

STORMWATER MANAGEMENT REPORT

Contents:

- Stormwater Narrative
- A Maps
- B Existing Conditions Drainage Analysis
- C Proposed Conditions Drainage Analysis

Project:

Reserve at Muir Park [61 Unit Plan]
(Formerly Prospect Pointe)

Location:

1001 Oak Avenue
Prospect Heights, Illinois

Prepared For:

Lexington Homes
1731 N. Marcey Street, #200
Chicago, IL 60614

Date:

July 23, 2020

Revised:

Prepared By:

Phil Ceratto, P.E.

Haeger Project No.: 18-219



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100 East State Parkway, Schaumburg, IL 60173 · tel 847.394.6600 fax 847.394.6608
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DRAINAGE SUMMARY

Reserve at Muir Park is a 5.227-acre parcel on the former Muir School / JFH Academy parcel. The site is bounded to the north by Drake's First Addition to Prospect Heights Subdivision, to the east by Lemke Farms Unit 2 Subdivision and Pleasant Run Park in Wheeling, IL, to the south by Muir Park and to the west by Pleasant Run Subdivision.

The purpose of this stormwater management report is to summarize the existing drainage conditions of the Muir School, Muir Park and Pleasant Run Park, including previously provided detention and depressional storage, and the requirements for the development of this site in accordance with the Metropolitan Water Reclamation District Watershed Management Ordinance.

Existing Drainage

The existing site was separated into six (6) distinct drainage areas. These drainage areas were determined based on tributary areas to depressional storage or to existing drainage structures and storm sewer. Curve numbers were calculated for each area based on TR-55 curve number tables for Hydrologic Soil Group D. For larger areas, time of concentration was calculated using the NRCS method while smaller areas were assumed to have a five (5) minute time of concentration. Depressional storage areas, where applicable, were calculated based on existing 1-foot contours and irregular weir cross sections were used to determine the extents of the depressional storage.

Upstream areas west of the site, identified as The Forums, Pleasant Run, and an area west of Elmhurst Road tributary to The Forums discharge into the 36" sewer along the southern property line via detention storage and restrictor pipes provided during the permitting and construction of those developments. To provide an analysis of existing and proposed flows through this sewer, which is proposed to serve as the primary outfall for the proposed development, these upstream tributary areas were included in the model. Coverage areas, restrictor sizes, and approximate pond storage volumes were gathered from the original MWRD permit application (#73-1228) for use in the model.

The information above was input into a PondPack hydrologic model with Bulletin 75 rainfall data. The model was run for the 24 hour storm event for the 10-, 50-year recurrence intervals, and for the 100-year critical duration analysis. The 100-year critical duration analysis determined the BFE of the existing depressional storage areas, which is being compensated at a ratio of 1.5:1 in the proposed basin.

In addition to the existing drainage analysis, detention was previously provided for the park sites in Prospect Heights and Wheeling. Refer to Appendix D for the previously prepared detention calculations for the park sites. The share of detention provided for the Wheeling park was calculated and combined with the required detention volume in the proposed conditions calculations. Since the Prospect Heights park will be redeveloped and the existing basin will be relocated as part of these improvements, the share of existing detention allocated to Prospect Heights was not included in these calculations. Refer to the existing conditions exhibits, calculations and hydrologic reports provided in Appendix B for additional details.

Proposed Drainage

Similar to the existing conditions analysis, the site was separated into drainage areas based on the proposed grading and utility design. The site was designed to minimize unrestricted development area to the greatest extent practicable, while maintaining existing drainage patterns from the adjacent sites onto or through the development. The upstream areas west of the site (The Forums, Pleasant Run, etc) are



unimpacted by the proposed development – restricted discharge from these sites will continue to flow into the 36" sewer to remain along the southern perimeter of the site.

The proposed basin was designed in accordance with Prospect Heights and MWRD requirements, while maintaining the general drainage conditions from the Pleasant Run park and Lemke Farms subdivision to the east. Due to grading constraints on the perimeter of the site, small portions along the eastern property line will flow unrestricted into the adjacent sewer system. Small upstream areas along the western perimeter of the site and to the north of the site by the Oak Avenue R.O.W. will be bypassed through the proposed pond.

The overflow structure for the proposed development was designed to meet MWRD runoff control requirements by providing capacity to overflow the critical duration peak inflow into the pond. The overflow structure is proposed to be a 7' x 22' box culvert constructed over the existing 36" sewer for discharge directly into the sewer. 18' of the face of the 22' culvert will be lowered below the rim elevation to function as an overflow weir at the proposed high water level. In the event the water level continues to raise above the top of the weir elevation, the box culvert will have open grating to allow for additional overflow capacity.

The information above was input into a PondPack hydrologic model with Bulletin 75 rainfall data. The model was run for the 24 hour storm event for the 10-, 50-year recurrence intervals, and for the 100-year critical duration analysis. The 100-year critical duration analysis determined the peak discharge rate and elevation from the proposed pond, accounting for all incoming runoff, was 0.680 cfs and 656.40, respectively. The peak discharge through the 36" sewer was determined to be 17.51 cfs. The full flow capacity of a 36" sewer at 0.18%, per the original design plans of the sewer construction, is 28.30 cfs, indicating that the peak discharge from the basin and upstream areas, including overflow as determined by the hydraulic modelling, can be safely discharged downstream. Based on the anticipated maximum water surface level and the design overflow capacity of the overflow structure, the stormwater design should have no adverse impacts to the existing or proposed buildings adjacent the pond or overflow route due to their elevations relative to the pond. Specific design values of the basin, including NWL / HWL and other parameters are summarized in the following section and in Appendix C.

Stormwater Management Design

The proposed stormwater management system was designed using the MWRD nomograph based on the following criteria:

Runoff Control

- Due to the grading constraints at the perimeter of the site, portions of the development area along the eastern property line will be unrestricted by the proposed stormwater management system.
 - Tributary Development Area = 5.09 Ac. [CN = 93 / ADJ. CN = 88]
 - Upstream Tributary Area = 0.30 Ac. [CN = 84]
- Tributary development area and curve number were input into PondPack to determine the 100 year, critical duration peak flow rate.
 - Peak Flow = 41.03 cfs [30 minute event]



- A box culvert overflow structure was designed to detain water in the proposed basin and convey runoff to the existing 36" sewer.
 - Weir & Grate Flow = 222.06 cfs
 - Weir Length = 18.00 ft
 - Weir Elevation = 656.50 ft
 - Grate Open Area = 129.36 sf
 - Grate Elevation = 657.00
 - Crest HGL Elevation = 657.10 ft

Volume Control

- Proposed impervious area of the development = 3.554 Ac.
 - Required Volume Control Storage = 0.296 ac-ft
- Proposed volume control storage will be provided in the storage below the outlet of the proposed wetland detention basin, including soil media mix and coarse aggregate
 - Volume Control Storage = 0.301 Ac-Ft
 - Top of Volume Control Elevation = 652.00
 - Pond Bottom Elevation = 651.00
 - Underdrain Invert = 649.00

Detention

- Development area = 5.227 Ac.
 - Watershed Planning Area = Des Plaines River
 - Watershed Planning Area Release Rate = 0.20 cfs/ac
 - Release Rate per City Requirements = 0.15 cfs/ac
 - Gross Allowable Release Rate = 0.784 cfs
- Proposed unrestricted area along the eastern property line = 0.140 Ac.
 - Unrestricted Release Rate per PondPack = 0.120 cfs
- Net allowable release rate = 0.664 cfs
- Calculated storage volume per Nomograph = 2.239 ac-ft
- Additional storage volume (Depressional Storage) = 0.132 ac-ft
- Total required storage volume = 2.371 ac-ft
- Provided storage volume @ Design HWL (656.60) = 2.416 ac-ft
 - NWL = 652.00
- Orifice diameter = 3.08 in
 - Orifice invert = 649.00
 - Release rate = 0.66 cfs



Appendix A - Maps

Aerial Exhibit

USGS Exhibit

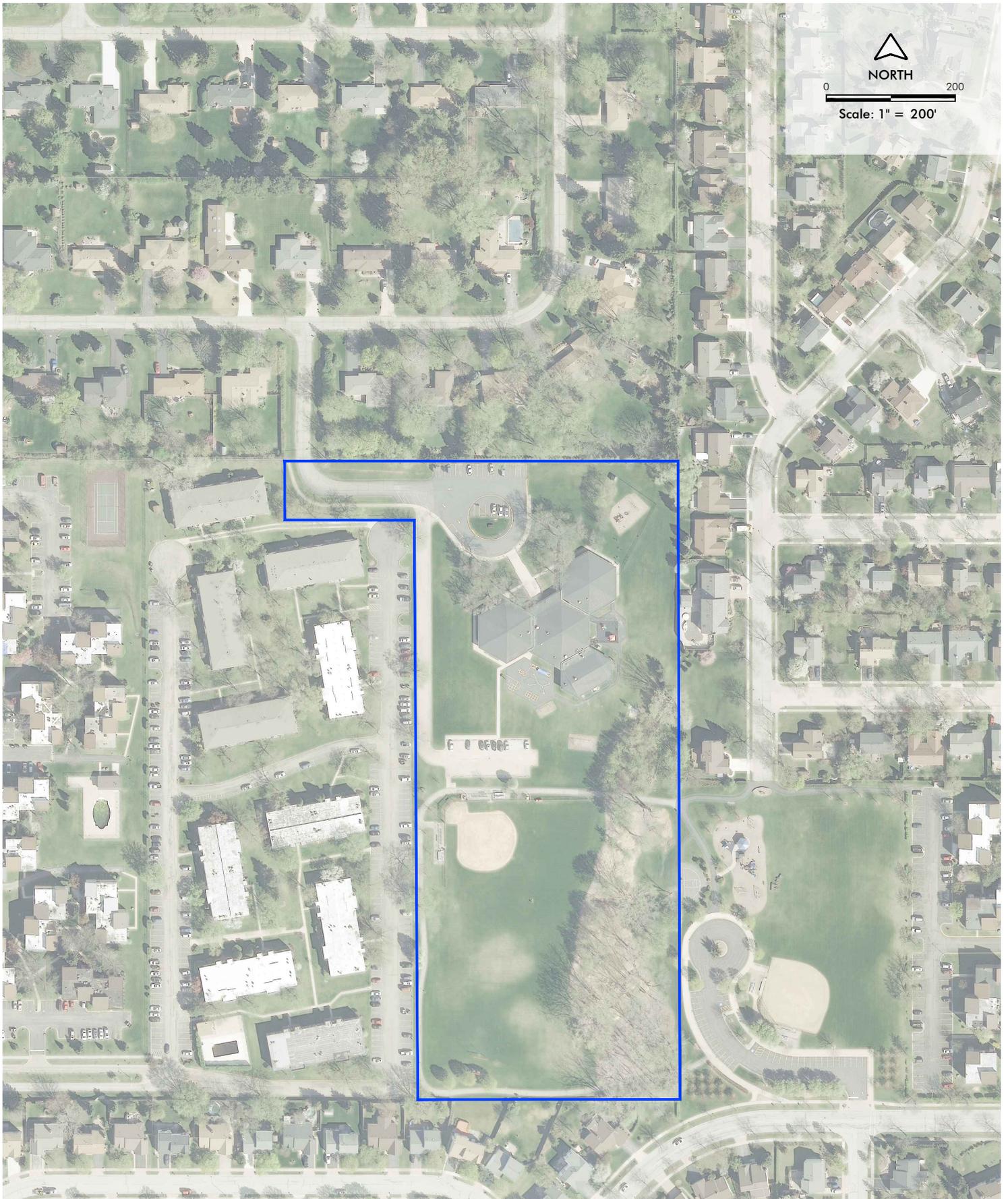
FEMA Firm Exhibit

MWRD Inundation Exhibit

National Wetlands Inventory Exhibit

NRCS Soils Exhibit

GIS Topography Exhibit



NORTH

0 200

Scale: 1" = 200'

**AERIAL EXHIBIT
1001 OAK AVENUE**

CITY OF PROSPECT HEIGHTS, COOK COUNTY, ILLINOIS



HAEGER ENGINEERING
consulting engineers • land surveyors

100 East State Parkway, Schaumburg, IL 60173 Tel: 847.394.6600 Fax: 847.394.6608
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Engineer: P A C
Date: 03/20/2020
Project No. 18-219
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**USGS EXHIBIT
1001 OAK AVENUE**

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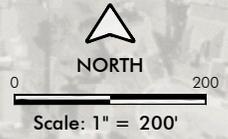
City of Prospect Heights 170919

PROSPECT DR

DRAKE TER

OAK AVE

CITY OF PROSPECT HE
VILLAGE OF WHEEL



HONEYSLICK

ZONE X

CT

15

ZONE
A

PLEASANT RUN DR

HIGHGOAL DR

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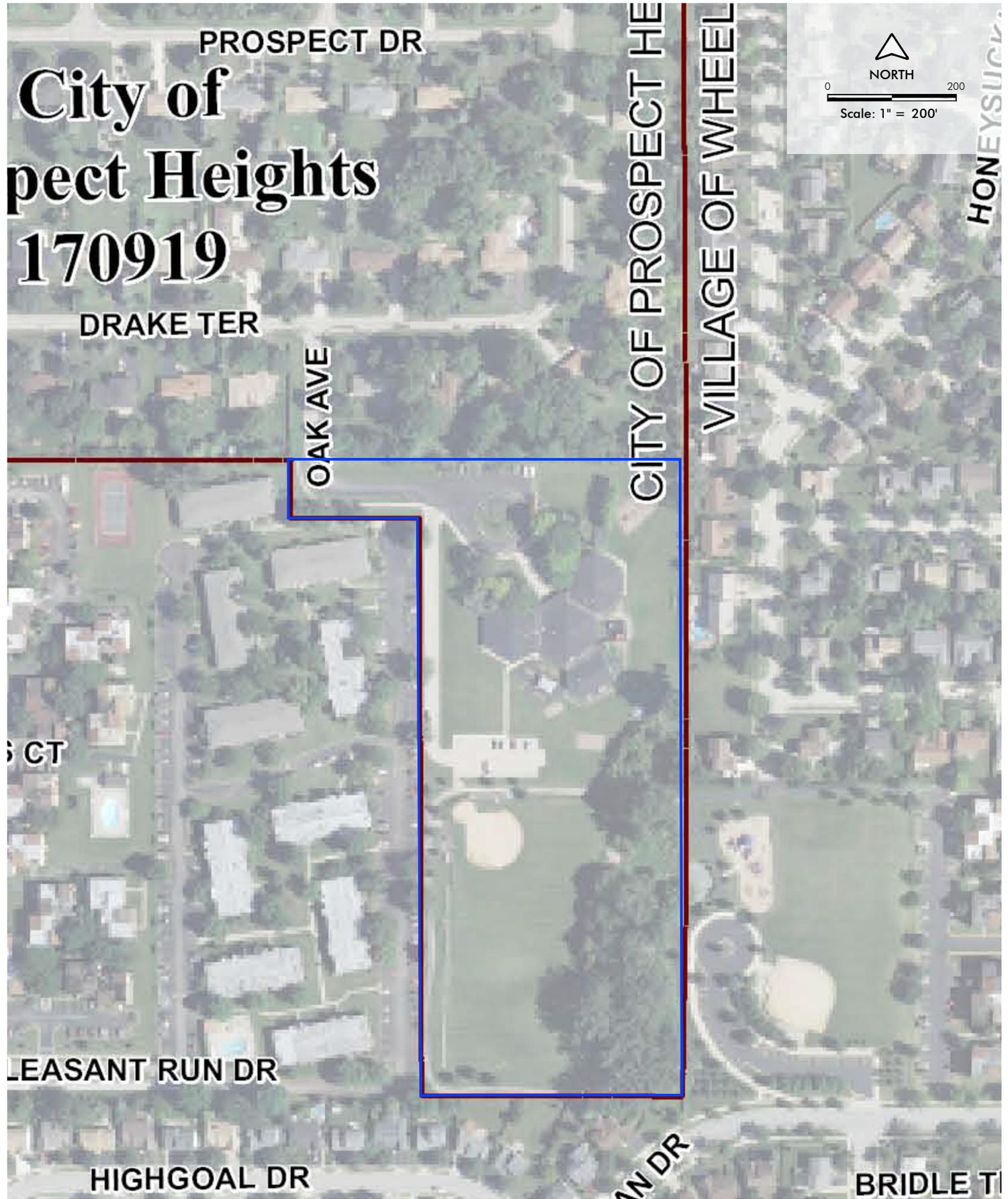
FEMA FIRM EXHIBIT
1001 OAK AVENUE

CITY OF PROSPECT HEIGHTS, COOK COUNTY, ILLINOIS

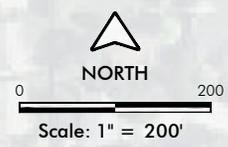
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City of Prospect Heights 170919



MWRD INUNDATION EXHIBIT
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Sheet 4 / 7



**NATIONAL WETLAND INVENTORY EXHIBIT
1001 OAK AVENUE**

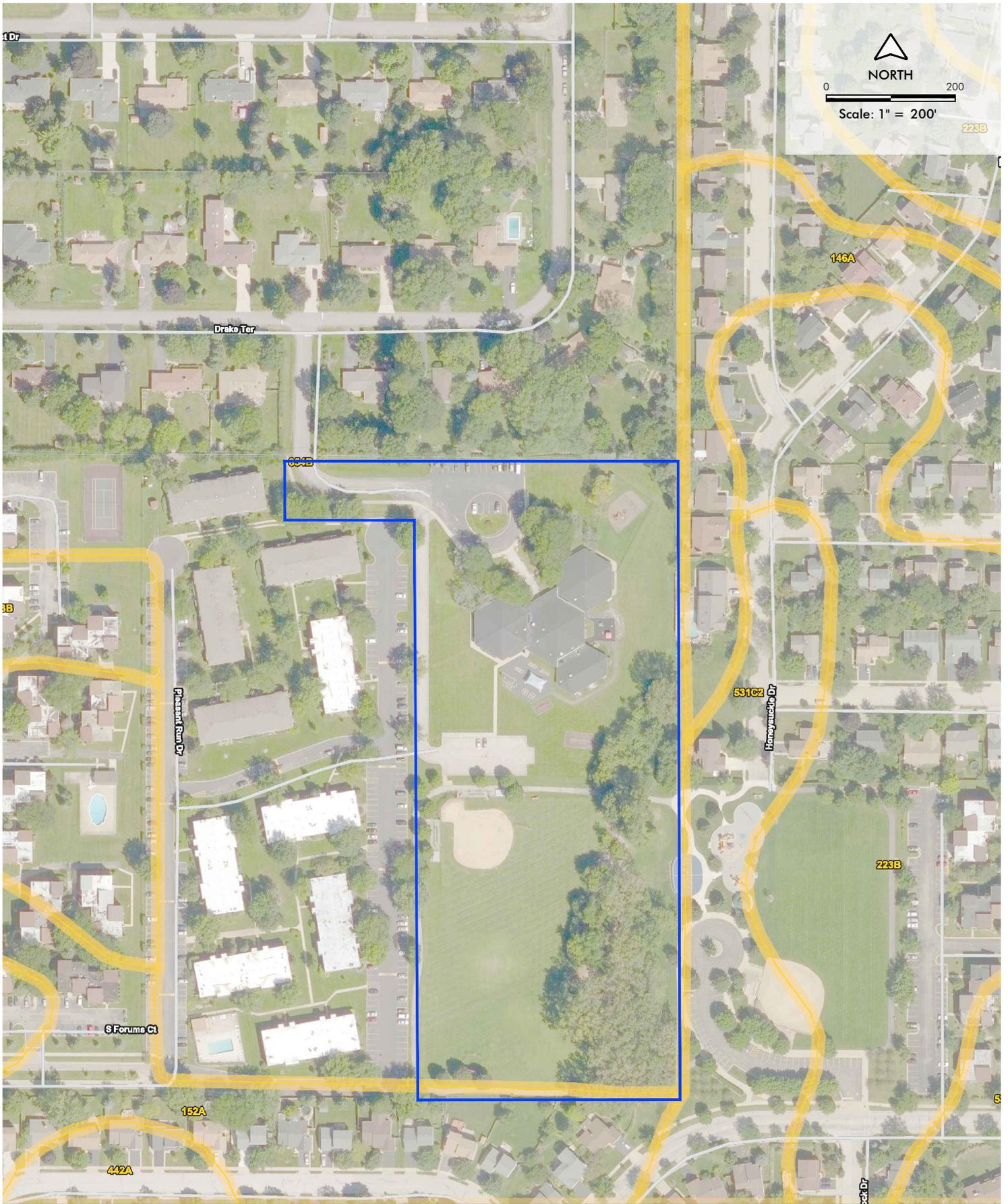
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Illinois Professional Design Firm License No. 184-003152 www.HaegerEngineering.com

