

Project: Gary Matzner Park

Date: 10/16/2024

Flood Routing Description: PRE-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

Zone: X

FEMA FIRM Information: 12086C0458L , Map Effective Date:09-11-2009

Project Description: Redevelopment of existing city owned lot with parking area, playground area and landscaping g

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	8.03	1.935	17.5	10.47	2.521
25 Year Return Period	10.6	4.69	1.129	12.9	6.53	1.572
10 Year Return Period	8.4	2.55	0.614	10.4	4.53	1.092
5 Year Return Period	7.0	2.09	0.504	9.4	3.81	0.919
3 Year Return Period	6.0	1.49	0.359	8.1	2.84	0.685
5 Yr Return Period - 1 Hr	2.9	0.17	0.040			

Runoff estimation - USDA SCS formula

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		10.31	0.00	10.53	0.00	10.53	0.00	Zero Q (Water Budget) 9.08
25 Year Return Period		10.01	0.00	10.18	0.00	10.18	0.00	
10 Year Return Period		9.79	0.00	10.00	0.00	10.00	0.00	
5 Year Return Period		9.65	0.00	9.90	0.00	9.90	0.00	
3 Year Return Period		9.56	0.00	9.76	0.00	9.76	0.00	

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 - 0.00 Inches)	0.000	
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	0.000	0.000	
Total WQ EQ WDV - Provided		0.000	
Total WQ EQ WDV - Required		0.241	1.00

Exfil Vol. in Stage Storage =	(Ac-Ft)	(Inches)
	0.000	0.00

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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	10.53				10.53			
25 Year Return Period	10.18				10.18			
10 Year Return Period	10.00				10.00			
5 Year Return Period	9.90				9.90			
3 Year Return Period	9.76				9.76			

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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	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
24.00	0.15	1.88	0.01	0.02	0.01	0.00	0.00	0.00	9.00	0.00	0.00	0.00
28.00	0.18	2.34	0.06	0.07	0.05	0.01	0.00	0.01	9.02	0.00	0.00	0.00
32.00	0.22	2.79	0.14	0.07	0.07	0.03	0.00	0.03	9.07	0.00	0.00	0.00
36.00	0.25	3.25	0.26	0.09	0.09	0.06	0.00	0.06	9.12	0.00	0.00	0.00
40.00	0.29	3.71	0.42	0.11	0.12	0.10	0.00	0.10	9.20	0.00	0.00	0.00
44.00	0.32	4.17	0.60	0.19	0.15	0.14	0.00	0.14	9.28	0.00	0.00	0.00
48.00	0.36	4.62	0.80	0.14	0.15	0.19	0.00	0.19	9.38	0.00	0.00	0.00
52.00	0.40	5.20	1.08	0.31	0.25	0.25	0.00	0.25	9.50	0.00	0.00	0.00
56.00	0.50	6.39	1.75	0.72	0.65	0.41	0.00	0.41	9.59	0.00	0.00	0.00
58.00	0.57	7.37	2.36	1.07	1.04	0.55	0.00	0.55	9.68	0.00	0.00	0.00
59.00	0.63	8.09	2.84	1.64	1.53	0.65	0.00	0.65	9.74	0.00	0.00	0.00
59.50	0.68	8.73	3.30	2.65	2.39	0.74	0.00	0.74	9.79	0.00	0.00	0.00
59.75	0.85	10.91	4.93	19.00	8.02	0.91	0.00	0.91	9.89	0.00	0.00	0.00
60.00	1.02	13.07	6.67	20.29	15.77	1.23	0.00	1.23	10.05	0.00	0.00	0.00
60.50	1.09	14.01	7.45	4.53	7.56	1.67	0.00	1.67	10.22	0.00	0.00	0.00
61.00	1.13	14.50	7.86	2.42	3.22	1.84	0.00	1.84	10.28	0.00	0.00	0.00
62.00	1.18	15.16	8.42	1.41	1.58	2.00	0.00	2.00	10.34	0.00	0.00	0.00
64.00	1.24	15.95	9.11	0.91	0.98	2.18	0.00	2.17	10.41	0.00	0.00	0.00
68.00	1.31	16.88	9.92	0.53	0.59	2.38	0.00	2.38	10.48	0.00	0.00	0.00
72.00	1.36	17.50	10.47	0.40	0.40	2.51	0.00	2.51	10.53	0.00	0.00	0.00
Peak stage						10.53	At hour	72.00				
Peak discharge						0.00	At hour	72.00				

