.38	0.17	6.59	0.66	0.64	0.01
68.00	1.31	12.44	7.08	0.38	0.43	1.70	1.54	0.16	6.39	0.43	0.43	0.01
72.00	1.36	12.90	7.48	0.29	0.29	1.79	1.65	0.15	6.26	0.29	0.29	0.01
				Peak stage		9.59	At hour	60.50				
				Peak discharge		4.00	At hour	60.50				

Project: Gary Matzner Park Date: 10/16/2024
Flood Routing Description: POST-Development Calculations

Client : Village of Pincecrest Job Number: 13861.00

Routing Results from Analysis WITH Offsite Discharge

Table 13. STAGE - DISCHARGE INFORMATION 10- YEAR STORM - with Offsite Discharge

TIME STEP (HOUR)	Rain Fall RATIO	Rain C*P (IN)	Q Scs (IN)	Inst Q In (CFS)	Sbuh Q (CFS)	Tot Q In (AC-FT)	Sumq Out (AC-FT)	Stored Vol (AC-FT)	Stage Lk-Up (FEET)	Inst Q Lkup (CFS)	Avg. Q Out (CFS)	Step Qout (AC-FT)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
4.00	0.02	0.18	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
8.00	0.05	0.37	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
12.00	0.07	0.56	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
16.00	0.10	0.74	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
20.00	0.12	0.93	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
24.00	0.15	1.12	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
28.00	0.18	1.39	0.00	0.01	0.01	0.00	0.00	0.00	4.00	0.00	0.00	0.00
32.00	0.22	1.66	0.02	0.02	0.02	0.00	0.00	0.00	4.07	0.00	0.00	0.00
36.00	0.25	1.93	0.06	0.03	0.03	0.01	0.00	0.01	4.21	0.00	0.00	0.00
40.00	0.29	2.20	0.11	0.04	0.04	0.03	0.00	0.03	4.41	0.00	0.00	0.00
44.00	0.32	2.48	0.19	0.08	0.06	0.04	0.00	0.04	4.67	0.00	0.00	0.00
48.00	0.36	2.75	0.27	0.06	0.06	0.06	0.00	0.06	4.98	0.00	0.00	0.00
52.00	0.40	3.09	0.40	0.14	0.11	0.09	0.00	0.09	5.42	0.00	0.00	0.00
56.00	0.50	3.80	0.71	0.34	0.31	0.16	0.02	0.15	6.25	0.28	0.27	0.01
58.00	0.57	4.38	1.00	0.53	0.51	0.23	0.07	0.16	6.42	0.47	0.46	0.01
59.00	0.63	4.81	1.25	0.82	0.76	0.28	0.11	0.17	6.59	0.66	0.62	0.01
59.50	0.68	5.19	1.48	1.35	1.21	0.33	0.14	0.19	6.85	0.95	0.86	0.02
59.75	0.85	6.48	2.32	9.89	4.15	0.41	0.16	0.26	8.96	3.30	2.12	0.04
60.00	1.02	7.77	3.26	10.86	8.30	0.59	0.20	0.38	9.26	3.63	3.46	0.07
60.50	1.09	8.33	3.68	2.46	4.06	0.82	0.35	0.47	9.43	3.82	3.81	0.08
61.00	1.13	8.62	3.91	1.32	1.75	0.91	0.51	0.40	9.29	3.67	3.72	0.08
62.00	1.18	9.01	4.22	0.78	0.87	1.00	0.80	0.20	7.07	1.19	2.10	0.04
64.00	1.24	9.48	4.59	0.50	0.54	1.10	0.93	0.16	6.49	0.54	0.54	0.01
68.00	1.31	10.03	5.04	0.29	0.33	1.21	1.06	0.15	6.29	0.33	0.33	0.01
72.00	1.36	10.40	5.35	0.22	0.22	1.28	1.14	0.14	6.20	0.22	0.22	0.00
				Peak stage		9.43	At hour	60.50				
				Peak discharge		3.82	At hour	60.50				

Project: Gary Matzner Park Date: 10/16/2024
Flood Routing Description: POST-Development Calculations