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Sheet 5 / 7



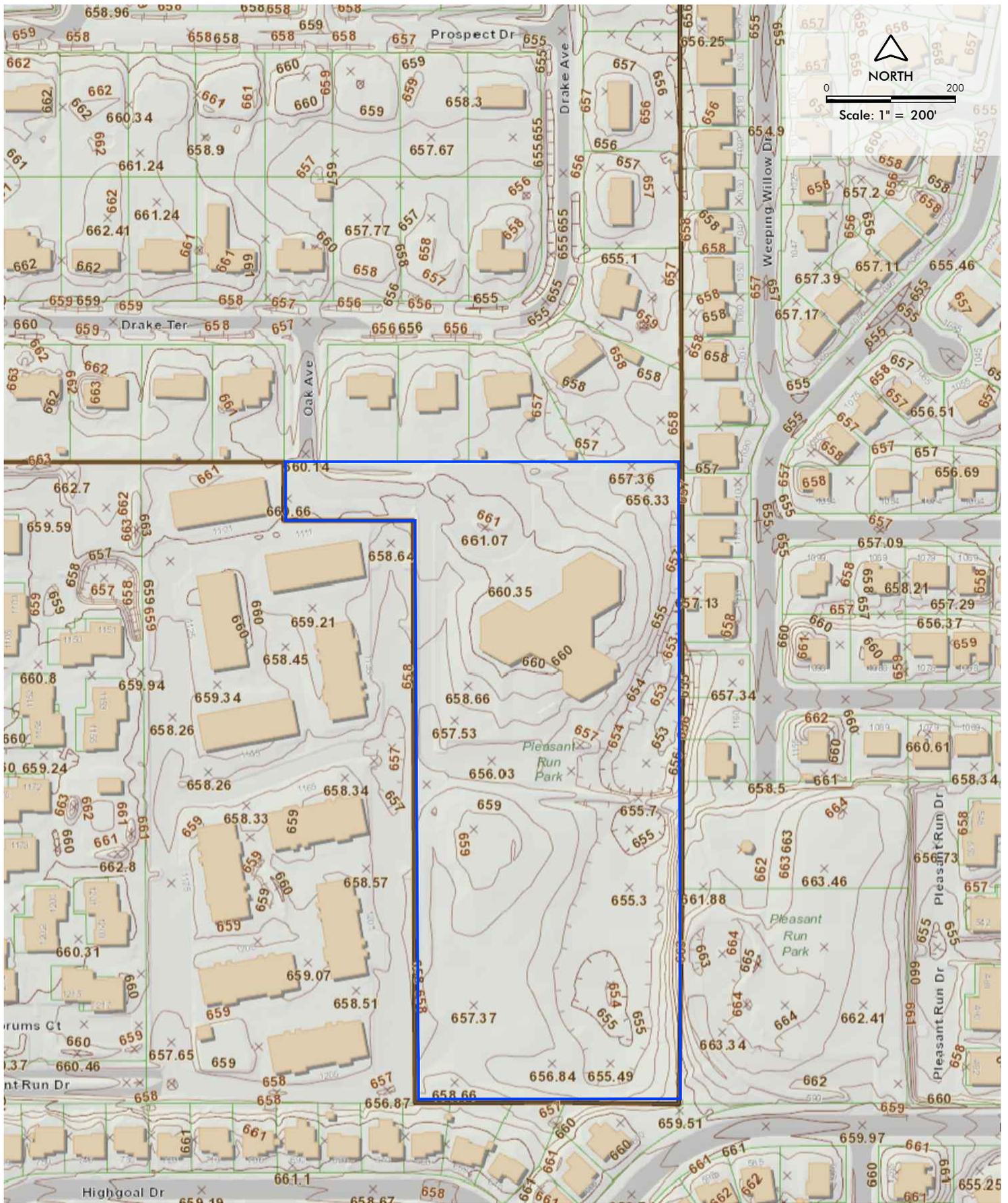
**NRCS SOILS EXHIBIT
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Sheet 6 / 7



GIS TOPOGRAPHY EXHIBIT
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Appendix B – Existing Conditions Drainage Analysis

Existing Conditions Drainage Exhibit

Curve Number Calculations

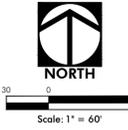
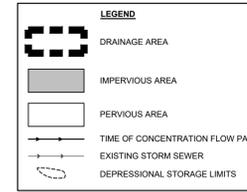
NRCS Time of Concentration Calculations

Detention / Depressional Storage Volume Calculations

Existing Conditions PondPack Reports

DEPRESSIONAL AREA / POND SUMMARY TABLE (100-YEAR)			
ID	Type	Critical Duration Peak	Storm Duration
D1 Depression	Storage (ac-ft)	0.016	30 Min
	Elevation (ft)	659.530	
	Flow (Out) (cfs)	2.840	
EX1 Depression	Storage (ac-ft)	0.072	2 Hr
	Elevation (ft)	653.740	
	Flow (Out) (cfs)	17.140	
PD1 Pond	Storage (ac-ft)	0.534	2 Hr
	Elevation (ft)	656.350	
	Flow (Out) (cfs)	13.050	
PD1-1 Depression	Storage (ac-ft)	0.312	30 Min
	Elevation (ft)	658.330	
	Flow (Out) (cfs)	1.850	
PR Detention	Storage (ac-ft)	1.024	3 Hr
	Elevation (ft)	658.340	
	Flow (Out) (cfs)	16.920	
FO Detention	Storage (ac-ft)	3.011	3 Hr
	Elevation (ft)	660.260	
	Flow (Out) (cfs)	13.360	

DRAINAGE AREA FLOW SUMMARY TABLE (100-YEAR)			
ID	Type	Critical Duration Peak	Storm Duration
Q-Drake Terrace	Flow (cfs)	2.84	30 Min
Area D1	Flow (cfs)	3.02	30 Min
Q-36IN to Wheeling Road	Flow (cfs)	23.87	1 Hr
Area S2	Flow (cfs)	10.96	30 Min
Area PR	Flow (cfs)	23.79	2 Hr
Area FO	Flow (cfs)	21.95	2 Hr
Area FO-US	Flow (cfs)	14.81	1 Hr
Q-Lot 117/118 Sewer	Flow (cfs)	20.04	2 Hr
Area S1	Flow (cfs)	10.43	30 Min
Area EX1	Flow (cfs)	8.38	1 Hr
Area PD1	Flow (cfs)	17.78	1 Hr
Area PD1-1	Flow (cfs)	1.84	30 Min



PER MWRD #73-1228, The Forums [Area FO] Receives Upstream Drainage [Area FO-US] from West. [COVERAGE & TIME OF CONCENTRATION PER MWRD #73-1228]

AREA FO [COVERAGE & TIME OF CONCENTRATION PER MWRD #73-1228]

AREA PR [COVERAGE & TIME OF CONCENTRATION PER MWRD #73-1228]

AREA PD1

COMPOSITE RUNOFF CURVE NUMBER (CN)

PROJECT: Reserves at Muir Park - AREA EX1 **PERMIT NUMBER:** _____
LOCATION: 1001 Oak Avenue, Prospect Heights, IL **DATE:** 5/22/2020

TYPE OF AREA (SELECT WITH DROP-DOWN)

DETAINED AREA MAJOR STORMWATER SYSTEM
 UNRESTRICTED AREA OTHER: _____
 UPSTREAM AREA

CONDITION (SELECT WITH DROP-DOWN)

PROPOSED CONDITION EXISTING CONDITION

RUNOFF CURVE NUMBER

Surface Description	Hydrologic Soil Group (HSG)	CN	Area (acres)	Product (CN)(Area)
Impervious Surface	D	98	0.456	44.68
Pervious Surface	D	80	1.715	137.19

TOTALS: 2.17 181.87

COMPOSITE RUNOFF CURVE NUMBER

$$\text{Composite CN} = \frac{\text{Total Product}}{\text{Total Area}} = \frac{181.87}{2.17} \rightarrow \text{Composite CN} = \boxed{83.78}$$

COMPOSITE RUNOFF CURVE NUMBER (CN)

PROJECT: Reserves at Muir Park - AREA S2 **PERMIT NUMBER:** _____
LOCATION: 1001 Oak Avenue, Prospect Heights, IL **DATE:** 3/12/2020

TYPE OF AREA (SELECT WITH DROP-DOWN)

DETAINED AREA MAJOR STORMWATER SYSTEM
 UNRESTRICTED AREA OTHER: _____
 UPSTREAM AREA

CONDITION (SELECT WITH DROP-DOWN)

PROPOSED CONDITION EXISTING CONDITION

RUNOFF CURVE NUMBER

Surface Description	Hydrologic Soil Group (HSG)	CN	Area (acres)	Product (CN)(Area)
Impervious Surface	D	98	1.162	113.89
Pervious Surface	D	80	1.195	95.62

TOTALS: 2.36 209.51

COMPOSITE RUNOFF CURVE NUMBER

$$\text{Composite CN} = \frac{\text{Total Product}}{\text{Total Area}} = \frac{209.51}{2.36} \rightarrow \text{Composite CN} = \boxed{88.87}$$

COMPOSITE RUNOFF CURVE NUMBER (CN)

PROJECT: Reserves at Muir Park - AREA PR **PERMIT NUMBER:** _____
LOCATION: 1001 Oak Avenue, Prospect Heights, IL **DATE:** 5/22/2020

TYPE OF AREA (SELECT WITH DROP-DOWN)

DETAINED AREA MAJOR STORMWATER SYSTEM
 UNRESTRICTED AREA OTHER: _____
 UPSTREAM AREA

CONDITION (SELECT WITH DROP-DOWN)

PROPOSED CONDITION EXISTING CONDITION

RUNOFF CURVE NUMBER

Surface Description	Hydrologic Soil Group (HSG)	CN	Area (acres)	Product (CN)(Area)
Impervious Surface	D	98	4.910	481.18
Pervious Surface	D	80	4.314	345.14

TOTALS: 9.22 826.32

COMPOSITE RUNOFF CURVE NUMBER

$$\text{Composite CN} = \frac{\text{Total Product}}{\text{Total Area}} = \frac{826.32}{9.22} \rightarrow \text{Composite CN} = \boxed{89.58}$$

NRCS TIME OF CONCENTRATION (T_c) OR TRAVEL TIME (T_t)

PROJECT: Reserves at Muir Park - AREA PD1

PERMIT NUMBER: _____

LOCATION: 1001 Oak Avenue, Prospect Heights, IL

DATE: 3/12/2020

CONDITION (SELECT FROM DROP-DOWN)

PROPOSED CONDITION

EXISTING CONDITION

SHEET FLOW

1. Segment ID	AB				
2. Surface description	Short Grass				
3. Manning's roughness coefficient, n	0.15				
4. Flow length, L (≤ 100 ft)	100	ft			
5. 2-year, 24-hr rainfall, P_2	3.34	in	3.34		
6. Land slope, s	0.005	ft/ft			
7. Travel time, T_t	16.70	+		=	16.70 min

$$T_t = \frac{0.007(nL)^{0.8}}{(P_2)^{0.5} s^{0.4}} (60)$$

SHALLOW CONCENTRATED FLOW

8. Segment ID	BC		CD		
9. Surface description (drop-down list)	Unpaved		Paved		
10. Flow length, L	77.7	ft	107.8		
11. Watercourse slope, s	0.006	ft/ft	0.005		
12. Average velocity, V	1.25	fps	1.44		
13. Travel time, T_t	1.04	+	1.25	=	2.29 min

$$T_t = \frac{L}{60V}$$

SHALLOW CONCENTRATED FLOW (cont'd)

8. Segment ID	EF				
9. Surface description (drop-down list)	Unpaved				
10. Flow length, L	560.6	ft			
11. Watercourse slope, s	0.004	ft/ft			
12. Average velocity, V	1.02	fps			
13. Travel time, T_t	9.16	+		=	9.16 min

$$T_t = \frac{L}{60V}$$

OPEN CHANNEL FLOW

14. Segment ID	DE				
15. Cross-sectional flow area, A	0.78	ft ²			
16. Wetted Perimeter, P_w	3.14	ft			
17. Hydraulic radius, R	0.25	ft			
18. Flow Length, L	296.4	ft			

19. Channel slope, S

20. Manning's roughness coefficient, n

21. Average velocity, V

22. Travel time, T_t

$$V = \frac{1.486}{n} R^{\frac{2}{3}} S^{\frac{1}{2}}$$
$$T_t = \frac{L}{60V}$$

0.007	ft/ft	
0.013		
3.78	fps	
1.31	+	

= 1.31 min

TIME-OF-CONCENTRATION (T_c) OR TRAVEL TIME (T_t)

23. Time-of-Concentration, T_c , or Travel Time, T_t

$$T_c, T_t = \sum T_t = \span style="border: 2px solid black; padding: 5px;">29.45 min$$

NRCS TIME OF CONCENTRATION (T_c) OR TRAVEL TIME (T_t)

PROJECT: Reserves at Muir Park - AREA EX1

PERMIT NUMBER: _____

LOCATION: 1001 Oak Avenue, Prospect Heights, IL

DATE: 3/12/2020

CONDITION (SELECT FROM DROP-DOWN)

PROPOSED CONDITION

EXISTING CONDITION

SHEET FLOW

1. Segment ID	AB			
2. Surface description	Short Grass			
3. Manning's roughness coefficient, n	0.15			
4. Flow length, L (≤ 100 ft)	100	ft		
5. 2-year, 24-hr rainfall, P_2	3.34	in	3.34	
6. Land slope, s	0.005	ft/ft		
7. Travel time, T_t	16.70	+		= 16.70 min

$$T_t = \frac{0.007(nL)^{0.8}}{(P_2)^{0.5} S^{0.4}} (60)$$

SHALLOW CONCENTRATED FLOW

8. Segment ID	BC-P		BC-UP	
9. Surface description (drop-down list)	Paved		Unpaved	
10. Flow length, L	60.3	ft	228.3	
11. Watercourse slope, s	0.037	ft/ft	0.037	
12. Average velocity, V	3.91	fps	3.10	
13. Travel time, T_t	0.26	+	1.23	= 1.48 min

$$T_t = \frac{L}{60V}$$

OPEN CHANNEL FLOW

14. Segment ID				
15. Cross-sectional flow area, A		ft ²		
16. Wetted Perimeter, P_w		ft		
17. Hydraulic radius, R		ft		
18. Flow Length, L		ft		
19. Channel slope, S		ft/ft		
20. Manning's roughness coefficient, n				
21. Average velocity, V		fps		
22. Travel time, T_t		+		= min

$$V = \frac{1.486}{n} R^{\frac{2}{3}} S^{\frac{1}{2}}$$

$$T_t = \frac{L}{60V}$$

TIME-OF-CONCENTRATION (T_c) OR TRAVEL TIME (T_t)

23. Time-of-Concentration, T_c , or Travel Time, T_t $T_c, T_t = \sum T_t =$ 18.18 min

NRCS TIME OF CONCENTRATION (T_c) OR TRAVEL TIME (T_t)

PROJECT: Reserves at Muir Park - AREA S1

PERMIT NUMBER: _____

LOCATION: 1001 Oak Avenue, Prospect Heights, IL

DATE: 3/12/2020

CONDITION (SELECT FROM DROP-DOWN)

PROPOSED CONDITION

EXISTING CONDITION

SHEET FLOW

1. Segment ID	AB			
2. Surface description	Asphalt			
3. Manning's roughness coefficient, n	0.011			
4. Flow length, L (≤ 100 ft)	100	ft		
5. 2-year, 24-hr rainfall, P_2	3.34	in	3.34	
6. Land slope, s	0.004	ft/ft		
7. Travel time, T_t	2.26	+		= 2.26 min

$$T_t = \frac{0.007(nL)^{0.8}}{(P_2)^{0.5} S^{0.4}} (60)$$

SHALLOW CONCENTRATED FLOW

8. Segment ID	BC		CD	
9. Surface description (drop-down list)	Paved		Unpaved	
10. Flow length, L	30.4	ft	458.6	
11. Watercourse slope, s	0.015	ft/ft	0.013	
12. Average velocity, V	2.49	fps	1.84	
13. Travel time, T_t	0.20	+	4.15	= 4.36 min

$$T_t = \frac{L}{60V}$$

OPEN CHANNEL FLOW

14. Segment ID				
15. Cross-sectional flow area, A		ft ²		
16. Wetted Perimeter, P_w		ft		
17. Hydraulic radius, R		ft		
18. Flow Length, L		ft		
19. Channel slope, S		ft/ft		
20. Manning's roughness coefficient, n				
21. Average velocity, V		fps		
22. Travel time, T_t		+		= min

$$V = \frac{1.486}{n} R^{\frac{2}{3}} S^{\frac{1}{2}}$$

$$T_t = \frac{L}{60V}$$

TIME-OF-CONCENTRATION (T_c) OR TRAVEL TIME (T_t)

23. Time-of-Concentration, T_c , or Travel Time, T_t $T_c, T_t = \sum T_t$ = 6.62 min

NRCS TIME OF CONCENTRATION (T_c) OR TRAVEL TIME (T_t)

PROJECT: Reserves at Muir Park - AREA S2

PERMIT NUMBER: _____

LOCATION: 1001 Oak Avenue, Prospect Heights, IL

DATE: 3/12/2020

CONDITION (SELECT FROM DROP-DOWN)

PROPOSED CONDITION

EXISTING CONDITION

SHEET FLOW

1. Segment ID	AB				
2. Surface description	Short Grass				
3. Manning's roughness coefficient, n	0.15				
4. Flow length, L (≤ 100 ft)	100	ft			
5. 2-year, 24-hr rainfall, P_2	3.34	in	3.34		
6. Land slope, s	0.009	ft/ft			
7. Travel time, T_t	13.38	+		=	13.38 min

$$T_t = \frac{0.007(nL)^{0.8}}{(P_2)^{0.5} S^{0.4}} (60)$$

SHALLOW CONCENTRATED FLOW

8. Segment ID	BC		CD		
9. Surface description (drop-down list)	Unpaved		Paved		
10. Flow length, L	36.8	ft	419.7		
11. Watercourse slope, s	0.007	ft/ft	0.008		
12. Average velocity, V	1.35	fps	1.82		
13. Travel time, T_t	0.45	+	3.85	=	4.30 min

$$T_t = \frac{L}{60V}$$

OPEN CHANNEL FLOW

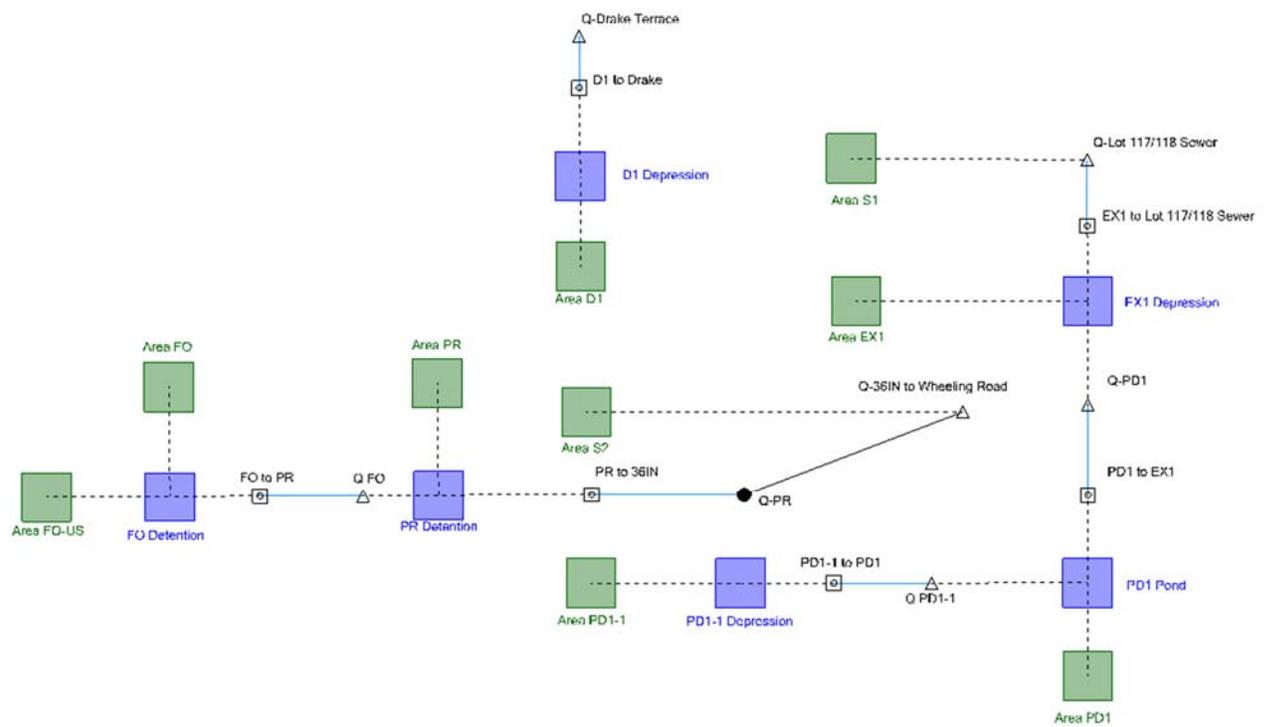
14. Segment ID	DE				
15. Cross-sectional flow area, A	0.20	ft ²			
16. Wetted Perimeter, P_w	1.57	ft			
17. Hydraulic radius, R	0.12	ft			
18. Flow Length, L	169.9	ft			
19. Channel slope, S	0.004	ft/ft			
20. Manning's roughness coefficient, n	0.011				
21. Average velocity, V	2.13	fps			
22. Travel time, T_t	1.33	+		=	1.33 min

$$V = \frac{1.486}{n} R^{\frac{2}{3}} S^{\frac{1}{2}}$$

$$T_t = \frac{L}{60V}$$

TIME-OF-CONCENTRATION (T_c) OR TRAVEL TIME (T_t)