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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	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
28.00	0.18	1.73	0.00	0.01	0.00	0.00	0.00	0.00	9.00	0.00	0.00	0.00
32.00	0.22	2.06	0.02	0.02	0.02	0.00	0.00	0.00	9.01	0.00	0.00	0.00
36.00	0.25	2.39	0.06	0.04	0.03	0.01	0.00	0.01	9.03	0.00	0.00	0.00
40.00	0.29	2.73	0.13	0.05	0.05	0.03	0.00	0.03	9.06	0.00	0.00	0.00
44.00	0.32	3.08	0.22	0.09	0.07	0.05	0.00	0.05	9.10	0.00	0.00	0.00
48.00	0.36	3.41	0.32	0.07	0.08	0.07	0.00	0.07	9.15	0.00	0.00	0.00
52.00	0.40	3.83	0.47	0.17	0.14	0.11	0.00	0.11	9.22	0.00	0.00	0.00
56.00	0.50	4.71	0.84	0.41	0.37	0.19	0.00	0.19	9.38	0.00	0.00	0.00
58.00	0.57	5.43	1.20	0.64	0.62	0.28	0.00	0.28	9.51	0.00	0.00	0.00
59.00	0.63	5.96	1.50	1.00	0.93	0.34	0.00	0.34	9.55	0.00	0.00	0.00
59.50	0.68	6.44	1.77	1.65	1.48	0.40	0.00	0.39	9.59	0.00	0.00	0.00
59.75	0.85	8.04	2.81	12.09	5.07	0.50	0.00	0.50	9.65	0.00	0.00	0.00
60.00	1.02	9.63	3.95	13.32	10.16	0.71	0.00	0.71	9.77	0.00	0.00	0.00
60.50	1.09	10.33	4.48	3.03	4.98	1.00	0.00	1.00	9.95	0.00	0.00	0.00
61.00	1.13	10.69	4.76	1.62	2.15	1.11	0.00	1.11	10.01	0.00	0.00	0.00
62.00	1.18	11.17	5.13	0.96	1.07	1.22	0.00	1.22	10.05	0.00	0.00	0.00
64.00	1.24	11.76	5.60	0.62	0.66	1.34	0.00	1.34	10.09	0.00	0.00	0.00
68.00	1.31	12.44	6.15	0.36	0.40	1.47	0.00	1.47	10.14	0.00	0.00	0.00
72.00	1.36	12.90	6.53	0.27	0.27	1.57	0.00	1.57	10.18	0.00	0.00	0.00
Peak stage						10.18	At hour	72.00				
Peak discharge						0.00	At hour	72.00				

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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	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
32.00	0.22	1.66	0.00	0.00	0.00	0.00	0.00	0.00	7.49	0.00	0.00	0.00
36.00	0.25	1.93	0.01	0.01	0.01	0.00	0.00	0.00	9.00	0.00	0.00	0.00
40.00	0.29	2.20	0.04	0.02	0.02	0.01	0.00	0.01	9.02	0.00	0.00	0.00
44.00	0.32	2.48	0.08	0.05	0.04	0.02	0.00	0.02	9.04	0.00	0.00	0.00
48.00	0.36	2.75	0.13	0.04	0.04	0.03	0.00	0.03	9.06	0.00	0.00	0.00
52.00	0.40	3.09	0.22	0.10	0.08	0.05	0.00	0.05	9.10	0.00	0.00	0.00
56.00	0.50	3.80	0.45	0.26	0.24	0.10	0.00	0.10	9.20	0.00	0.00	0.00
58.00	0.57	4.38	0.69	0.43	0.41	0.16	0.00	0.16	9.31	0.00	0.00	0.00
59.00	0.63	4.81	0.89	0.68	0.63	0.20	0.00	0.20	9.40	0.00	0.00	0.00
59.50	0.68	5.19	1.08	1.13	1.01	0.24	0.00	0.24	9.47	0.00	0.00	0.00
59.75	0.85	6.48	1.80	8.47	3.54	0.31	0.00	0.31	9.53	0.00	0.00	0.00
60.00	1.02	7.77	2.63	9.61	7.21	0.46	0.00	0.46	9.62	0.00	0.00	0.00
60.50	1.09	8.33	3.01	2.22	3.61	0.66	0.00	0.66	9.75	0.00	0.00	0.00
61.00	1.13	8.62	3.21	1.20	1.57	0.75	0.00	0.75	9.80	0.00	0.00	0.00
62.00	1.18	9.01	3.49	0.71	0.79	0.83	0.00	0.83	9.84	0.00	0.00	0.00
64.00	1.24	9.48	3.84	0.46	0.49	0.92	0.00	0.91	9.90	0.00	0.00	0.00
68.00	1.31	10.03	4.25	0.27	0.30	1.02	0.00	1.02	9.96	0.00	0.00	0.00
72.00	1.36	10.40	4.53	0.21	0.20	1.09	0.00	1.09	10.00	0.00	0.00	0.00
Peak stage						10.00	At hour	72.00				
Peak discharge						0.00	At hour	72.00				