Client : Village of Pincecrest Job Number: 13861.00

Routing Results from Analysis WITH Offsite Discharge

Table 14. STAGE - DISCHARGE INFORMATION 5- YEAR STORM - with Offsite Discharge

TIME STEP (HOUR)	Rain Fall RATIO	Rain C*P (IN)	Q Scs (IN)	Inst Q In (CFS)	Sbuh Q (CFS)	Tot Q In (AC-FT)	Sumq Out (AC-FT)	Stored Vol (AC-FT)	Stage Lk-Up (FEET)	Inst Q Lkup (CFS)	Avg. Q Out (CFS)	Step Qout (AC-FT)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
4.00	0.02	0.17	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
8.00	0.05	0.34	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
12.00	0.07	0.51	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
16.00	0.10	0.67	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
20.00	0.12	0.85	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
24.00	0.15	1.01	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
28.00	0.18	1.26	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
32.00	0.22	1.51	0.01	0.01	0.01	0.00	0.00	0.00	4.02	0.00	0.00	0.00
36.00	0.25	1.75	0.03	0.02	0.02	0.01	0.00	0.01	4.11	0.00	0.00	0.00
40.00	0.29	2.00	0.07	0.03	0.03	0.02	0.00	0.02	4.25	0.00	0.00	0.00
44.00	0.32	2.25	0.13	0.06	0.05	0.03	0.00	0.03	4.45	0.00	0.00	0.00
48.00	0.36	2.50	0.19	0.05	0.05	0.05	0.00	0.05	4.69	0.00	0.00	0.00
52.00	0.40	2.81	0.29	0.11	0.09	0.07	0.00	0.07	5.04	0.00	0.00	0.00
56.00	0.50	3.45	0.54	0.28	0.25	0.13	0.00	0.13	5.91	0.00	0.00	0.00
58.00	0.57	3.98	0.79	0.44	0.43	0.18	0.03	0.15	6.35	0.39	0.38	0.01
59.00	0.63	4.36	1.00	0.70	0.65	0.23	0.06	0.16	6.50	0.55	0.52	0.01
59.50	0.68	4.71	1.19	1.15	1.03	0.26	0.09	0.18	6.72	0.81	0.73	0.02
59.75	0.85	5.89	1.92	8.49	3.55	0.34	0.10	0.24	8.35	2.62	1.71	0.04
60.00	1.02	7.05	2.73	9.43	7.16	0.49	0.14	0.35	9.19	3.55	3.09	0.06
60.50	1.09	7.56	3.10	2.16	3.53	0.69	0.28	0.41	9.32	3.70	3.70	0.08
61.00	1.13	7.83	3.30	1.16	1.53	0.77	0.43	0.34	9.17	3.53	3.58	0.07
62.00	1.18	8.18	3.57	0.68	0.76	0.84	0.67	0.17	6.60	0.67	0.86	0.02
64.00	1.24	8.61	3.90	0.44	0.47	0.93	0.77	0.16	6.43	0.48	0.48	0.01
68.00	1.31	9.11	4.30	0.26	0.29	1.03	0.88	0.15	6.26	0.29	0.29	0.01
72.00	1.36	9.45	4.57	0.20	0.20	1.10	0.95	0.14	6.18	0.20	0.20	0.00
				Peak stage		9.32	At hour	60.25				
				Peak discharge		3.70	At hour	60.25				

Project: Gary Matzner Park Date: 10/16/2024
Flood Routing Description: POST-Development Calculations

Client : Village of Pincecrest Job Number: 13861.00

Routing Results from Analysis WITH Offsite Discharge

Table 15. STAGE - DISCHARGE INFORMATION 3- YEAR STORM - with Offsite Discharge

TIME STEP (HOUR)	Rain Fall RATIO	Rain C*P (IN)	Q Scs (IN)	Inst Q In (CFS)	Sbuh Q (CFS)	Tot Q In (AC-FT)	Sumq Out (AC-FT)	Stored Vol (AC-FT)	Stage Lk-Up (FEET)	Inst Q Lkup (CFS)	Avg. Q Out (CFS)	Step Qout (AC-FT)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
4.00	0.02	0.14	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
8.00	0.05	0.29	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
12.00	0.07	0.43	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
16.00	0.10	0.58	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
20.00	0.12	0.73	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
24.00	0.15	0.87	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
28.00	0.18	1.08	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
32.00	0.22	1.29	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
36.00	0.25	1.50	0.01	0.01	0.01	0.00	0.00	0.00	4.02	0.00	0.00	0.00
40.00	0.29	1.71	0.03	0.02	0.02	0.01	0.00	0.01	4.09	0.00	0.00	0.00
44.00	0.32	1.93	0.06	0.04	0.03	0.01	0.00	0.01	4.20	0.00	0.00	0.00
48.00	0.36	2.14	0.10	0.03	0.03	0.02	0.00	0.02	4.36	0.00	0.00	0.00
52.00	0.40	2.40	0.17	0.08	0.06	0.04	0.00	0.04	4.59	0.00	0.00	0.00
56.00	0.50	2.95	0.34	0.20	0.18	0.08	0.00	0.08	5.20	0.00	0.00	0.00
58.00	0.57	3.40	0.53	0.33	0.31	0.12	0.00	0.12	5.83	0.00	0.00	0.00
59.00	0.63	3.74	0.68	0.52	0.48	0.15	0.00	0.15	6.28	0.31	0.25	0.01
59.50	0.68	4.03	0.82	0.87	0.77	0.18	0.02	0.17	6.52	0.58	0.51	0.01
59.75	0.85	5.04	1.38	6.54	2.73	0.24	0.03	0.21	7.48	1.65	1.12	0.02
60.00	1.02	6.04	2.02	7.42	5.56	0.35	0.05	0.30	9.10	3.45	2.55	0.05
60.50	1.09	6.47	2.32	1.72	2.79	0.51	0.17	0.34	9.16	3.53	3.54	0.07
61.00	1.13	6.70	2.48	0.93	1.22	0.57	0.32	0.25	8.93	3.27	3.35	0.07
62.00	1.18	7.00	2.69	0.55	0.61	0.64	0.47	0.16	6.50	0.56	0.57	0.01
64.00	1.24	7.37	2.96	0.36	0.38	0.71	0.55	0.15	6.35	0.39	0.39	0.01
68.00	1.31	7.80	3.28	0.21	0.23	0.79	0.64	0.14	6.21	0.23	0.23	0.00
72.00	1.36	8.09	3.50	0.16	0.16	0.84	0.70	0.14	6.14	0.16	0.16	0.00
				Peak stage		9.19	At hour	60.25				
				Peak discharge		3.56	At hour	60.25				