23. Time-of-Concentration, T_c , or Travel Time, T_t		$T_c, T_t = \sum T_t$			19.01 min
--	--	-----------------------	--	--	-----------



Existing Conditions PondPack Reports

Project Summary

Title	Prospect Pointe - Existing Conditions
Engineer	PAC
Company	Haeger Engineering LLC
Date	5/22/2020

Notes Existing Conditions 24 Hour, 10-, 50- & 100-Year Critical Duration Analysis

16219 - Existing Conditions.ppc
5/15/2020

Bentley Systems, Inc. Haestad Methods Solution Center
27 Siemon Company Drive Suite 200 W
Watertown, CT 06795 USA +1-203-755-1666

PondPack CONNECT Edition
[10.02.00.01]
Page 1 of 84

Table of Contents

Master Network Summary	2
B75 - 100 Year Critical	
Time-Depth Curve, 100 years (100yr 10m)	19
Time-Depth Curve, 100 years (100yr 120hr)	20
Time-Depth Curve, 100 years (100yr 12hr)	21
Time-Depth Curve, 100 years (100yr 15m)	22
Time-Depth Curve, 100 years (100yr 18hr)	23
Time-Depth Curve, 100 years (100yr 1hr)	24
Time-Depth Curve, 100 years (100yr 240hr)	25
Time-Depth Curve, 100 years (100yr 24hr)	26
B75 - 10 Year Critical	
Time-Depth Curve, 10 years (10yr 24hr)	27
B75 - 50 Year Critical	
Time-Depth Curve, 50 years (50yr 24hr)	28
B75 - 100 Year Critical	
Time-Depth Curve, 100 years (100yr 2hr)	29
Time-Depth Curve, 100 years (100yr 30m)	30
Time-Depth Curve, 100 years (100yr 3hr)	31
Time-Depth Curve, 100 years (100yr 48hr)	32
Time-Depth Curve, 100 years (100yr 5m)	33
Time-Depth Curve, 100 years (100yr 6hr)	34
Time-Depth Curve, 100 years (100yr 72hr)	35
Area D1	
Time of Concentration Calculations, 10 years (10yr 24hr)	36
Area EX1	
Time of Concentration Calculations, 10 years (10yr 24hr)	38
Area FO	
Time of Concentration Calculations, 10 years (10yr 24hr)	40
Area FO-US	
Time of Concentration Calculations, 10 years (10yr 24hr)	42
Area PD1	
Time of Concentration Calculations, 10 years (10yr 24hr)	44
Area PD1-1	
Time of Concentration Calculations, 10 years (10yr 24hr)	46

Table of Contents

Area PR	Time of Concentration Calculations, 10 years (10yr 24hr)	48
Area S1	Time of Concentration Calculations, 10 years (10yr 24hr)	50
Area S2	Time of Concentration Calculations, 10 years (10yr 24hr)	52
Area D1	Runoff CN-Area, 10 years (10yr 24hr)	54
Area EX1	Runoff CN-Area, 10 years (10yr 24hr)	55
Area FO	Runoff CN-Area, 10 years (10yr 24hr)	56
Area FO-US	Runoff CN-Area, 10 years (10yr 24hr)	57
Area PD1	Runoff CN-Area, 10 years (10yr 24hr)	58
Area PD1-1	Runoff CN-Area, 10 years (10yr 24hr)	59
Area PR	Runoff CN-Area, 10 years (10yr 24hr)	60
Area S1	Runoff CN-Area, 10 years (10yr 24hr)	61
Area S2	Runoff CN-Area, 10 years (10yr 24hr)	62
D1 Depression	Elevation vs. Volume Curve, 10 years (10yr 24hr)	63
EX1 Depression	Elevation vs. Volume Curve, 10 years (10yr 24hr)	64
FO Detention	Elevation vs. Volume Curve, 10 years (10yr 24hr)	65
PD1 Pond	Elevation vs. Volume Curve, 10 years (10yr 24hr)	66
PD1-1 Depression	Elevation vs. Volume Curve, 10 years (10yr 24hr)	67

Table of Contents

PR Detention	Elevation vs. Volume Curve, 10 years (10yr 24hr)	68
OF D1	Outlet Input Data, 10 years (10yr 24hr)	69
OF EX1	Outlet Input Data, 10 years (10yr 24hr)	71
OF PD1-1	Outlet Input Data, 10 years (10yr 24hr)	73
RF PR	Outlet Input Data, 10 years (10yr 24hr)	75
RF/OF FO	Outlet Input Data, 10 years (10yr 24hr)	77
RF/OF PD1	Outlet Input Data, 10 years (10yr 24hr)	79

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)
Area D1	10yr 24hr	10	0.140	15.60	0.24
Area D1	50yr 24hr	50	0.232	15.60	0.38
Area D1	100yr 5m	100	0.006	0.10	0.77
Area D1	100yr 10m	100	0.024	0.10	2.90
Area D1	100yr 15m	100	0.039	0.10	2.60
Area D1	100yr 30m	100	0.067	0.15	3.02
Area D1	100yr 1hr	100	0.097	0.25	2.46
Area D1	100yr 2hr	100	0.133	0.25	2.00
Area D1	100yr 3hr	100	0.153	0.30	1.73
Area D1	100yr 6hr	100	0.189	0.60	1.24
Area D1	100yr 12hr	100	0.231	4.80	0.66
Area D1	100yr 18hr	100	0.255	11.70	0.55
Area D1	100yr 24hr	100	0.275	15.60	0.45
Area D1	100yr 48hr	100	0.310	40.50	0.24
Area D1	100yr 72hr	100	0.332	61.00	0.17
Area D1	100yr 120hr	100	0.366	102.00	0.11
Area D1	100yr 240hr	100	0.449	204.00	0.07
Area PD1-1	10yr 24hr	10	0.085	15.60	0.15
Area PD1-1	50yr 24hr	50	0.141	15.60	0.23
Area PD1-1	100yr 5m	100	0.004	0.10	0.47
Area PD1-1	100yr 10m	100	0.015	0.10	1.76
Area PD1-1	100yr 15m	100	0.024	0.10	1.58
Area PD1-1	100yr 30m	100	0.041	0.15	1.84
Area PD1-1	100yr 1hr	100	0.059	0.25	1.50
Area PD1-1	100yr 2hr	100	0.081	0.25	1.22
Area PD1-1	100yr 3hr	100	0.093	0.30	1.05
Area PD1-1	100yr 6hr	100	0.115	0.60	0.76
Area PD1-1	100yr 12hr	100	0.140	4.80	0.40
Area PD1-1	100yr 18hr	100	0.155	11.70	0.34
Area PD1-1	100yr 24hr	100	0.167	15.60	0.27
Area PD1-1	100yr 48hr	100	0.189	40.50	0.15
Area PD1-1	100yr 72hr	100	0.202	61.00	0.11
Area PD1-1	100yr 120hr	100	0.222	102.00	0.07
Area PD1-1	100yr 240hr	100	0.273	204.00	0.04
Area S2	10yr 24hr	10	0.759	15.60	1.22
Area S2	50yr 24hr	50	1.202	15.60	1.85
Area S2	100yr 5m	100	0.057	0.25	2.34
Area S2	100yr 10m	100	0.170	0.25	6.94
Area S2	100yr 15m	100	0.251	0.30	9.04
Area S2	100yr 30m	100	0.398	0.30	10.96
Area S2	100yr 1hr	100	0.553	0.40	10.94
Area S2	100yr 2hr	100	0.726	0.50	9.10
Area S2	100yr 3hr	100	0.823	0.50	7.76
Area S2	100yr 6hr	100	1.000	0.70	5.98
Area S2	100yr 12hr	100	1.195	4.80	3.25

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)
Area S2	100yr 18hr	100	1.309	11.70	2.66
Area S2	100yr 24hr	100	1.407	15.60	2.13
Area S2	100yr 48hr	100	1.559	40.50	1.16
Area S2	100yr 72hr	100	1.672	61.00	0.82
Area S2	100yr 120hr	100	1.829	102.00	0.54
Area S2	100yr 240hr	100	2.216	204.00	0.32
Area S1	10yr 24hr	10	0.523	15.60	0.90
Area S1	50yr 24hr	50	0.863	15.60	1.40
Area S1	100yr 5m	100	0.024	0.10	2.60
Area S1	100yr 10m	100	0.094	0.10	9.93
Area S1	100yr 15m	100	0.150	0.15	9.52
Area S1	100yr 30m	100	0.254	0.20	10.44
Area S1	100yr 1hr	100	0.367	0.25	9.21
Area S1	100yr 2hr	100	0.497	0.25	7.41
Area S1	100yr 3hr	100	0.571	0.35	6.40
Area S1	100yr 6hr	100	0.706	0.60	4.59
Area S1	100yr 12hr	100	0.856	4.80	2.43
Area S1	100yr 18hr	100	0.945	11.70	2.03
Area S1	100yr 24hr	100	1.021	15.60	1.63
Area S1	100yr 48hr	100	1.147	40.50	0.89
Area S1	100yr 72hr	100	1.238	61.00	0.64
Area S1	100yr 120hr	100	1.351	102.00	0.42
Area S1	100yr 240hr	100	1.653	204.00	0.25
Area PD1	10yr 24hr	10	1.614	15.60	2.78
Area PD1	50yr 24hr	50	2.685	15.60	4.38
Area PD1	100yr 5m	100	0.067	0.35	1.81
Area PD1	100yr 10m	100	0.278	0.35	7.50
Area PD1	100yr 15m	100	0.447	0.40	11.43
Area PD1	100yr 30m	100	0.771	0.50	16.23
Area PD1	100yr 1hr	100	1.126	0.55	17.78
Area PD1	100yr 2hr	100	1.534	0.70	16.32
Area PD1	100yr 3hr	100	1.766	0.85	14.13
Area PD1	100yr 6hr	100	2.192	0.90	10.30
Area PD1	100yr 12hr	100	2.667	5.00	7.33
Area PD1	100yr 18hr	100	2.946	11.70	6.32
Area PD1	100yr 24hr	100	3.185	15.60	5.11
Area PD1	100yr 48hr	100	3.561	40.50	2.81
Area PD1	100yr 72hr	100	3.837	61.00	2.01
Area PD1	100yr 120hr	100	4.224	102.00	1.31
Area PD1	100yr 240hr	100	5.185	204.00	0.79
Area EX1	10yr 24hr	10	0.608	15.60	1.04
Area EX1	50yr 24hr	50	1.003	15.60	1.63
Area EX1	100yr 5m	100	0.028	0.20	1.22
Area EX1	100yr 10m	100	0.110	0.20	4.78
Area EX1	100yr 15m	100	0.174	0.30	6.39

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)
Area EX1	100yr 30m	100	0.295	0.35	8.19
Area EX1	100yr 1hr	100	0.427	0.40	8.38
Area EX1	100yr 2hr	100	0.578	0.55	7.02
Area EX1	100yr 3hr	100	0.664	0.55	5.82
Area EX1	100yr 6hr	100	0.821	0.70	4.52
Area EX1	100yr 12hr	100	0.996	4.90	2.78
Area EX1	100yr 18hr	100	1.170	11.70	2.35
Area EX1	100yr 24hr	100	1.187	15.60	1.89
Area EX1	100yr 48hr	100	1.325	40.50	1.04
Area EX1	100yr 72hr	100	1.427	61.00	0.74
Area EX1	100yr 120hr	100	1.569	102.00	0.48
Area EX1	100yr 240hr	100	1.922	204.00	0.29
Area FO	10yr 24hr	10	2.858	15.70	4.59
Area FO	50yr 24hr	50	4.600	15.70	7.07
Area FO	100yr 5m	100	0.179	0.65	2.41
Area FO	100yr 10m	100	0.587	0.65	7.92
Area FO	100yr 15m	100	0.892	0.70	11.83
Area FO	100yr 30m	100	1.453	0.80	18.40
Area FO	100yr 1hr	100	2.051	0.95	21.69
Area FO	100yr 2hr	100	2.727	1.05	21.95
Area FO	100yr 3hr	100	3.107	1.20	20.35
Area FO	100yr 6hr	100	3.801	1.45	15.85
Area FO	100yr 12hr	100	4.570	5.50	11.80
Area FO	100yr 18hr	100	5.021	11.90	9.97
Area FO	100yr 24hr	100	5.405	15.70	8.19
Area FO	100yr 48hr	100	6.012	41.00	4.50
Area FO	100yr 72hr	100	6.469	61.00	3.24
Area FO	100yr 120hr	100	7.071	102.00	2.12
Area FO	100yr 240hr	100	8.603	204.00	1.27
Area PR	10yr 24hr	10	3.053	15.70	4.74
Area PR	50yr 24hr	50	4.797	15.70	7.15
Area PR	100yr 5m	100	0.251	0.65	3.38
Area PR	100yr 10m	100	0.712	0.65	9.60
Area PR	100yr 15m	100	1.038	0.70	13.77
Area PR	100yr 30m	100	1.623	0.80	20.56
Area PR	100yr 1hr	100	2.236	0.95	23.69
Area PR	100yr 2hr	100	2.921	1.05	23.79
Area PR	100yr 3hr	100	3.303	1.20	21.90
Area PR	100yr 6hr	100	3.999	1.35	17.12
Area PR	100yr 12hr	100	4.767	5.40	12.08
Area PR	100yr 18hr	100	5.216	11.90	10.06
Area PR	100yr 24hr	100	5.598	15.70	8.24
Area PR	100yr 48hr	100	6.202	41.00	4.55
Area PR	100yr 72hr	100	6.635	61.00	3.24
Area PR	100yr 120hr	100	7.251	102.00	2.11

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)
Area PR	100yr 240hr	100	8.769	204.00	1.26
Area FO-US	10yr 24hr	10	1.672	15.70	2.79
Area FO-US	50yr 24hr	50	2.736	15.60	4.34
Area FO-US	100yr 5m	100	0.086	0.50	1.56
Area FO-US	100yr 10m	100	0.315	0.50	5.72
Area FO-US	100yr 15m	100	0.492	0.60	8.51
Area FO-US	100yr 30m	100	0.824	0.70	13.04
Area FO-US	100yr 1hr	100	1.183	0.70	14.81
Area FO-US	100yr 2hr	100	1.592	0.90	14.61
Area FO-US	100yr 3hr	100	1.823	1.00	13.15
Area FO-US	100yr 6hr	100	2.247	1.20	9.82
Area FO-US	100yr 12hr	100	2.717	5.30	7.24
Area FO-US	100yr 18hr	100	2.993	11.80	6.21
Area FO-US	100yr 24hr	100	3.229	15.60	5.05
Area FO-US	100yr 48hr	100	3.602	40.50	2.78
Area FO-US	100yr 72hr	100	3.871	61.00	1.98
Area FO-US	100yr 120hr	100	4.253	102.00	1.30
Area FO-US	100yr 240hr	100	5.198	204.00	0.78

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)
Q-Drake Terrace	10yr 24hr	10	0.134	15.60	0.24
Q-Drake Terrace	50yr 24hr	50	0.226	15.60	0.38
Q-Drake Terrace	100yr 5m	100	0.000	0.00	0.00
Q-Drake Terrace	100yr 10m	100	0.018	0.15	1.89
Q-Drake Terrace	100yr 15m	100	0.033	0.20	2.10
Q-Drake Terrace	100yr 30m	100	0.061	0.20	2.84
Q-Drake Terrace	100yr 1hr	100	0.091	0.25	2.47
Q-Drake Terrace	100yr 2hr	100	0.127	0.30	1.91
Q-Drake Terrace	100yr 3hr	100	0.147	0.35	1.65
Q-Drake Terrace	100yr 6hr	100	0.183	0.60	1.20
Q-Drake Terrace	100yr 12hr	100	0.225	4.80	0.66
Q-Drake Terrace	100yr 18hr	100	0.249	11.70	0.55
Q-Drake Terrace	100yr 24hr	100	0.269	15.60	0.44
Q-Drake Terrace	100yr 48hr	100	0.304	39.00	0.25
Q-Drake Terrace	100yr 72hr	100	0.326	58.50	0.18
Q-Drake Terrace	100yr 120hr	100	0.360	97.00	0.12
Q-Drake Terrace	100yr 240hr	100	0.443	204.00	0.07
Q-36IN to Wheeling Road	10yr 24hr	10	8.344	15.70	10.40
Q-36IN to Wheeling Road	50yr				

Subsection: Master Network Summary

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)
Q-36IN to Wheeling Road	100yr 5m	100	0.573	0.65	7.26
Q-36IN to Wheeling Road	100yr 10m	100	1.784	0.30	13.67
Q-36IN to Wheeling Road	100yr 15m	100	2.675	0.35	18.09
Q-36IN to Wheeling Road	100yr 30m	100	4.300	0.45	22.28
Q-36IN to Wheeling Road	100yr 1hr	100	6.024	0.50	23.87
Q-36IN to Wheeling Road	100yr 2hr	100	7.966	0.65	23.06
Q-36IN to Wheeling Road	100yr 3hr	100	9.056	0.80	21.57
Q-36IN to Wheeling Road	100yr 6hr	100	11.047	1.05	19.35
Q-36IN to Wheeling Road	100yr 12hr	100	13.249	5.10	17.90
Q-36IN to Wheeling Road	100yr 18hr	100	14.541	11.80	16.88
Q-36IN to Wheeling Road	100yr 24hr	100	15.639	15.70	15.06
Q-36IN to Wheeling Road	100yr 48hr	100	17.376	43.00	10.42
Q-36IN to Wheeling Road	100yr 72hr	100	18.627	59.50	8.69
Q-36IN to Wheeling Road	100yr 120hr	100	20.404	102.00	6.06
Q-36IN to Wheeling Road	100yr 240hr	100	24.785	204.00	3.62
Q-Lot 117/118 Sewer	10yr 24hr	10	2.810	15.60	3.75
Q-Lot 117/118 Sewer	50yr 24hr	50	4.673	15.60	7.31
Q-Lot 117/118 Sewer	100yr 5m	100	0.106	0.10	2.60
Q-Lot 117/118 Sewer	100yr 10m	100	0.477	0.10	9.93
Q-Lot 117/118 Sewer	100yr 15m	100	0.775	0.30	10.85
Q-Lot 117/118 Sewer	100yr 30m	100	1.341	0.30	15.33
Q-Lot 117/118 Sewer	100yr 1hr	100	1.961	0.85	18.38
Q-Lot 117/118 Sewer	100yr 2hr	100	2.671	0.95	20.04
Q-Lot 117/118 Sewer	100yr 3hr	100	3.074	1.10	18.70
Q-Lot 117/118 Sewer	100yr 6hr	100	3.815	1.55	14.99
Q-Lot 117/118 Sewer	100yr 12hr	100	4.640	5.40	12.42
Q-Lot 117/118 Sewer	100yr 18hr	100	5.126	11.70	10.84
Q-Lot 117/118 Sewer	100yr 24hr	100	5.541	15.60	8.78
Q-Lot 117/118 Sewer	100yr 48hr	100	6.202	43.00	4.51
Q-Lot 117/118 Sewer	100yr 72hr	100	6.675	64.50	3.13
Q-Lot 117/118 Sewer	100yr 120hr	100	7.347	102.00	2.27
Q-Lot 117/118 Sewer	100yr 240hr	100	9.013	204.00	1.37