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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	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
36.00	0.25	1.75	0.00	0.00	0.00	0.00	0.00	0.00	9.00	0.00	0.00	0.00
40.00	0.29	2.00	0.02	0.01	0.01	0.00	0.00	0.00	9.01	0.00	0.00	0.00
44.00	0.32	2.25	0.04	0.03	0.02	0.01	0.00	0.01	9.02	0.00	0.00	0.00
48.00	0.36	2.50	0.08	0.03	0.03	0.02	0.00	0.02	9.04	0.00	0.00	0.00
52.00	0.40	2.81	0.15	0.08	0.06	0.03	0.00	0.03	9.07	0.00	0.00	0.00
56.00	0.50	3.45	0.33	0.21	0.19	0.07	0.00	0.07	9.15	0.00	0.00	0.00
58.00	0.57	3.98	0.52	0.35	0.33	0.12	0.00	0.12	9.23	0.00	0.00	0.00
59.00	0.63	4.36	0.68	0.56	0.52	0.15	0.00	0.15	9.30	0.00	0.00	0.00
59.50	0.68	4.71	0.84	0.94	0.83	0.18	0.00	0.18	9.37	0.00	0.00	0.00
59.75	0.85	5.89	1.45	7.14	2.97	0.25	0.00	0.25	9.49	0.00	0.00	0.00
60.00	1.02	7.05	2.16	8.22	6.11	0.37	0.00	0.37	9.57	0.00	0.00	0.00
60.50	1.09	7.56	2.49	1.92	3.09	0.55	0.00	0.55	9.68	0.00	0.00	0.00
61.00	1.13	7.83	2.67	1.04	1.36	0.62	0.00	0.62	9.72	0.00	0.00	0.00
62.00	1.18	8.18	2.91	0.61	0.68	0.69	0.00	0.69	9.76	0.00	0.00	0.00
64.00	1.24	8.61	3.21	0.40	0.43	0.76	0.00	0.76	9.81	0.00	0.00	0.00
68.00	1.31	9.11	3.57	0.24	0.26	0.85	0.00	0.85	9.86	0.00	0.00	0.00
72.00	1.36	9.45	3.81	0.18	0.18	0.91	0.00	0.91	9.90	0.00	0.00	0.00
Peak stage						9.90	At hour	72.00				
Peak discharge						0.00	At hour	72.00				

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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	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
40.00	0.29	1.71	0.00	0.00	0.00	0.00	0.00	0.00	9.00	0.00	0.00	0.00
44.00	0.32	1.93	0.01	0.01	0.01	0.00	0.00	0.00	9.00	0.00	0.00	0.00
48.00	0.36	2.14	0.03	0.02	0.02	0.01	0.00	0.01	9.01	0.00	0.00	0.00
52.00	0.40	2.40	0.07	0.04	0.04	0.02	0.00	0.01	9.03	0.00	0.00	0.00
56.00	0.50	2.95	0.18	0.14	0.13	0.04	0.00	0.04	9.08	0.00	0.00	0.00
58.00	0.57	3.40	0.31	0.24	0.23	0.07	0.00	0.07	9.14	0.00	0.00	0.00
59.00	0.63	3.74	0.43	0.40	0.37	0.10	0.00	0.10	9.19	0.00	0.00	0.00
59.50	0.68	4.03	0.54	0.68	0.60	0.12	0.00	0.12	9.23	0.00	0.00	0.00
59.75	0.85	5.04	1.00	5.32	2.20	0.16	0.00	0.16	9.32	0.00	0.00	0.00
60.00	1.02	6.04	1.54	6.30	4.61	0.26	0.00	0.26	9.50	0.00	0.00	0.00
60.50	1.09	6.47	1.80	1.49	2.38	0.39	0.00	0.39	9.58	0.00	0.00	0.00
61.00	1.13	6.70	1.94	0.81	1.06	0.45	0.00	0.45	9.62	0.00	0.00	0.00
62.00	1.18	7.00	2.13	0.48	0.54	0.50	0.00	0.50	9.65	0.00	0.00	0.00
64.00	1.24	7.37	2.36	0.32	0.34	0.56	0.00	0.56	9.69	0.00	0.00	0.00
68.00	1.31	7.80	2.65	0.19	0.21	0.63	0.00	0.63	9.73	0.00	0.00	0.00
72.00	1.36	8.09	2.84	0.14	0.14	0.68	0.00	0.68	9.76	0.00	0.00	0.00
Peak stage						9.76	At hour	72.00				
Peak discharge						0.00	At hour	72.00				