Subsection: Master Network Summary

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)
Q-PR	10yr 24hr	10	7.584	15.80	9.23
Q-PR	50yr 24hr	50	12.132	15.90	11.82
Q-PR	100yr 5m	100	0.516	0.65	7.12
Q-PR	100yr 10m	100	1.614	0.70	12.19
Q-PR	100yr 15m	100	2.423	0.80	14.56
Q-PR	100yr 30m	100	3.902	1.20	15.31
Q-PR	100yr 1hr	100	5.471	1.55	15.96
Q-PR	100yr 2hr	100	7.240	2.50	16.78
Q-PR	100yr 3hr	100	8.233	3.05	16.92
Q-PR	100yr 6hr	100	10.047	3.60	16.40
Q-PR	100yr 12hr	100	12.054	7.70	15.33
Q-PR	100yr 18hr	100	13.232	12.00	14.48
Q-PR	100yr 24hr	100	14.233	15.90	13.05
Q-PR	100yr 48hr	100	15.817	43.50	9.35
Q-PR	100yr 72hr	100	16.954	59.50	7.87
Q-PR	100yr 120hr	100	18.575	102.00	5.52
Q-PR	100yr 240hr	100	22.570	204.00	3.30

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
D1 Depression (IN)	10yr 24hr	10	0.140	15.60	0.24	(N/A)	(N/A)
D1 Depression (OUT)	10yr 24hr	10	0.134	15.60	0.24	659.26	0.010
D1 Depression (IN)	50yr 24hr	50	0.232	15.60	0.38	(N/A)	(N/A)
D1 Depression (OUT)	50yr 24hr	50	0.226	15.60	0.38	659.29	0.010
D1 Depression (IN)	100yr 5m	100	0.006	0.10	0.77	(N/A)	(N/A)
D1 Depression (OUT)	100yr 5m	100	0.000	0.00	0.00	659.09	0.006
D1 Depression (IN)	100yr 10m	100	0.024	0.10	2.90	(N/A)	(N/A)

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
D1 Depression (OUT)	100yr 10m	100	0.018	0.15	1.89	659.47	0.014
D1 Depression (IN)	100yr 15m	100	0.039	0.10	2.60	(N/A)	(N/A)
D1 Depression (OUT)	100yr 15m	100	0.033	0.20	2.10	659.48	0.015
D1 Depression (IN)	100yr 30m	100	0.067	0.15	3.02	(N/A)	(N/A)
D1 Depression (OUT)	100yr 30m	100	0.061	0.20	2.84	659.53	0.016
D1 Depression (IN)	100yr 1hr	100	0.097	0.25	2.46	(N/A)	(N/A)
D1 Depression (OUT)	100yr 1hr	100	0.091	0.25	2.47	659.51	0.015
D1 Depression (IN)	100yr 2hr	100	0.133	0.25	2.00	(N/A)	(N/A)
D1 Depression (OUT)	100yr 2hr	100	0.127	0.30	1.91	659.47	0.014
D1 Depression (IN)	100yr 3hr	100	0.153	0.30	1.73	(N/A)	(N/A)
D1 Depression (OUT)	100yr 3hr	100	0.147	0.35	1.65	659.45	0.014
D1 Depression (IN)	100yr 6hr	100	0.189	0.60	1.24	(N/A)	(N/A)
D1 Depression (OUT)	100yr 6hr	100	0.183	0.60	1.20	659.41	0.013
D1 Depression (IN)	100yr 12hr	100	0.231	4.80	0.66	(N/A)	(N/A)
D1 Depression (OUT)	100yr 12hr	100	0.225	4.80	0.66	659.34	0.011

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
D1 Depression (IN)	100yr 18hr	100	0.255	11.70	0.55	(N/A)	(N/A)
D1 Depression (OUT)	100yr 18hr	100	0.249	11.70	0.55	659.32	0.011
D1 Depression (IN)	100yr 24hr	100	0.275	15.60	0.45	(N/A)	(N/A)
D1 Depression (OUT)	100yr 24hr	100	0.269	15.60	0.44	659.31	0.011
D1 Depression (IN)	100yr 48hr	100	0.310	40.50	0.24	(N/A)	(N/A)
D1 Depression (OUT)	100yr 48hr	100	0.304	39.00	0.25	659.26	0.010
D1 Depression (IN)	100yr 72hr	100	0.332	61.00	0.17	(N/A)	(N/A)
D1 Depression (OUT)	100yr 72hr	100	0.326	58.50	0.18	659.24	0.009
D1 Depression (IN)	100yr 120hr	100	0.366	102.00	0.11	(N/A)	(N/A)
D1 Depression (OUT)	100yr 120hr	100	0.360	97.00	0.12	659.22	0.009
D1 Depression (IN)	100yr 240hr	100	0.449	204.00	0.07	(N/A)	(N/A)
D1 Depression (OUT)	100yr 240hr	100	0.443	204.00	0.07	659.20	0.008
PD1-1 Depression (IN)	10yr 24hr	10	0.085	15.60	0.15	(N/A)	(N/A)
PD1-1 Depression (OUT)	10yr 24hr	10	0.079	15.60	0.15	658.25	0.008
PD1-1 Depression (IN)	50yr 24hr	50	0.141	15.60	0.23	(N/A)	(N/A)

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
PD1-1 Depression (OUT)	50yr 24hr	50	0.135	15.60	0.23	658.26	0.009
PD1-1 Depression (IN)	100yr 5m	100	0.004	0.10	0.47	(N/A)	(N/A)
PD1-1 Depression (OUT)	100yr 5m	100	0.000	0.00	0.00	658.12	0.004
PD1-1 Depression (IN)	100yr 10m	100	0.015	0.10	1.76	(N/A)	(N/A)
PD1-1 Depression (OUT)	100yr 10m	100	0.009	0.15	0.81	658.30	0.011
PD1-1 Depression (IN)	100yr 15m	100	0.024	0.10	1.58	(N/A)	(N/A)
PD1-1 Depression (OUT)	100yr 15m	100	0.018	0.20	1.22	658.32	0.011
PD1-1 Depression (IN)	100yr 30m	100	0.041	0.15	1.84	(N/A)	(N/A)
PD1-1 Depression (OUT)	100yr 30m	100	0.035	0.20	1.65	658.33	0.012
PD1-1 Depression (IN)	100yr 1hr	100	0.059	0.25	1.50	(N/A)	(N/A)
PD1-1 Depression (OUT)	100yr 1hr	100	0.053	0.25	1.51	658.33	0.012
PD1-1 Depression (IN)	100yr 2hr	100	0.081	0.25	1.22	(N/A)	(N/A)
PD1-1 Depression (OUT)	100yr 2hr	100	0.075	0.35	1.07	658.31	0.011
PD1-1 Depression (IN)	100yr 3hr	100	0.093	0.30	1.05	(N/A)	(N/A)
PD1-1 Depression (OUT)	100yr 3hr	100	0.087	0.40	0.94	658.31	0.011

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
PD1-1 Depression (IN)	100yr 6hr	100	0.115	0.60	0.76	(N/A)	(N/A)
PD1-1 Depression (OUT)	100yr 6hr	100	0.109	0.65	0.71	658.29	0.010
PD1-1 Depression (IN)	100yr 12hr	100	0.140	4.80	0.40	(N/A)	(N/A)
PD1-1 Depression (OUT)	100yr 12hr	100	0.134	4.80	0.40	658.27	0.009
PD1-1 Depression (IN)	100yr 18hr	100	0.155	11.70	0.34	(N/A)	(N/A)
PD1-1 Depression (OUT)	100yr 18hr	100	0.149	11.70	0.34	658.27	0.009
PD1-1 Depression (IN)	100yr 24hr	100	0.167	15.60	0.27	(N/A)	(N/A)
PD1-1 Depression (OUT)	100yr 24hr	100	0.161	15.60	0.27	658.26	0.009
PD1-1 Depression (IN)	100yr 48hr	100	0.189	40.50	0.15	(N/A)	(N/A)
PD1-1 Depression (OUT)	100yr 48hr	100	0.183	40.50	0.15	658.25	0.008
PD1-1 Depression (IN)	100yr 72hr	100	0.202	61.00	0.11	(N/A)	(N/A)
PD1-1 Depression (OUT)	100yr 72hr	100	0.196	58.50	0.11	658.24	0.008
PD1-1 Depression (IN)	100yr 120hr	100	0.222	102.00	0.07	(N/A)	(N/A)
PD1-1 Depression (OUT)	100yr 120hr	100	0.216	97.00	0.07	658.22	0.007
PD1-1 Depression (IN)	100yr 240hr	100	0.273	204.00	0.04	(N/A)	(N/A)

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
PD1-1 Depression (OUT)	100yr 240hr	100	0.267	193.00	0.04	658.21	0.007
PD1 Pond (IN)	10yr 24hr	10	1.693	15.60	2.93	(N/A)	(N/A)
PD1 Pond (OUT)	10yr 24hr	10	1.692	17.00	1.93	655.87	0.241
PD1 Pond (IN)	50yr 24hr	50	2.820	15.60	4.61	(N/A)	(N/A)
PD1 Pond (OUT)	50yr 24hr	50	2.820	15.80	4.40	656.16	0.393
PD1 Pond (IN)	100yr 5m	100	0.067	0.35	1.81	(N/A)	(N/A)
PD1 Pond (OUT)	100yr 5m	100	0.067	0.50	1.29	655.03	0.015
PD1 Pond (IN)	100yr 10m	100	0.287	0.35	7.60	(N/A)	(N/A)
PD1 Pond (OUT)	100yr 10m	100	0.286	0.70	1.78	655.64	0.179
PD1 Pond (IN)	100yr 15m	100	0.465	0.40	11.57	(N/A)	(N/A)
PD1 Pond (OUT)	100yr 15m	100	0.465	0.80	2.53	656.06	0.317
PD1 Pond (IN)	100yr 30m	100	0.805	0.45	16.86	(N/A)	(N/A)
PD1 Pond (OUT)	100yr 30m	100	0.805	0.80	8.36	656.27	0.472
PD1 Pond (IN)	100yr 1hr	100	1.179	0.55	18.48	(N/A)	(N/A)
PD1 Pond (OUT)	100yr 1hr	100	1.179	0.90	12.25	656.34	0.524
PD1 Pond (IN)	100yr 2hr	100	1.609	0.70	17.04	(N/A)	(N/A)
PD1 Pond (OUT)	100yr 2hr	100	1.608	1.00	13.05	656.35	0.534
PD1 Pond (IN)	100yr 3hr	100	1.852	0.80	14.85	(N/A)	(N/A)
PD1 Pond (OUT)	100yr 3hr	100	1.852	1.15	12.05	656.33	0.522
PD1 Pond (IN)	100yr 6hr	100	2.301	0.90	10.81	(N/A)	(N/A)
PD1 Pond (OUT)	100yr 6hr	100	2.301	1.65	9.21	656.28	0.485
PD1 Pond (IN)	100yr 12hr	100	2.801	5.00	7.70	(N/A)	(N/A)

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
PD1 Pond (OUT)	100yr 12hr	100	2.800	5.50	7.48	656.25	0.459
PD1 Pond (IN)	100yr 18hr	100	3.095	11.70	6.65	(N/A)	(N/A)
PD1 Pond (OUT)	100yr 18hr	100	3.095	11.80	6.52	656.22	0.441
PD1 Pond (IN)	100yr 24hr	100	3.346	15.60	5.38	(N/A)	(N/A)
PD1 Pond (OUT)	100yr 24hr	100	3.346	15.70	5.29	656.19	0.416
PD1 Pond (IN)	100yr 48hr	100	3.744	40.50	2.96	(N/A)	(N/A)
PD1 Pond (OUT)	100yr 48hr	100	3.744	43.00	2.73	656.07	0.329
PD1 Pond (IN)	100yr 72hr	100	4.033	61.00	2.11	(N/A)	(N/A)
PD1 Pond (OUT)	100yr 72hr	100	4.033	65.00	1.86	655.76	0.213
PD1 Pond (IN)	100yr 120hr	100	4.441	102.00	1.38	(N/A)	(N/A)
PD1 Pond (OUT)	100yr 120hr	100	4.440	102.00	1.37	655.09	0.031
PD1 Pond (IN)	100yr 240hr	100	5.452	204.00	0.83	(N/A)	(N/A)
PD1 Pond (OUT)	100yr 240hr	100	5.451	204.00	0.83	654.80	0.006
EX1 Depression (IN)	10yr 24hr	10	2.300	15.60	2.86	(N/A)	(N/A)
EX1 Depression (OUT)	10yr 24hr	10	2.287	15.70	2.85	653.46	0.042
EX1 Depression (IN)	50yr 24hr	50	3.823	15.70	5.96	(N/A)	(N/A)
EX1 Depression (OUT)	50yr 24hr	50	3.810	15.70	5.96	653.55	0.051
EX1 Depression (IN)	100yr 5m	100	0.095	0.25	2.30	(N/A)	(N/A)
EX1 Depression (OUT)	100yr 5m	100	0.082	0.45	1.55	653.41	0.035

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
EX1 Depression (IN)	100yr 10m	100	0.396	0.20	6.12	(N/A)	(N/A)
EX1 Depression (OUT)	100yr 10m	100	0.383	0.30	5.51	653.54	0.050
EX1 Depression (IN)	100yr 15m	100	0.639	0.30	7.90	(N/A)	(N/A)
EX1 Depression (OUT)	100yr 15m	100	0.626	0.35	7.60	653.59	0.055
EX1 Depression (IN)	100yr 30m	100	1.100	0.70	9.94	(N/A)	(N/A)
EX1 Depression (OUT)	100yr 30m	100	1.087	0.75	9.91	653.63	0.060
EX1 Depression (IN)	100yr 1hr	100	1.606	0.85	15.78	(N/A)	(N/A)
EX1 Depression (OUT)	100yr 1hr	100	1.593	0.85	15.74	653.72	0.070
EX1 Depression (IN)	100yr 2hr	100	2.187	1.00	17.14	(N/A)	(N/A)
EX1 Depression (OUT)	100yr 2hr	100	2.174	1.00	17.14	653.74	0.072
EX1 Depression (IN)	100yr 3hr	100	2.516	1.10	15.88	(N/A)	(N/A)
EX1 Depression (OUT)	100yr 3hr	100	2.503	1.15	15.89	653.72	0.070
EX1 Depression (IN)	100yr 6hr	100	3.122	1.60	12.38	(N/A)	(N/A)
EX1 Depression (OUT)	100yr 6hr	100	3.109	1.60	12.39	653.67	0.065
EX1 Depression (IN)	100yr 12hr	100	3.797	5.40	10.12	(N/A)	(N/A)

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
EX1 Depression (OUT)	100yr 12hr	100	3.784	5.50	10.10	653.64	0.060
EX1 Depression (IN)	100yr 18hr	100	4.194	11.70	8.83	(N/A)	(N/A)
EX1 Depression (OUT)	100yr 18hr	100	4.181	11.80	8.82	653.61	0.058
EX1 Depression (IN)	100yr 24hr	100	4.533	15.60	7.16	(N/A)	(N/A)
EX1 Depression (OUT)	100yr 24hr	100	4.520	15.60	7.15	653.58	0.054
EX1 Depression (IN)	100yr 48hr	100	5.069	43.00	3.70	(N/A)	(N/A)
EX1 Depression (OUT)	100yr 48hr	100	5.056	43.00	3.67	653.49	0.045
EX1 Depression (IN)	100yr 72hr	100	5.460	64.50	2.54	(N/A)	(N/A)
EX1 Depression (OUT)	100yr 72hr	100	5.447	64.50	2.54	653.45	0.040
EX1 Depression (IN)	100yr 120hr	100	6.010	102.00	1.86	(N/A)	(N/A)
EX1 Depression (OUT)	100yr 120hr	100	5.997	102.00	1.86	653.42	0.037
EX1 Depression (IN)	100yr 240hr	100	7.373	204.00	1.12	(N/A)	(N/A)
EX1 Depression (OUT)	100yr 240hr	100	7.360	204.00	1.12	653.38	0.032
PR Detention (IN)	10yr 24hr	10	7.583	15.80	9.23	(N/A)	(N/A)
PR Detention (OUT)	10yr 24hr	10	7.583	15.80	9.23	655.25	0.000
PR Detention (IN)	50yr 24hr	50	12.132	15.80	11.83	(N/A)	(N/A)
PR Detention (OUT)	50yr 24hr	50	12.132	15.90	11.82	656.09	0.000

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
PR Detention (IN)	100yr 5m	100	0.516	0.65	7.16	(N/A)	(N/A)
PR Detention (OUT)	100yr 5m	100	0.516	0.65	7.12	654.72	0.000
PR Detention (IN)	100yr 10m	100	1.614	0.65	12.21	(N/A)	(N/A)
PR Detention (OUT)	100yr 10m	100	1.614	0.70	12.19	656.23	0.000
PR Detention (IN)	100yr 15m	100	2.423	0.80	15.54	(N/A)	(N/A)
PR Detention (OUT)	100yr 15m	100	2.423	0.80	14.56	657.20	0.000
PR Detention (IN)	100yr 30m	100	3.900	0.80	22.19	(N/A)	(N/A)
PR Detention (OUT)	100yr 30m	100	3.900	1.20	15.31	657.54	0.238
PR Detention (IN)	100yr 1hr	100	5.471	0.95	26.38	(N/A)	(N/A)
PR Detention (OUT)	100yr 1hr	100	5.471	1.55	15.96	657.85	0.544
PR Detention (IN)	100yr 2hr	100	7.240	1.10	26.63	(N/A)	(N/A)
PR Detention (OUT)	100yr 2hr	100	7.240	2.50	16.78	658.26	0.948
PR Detention (IN)	100yr 3hr	100	8.233	1.20	24.89	(N/A)	(N/A)
PR Detention (OUT)	100yr 3hr	100	8.233	3.05	16.92	658.34	1.024
PR Detention (IN)	100yr 6hr	100	10.047	2.90	21.77	(N/A)	(N/A)
PR Detention (OUT)	100yr 6hr	100	10.047	3.60	16.40	658.07	0.760
PR Detention (IN)	100yr 12hr	100	12.054	7.00	17.68	(N/A)	(N/A)
PR Detention (OUT)	100yr 12hr	100	12.054	7.70	15.33	657.55	0.249
PR Detention (IN)	100yr 18hr	100	13.230	12.00	14.50	(N/A)	(N/A)
PR Detention (OUT)	100yr 18hr	100	13.230	12.00	14.48	657.16	0.000
PR Detention (IN)	100yr 24hr	100	14.232	15.80	13.05	(N/A)	(N/A)
PR Detention (OUT)	100yr 24hr	100	14.232	15.90	13.05	656.56	0.000
PR Detention (IN)	100yr 48hr	100	15.816	43.00	9.38	(N/A)	(N/A)

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
PR Detention (OUT)	100yr 48hr	100	15.816	43.50	9.35	655.29	0.000
PR Detention (IN)	100yr 72hr	100	16.954	59.00	7.96	(N/A)	(N/A)
PR Detention (OUT)	100yr 72hr	100	16.954	59.50	7.87	654.90	0.000
PR Detention (IN)	100yr 120hr	100	18.575	102.00	5.52	(N/A)	(N/A)
PR Detention (OUT)	100yr 120hr	100	18.575	102.00	5.52	654.55	0.000
PR Detention (IN)	100yr 240hr	100	22.570	204.00	3.30	(N/A)	(N/A)
PR Detention (OUT)	100yr 240hr	100	22.570	204.00	3.30	654.36	0.000
FO Detention (IN)	10yr 24hr	10	4.530	15.70	7.38	(N/A)	(N/A)
FO Detention (OUT)	10yr 24hr	10	4.530	18.00	5.18	657.01	0.496
FO Detention (IN)	50yr 24hr	50	7.335	15.70	11.41	(N/A)	(N/A)
FO Detention (OUT)	50yr 24hr	50	7.335	19.10	6.30	658.41	1.640
FO Detention (IN)	100yr 5m	100	0.265	0.60	3.80	(N/A)	(N/A)
FO Detention (OUT)	100yr 5m	100	0.265	0.60	3.79	655.80	0.000
FO Detention (IN)	100yr 10m	100	0.903	0.60	13.03	(N/A)	(N/A)
FO Detention (OUT)	100yr 10m	100	0.903	1.80	5.32	656.96	0.455
FO Detention (IN)	100yr 15m	100	1.385	0.65	19.78	(N/A)	(N/A)
FO Detention (OUT)	100yr 15m	100	1.385	2.00	5.85	657.55	0.940
FO Detention (IN)	100yr 30m	100	2.277	0.70	30.60	(N/A)	(N/A)
FO Detention (OUT)	100yr 30m	100	2.277	1.90	6.93	658.61	1.793
FO Detention (IN)	100yr 1hr	100	3.235	0.80	35.58	(N/A)	(N/A)
FO Detention (OUT)	100yr 1hr	100	3.235	2.75	7.73	659.68	2.569
FO Detention (IN)	100yr 2hr	100	4.319	1.00	35.77	(N/A)	(N/A)
FO Detention (OUT)	100yr 2hr	100	4.319	2.20	13.17	660.26	3.008

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
FO Detention (IN)	100yr 3hr	100	4.930	1.10	32.98	(N/A)	(N/A)
FO Detention (OUT)	100yr 3hr	100	4.930	2.40	13.36	660.26	3.011
FO Detention (IN)	100yr 6hr	100	6.048	1.40	25.46	(N/A)	(N/A)
FO Detention (OUT)	100yr 6hr	100	6.048	3.05	12.92	660.25	2.999
FO Detention (IN)	100yr 12hr	100	7.287	5.40	19.01	(N/A)	(N/A)
FO Detention (OUT)	100yr 12hr	100	7.287	7.20	10.59	660.18	2.946
FO Detention (IN)	100yr 18hr	100	8.014	11.80	16.17	(N/A)	(N/A)
FO Detention (OUT)	100yr 18hr	100	8.014	15.30	7.30	659.92	2.743
FO Detention (IN)	100yr 24hr	100	8.634	15.70	13.23	(N/A)	(N/A)
FO Detention (OUT)	100yr 24hr	100	8.634	19.10	6.87	659.26	2.264
FO Detention (IN)	100yr 48hr	100	9.615	41.00	7.32	(N/A)	(N/A)
FO Detention (OUT)	100yr 48hr	100	9.615	45.00	5.46	657.43	0.835
FO Detention (IN)	100yr 72hr	100	10.320	61.00	5.23	(N/A)	(N/A)
FO Detention (OUT)	100yr 72hr	100	10.319	59.00	4.86	656.62	0.178
FO Detention (IN)	100yr 120hr	100	11.324	102.00	3.42	(N/A)	(N/A)
FO Detention (OUT)	100yr 120hr	100	11.324	102.00	3.41	655.46	0.000
FO Detention (IN)	100yr 240hr	100	13.801	204.00	2.05	(N/A)	(N/A)
FO Detention (OUT)	100yr 240hr	100	13.801	204.00	2.05	654.94	0.000

Subsection: Time-Depth Curve
Label: B75 - 100 Year Critical
Scenario: 100yr 10m

Return Event: 100 years
Storm Event: 10m100y

Time-Depth Curve: 10m100y	
Label	10m100y
Start Time	0.00 hours
Increment	0.00 hours
End Time	0.08 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.00 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)				
0.00	0.00	0.29	0.59	0.77	0.94
0.02	1.08	1.19	1.28	1.35	1.42
0.04	1.48	1.51	1.55	1.58	1.62
0.06	1.66	1.69	1.73	1.75	1.76
0.08	1.80	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 100 Year Critical
Scenario: 100yr 120hr

Return Event: 100 years
Storm Event: 120h100y

Time-Depth Curve: 120h100y	
Label	120h100y
Start Time	0.00 hours
Increment	6.00 hours
End Time	120.00 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 6.00 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)				
0.00	0.00	0.21	0.53	0.85	1.07
30.00	1.39	1.71	2.03	2.35	2.67
60.00	2.98	3.41	3.73	4.16	4.80
90.00	5.44	6.29	7.68	8.95	9.81
120.00	10.66	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 100 Year Critical
Scenario: 100yr 12hr

Return Event: 100 years
Storm Event: 12h100y

Time-Depth Curve: 12h100y	
Label	12h100y
Start Time	0.00 hours
Increment	0.60 hours
End Time	12.00 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.60 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)				
0.00	0.00	0.22	0.60	0.90	1.19
3.00	1.64	2.16	2.91	3.80	4.63
6.00	5.22	5.67	6.04	6.34	6.56
9.00	6.79	6.94	7.09	7.24	7.31
12.00	7.39	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
 Label: B75 - 100 Year Critical
 Scenario: 100yr 15m

Return Event: 100 years
 Storm Event: 15m100y

Time-Depth Curve: 15m100y	
Label	15m100y
Start Time	0.00 hours
Increment	0.01 hours
End Time	0.25 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.01 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)				
0.00	0.00	0.37	0.77	1.00	1.21
0.06	1.39	1.53	1.65	1.74	1.83
0.13	1.90	1.95	2.00	2.04	2.09
0.19	2.13	2.18	2.23	2.25	2.27
0.25	2.30	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
 Label: B75 - 100 Year Critical
 Scenario: 100yr 18hr

Return Event: 100 years
 Storm Event: 18h100y

Time-Depth Curve: 18h100y	
Label	18h100y
Start Time	0.00 hours
Increment	0.90 hours
End Time	18.00 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.90 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)				
0.00	0.00	0.24	0.48	0.73	0.97
4.50	1.21	1.53	1.85	2.18	2.58
9.00	3.06	3.63	4.59	5.64	6.37
13.50	6.85	7.17	7.42	7.66	7.82
18.00	7.98	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
 Label: B75 - 100 Year Critical
 Scenario: 100yr 1hr

Return Event: 100 years
 Storm Event: 1h100y

Time-Depth Curve: 1h100y	
Label	1h100y
Start Time	0.00 hours
Increment	0.05 hours
End Time	1.00 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.05 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)				
0.00	0.00	0.64	1.33	1.73	2.10
0.25	2.42	2.66	2.86	3.02	3.18
0.50	3.30	3.39	3.47	3.55	3.63
0.75	3.71	3.79	3.87	3.91	3.95
1.00	3.99	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
 Label: B75 - 100 Year Critical
 Scenario: 100yr 240hr

Return Event: 100 years
 Storm Event: 240h100y

Time-Depth Curve: 240h100y	
Label	240h100y
Start Time	0.00 hours
Increment	12.00 hours
End Time	240.00 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 12.00 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)				
0.00	0.00	0.25	0.63	1.01	1.27
60.00	1.64	2.02	2.40	2.78	3.16
120.00	3.54	4.05	4.43	4.93	5.69
180.00	6.45	7.46	9.11	10.63	11.64
240.00	12.65	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
 Label: B75 - 100 Year Critical
 Scenario: 100yr 24hr

Return Event: 100 years
 Storm Event: 24h100y

Time-Depth Curve: 24h100y	
Label	24h100y
Start Time	0.00 hours
Increment	1.20 hours
End Time	24.00 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 1.20 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)				
0.00	0.00	0.26	0.51	0.77	1.03
6.00	1.29	1.63	1.97	2.31	2.74
12.00	3.26	3.86	4.88	6.00	6.77
18.00	7.28	7.63	7.88	8.14	8.31
24.00	8.48	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
 Label: B75 - 10 Year Critical
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Time-Depth Curve: 24h10y	
Label	24h10y
Start Time	0.00 hours
Increment	1.20 hours
End Time	24.00 hours
Return Event	10 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 1.20 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)				
0.00	0.00	0.15	0.31	0.46	0.62
6.00	0.77	0.98	1.18	1.39	1.65
12.00	1.96	2.32	2.94	3.60	4.07
18.00	4.38	4.58	4.74	4.89	5.00
24.00	5.10	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
 Label: B75 - 50 Year Critical
 Scenario: 50yr 24hr

Return Event: 50 years
 Storm Event: 24h50y

Time-Depth Curve: 24h50y	
Label	24h50y
Start Time	0.00 hours
Increment	1.20 hours
End Time	24.00 hours
Return Event	50 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 1.20 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)				
0.00	0.00	0.22	0.45	0.68	0.90
6.00	1.13	1.42	1.73	2.03	2.40
12.00	2.85	3.37	4.27	5.25	5.93
18.00	6.38	6.67	6.90	7.12	7.28
24.00	7.43	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
 Label: B75 - 100 Year Critical
 Scenario: 100yr 2hr

Return Event: 100 years
 Storm Event: 2h100y

Time-Depth Curve: 2h100y	
Label	2h100y
Start Time	0.00 hours
Increment	0.10 hours
End Time	2.00 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.10 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)				
0.00	0.00	0.80	1.64	2.14	2.58
0.50	2.98	3.28	3.53	3.73	3.93
1.00	4.08	4.17	4.27	4.37	4.47
1.50	4.57	4.67	4.77	4.82	4.87
2.00	4.92	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
 Label: B75 - 100 Year Critical
 Scenario: 100yr 30m

Return Event: 100 years
 Storm Event: 30m100y

Time-Depth Curve: 30m100y	
Label	30m100y
Start Time	0.00 hours
Increment	0.03 hours
End Time	0.50 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.03 hours

Time on left represents time for first value in each row.

Time (hours)	Depth (in)				
0.00	0.00	0.51	1.05	1.36	1.65
0.13	1.90	2.09	2.25	2.38	2.50
0.25	2.60	2.66	2.73	2.79	2.85
0.38	2.92	2.98	3.04	3.07	3.11
0.50	3.14	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
 Label: B75 - 100 Year Critical
 Scenario: 100yr 3hr

Return Event: 100 years
 Storm Event: 3h100y

Time-Depth Curve: 3h100y	
Label	3h100y
Start Time	0.00 hours
Increment	0.15 hours
End Time	3.00 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.15 hours

Time on left represents time for first value in each row.

Time (hours)	Depth (in)				
0.00	0.00	0.88	1.81	2.36	2.85
0.75	3.29	3.62	3.90	4.12	4.34
1.50	4.50	4.61	4.72	4.83	4.94
2.25	5.05	5.16	5.27	5.33	5.38
3.00	5.44	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
 Label: B75 - 100 Year Critical
 Scenario: 100yr 48hr

Return Event: 100 years
 Storm Event: 48h100y

Time-Depth Curve: 48h100y	
Label	48h100y
Start Time	0.00 hours
Increment	2.40 hours
End Time	48.00 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 2.40 hours

Time on left represents time for first value in each row.

Time (hours)	Depth (in)				
0.00	0.00	0.19	0.46	0.74	0.93
12.00	1.21	1.48	1.76	2.04	2.32
24.00	2.60	2.97	3.25	3.62	4.18
36.00	4.73	5.48	6.68	7.80	8.54
48.00	9.28	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
 Label: B75 - 100 Year Critical
 Scenario: 100yr 5m

Return Event: 100 years
 Storm Event: 5m100y

Time-Depth Curve: 5m100y	
Label	5m100y
Start Time	0.00 hours
Increment	0.00 hours
End Time	0.08 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.00 hours

Time on left represents time for first value in each row.

Time (hours)	Depth (in)				
0.00	0.00	0.16	0.34	0.44	0.54
0.02	0.62	0.68	0.73	0.77	0.81
0.04	0.84	0.87	0.89	0.91	0.93
0.06	0.95	0.97	0.99	1.00	1.01
0.08	1.02	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
 Label: B75 - 100 Year Critical
 Scenario: 100yr 6hr

Return Event: 100 years
 Storm Event: 6h100y

Time-Depth Curve: 6h100y	
Label	6h100y
Start Time	0.00 hours
Increment	0.30 hours
End Time	6.00 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.30 hours

Time on left represents time for first value in each row.

Time (hours)	Depth (in)				
0.00	0.00	1.03	2.12	2.76	3.34
1.50	3.86	4.24	4.57	4.82	5.08
3.00	5.27	5.40	5.53	5.66	5.79
4.50	5.92	6.04	6.17	6.24	6.30
6.00	6.37	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
 Label: B75 - 100 Year Critical
 Scenario: 100yr 72hr

Return Event: 100 years
 Storm Event: 72h100y

Time-Depth Curve: 72h100y	
Label	72h100y
Start Time	0.00 hours
Increment	3.60 hours
End Time	72.00 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 3.60 hours

Time on left represents time for first value in each row.

Time (hours)	Depth (in)				
0.00	0.00	0.20	0.49	0.79	0.99
18.00	1.28	1.58	1.87	2.17	2.46
36.00	2.76	3.15	3.45	3.84	4.43
54.00	5.02	5.81	7.09	8.27	9.06
72.00	9.85	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time of Concentration Calculations
 Label: Area D1
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Time of Concentration Results	
Segment #1: User Defined Tc	
Time of Concentration	0.08 hours
Time of Concentration (Composite)	
Time of Concentration (Composite)	0.08 hours

Subsection: Time of Concentration Calculations
 Label: Area D1
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

==== User Defined
 Tc = Value entered by user
 Where: Tc= Time of concentration, hours

Subsection: Time of Concentration Calculations
Label: Area EX1
Scenario: 10yr 24hr

Return Event: 10 years
Storm Event: 24h10y

Time of Concentration Results

Segment #1: User Defined Tc	
Time of Concentration	0.30 hours

Time of Concentration (Composite)

Time of Concentration (Composite)	0.30 hours
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Subsection: Time of Concentration Calculations
Label: Area EX1
Scenario: 10yr 24hr

Return Event: 10 years
Storm Event: 24h10y

==== **User Defined**
Tc = Value entered by user
Where: Tc= Time of concentration, hours

Subsection: Time of Concentration Calculations
Label: Area FO
Scenario: 10yr 24hr

Return Event: 10 years
Storm Event: 24h10y

Time of Concentration Results

Segment #1: User Defined Tc	
Time of Concentration	1.00 hours

Time of Concentration (Composite)

Time of Concentration (Composite)	1.00 hours
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Subsection: Time of Concentration Calculations
Label: Area FO
Scenario: 10yr 24hr

Return Event: 10 years
Storm Event: 24h10y

==== **User Defined**
Tc = Value entered by user
Where: Tc= Time of concentration, hours

Subsection: Time of Concentration Calculations
Label: Area FO-US
Scenario: 10yr 24hr

Return Event: 10 years
Storm Event: 24h10y

Time of Concentration Results

Segment #1: User Defined Tc

Time of Concentration	0.75 hours
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Time of Concentration (Composite)

Time of Concentration (Composite)	0.75 hours
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Subsection: Time of Concentration Calculations
Label: Area FO-US
Scenario: 10yr 24hr

Return Event: 10 years
Storm Event: 24h10y

==== User Defined

Tc = Value entered by user
Where: Tc= Time of concentration, hours

Subsection: Time of Concentration Calculations
Label: Area PD1
Scenario: 10yr 24hr

Return Event: 10 years
Storm Event: 24h10y

Time of Concentration Results

Segment #1: User Defined Tc

Time of Concentration	0.49 hours
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Time of Concentration (Composite)

Time of Concentration (Composite)	0.49 hours
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Subsection: Time of Concentration Calculations
Label: Area PD1
Scenario: 10yr 24hr

Return Event: 10 years
Storm Event: 24h10y

==== User Defined

Tc = Value entered by user
Where: Tc= Time of concentration, hours

Subsection: Time of Concentration Calculations
Label: Area PD1-1
Scenario: 10yr 24hr

Return Event: 10 years
Storm Event: 24h10y

Time of Concentration Results

Segment #1: User Defined Tc

Time of Concentration	0.08 hours
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Time of Concentration (Composite)

Time of Concentration (Composite)	0.08 hours
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Subsection: Time of Concentration Calculations
Label: Area PD1-1
Scenario: 10yr 24hr

Return Event: 10 years
Storm Event: 24h10y

==== User Defined

Tc = Value entered by user
Where: Tc= Time of concentration, hours

Subsection: Time of Concentration Calculations
Label: Area PR
Scenario: 10yr 24hr

Return Event: 10 years
Storm Event: 24h10y

Time of Concentration Results

Segment #1: User Defined Tc

Time of Concentration	1.00 hours
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Time of Concentration (Composite)

Time of Concentration (Composite)	1.00 hours
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Subsection: Time of Concentration Calculations
Label: Area PR
Scenario: 10yr 24hr

Return Event: 10 years
Storm Event: 24h10y

==== User Defined

Tc = Value entered by user
Where: Tc= Time of concentration, hours

Subsection: Time of Concentration Calculations
Label: Area S1
Scenario: 10yr 24hr

Return Event: 10 years
Storm Event: 24h10y

Time of Concentration Results

Segment #1: User Defined Tc

Time of Concentration	0.11 hours
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Time of Concentration (Composite)

Time of Concentration (Composite)	0.11 hours
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Subsection: Time of Concentration Calculations
Label: Area S1
Scenario: 10yr 24hr

Return Event: 10 years
Storm Event: 24h10y

==== User Defined

Tc = Value entered by user
Where: Tc= Time of concentration, hours

Subsection: Time of Concentration Calculations
Label: Area S2
Scenario: 10yr 24hr

Return Event: 10 years
Storm Event: 24h10y

Time of Concentration Results

Segment #1: User Defined Tc

Time of Concentration	0.32 hours
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Time of Concentration (Composite)

Time of Concentration (Composite)	0.32 hours
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Subsection: Time of Concentration Calculations
Label: Area S2
Scenario: 10yr 24hr

Return Event: 10 years
Storm Event: 24h10y

==== User Defined

Tc = Value entered by user
Where: Tc= Time of concentration, hours

Subsection: Runoff CN-Area
 Label: Area D1
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area
 Label: Area EX1
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area
 Label: Area FO
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area
 Label: Area FO-US
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area
 Label: Area PD1
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area
 Label: Area PD1-1
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area
 Label: Area PR
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area
 Label: Area S1
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area
 Label: Area S2
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Elevation vs. Volume Curve
 Label: D1 Depression
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ac-ft)
658.50	0.000
659.00	0.004
659.10	0.006
659.50	0.015
660.00	0.035

Subsection: Elevation vs. Volume Curve
 Label: EX1 Depression
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ac-ft)
652.95	0.000
653.00	0.001
653.20	0.013
654.00	0.100

Subsection: Elevation vs. Volume Curve
 Label: FO Detention
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ac-ft)
654.10	0.000
656.40	0.000
658.50	1.710
660.00	2.800
660.50	3.200

Subsection: Elevation vs. Volume Curve
 Label: PD1 Pond
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ac-ft)
654.10	0.000
655.00	0.008
656.00	0.276
656.50	0.644

Subsection: Elevation vs. Volume Curve
 Label: PD1-1 Depression
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ac-ft)
657.90	0.000
658.00	0.000
658.20	0.006
658.50	0.020

Subsection: Elevation vs. Volume Curve
 Label: PR Detention
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ac-ft)
653.32	0.000
657.30	0.000
658.50	1.180

Subsection: Outlet Input Data
 Label: OF D1
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Requested Pond Water Surface Elevations	
Minimum (Headwater)	658.50 ft
Increment (Headwater)	0.05 ft
Maximum (Headwater)	660.00 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Irregular Weir	Weir D1	Forward	TW	659.10	660.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data
 Label: OF D1
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Structure ID: Weir D1
Structure Type: Irregular Weir

Station (ft)	Elevation (ft)
0.00	0.90
5.80	0.00
19.30	0.90

Lowest Elevation 659.10 ft
 Weir Coefficient 3.00 (ft^{0.5}/s)

Structure ID: TW
 Structure Type: TW Setup, DS Channel

Tailwater Type Free Outfall

Convergence Tolerances

Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft ³ /s
Flow Tolerance (Maximum)	10.000 ft ³ /s

Subsection: Outlet Input Data
 Label: OF EX1
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Requested Pond Water Surface Elevations	
Minimum (Headwater)	652.95 ft
Increment (Headwater)	0.05 ft
Maximum (Headwater)	654.00 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Irregular Weir	Weir EX1	Forward	TW	653.20	654.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data
 Label: OF EX1
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Structure ID: Weir EX1
Structure Type: Irregular Weir

Station (ft)	Elevation (ft)
0.00	0.80
42.50	0.00
60.20	0.80

Lowest Elevation 653.20 ft
 Weir Coefficient 3.00 (ft^{0.5}/s)

Structure ID: TW
 Structure Type: TW Setup, DS Channel

Tailwater Type Free Outfall

Convergence Tolerances

Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft ³ /s
Flow Tolerance (Maximum)	10.000 ft ³ /s

Subsection: Outlet Input Data
 Label: OF PD1-1
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Requested Pond Water Surface Elevations	
Minimum (Headwater)	657.90 ft
Increment (Headwater)	0.05 ft
Maximum (Headwater)	658.50 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Irregular Weir	Weir PD1-1	Forward	TW	658.20	658.50
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data
 Label: OF PD1-1
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Structure ID: Weir PD1-1
Structure Type: Irregular Weir