Project: Gary Matzner Park
 Flood Routing Description: PRE-Development Calculations

Date: 10/16/2024

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	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
24.00	0.15	1.88	0.01	0.02	0.01	0.00	0.00	0.00	9.00	0.00	0.00	0.00
28.00	0.18	2.34	0.06	0.07	0.05	0.01	0.00	0.01	9.02	0.00	0.00	0.00
32.00	0.22	2.79	0.14	0.07	0.07	0.03	0.00	0.03	9.07	0.00	0.00	0.00
36.00	0.25	3.25	0.26	0.09	0.09	0.06	0.00	0.06	9.12	0.00	0.00	0.00
40.00	0.29	3.71	0.42	0.11	0.12	0.10	0.00	0.10	9.20	0.00	0.00	0.00
44.00	0.32	4.17	0.60	0.19	0.15	0.14	0.00	0.14	9.28	0.00	0.00	0.00
48.00	0.36	4.62	0.80	0.14	0.15	0.19	0.00	0.19	9.38	0.00	0.00	0.00
52.00	0.40	5.20	1.08	0.31	0.25	0.25	0.00	0.25	9.50	0.00	0.00	0.00
56.00	0.50	6.39	1.75	0.72	0.65	0.41	0.00	0.41	9.59	0.00	0.00	0.00
58.00	0.57	7.37	2.36	1.07	1.04	0.55	0.00	0.55	9.68	0.00	0.00	0.00
59.00	0.63	8.09	2.84	1.64	1.53	0.65	0.00	0.65	9.74	0.00	0.00	0.00
59.50	0.68	8.73	3.30	2.65	2.39	0.74	0.00	0.74	9.79	0.00	0.00	0.00
59.75	0.85	10.91	4.93	19.00	8.02	0.91	0.00	0.91	9.89	0.00	0.00	0.00
60.00	1.02	13.07	6.67	20.29	15.77	1.23	0.00	1.23	10.05	0.00	0.00	0.00
60.50	1.09	14.01	7.45	4.53	7.56	1.67	0.00	1.67	10.22	0.00	0.00	0.00
61.00	1.13	14.50	7.86	2.42	3.22	1.84	0.00	1.84	10.28	0.00	0.00	0.00
62.00	1.18	15.16	8.42	1.41	1.58	2.00	0.00	2.00	10.34	0.00	0.00	0.00
64.00	1.24	15.95	9.11	0.91	0.98	2.18	0.00	2.17	10.41	0.00	0.00	0.00
68.00	1.31	16.88	9.92	0.53	0.59	2.38	0.00	2.38	10.48	0.00	0.00	0.00
72.00	1.36	17.50	10.47	0.40	0.40	2.51	0.00	2.51	10.53	0.00	0.00	0.00
Peak stage						10.53	At hour	72.00				
Peak discharge						0.00	At hour	72.00				

Project: Gary Matzner Park
 Flood Routing Description: PRE-Development Calculations