Station (ft)	Elevation (ft)
0.00	0.30
45.86	0.00
70.86	0.30

Lowest Elevation 658.20 ft
 Weir Coefficient 3.00 (ft^{0.5})/s

Structure ID: TW
 Structure Type: TW Setup, DS Channel

Tailwater Type Free Outfall

Convergence Tolerances

Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft ³ /s
Flow Tolerance (Maximum)	10.000 ft ³ /s

Subsection: Outlet Input Data
 Label: RF PR
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Requested Pond Water Surface Elevations	
Minimum (Headwater)	653.32 ft
Increment (Headwater)	0.05 ft
Maximum (Headwater)	658.50 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Orifice-Circular	Orifice PR	Forward	TW	653.32	658.50
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data
 Label: RF PR
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Structure ID: Orifice PR	
Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	653.32 ft
Orifice Diameter	15.00 in
Orifice Coefficient	0.820

Structure ID: TW
 Structure Type: TW Setup, DS Channel

Tailwater Type Free Outfall

Convergence Tolerances

Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft ³ /s
Flow Tolerance (Maximum)	10.000 ft ³ /s

Subsection: Outlet Input Data
 Label: RF/OF FO
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Requested Pond Water Surface Elevations	
Minimum (Headwater)	654.10 ft
Increment (Headwater)	0.05 ft
Maximum (Headwater)	660.50 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Orifice-Circular	Orifice FO	Forward	TW	654.10	660.50
Rectangular Weir	Weir FO	Forward	TW	660.00	660.50
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data
 Label: RF/OF FO
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Structure ID: Orifice FO	
Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	654.10 ft
Orifice Diameter	10.00 in
Orifice Coefficient	0.820

Structure ID: Weir FO	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	660.00 ft
Weir Length	20.00 ft
Weir Coefficient	3.00 (ft ^{0.5})/s

Subsection: Outlet Input Data
 Label: RF/OF PD1
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Requested Pond Water Surface Elevations	
Minimum (Headwater)	654.10 ft
Increment (Headwater)	0.05 ft
Maximum (Headwater)	656.50 ft

Outlet Connectivity					
Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Culvert-Circular	Culvert PD1	Forward	TW	654.14	656.50
Irregular Weir	Weir PD1	Forward	TW	655.94	656.50
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data
 Label: RF/OF PD1
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Structure ID: Weir PD1
Structure Type: Irregular Weir

Station (ft)	Elevation (ft)
0.00	0.56
30.00	0.00
53.00	0.56

Lowest Elevation	655.94 ft
Weir Coefficient	3.00 (ft ^{0.5})/s

Structure ID: Culvert PD1	
Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	8.00 in
Length	36.10 ft
Length (Computed Barrel)	36.10 ft
Slope (Computed)	0.011 ft/ft

Outlet Control Data	
Manning's n	0.013
Ke	0.200
Kb	0.054
Kr	0.200
Convergence Tolerance	0.00 ft

Inlet Control Data	
Equation Form	Form 1
K	0.0045
M	2.0000
C	0.0317
Y	0.6900
T1 ratio (HW/D)	1.089
T2 ratio (HW/D)	1.192
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.
 Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control, interpolate between flows at T1 & T2...

T1 Elevation	654.87 ft	T1 Flow	1.00 ft ³ /s
--------------	-----------	---------	-------------------------

Subsection: Outlet Input Data
 Label: RF/OF PD1
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Use unsubmerged inlet control 0 equation below T1 elevation.
 Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control, interpolate between flows at T1 & T2...

T2 Elevation	654.93 ft	T2 Flow	1.14 ft ³ /s
--------------	-----------	---------	-------------------------

Subsection: Outlet Input Data
Label: RF/OF PD1
Scenario: 10yr 24hr

Return Event: 10 years
Storm Event: 24h10y

Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft ³ /s
Flow Tolerance (Maximum)	10.000 ft ³ /s

Index

A

Area D1 (Runoff CN-Area, 10 years (10yr 24hr))...54

Area D1 (Time of Concentration Calculations, 10 years (10yr 24hr))...36, 37

Area EX1 (Runoff CN-Area, 10 years (10yr 24hr))...55

Area EX1 (Time of Concentration Calculations, 10 years (10yr 24hr))...38, 39

Area FO (Runoff CN-Area, 10 years (10yr 24hr))...56

Area FO (Time of Concentration Calculations, 10 years (10yr 24hr))...40, 41

Area FO-US (Runoff CN-Area, 10 years (10yr 24hr))...57

Area FO-US (Time of Concentration Calculations, 10 years (10yr 24hr))...42, 43

Area PD1 (Runoff CN-Area, 10 years (10yr 24hr))...58

Area PD1 (Time of Concentration Calculations, 10 years (10yr 24hr))...44, 45

Area PD1-1 (Runoff CN-Area, 10 years (10yr 24hr))...59

Area PD1-1 (Time of Concentration Calculations, 10 years (10yr 24hr))...46, 47

Area PR (Runoff CN-Area, 10 years (10yr 24hr))...60

Area PR (Time of Concentration Calculations, 10 years (10yr 24hr))...48, 49

Area S1 (Runoff CN-Area, 10 years (10yr 24hr))...61

Area S1 (Time of Concentration Calculations, 10 years (10yr 24hr))...50, 51

Area S2 (Runoff CN-Area, 10 years (10yr 24hr))...62

Area S2 (Time of Concentration Calculations, 10 years (10yr 24hr))...52, 53

B

B75 - 10 Year Critical (Time-Depth Curve, 10 years (10yr 24hr))...27

B75 - 100 Year Critical (Time-Depth Curve, 100 years (100yr 10m))...19

B75 - 100 Year Critical (Time-Depth Curve, 100 years (100yr 120hr))...20

B75 - 100 Year Critical (Time-Depth Curve, 100 years (100yr 12hr))...21

B75 - 100 Year Critical (Time-Depth Curve, 100 years (100yr 15m))...22

B75 - 100 Year Critical (Time-Depth Curve, 100 years (100yr 18hr))...23

B75 - 100 Year Critical (Time-Depth Curve, 100 years (100yr 1hr))...24

B75 - 100 Year Critical (Time-Depth Curve, 100 years (100yr 240hr))...25

B75 - 100 Year Critical (Time-Depth Curve, 100 years (100yr 24hr))...26

B75 - 100 Year Critical (Time-Depth Curve, 100 years (100yr 2hr))...29

B75 - 100 Year Critical (Time-Depth Curve, 100 years (100yr 30m))...30

B75 - 100 Year Critical (Time-Depth Curve, 100 years (100yr 3hr))...31

B75 - 100 Year Critical (Time-Depth Curve, 100 years (100yr 48hr))...32

B75 - 100 Year Critical (Time-Depth Curve, 100 years (100yr 5m))...33

B75 - 100 Year Critical (Time-Depth Curve, 100 years (100yr 6hr))...34

B75 - 100 Year Critical (Time-Depth Curve, 100 years (100yr 72hr))...35

B75 - 50 Year Critical (Time-Depth Curve, 50 years (50yr 24hr))...28

D

D1 Depression (Elevation vs. Volume Curve, 10 years (10yr 24hr))...63

E

EX1 Depression (Elevation vs. Volume Curve, 10 years (10yr 24hr))...64

F

FO Detention (Elevation vs. Volume Curve, 10 years (10yr 24hr))...65

M

Master Network Summary...2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18

O

OF D1 (Outlet Input Data, 10 years (10yr 24hr))...69, 70

OF EX1 (Outlet Input Data, 10 years (10yr 24hr))...71, 72

OF PD1-1 (Outlet Input Data, 10 years (10yr 24hr))...73, 74

P

PD1 Pond (Elevation vs. Volume Curve, 10 years (10yr 24hr))...66

PD1-1 Depression (Elevation vs. Volume Curve, 10 years (10yr 24hr))...67

PR Detention (Elevation vs. Volume Curve, 10 years (10yr 24hr))...68

R

RF PR (Outlet Input Data, 10 years (10yr 24hr))...75, 76

RF/OF FO (Outlet Input Data, 10 years (10yr 24hr))...77, 78

RF/OF PD1 (Outlet Input Data, 10 years (10yr 24hr))...79, 80, 81, 82



Appendix C – Proposed Conditions Drainage Analysis

Proposed Conditions Drainage Exhibit

MWRD Calculations Overview

Park District Storm Water Analysis

Curve Number & Adjusted Curve Number Calculations

Nomograph Calculations

Proposed Conditions PondPack Reports

Provided Detention & Volume Control Calculations

Orifice and Weir Discharge Rate Calculations

MWRD CALCULATION OVERVIEW

PROJECT: Reserve at Muir Park [61 Unit Plan]

PERMIT NUMBER: _____

LOCATION: 1001 Oak Avenue, Prospect Heights, IL

DATE: 7/22/2020

DEFINITIONS & CONSTRAINTS

1. Development Area	5.227	acres
2. Watershed Planning Area	Village Requirement	
3. Watershed Planning Area Release Rate	0.15	cfs/ac
4. Gross Allowable Release Rate	0.784	cfs
5. Unrestricted Release Rate (See Area Below)	0.120	cfs
6. Net Allowable Release Rate	0.664	cfs

AREAS / CURVE NUMBERS

7. Detained Area (See Calculations)	5.090	acres	93.49	CN
8. Unrestricted Area (See Calculations)	0.140	acres	80.00	CN

VOLUME CONTROL

9. Development Impervious Area	3.554	acres
10. Required Volume Control Storage	0.296	ac-ft

DETENTION

11. Methodology	Nomograph	
12. Calculated Storage Volume	2.239	acres
13. Additional Storage Volume (Depressional Storage * 150%)	0.132	acres
14. Total Required Storage Volume	2.371	acres

COMPOSITE RUNOFF CURVE NUMBER (CN)

PROJECT: Reserve at Muir Park - Detained Dev Area [61 Unit]

PERMIT NUMBER: _____

LOCATION: 1001 Oak Avenue, Prospect Heights, IL

DATE: 7/22/2020

TYPE OF AREA (SELECT WITH DROP-DOWN)

- | | |
|---|--|
| <input checked="" type="checkbox"/> DETAINED AREA | <input type="checkbox"/> MAJOR STORMWATER SYSTEM |
| <input type="checkbox"/> UNRESTRICTED AREA | <input type="checkbox"/> OTHER: _____ |
| <input type="checkbox"/> UPSTREAM AREA | |

CONDITION (SELECT WITH DROP-DOWN)

- | | |
|--|---|
| <input checked="" type="checkbox"/> PROPOSED CONDITION | <input type="checkbox"/> EXISTING CONDITION |
|--|---|

RUNOFF CURVE NUMBER

Surface Description	Hydrologic Soil Group (HSG)	CN	Area (acres)	Product (CN)(Area)
Water Surface	D	100	0.23	23.39
Impervious Surface	D	98	3.55	348.28
Pervious Surface	D	80	1.30	104.14

TOTALS:	5.09	475.81
---------	------	--------

COMPOSITE RUNOFF CURVE NUMBER

$$\text{Composite CN} = \frac{\text{Total Product}}{\text{Total Area}} = \frac{475.81}{5.09} \rightarrow \text{Composite CN} = \boxed{93.49}$$

COMPOSITE RUNOFF CURVE NUMBER (CN)

PROJECT: Reserve at Muir Park - Unrestricted [61 Unit Plan]

PERMIT NUMBER: _____

LOCATION: 1001 Oak Avenue, Prospect Heights, IL

DATE: 7/22/2020

TYPE OF AREA (SELECT WITH DROP-DOWN)

DETAINED AREA

MAJOR STORMWATER SYSTEM

UNRESTRICTED AREA

OTHER: _____

UPSTREAM AREA

CONDITION (SELECT WITH DROP-DOWN)

PROPOSED CONDITION

EXISTING CONDITION

RUNOFF CURVE NUMBER

Surface Description	Hydrologic Soil Group (HSG)	CN	Area (acres)	Product (CN)(Area)
Pervious Surface	D	80	0.14	10.96

TOTALS:

0.14	10.96
------	-------

COMPOSITE RUNOFF CURVE NUMBER

$$\text{Composite CN} = \frac{\text{Total Product}}{\text{Total Area}} = \frac{10.96}{0.14} \rightarrow \text{Composite CN} = \boxed{80.00}$$

COMPOSITE RUNOFF CURVE NUMBER (CN)

PROJECT: Reserve at Muir Park - Upstream Area [61 Unit Plan]

PERMIT NUMBER: _____

LOCATION: 1001 Oak Avenue, Prospect Heights, IL

DATE: 7/22/2020

TYPE OF AREA (SELECT WITH DROP-DOWN)

- | | |
|---|--|
| <input type="checkbox"/> DETAINED AREA | <input type="checkbox"/> MAJOR STORMWATER SYSTEM |
| <input type="checkbox"/> UNRESTRICTED AREA | <input type="checkbox"/> OTHER: _____ |
| <input checked="" type="checkbox"/> UPSTREAM AREA | |

CONDITION (SELECT WITH DROP-DOWN)

- | | |
|--|---|
| <input checked="" type="checkbox"/> PROPOSED CONDITION | <input type="checkbox"/> EXISTING CONDITION |
|--|---|

RUNOFF CURVE NUMBER

Surface Description	Hydrologic Soil Group (HSG)	CN	Area (acres)	Product (CN)(Area)
Impervious Surface	D	98	0.06	6.02
Pervious Surface	D	80	0.24	19.02

TOTALS:	0.30	25.04
---------	------	-------

COMPOSITE RUNOFF CURVE NUMBER

$$\text{Composite CN} = \frac{\text{Total Product}}{\text{Total Area}} = \frac{25.04}{0.30} \rightarrow \text{Composite CN} = \boxed{83.69}$$

COMPOSITE RUNOFF CURVE NUMBER (CN)

PROJECT: Reserves at Muir Park - AREA PD1

PERMIT NUMBER: _____

LOCATION: 1001 Oak Avenue, Prospect Heights, IL

DATE: 5/22/2020

TYPE OF AREA (SELECT WITH DROP-DOWN)

DETAINED AREA

MAJOR STORMWATER SYSTEM

UNRESTRICTED AREA

OTHER: _____

UPSTREAM AREA

CONDITION (SELECT WITH DROP-DOWN)

PROPOSED CONDITION

EXISTING CONDITION

RUNOFF CURVE NUMBER

Surface Description	Hydrologic Soil Group (HSG)	CN	Area (acres)	Product (CN)(Area)
Impervious Surface	D	98	1.13	110.35
Pervious Surface	D	80	4.81	384.65

TOTALS:

5.93

495.01

COMPOSITE RUNOFF CURVE NUMBER

$$\text{Composite CN} = \frac{\text{Total Product}}{\text{Total Area}} = \frac{495.01}{5.93} \rightarrow \text{Composite CN} = \boxed{83.42}$$

COMPOSITE RUNOFF CURVE NUMBER (CN)

PROJECT: Reserves at Muir Park - AREA PD1

PERMIT NUMBER: _____

LOCATION: 1001 Oak Avenue, Prospect Heights, IL

DATE: 5/22/2020

TYPE OF AREA (SELECT WITH DROP-DOWN)

- DETAINED AREA
 MAJOR STORMWATER SYSTEM
 UNRESTRICTED AREA
 OTHER: _____
 UPSTREAM AREA

CONDITION (SELECT WITH DROP-DOWN)

- PROPOSED CONDITION
 EXISTING CONDITION

RUNOFF CURVE NUMBER

Surface Description	Hydrologic Soil Group (HSG)	CN	Area (acres)	Product (CN)(Area)
Impervious Surface	D	98	0.05	4.90
Pervious Surface	D	80	0.26	20.98

TOTALS: 0.31 25.88

COMPOSITE RUNOFF CURVE NUMBER

$$\text{Composite CN} = \frac{\text{Total Product}}{\text{Total Area}} = \frac{\boxed{25.88}}{\boxed{0.31}} \rightarrow \text{Composite CN} = \boxed{82.88}$$

COMPOSITE RUNOFF CURVE NUMBER (CN)

PROJECT: Reserves at Muir Park - AREA PR

PERMIT NUMBER: _____

LOCATION: 1001 Oak Avenue, Prospect Heights, IL

DATE: 5/22/2020

TYPE OF AREA (SELECT WITH DROP-DOWN)

DETAINED AREA

MAJOR STORMWATER SYSTEM

UNRESTRICTED AREA

OTHER: _____

UPSTREAM AREA

CONDITION (SELECT WITH DROP-DOWN)

PROPOSED CONDITION

EXISTING CONDITION

RUNOFF CURVE NUMBER

Surface Description	Hydrologic Soil Group (HSG)	CN	Area (acres)	Product (CN)(Area)
Impervious Surface	D	98	4.91	481.18
Pervious Surface	D	80	4.19	335.20

TOTALS:	9.10	816.38
---------	------	--------

COMPOSITE RUNOFF CURVE NUMBER

$$\text{Composite CN} = \frac{\text{Total Product}}{\text{Total Area}} = \frac{816.38}{9.10} \rightarrow \text{Composite CN} = \boxed{89.71}$$

COMPOSITE RUNOFF CURVE NUMBER (CN)

PROJECT: Reserves at Muir Park - AREA FO _____

PERMIT NUMBER: _____

LOCATION: 1001 Oak Avenue, Prospect Heights, IL _____

DATE: 5/22/2020 _____

TYPE OF AREA (SELECT WITH DROP-DOWN)

DETAINED AREA

MAJOR STORMWATER SYSTEM

UNRESTRICTED AREA

OTHER: _____

UPSTREAM AREA

CONDITION (SELECT WITH DROP-DOWN)

PROPOSED CONDITION

EXISTING CONDITION

RUNOFF CURVE NUMBER

Surface Description	Hydrologic Soil Group (HSG)	CN	Area (acres)	Product (CN)(Area)
Impervious Surface	D	98	3.89	381.22
Pervious Surface	D	80	5.48	438.40

TOTALS:

9.37

819.62

COMPOSITE RUNOFF CURVE NUMBER

$$\text{Composite CN} = \frac{\text{Total Product}}{\text{Total Area}} = \frac{819.62}{9.37} \rightarrow \text{Composite CN} = \boxed{87.47}$$

ADJUSTED COMPOSITE RUNOFF CURVE NUMBER (CN_{ADJ})

PROJECT: Reserve at Muir Park - Detained Dev Area [61 Unit]

PERMIT NUMBER: _____

LOCATION: 1001 Oak Avenue, Prospect Heights, IL

DATE: 7/22/2020

DEVELOPMENT INFORMATION

1. Area Detained, A	5.090	acres
2. Total Impervious Area	3.554	acres
3. Composite CN	93.49	
4. Volume Control Storage Provided, VC_P	0.301	ac-ft
5. Depth of Rainfall, P	8.57	inches

RUNOFF VOLUME (NRCS EQUATIONS)

6. Maximum Retention, S	$S = \frac{1000}{CN} - 10$	0.70	inches
7. Runoff Depth, Q_D	$Q_D = \frac{(P - 0.2S)^2}{(P + 0.8S)}$	7.79	inches
8. Runoff Volume, V_R	$V_R = Q_D A \left(\frac{1}{12 \frac{in}{ft}} \right)$	3.30	ac-ft

VOLUME CONTROL STORAGE

9. Volume Control Storage Required, VC_R	0.296	ac-ft
10. Additional Volume Control Storage Provided	0.005	ac-ft

ADJUSTED RUNOFF VOLUME

11. Adjusted Runoff Volume, V_{ADJ}	$V_{ADJ} = V_R - VC_P$	3.002	ac-ft
12. Adjusted Runoff Depth, Q_{ADJ}		7.08	inches
13. Adjusted Maximum Retention, S_{ADJ}		1.42	inches

ADJUSTED COMPOSITE RUNOFF CURVE NUMBER

14. Adjusted Runoff Curve Number, CN_{ADJ}	87.60
--	-------

NOMOGRAPH: BULLETIN 70 RAINFALL DATA (2019)

PROJECT: Reserve at Muir Park [61 Unit Plan]

PERMIT NUMBER: _____

LOCATION: 1001 Oak Avenue, Prospect Heights, IL

DATE: 7/22/2020

DEVELOPMENT INFORMATION

1. Detained Area

5.090

acres

2. Curve Number

87.60

3. Actual Release Rate

0.714

cfs

REQUIRED DETENTION VOLUME

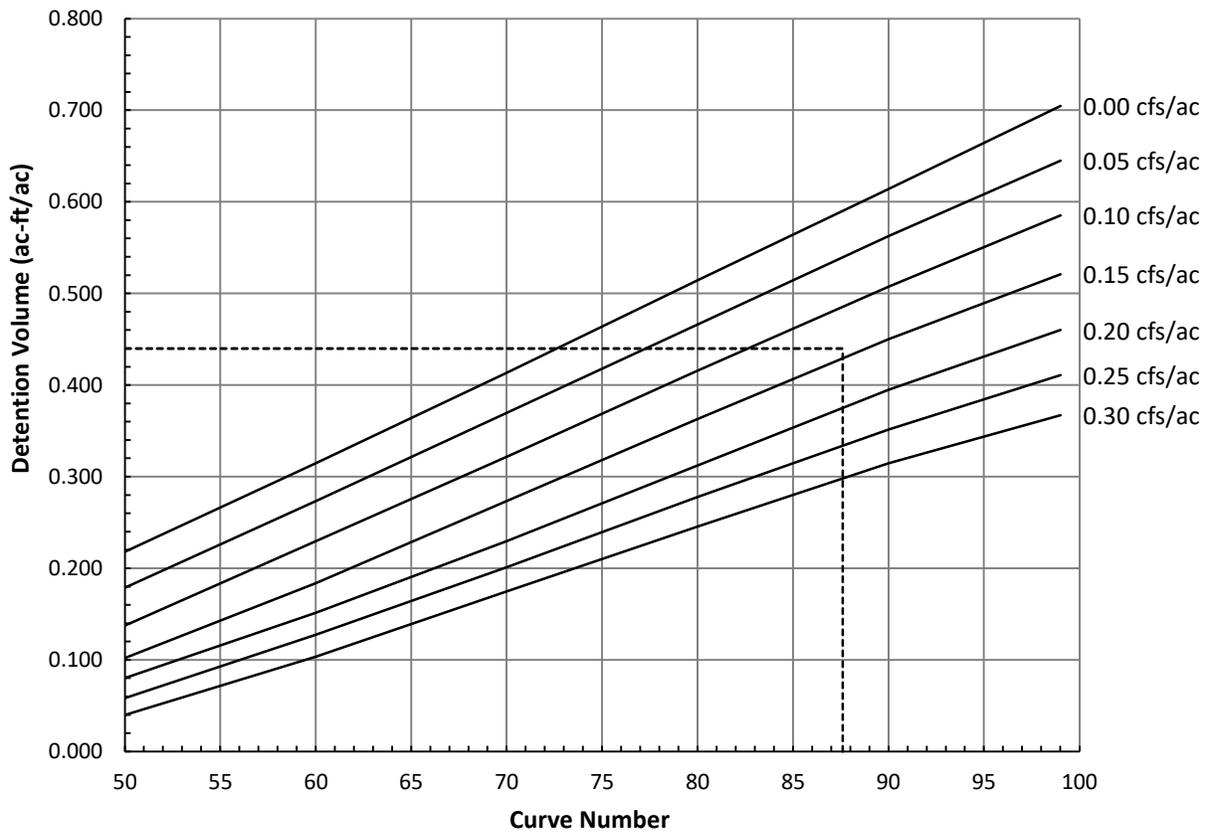
4. Required Detention Volume

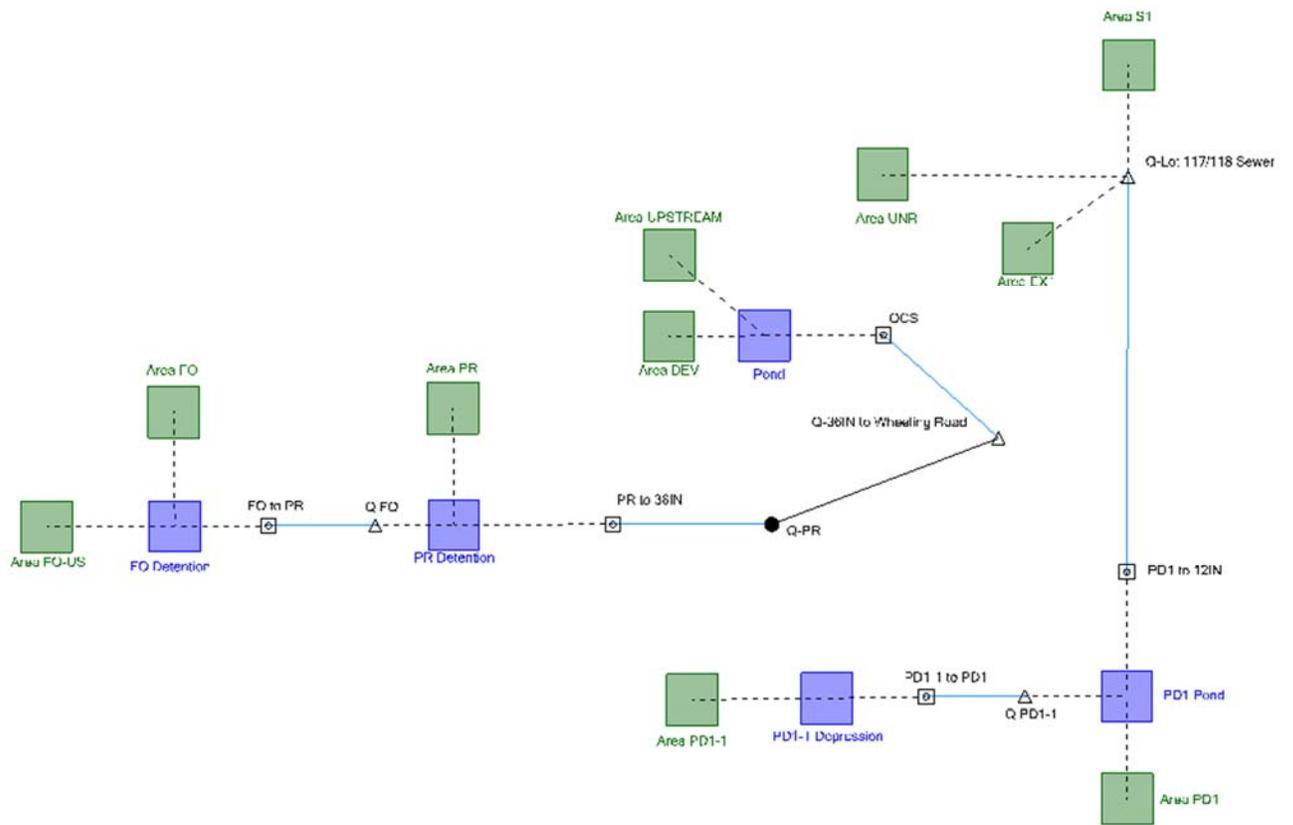
2.239

ac-ft

NOMOGRAPH

NOMOGRAPH: BULLETIN 70 (2019)





Proposed Conditions PondPack Reports

Project Summary

Title	Reserve at Muir Park (61 Unit Plan)
Engineer	PAC
Company	Haeger Engineering LLC
Date	7/22/2020

Notes Proposed Conditions 24 Hour, 10-, 50- & 100-Year Critical Duration Analysis

18219 - Proposed Conditions - 61 Unit - PD to 12N.ppc
7/22/2020

Bentley Systems, Inc. Haestad Methods Solution Center
27 Siemon Company Drive Suite 200 W Watertown, CT 06795 USA +1-203-755-1666

PondPack CONNECT Edition [10.02.00.01]
Page 1 of 80

Table of Contents

Master Network Summary	2
B75 - 100 Year Critical	
Time-Depth Curve, 100 years (100yr 10m)	15
Time-Depth Curve, 100 years (100yr 120hr)	16
Time-Depth Curve, 100 years (100yr 12hr)	17
Time-Depth Curve, 100 years (100yr 15m)	18
Time-Depth Curve, 100 years (100yr 18hr)	19
Time-Depth Curve, 100 years (100yr 1hr)	20
Time-Depth Curve, 100 years (100yr 240hr)	21
Time-Depth Curve, 100 years (100yr 24hr)	22
B75 - 10 Year Critical	
Time-Depth Curve, 10 years (10yr 24hr)	23
B75 - 50 Year Critical	
Time-Depth Curve, 50 years (50yr 24hr)	24
B75 - 100 Year Critical	
Time-Depth Curve, 100 years (100yr 2hr)	25
Time-Depth Curve, 100 years (100yr 30m)	26
Time-Depth Curve, 100 years (100yr 3hr)	27
Time-Depth Curve, 100 years (100yr 48hr)	28
Time-Depth Curve, 100 years (100yr 5m)	29
Time-Depth Curve, 100 years (100yr 6hr)	30
Time-Depth Curve, 100 years (100yr 72hr)	31
Area DEV	
Time of Concentration Calculations, 10 years (10yr 24hr)	32
Area EX1	
Time of Concentration Calculations, 10 years (10yr 24hr)	34
Area FO	
Time of Concentration Calculations, 10 years (10yr 24hr)	36
Area FO-US	
Time of Concentration Calculations, 10 years (10yr 24hr)	38
Area PD1	
Time of Concentration Calculations, 10 years (10yr 24hr)	40
Area PD1-1	
Time of Concentration Calculations, 10 years (10yr 24hr)	42

Table of Contents

Area PR	Time of Concentration Calculations, 10 years (10yr 24hr)	44
Area S1	Time of Concentration Calculations, 10 years (10yr 24hr)	46
Area UNR	Time of Concentration Calculations, 10 years (10yr 24hr)	48
Area UPSTREAM	Time of Concentration Calculations, 10 years (10yr 24hr)	50
Area DEV	Runoff CN-Area, 10 years (10yr 24hr)	52
Area EX1	Runoff CN-Area, 10 years (10yr 24hr)	53
Area FO	Runoff CN-Area, 10 years (10yr 24hr)	54
Area FO-US	Runoff CN-Area, 10 years (10yr 24hr)	55
Area PD1	Runoff CN-Area, 10 years (10yr 24hr)	56
Area PD1-1	Runoff CN-Area, 10 years (10yr 24hr)	57
Area PR	Runoff CN-Area, 10 years (10yr 24hr)	58
Area S1	Runoff CN-Area, 10 years (10yr 24hr)	59
Area UNR	Runoff CN-Area, 10 years (10yr 24hr)	60
Area UPSTREAM	Runoff CN-Area, 10 years (10yr 24hr)	61
FO Detention	Elevation vs. Volume Curve, 10 years (10yr 24hr)	62
PD1 Pond	Elevation vs. Volume Curve, 10 years (10yr 24hr)	63
PD1-1 Depression	Elevation vs. Volume Curve, 10 years (10yr 24hr)	64

Table of Contents

Pond	Elevation vs. Volume Curve, 10 years (10yr 24hr)	65
PR Detention	Elevation vs. Volume Curve, 10 years (10yr 24hr)	66
OF PD1-1	Outlet Input Data, 10 years (10yr 24hr)	67
RF PR	Outlet Input Data, 10 years (10yr 24hr)	69
RF/OF FO	Outlet Input Data, 10 years (10yr 24hr)	71
RF/OF PD1	Outlet Input Data, 10 years (10yr 24hr)	73
RF/OF Pond	Outlet Input Data, 10 years (10yr 24hr)	77

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)
Area UNR	10yr 24hr	10	0.035	15.60	0.06
Area UNR	50yr 24hr	50	0.059	15.60	0.10
Area UNR	100yr 5m	100	0.001	0.10	0.14
Area UNR	100yr 10m	100	0.005	0.10	0.64
Area UNR	100yr 15m	100	0.009	0.15	0.57
Area UNR	100yr 30m	100	0.016	0.15	0.69
Area UNR	100yr 1hr	100	0.024	0.25	0.60
Area UNR	100yr 2hr	100	0.033	0.25	0.46
Area UNR	100yr 3hr	100	0.038	0.30	0.40
Area UNR	100yr 6hr	100	0.048	0.60	0.30
Area UNR	100yr 12hr	100	0.059	4.80	0.17
Area UNR	100yr 18hr	100	0.065	11.70	0.15
Area UNR	100yr 24hr	100	0.071	15.60	0.12
Area UNR	100yr 48hr	100	0.080	40.50	0.06
Area UNR	100yr 72hr	100	0.086	61.00	0.05
Area UNR	100yr 120hr	100	0.095	102.00	0.03
Area UNR	100yr 240hr	100	0.118	204.00	0.02
Area FO	10yr 24hr	10	2.858	15.70	4.59
Area FO	50yr 24hr	50	4.600	15.70	7.07
Area FO	100yr 5m	100	0.179	0.65	2.41
Area FO	100yr 10m	100	0.587	0.65	7.92
Area FO	100yr 15m	100	0.892	0.70	11.83
Area FO	100yr 30m	100	1.453	0.80	18.40
Area FO	100yr 1hr	100	2.051	0.95	21.69
Area FO	100yr 2hr	100	2.727	1.05	21.95
Area FO	100yr 3hr	100	3.107	1.20	20.35
Area FO	100yr 6hr	100	3.801	1.45	15.85
Area FO	100yr 12hr	100	4.570	5.50	11.80
Area FO	100yr 18hr	100	5.021	11.90	9.97
Area FO	100yr 24hr	100	5.405	15.70	8.19
Area FO	100yr 48hr	100	6.012	41.00	4.54
Area FO	100yr 72hr	100	6.449	61.00	3.24
Area FO	100yr 120hr	100	7.071	102.00	2.12
Area FO	100yr 240hr	100	8.603	204.00	1.27
Area PR	10yr 24hr	10	3.012	15.70	4.67
Area PR	50yr 24hr	50	4.732	15.70	7.05
Area PR	100yr 5m	100	0.248	0.65	3.34
Area PR	100yr 10m	100	0.702	0.65	9.47
Area PR	100yr 15m	100	1.024	0.70	13.58
Area PR	100yr 30m	100	1.601	0.80	20.29
Area PR	100yr 1hr	100	2.206	0.95	23.37
Area PR	100yr 2hr	100	2.881	1.05	23.47
Area PR	100yr 3hr	100	3.259	1.20	21.61
Area PR	100yr 6hr	100	3.945	1.35	16.89
Area PR	100yr 12hr	100	4.703	5.40	11.92

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)
Area PR	100yr 18hr	100	5.146	11.90	9.92
Area PR	100yr 24hr	100	5.523	15.70	8.13
Area PR	100yr 48hr	100	6.118	41.00	4.48
Area PR	100yr 72hr	100	6.545	61.00	3.19
Area PR	100yr 120hr	100	7.154	102.00	2.08
Area PR	100yr 240hr	100	8.651	204.00	1.24
Area FO-US	10yr 24hr	10	1.572	15.70	2.79
Area FO-US	50yr 24hr	50	2.736	15.60	4.34
Area FO-US	100yr 5m	100	0.086	0.50	1.56
Area FO-US	100yr 10m	100	0.315	0.50	5.72
Area FO-US	100yr 15m	100	0.492	0.60	8.51
Area FO-US	100yr 30m	100	0.824	0.70	13.04
Area FO-US	100yr 1hr	100	1.183	0.70	14.81
Area FO-US	100yr 2hr	100	1.592	0.90	14.61
Area FO-US	100yr 3hr	100	1.823	1.00	13.15
Area FO-US	100yr 6hr	100	2.247	1.20	9.82
Area FO-US	100yr 12hr	100	2.717	5.30	7.24
Area FO-US	100yr 18hr	100	2.993	11.80	6.21
Area FO-US	100yr 24hr	100	3.229	15.60	5.05
Area FO-US	100yr 48hr	100	3.602	40.50	2.78
Area FO-US	100yr 72hr	100	3.871	61.00	1.98
Area FO-US	100yr 120hr	100	4.253	102.00	1.30
Area FO-US	100yr 240hr	100	5.198	204.00	0.78
Area EX1	10yr 24hr	10	0.263	15.60	0.45
Area EX1	50yr 24hr	50	0.434	15.60	0.71
Area EX1	100yr 5m	100	0.012	0.20	0.54
Area EX1	100yr 10m	100	0.048	0.20	2.10
Area EX1	100yr 15m	100	0.075	0.30	2.78
Area EX1	100yr 30m	100	0.128	0.35	3.56
Area EX1	100yr 1hr	100	0.185	0.40	3.65
Area EX1	100yr 2hr	100	0.250	0.55	3.04
Area EX1	100yr 3hr	100	0.288	0.55	2.53
Area EX1	100yr 6hr	100	0.356	0.70	1.96
Area EX1	100yr 12hr	100	0.431	4.90	1.20
Area EX1	100yr 18hr	100	0.476	11.70	1.02
Area EX1	100yr 24hr	100	0.514	15.60	0.82
Area EX1	100yr 48hr	100	0.574	40.50	0.45
Area EX1	100yr 72hr	100	0.618	61.00	0.32
Area EX1	100yr 120hr	100	0.679	102.00	0.21
Area EX1	100yr 240hr	100	0.832	204.00	0.13
Area S1	10yr 24hr	10	0.097	15.60	0.17
Area S1	50yr 24hr	50	0.161	15.60	0.27
Area S1	100yr 5m	100	0.004	0.10	0.43
Area S1	100yr 10m	100	0.017	0.10	1.76
Area S1	100yr 15m	100	0.027	0.15	1.71

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)
Area S1	100yr 30m	100	0.046	0.20	1.90
Area S1	100yr 1hr	100	0.068	0.25	1.68
Area S1	100yr 2hr	100	0.092	0.25	1.33
Area S1	100yr 3hr	100	0.106	0.35	1.16
Area S1	100yr 6hr	100	0.131	0.60	0.84
Area S1	100yr 12hr	100	0.160	4.80	0.46
Area S1	100yr 18hr	100	0.177	11.70	0.38
Area S1	100yr 24hr	100	0.191	15.60	0.31
Area S1	100yr 48hr	100	0.215	40.50	0.17
Area S1	100yr 72hr	100	0.230	61.00	0.12
Area S1	100yr 120hr	100	0.254	102.00	0.08
Area S1	100yr 240hr	100	0.311	204.00	0.05
Area DEV	10yr 24hr	10	1.822	15.60	2.77
Area DEV	50yr 24hr	50	2.796	15.50	4.10
Area DEV	100yr 5m	100	0.193	0.15	14.02
Area DEV	100yr 10m	100	0.477	0.15	34.27
Area DEV	100yr 15m	100	0.673	0.15	35.01
Area DEV	100yr 30m	100	1.012	0.20	39.55
Area DEV	100yr 1hr	100	1.362	0.25	34.44
Area DEV	100yr 2hr	100	1.748	0.30	27.90
Area DEV	100yr 3hr	100	1.962	0.35	24.20
Area DEV	100yr 6hr	100	2.352	0.60	16.38
Area DEV	100yr 12hr	100	2.779	4.80	7.41
Area DEV	100yr 18hr	100	3.029	11.60	5.88
Area DEV	100yr 24hr	100	3.242	15.50	4.70
Area DEV	100yr 48hr	100	3.581	40.50	2.55
Area DEV	100yr 72hr	100	3.820	61.00	1.81
Area DEV	100yr 120hr	100	4.162	102.00	1.18
Area DEV	100yr 240hr	100	5.002	204.00	0.70
Area UPSTREAM	10yr 24hr	10	0.084	15.60	0.14
Area UPSTREAM	50yr 24hr	50	0.139	15.60	0.23
Area UPSTREAM	100yr 5m	100	0.004	0.15	0.29
Area UPSTREAM	100yr 10m	100	0.015	0.15	1.11
Area UPSTREAM	100yr 15m	100	0.024	0.20	1.24
Area UPSTREAM	100yr 30m	100	0.041	0.20	1.48
Area UPSTREAM	100yr 1hr	100	0.059	0.30	1.38
Area UPSTREAM	100yr 2hr	100	0.080	0.35	1.06
Area UPSTREAM	100yr 3hr	100	0.092	0.40	0.93
Area UPSTREAM	100yr 6hr	100	0.113	0.65	0.71
Area UPSTREAM	100yr 12hr	100	0.138	4.80	0.39
Area UPSTREAM	100yr 18hr	100	0.152	11.70	0.33
Area UPSTREAM	100yr 24hr	100	0.164	15.60	0.26
Area UPSTREAM	100yr 48hr	100	0.184	40.50	0.14
Area UPSTREAM	100yr 72hr	100	0.197	61.00	0.10
Area UPSTREAM	100yr 120hr	100	0.217	102.00	0.07