Date: 10/16/2024

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	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
28.00	0.18	1.73	0.00	0.01	0.00	0.00	0.00	0.00	9.00	0.00	0.00	0.00
32.00	0.22	2.06	0.02	0.02	0.02	0.00	0.00	0.00	9.01	0.00	0.00	0.00
36.00	0.25	2.39	0.06	0.04	0.03	0.01	0.00	0.01	9.03	0.00	0.00	0.00
40.00	0.29	2.73	0.13	0.05	0.05	0.03	0.00	0.03	9.06	0.00	0.00	0.00
44.00	0.32	3.08	0.22	0.09	0.07	0.05	0.00	0.05	9.10	0.00	0.00	0.00
48.00	0.36	3.41	0.32	0.07	0.08	0.07	0.00	0.07	9.15	0.00	0.00	0.00
52.00	0.40	3.83	0.47	0.17	0.14	0.11	0.00	0.11	9.22	0.00	0.00	0.00
56.00	0.50	4.71	0.84	0.41	0.37	0.19	0.00	0.19	9.38	0.00	0.00	0.00
58.00	0.57	5.43	1.20	0.64	0.62	0.28	0.00	0.28	9.51	0.00	0.00	0.00
59.00	0.63	5.96	1.50	1.00	0.93	0.34	0.00	0.34	9.55	0.00	0.00	0.00
59.50	0.68	6.44	1.77	1.65	1.48	0.40	0.00	0.39	9.59	0.00	0.00	0.00
59.75	0.85	8.04	2.81	12.09	5.07	0.50	0.00	0.50	9.65	0.00	0.00	0.00
60.00	1.02	9.63	3.95	13.32	10.16	0.71	0.00	0.71	9.77	0.00	0.00	0.00
60.50	1.09	10.33	4.48	3.03	4.98	1.00	0.00	1.00	9.95	0.00	0.00	0.00
61.00	1.13	10.69	4.76	1.62	2.15	1.11	0.00	1.11	10.01	0.00	0.00	0.00
62.00	1.18	11.17	5.13	0.96	1.07	1.22	0.00	1.22	10.05	0.00	0.00	0.00
64.00	1.24	11.76	5.60	0.62	0.66	1.34	0.00	1.34	10.09	0.00	0.00	0.00
68.00	1.31	12.44	6.15	0.36	0.40	1.47	0.00	1.47	10.14	0.00	0.00	0.00
72.00	1.36	12.90	6.53	0.27	0.27	1.57	0.00	1.57	10.18	0.00	0.00	0.00
Peak stage						10.18	At hour	72.00				
Peak discharge						0.00	At hour	72.00				

Project: Gary Matzner Park
 Flood Routing Description: PRE-Development Calculations

Date: 10/16/2024

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	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
32.00	0.22	1.66	0.00	0.00	0.00	0.00	0.00	0.00	7.49	0.00	0.00	0.00
36.00	0.25	1.93	0.01	0.01	0.01	0.00	0.00	0.00	9.00	0.00	0.00	0.00
40.00	0.29	2.20	0.04	0.02	0.02	0.01	0.00	0.01	9.02	0.00	0.00	0.00
44.00	0.32	2.48	0.08	0.05	0.04	0.02	0.00	0.02	9.04	0.00	0.00	0.00
48.00	0.36	2.75	0.13	0.04	0.04	0.03	0.00	0.03	9.06	0.00	0.00	0.00
52.00	0.40	3.09	0.22	0.10	0.08	0.05	0.00	0.05	9.10	0.00	0.00	0.00
56.00	0.50	3.80	0.45	0.26	0.24	0.10	0.00	0.10	9.20	0.00	0.00	0.00
58.00	0.57	4.38	0.69	0.43	0.41	0.16	0.00	0.16	9.31	0.00	0.00	0.00
59.00	0.63	4.81	0.89	0.68	0.63	0.20	0.00	0.20	9.40	0.00	0.00	0.00
59.50	0.68	5.19	1.08	1.13	1.01	0.24	0.00	0.24	9.47	0.00	0.00	0.00
59.75	0.85	6.48	1.80	8.47	3.54	0.31	0.00	0.31	9.53	0.00	0.00	0.00
60.00	1.02	7.77	2.63	9.61	7.21	0.46	0.00	0.46	9.62	0.00	0.00	0.00
60.50	1.09	8.33	3.01	2.22	3.61	0.66	0.00	0.66	9.75	0.00	0.00	0.00
61.00	1.13	8.62	3.21	1.20	1.57	0.75	0.00	0.75	9.80	0.00	0.00	0.00
62.00	1.18	9.01	3.49	0.71	0.79	0.83	0.00	0.83	9.84	0.00	0.00	0.00
64.00	1.24	9.48	3.84	0.46	0.49	0.92	0.00	0.91	9.90	0.00	0.00	0.00
68.00	1.31	10.03	4.25	0.27	0.30	1.02	0.00	1.02	9.96	0.00	0.00	0.00
72.00	1.36	10.40	4.53	0.21	0.20	1.09	0.00	1.09	10.00	0.00	0.00	0.00
Peak stage						10.00	At hour	72.00				
Peak discharge						0.00	At hour	72.00				

Project: Gary Matzner Park
 Flood Routing Description: PRE-Development Calculations

Date: 10/16/2024

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	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
36.00	0.25	1.75	0.00	0.00	0.00	0.00	0.00	0.00	9.00	0.00	0.00	0.00
40.00	0.29	2.00	0.02	0.01	0.01	0.00	0.00	0.00	9.01	0.00	0.00	0.00
44.00	0.32	2.25	0.04	0.03	0.02	0.01	0.00	0.01	9.02	0.00	0.00	0.00
48.00	0.36	2.50	0.08	0.03	0.03	0.02	0.00	0.02	9.04	0.00	0.00	0.00
52.00	0.40	2.81	0.15	0.08	0.06	0.03	0.00	0.03	9.07	0.00	0.00	0.00
56.00	0.50	3.45	0.33	0.21	0.19	0.07	0.00	0.07	9.15	0.00	0.00	0.00
58.00	0.57	3.98	0.52	0.35	0.33	0.12	0.00	0.12	9.23	0.00	0.00	0.00
59.00	0.63	4.36	0.68	0.56	0.52	0.15	0.00	0.15	9.30	0.00	0.00	0.00
59.50	0.68	4.71	0.84	0.94	0.83	0.18	0.00	0.18	9.37	0.00	0.00	0.00
59.75	0.85	5.89	1.45	7.14	2.97	0.25	0.00	0.25	9.49	0.00	0.00	0.00
60.00	1.02	7.05	2.16	8.22	6.11	0.37	0.00	0.37	9.57	0.00	0.00	0.00
60.50	1.09	7.56	2.49	1.92	3.09	0.55	0.00	0.55	9.68	0.00	0.00	0.00
61.00	1.13	7.83	2.67	1.04	1.36	0.62	0.00	0.62	9.72	0.00	0.00	0.00
62.00	1.18	8.18	2.91	0.61	0.68	0.69	0.00	0.69	9.76	0.00	0.00	0.00
64.00	1.24	8.61	3.21	0.40	0.43	0.76	0.00	0.76	9.81	0.00	0.00	0.00
68.00	1.31	9.11	3.57	0.24	0.26	0.85	0.00	0.85	9.86	0.00	0.00	0.00
72.00	1.36	9.45	3.81	0.18	0.18	0.91	0.00	0.91	9.90	0.00	0.00	0.00
Peak stage						9.90	At hour	72.00				
Peak discharge						0.00	At hour	72.00				

Project: Gary Matzner Park
Flood Routing Description: PRE-Development Calculations
Client : Village of Pincecrest

Date: 10/16/2024

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	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	0.00
40.00	0.29	1.71	0.00	0.00	0.00	0.00	0.00	0.00	9.00	0.00	0.00	0.00
44.00	0.32	1.93	0.01	0.01	0.01	0.00	0.00	0.00	9.00	0.00	0.00	0.00
48.00	0.36	2.14	0.03	0.02	0.02	0.01	0.00	0.01	9.01	0.00	0.00	0.00
52.00	0.40	2.40	0.07	0.04	0.04	0.02	0.00	0.01	9.03	0.00	0.00	0.00
56.00	0.50	2.95	0.18	0.14	0.13	0.04	0.00	0.04	9.08	0.00	0.00	0.00
58.00	0.57	3.40	0.31	0.24	0.23	0.07	0.00	0.07	9.14	0.00	0.00	0.00
59.00	0.63	3.74	0.43	0.40	0.37	0.10	0.00	0.10	9.19	0.00	0.00	0.00
59.50	0.68	4.03	0.54	0.68	0.60	0.12	0.00	0.12	9.23	0.00	0.00	0.00
59.75	0.85	5.04	1.00	5.32	2.20	0.16	0.00	0.16	9.32	0.00	0.00	0.00
60.00	1.02	6.04	1.54	6.30	4.61	0.26	0.00	0.26	9.50	0.00	0.00	0.00
60.50	1.09	6.47	1.80	1.49	2.38	0.39	0.00	0.39	9.58	0.00	0.00	0.00
61.00	1.13	6.70	1.94	0.81	1.06	0.45	0.00	0.45	9.62	0.00	0.00	0.00
62.00	1.18	7.00	2.13	0.48	0.54	0.50	0.00	0.50	9.65	0.00	0.00	0.00
64.00	1.24	7.37	2.36	0.32	0.34	0.56	0.00	0.56	9.69	0.00	0.00	0.00
68.00	1.31	7.80	2.65	0.19	0.21	0.63	0.00	0.63	9.73	0.00	0.00	0.00
72.00	1.36	8.09	2.84	0.14	0.14	0.68	0.00	0.68	9.76	0.00	0.00	0.00
Peak stage						9.76	At hour	72.00				
Peak discharge						0.00	At hour	72.00				