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)
Area UPSTREAM	100yr 240hr	100	0.266	204.00	0.04
Area PD1-1	10yr 24hr	10	0.084	15.60	0.15
Area PD1-1	50yr 24hr	50	0.140	15.60	0.23
Area PD1-1	100yr 5m	100	0.004	0.10	0.47
Area PD1-1	100yr 10m	100	0.015	0.10	1.75
Area PD1-1	100yr 15m	100	0.023	0.10	1.57
Area PD1-1	100yr 30m	100	0.040	0.15	1.83
Area PD1-1	100yr 1hr	100	0.059	0.25	1.49
Area PD1-1	100yr 2hr	100	0.080	0.25	1.21
Area PD1-1	100yr 3hr	100	0.092	0.30	1.04
Area PD1-1	100yr 6hr	100	0.114	0.60	0.75
Area PD1-1	100yr 12hr	100	0.139	4.80	0.40
Area PD1-1	100yr 18hr	100	0.154	11.70	0.33
Area PD1-1	100yr 24hr	100	0.166	15.60	0.27
Area PD1-1	100yr 48hr	100	0.188	40.50	0.15
Area PD1-1	100yr 72hr	100	0.201	61.00	0.10
Area PD1-1	100yr 120hr	100	0.221	102.00	0.07
Area PD1-1	100yr 240hr	100	0.271	204.00	0.04
Area PD1	10yr 24hr	10	1.615	15.60	2.78
Area PD1	50yr 24hr	50	2.688	15.60	4.39
Area PD1	100yr 5m	100	0.067	0.35	1.82
Area PD1	100yr 10m	100	0.278	0.35	7.52
Area PD1	100yr 15m	100	0.448	0.40	11.46
Area PD1	100yr 30m	100	0.771	0.50	16.27
Area PD1	100yr 1hr	100	1.127	0.55	17.81
Area PD1	100yr 2hr	100	1.536	0.70	16.34
Area PD1	100yr 3hr	100	1.767	0.85	14.15
Area PD1	100yr 6hr	100	2.194	0.90	10.31
Area PD1	100yr 12hr	100	2.669	5.00	7.33
Area PD1	100yr 18hr	100	2.949	11.70	6.33
Area PD1	100yr 24hr	100	3.188	15.60	5.11
Area PD1	100yr 48hr	100	3.565	40.50	2.81
Area PD1	100yr 72hr	100	3.841	61.00	2.01
Area PD1	100yr 120hr	100	4.229	102.00	1.31
Area PD1	100yr 240hr	100	5.190	204.00	0.79

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)
Q-36IN to Wheeling Road	10yr 24hr	10	9.449	15.80	9.71
Q-36IN to Wheeling Road	50yr 24hr	50	15.003	15.90	12.36

Subsection: Master Network Summary

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)
Q-36IN to Wheeling Road	100yr 5m	100	0.709	0.65	7.53
Q-36IN to Wheeling Road	100yr 10m	100	2.097	0.70	12.61
Q-36IN to Wheeling Road	100yr 15m	100	3.106	0.85	14.97
Q-36IN to Wheeling Road	100yr 30m	100	4.931	1.20	15.84
Q-36IN to Wheeling Road	100yr 1hr	100	6.862	1.55	16.51
Q-36IN to Wheeling Road	100yr 2hr	100	9.031	2.50	17.35
Q-36IN to Wheeling Road	100yr 3hr	100	10.242	3.05	17.51
Q-36IN to Wheeling Road	100yr 6hr	100	12.327	3.60	16.99
Q-36IN to Wheeling Road	100yr 12hr	100	14.913	7.70	15.94
Q-36IN to Wheeling Road	100yr 18hr	100	16.341	12.00	15.02
Q-36IN to Wheeling Road	100yr 24hr	100	17.564	15.90	13.60
Q-36IN to Wheeling Road	100yr 48hr	100	19.498	43.50	9.93
Q-36IN to Wheeling Road	100yr 72hr	100	20.882	61.50	8.37
Q-36IN to Wheeling Road	100yr 120hr	100	22.857	102.00	6.01
Q-36IN to Wheeling Road	100yr 240hr	100	27.720	204.00	3.76
Q-Lot 117/118 Sewer	10yr 24hr	10	2.088	15.60	2.50
Q-Lot 117/118 Sewer	50yr 24hr	50	3.477	15.60	5.38
Q-Lot 117/118 Sewer	100yr 5m	100	0.084	0.30	1.68
Q-Lot 117/118 Sewer	100yr 10m	100	0.356	0.15	4.22
Q-Lot 117/118 Sewer	100yr 15m	100	0.576	0.25	5.46
Q-Lot 117/118 Sewer	100yr 30m	100	0.995	0.75	8.98
Q-Lot 117/118 Sewer	100yr 1hr	100	1.456	0.85	14.46
Q-Lot 117/118 Sewer	100yr 2hr	100	1.985	1.00	15.53
Q-Lot 117/118 Sewer	100yr 3hr	100	2.285	1.15	14.38
Q-Lot 117/118 Sewer	100yr 6hr	100	2.837	1.55	11.21
Q-Lot 117/118 Sewer	100yr 12hr	100	3.452	5.40	9.21
Q-Lot 117/118 Sewer	100yr 18hr	100	3.815	11.70	8.03
Q-Lot 117/118 Sewer	100yr 24hr	100	4.124	15.60	6.52
Q-Lot 117/118 Sewer	100yr 48hr	100	4.615	43.00	3.37
Q-Lot 117/118 Sewer	100yr 72hr	100	4.970	64.50	2.31
Q-Lot 117/118 Sewer	100yr 120hr	100	5.472	102.00	1.69
Q-Lot 117/118 Sewer	100yr 240hr	100	6.716	204.00	1.02

Subsection: Master Network Summary

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)
Q-PR	10yr 24hr	10	7.543	15.80	9.18
Q-PR	50yr 24hr	50	12.068	15.90	11.75
Q-PR	100yr 5m	100	0.513	0.65	7.08
Q-PR	100yr 10m	100	1.605	0.70	12.12
Q-PR	100yr 15m	100	2.409	0.85	14.45
Q-PR	100yr 30m	100	3.878	1.20	15.28
Q-PR	100yr 1hr	100	5.441	1.55	15.92
Q-PR	100yr 2hr	100	7.203	2.50	16.72
Q-PR	100yr 3hr	100	8.189	3.05	16.87
Q-PR	100yr 6hr	100	9.993	3.60	16.34
Q-PR	100yr 12hr	100	11.995	7.70	15.28
Q-PR	100yr 18hr	100	13.159	12.00	14.38
Q-PR	100yr 24hr	100	14.158	15.90	12.97
Q-PR	100yr 48hr	100	15.734	43.50	9.31
Q-PR	100yr 72hr	100	16.865	59.50	7.83
Q-PR	100yr 120hr	100	18.478	102.00	5.49
Q-PR	100yr 240hr	100	22.452	204.00	3.29

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
PR Detention (IN)	10yr 24hr	10	7.542	15.80	9.19	(N/A)	(N/A)
PR Detention (OUT)	10yr 24hr	10	7.541	15.80	9.18	655.24	0.000
PR Detention (IN)	50yr 24hr	50	12.068	15.80	11.76	(N/A)	(N/A)
PR Detention (OUT)	50yr 24hr	50	12.068	15.90	11.75	656.07	0.000
PR Detention (IN)	100yr 5m	100	0.512	0.65	7.11	(N/A)	(N/A)
PR Detention (OUT)	100yr 5m	100	0.512	0.65	7.08	654.71	0.000
PR Detention (IN)	100yr 10m	100	1.605	0.65	12.14	(N/A)	(N/A)
PR Detention (OUT)	100yr 10m	100	1.605	0.70	12.12	656.20	0.000
PR Detention (IN)	100yr 15m	100	2.409	0.80	15.14	(N/A)	(N/A)
PR Detention (OUT)	100yr 15m	100	2.409	0.85	14.45	657.15	0.000
PR Detention (IN)	100yr 30m	100	3.878	0.80	21.92	(N/A)	(N/A)

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
PR Detention (OUT)	100yr 30m	100	3.878	1.20	15.28	657.53	0.226
PR Detention (IN)	100yr 1hr	100	5.441	0.95	26.08	(N/A)	(N/A)
PR Detention (OUT)	100yr 1hr	100	5.441	1.55	15.92	657.83	0.525
PR Detention (IN)	100yr 2hr	100	7.200	1.10	26.32	(N/A)	(N/A)
PR Detention (OUT)	100yr 2hr	100	7.200	2.50	16.72	658.23	0.919
PR Detention (IN)	100yr 3hr	100	8.188	1.20	24.61	(N/A)	(N/A)
PR Detention (OUT)	100yr 3hr	100	8.188	3.05	16.87	658.31	0.994
PR Detention (IN)	100yr 6hr	100	9.993	2.90	21.60	(N/A)	(N/A)
PR Detention (OUT)	100yr 6hr	100	9.993	3.60	16.34	658.04	0.731
PR Detention (IN)	100yr 12hr	100	11.990	7.00	17.52	(N/A)	(N/A)
PR Detention (OUT)	100yr 12hr	100	11.990	7.70	15.28	657.53	0.224
PR Detention (IN)	100yr 18hr	100	13.159	12.00	14.41	(N/A)	(N/A)
PR Detention (OUT)	100yr 18hr	100	13.159	12.00	14.38	657.12	0.000
PR Detention (IN)	100yr 24hr	100	14.157	15.80	12.97	(N/A)	(N/A)
PR Detention (OUT)	100yr 24hr	100	14.157	15.90	12.97	656.52	0.000
PR Detention (IN)	100yr 48hr	100	15.733	43.00	9.33	(N/A)	(N/A)
PR Detention (OUT)	100yr 48hr	100	15.733	43.50	9.31	655.27	0.000
PR Detention (IN)	100yr 72hr	100	16.865	59.00	7.92	(N/A)	(N/A)
PR Detention (OUT)	100yr 72hr	100	16.865	59.50	7.83	654.89	0.000
PR Detention (IN)	100yr 120hr	100	18.478	102.00	5.50	(N/A)	(N/A)
PR Detention (OUT)	100yr 120hr	100	18.478	102.00	5.49	654.55	0.000
PR Detention (IN)	100yr 240hr	100	22.452	204.00	3.29	(N/A)	(N/A)
PR Detention (OUT)	100yr 240hr	100	22.452	204.00	3.29	654.35	0.000

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
FO Detention (IN)	10yr 24hr	10	4.530	15.70	7.38	(N/A)	(N/A)
FO Detention (OUT)	10yr 24hr	10	4.530	18.00	5.18	657.00	0.493
FO Detention (IN)	50yr 24hr	50	7.335	15.70	11.41	(N/A)	(N/A)
FO Detention (OUT)	50yr 24hr	50	7.335	19.10	6.30	658.40	1.632
FO Detention (IN)	100yr 5m	100	0.265	0.60	3.80	(N/A)	(N/A)
FO Detention (OUT)	100yr 5m	100	0.265	0.60	3.79	655.80	0.000
FO Detention (IN)	100yr 10m	100	0.903	0.60	13.03	(N/A)	(N/A)
FO Detention (OUT)	100yr 10m	100	0.903	1.80	5.31	656.96	0.452
FO Detention (IN)	100yr 15m	100	1.385	0.65	19.78	(N/A)	(N/A)
FO Detention (OUT)	100yr 15m	100	1.385	2.00	5.84	657.55	0.933
FO Detention (IN)	100yr 30m	100	2.277	0.70	30.60	(N/A)	(N/A)
FO Detention (OUT)	100yr 30m	100	2.277	1.85	6.90	658.61	1.790
FO Detention (IN)	100yr 1hr	100	3.235	0.80	35.58	(N/A)	(N/A)
FO Detention (OUT)	100yr 1hr	100	3.235	2.70	7.83	659.68	2.566
FO Detention (IN)	100yr 2hr	100	4.319	1.00	35.77	(N/A)	(N/A)
FO Detention (OUT)	100yr 2hr	100	4.319	2.20	13.14	660.26	3.007
FO Detention (IN)	100yr 3hr	100	4.930	1.10	32.98	(N/A)	(N/A)
FO Detention (OUT)	100yr 3hr	100	4.930	2.40	13.34	660.26	3.010
FO Detention (IN)	100yr 6hr	100	6.048	1.40	25.46	(N/A)	(N/A)
FO Detention (OUT)	100yr 6hr	100	6.048	3.05	12.89	660.25	2.998
FO Detention (IN)	100yr 12hr	100	7.287	5.40	19.01	(N/A)	(N/A)
FO Detention (OUT)	100yr 12hr	100	7.287	7.20	10.56	660.18	2.945
FO Detention (IN)	100yr 18hr	100	8.014	11.80	16.17	(N/A)	(N/A)

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
FO Detention (OUT)	100yr 18hr	100	8.014	15.30	7.29	659.91	2.731
FO Detention (IN)	100yr 24hr	100	8.634	15.70	13.23	(N/A)	(N/A)
FO Detention (OUT)	100yr 24hr	100	8.634	19.10	6.87	659.25	2.254
FO Detention (IN)	100yr 48hr	100	9.615	41.00	7.32	(N/A)	(N/A)
FO Detention (OUT)	100yr 48hr	100	9.615	45.00	5.47	657.42	0.830
FO Detention (IN)	100yr 72hr	100	10.320	61.00	5.23	(N/A)	(N/A)
FO Detention (OUT)	100yr 72hr	100	10.319	59.00	4.85	656.61	0.174
FO Detention (IN)	100yr 120hr	100	11.324	102.00	3.42	(N/A)	(N/A)
FO Detention (OUT)	100yr 120hr	100	11.324	102.00	3.41	655.46	0.000
FO Detention (IN)	100yr 240hr	100	13.801	204.00	2.05	(N/A)	(N/A)
FO Detention (OUT)	100yr 240hr	100	13.801	204.00	2.05	654.94	0.000
Pond (IN)	10yr 24hr	10	1.906	15.60	2.91	(N/A)	(N/A)
Pond (OUT)	10yr 24hr	10	1.906	21.70	0.56	654.07	1.058
Pond (IN)	50yr 24hr	50	2.935	15.50	4.32	(N/A)	(N/A)
Pond (OUT)	50yr 24hr	50	2.935	24.00	0.65	655.65	1.936
Pond (IN)	100yr 5m	100	0.197	0.15	14.31	(N/A)	(N/A)
Pond (OUT)	100yr 5m	100	0.197	0.40	0.45	652.35	0.180
Pond (IN)	100yr 10m	100	0.492	0.15	35.38	(N/A)	(N/A)
Pond (OUT)	100yr 10m	100	0.492	0.45	0.49	652.92	0.473
Pond (IN)	100yr 15m	100	0.697	0.15	36.15	(N/A)	(N/A)
Pond (OUT)	100yr 15m	100	0.697	0.55	0.52	653.32	0.673
Pond (IN)	100yr 30m	100	1.053	0.20	41.03	(N/A)	(N/A)
Pond (OUT)	100yr 30m	100	1.053	0.75	0.56	653.99	1.019
Pond (IN)	100yr 1hr	100	1.421	0.25	35.78	(N/A)	(N/A)
Pond (OUT)	100yr 1hr	100	1.421	1.20	0.60	654.67	1.364
Pond (IN)	100yr 2hr	100	1.828	0.30	28.95	(N/A)	(N/A)
Pond (OUT)	100yr 2hr	100	1.828	2.20	0.63	655.31	1.724
Pond (IN)	100yr 3hr	100	2.054	0.35	25.12	(N/A)	(N/A)
Pond (OUT)	100yr 3hr	100	2.054	3.15	0.64	655.59	1.900
Pond (IN)	100yr 6hr	100	2.465	0.60	17.07	(N/A)	(N/A)
Pond (OUT)	100yr 6hr	100	2.465	6.10	0.66	656.01	2.159
Pond (IN)	100yr 12hr	100	2.917	4.80	7.80	(N/A)	(N/A)
Pond (OUT)	100yr 12hr	100	2.917	11.20	0.68	656.34	2.359

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
Pond (IN)	100yr 18hr	100	3.181	11.70	6.21	(N/A)	(N/A)
Pond (OUT)	100yr 18hr	100	3.181	18.10	0.68	655.40	2.394
Pond (IN)	100yr 24hr	100	3.406	15.50	4.96	(N/A)	(N/A)
Pond (OUT)	100yr 24hr	100	3.406	24.00	0.68	656.34	2.361
Pond (IN)	100yr 48hr	100	3.765	40.50	2.69	(N/A)	(N/A)
Pond (OUT)	100yr 48hr	100	3.765	48.50	0.65	655.77	2.008
Pond (IN)	100yr 72hr	100	4.017	61.00	1.91	(N/A)	(N/A)
Pond (OUT)	100yr 72hr	100	4.017	72.00	0.62	655.15	1.626
Pond (IN)	100yr 120hr	100	4.379	102.00	1.24	(N/A)	(N/A)
Pond (OUT)	100yr 120hr	100	4.379	120.00	0.57	654.26	1.157
Pond (IN)	100yr 240hr	100	5.268	204.00	0.74	(N/A)	(N/A)
Pond (OUT)	100yr 240hr	100	5.268	216.50	0.50	652.99	0.507
PD1-1 Depression (IN)	10yr 24hr	10	0.084	15.60	0.15	(N/A)	(N/A)
PD1-1 Depression (OUT)	10yr 24hr	10	0.078	15.60	0.15	658.25	0.008
PD1-1 Depression (IN)	50yr 24hr	50	0.140	15.60	0.23	(N/A)	(N/A)
PD1-1 Depression (OUT)	50yr 24hr	50	0.134	15.60	0.23	658.26	0.009
PD1-1 Depression (IN)	100yr 5m	100	0.004	0.10	0.47	(N/A)	(N/A)
PD1-1 Depression (OUT)	100yr 5m	100	0.000	0.00	0.00	658.12	0.004
PD1-1 Depression (IN)	100yr 10m	100	0.015	0.10	1.75	(N/A)	(N/A)
PD1-1 Depression (OUT)	100yr 10m	100	0.009	0.15	0.79	658.30	0.011
PD1-1 Depression (IN)	100yr 15m	100	0.023	0.10	1.57	(N/A)	(N/A)
PD1-1 Depression (OUT)	100yr 15m	100	0.017	0.20	1.21	658.31	0.011
PD1-1 Depression (IN)	100yr 30m	100	0.040	0.15	1.83	(N/A)	(N/A)

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
PD1-1 Depression (OUT)	100yr 30m	100	0.034	0.20	1.64	658.33	0.012
PD1-1 Depression (IN)	100yr 1hr	100	0.059	0.25	1.49	(N/A)	(N/A)
PD1-1 Depression (OUT)	100yr 1hr	100	0.053	0.25	1.49	658.33	0.012
PD1-1 Depression (IN)	100yr 2hr	100	0.080	0.25	1.21	(N/A)	(N/A)
PD1-1 Depression (OUT)	100yr 2hr	100	0.074	0.35	1.07	658.31	0.011
PD1-1 Depression (IN)	100yr 3hr	100	0.092	0.30	1.04	(N/A)	(N/A)
PD1-1 Depression (OUT)	100yr 3hr	100	0.086	0.40	0.93	658.30	0.011
PD1-1 Depression (IN)	100yr 6hr	100	0.114	0.60	0.75	(N/A)	(N/A)
PD1-1 Depression (OUT)	100yr 6hr	100	0.108	0.65	0.70	658.29	0.010
PD1-1 Depression (IN)	100yr 12hr	100	0.139	4.80	0.40	(N/A)	(N/A)
PD1-1 Depression (OUT)	100yr 12hr	100	0.133	4.80	0.40	658.27	0.009
PD1-1 Depression (IN)	100yr 18hr	100	0.154	11.70	0.33	(N/A)	(N/A)
PD1-1 Depression (OUT)	100yr 18hr	100	0.148	11.70	0.33	658.26	0.009
PD1-1 Depression (IN)	100yr 24hr	100	0.166	15.60	0.27	(N/A)	(N/A)
PD1-1 Depression (OUT)	100yr 24hr	100	0.160	15.60	0.27	658.26	0.009

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
PD1-1 Depression (IN)	100yr 48hr	100	0.188	40.50	0.15	(N/A)	(N/A)
PD1-1 Depression (OUT)	100yr 48hr	100	0.182	40.50	0.15	658.25	0.008
PD1-1 Depression (IN)	100yr 72hr	100	0.201	61.00	0.10	(N/A)	(N/A)
PD1-1 Depression (OUT)	100yr 72hr	100	0.195	58.50	0.11	658.24	0.008
PD1-1 Depression (IN)	100yr 120hr	100	0.221	102.00	0.07	(N/A)	(N/A)
PD1-1 Depression (OUT)	100yr 120hr	100	0.215	97.00	0.07	658.22	0.007
PD1-1 Depression (IN)	100yr 240hr	100	0.271	204.00	0.04	(N/A)	(N/A)
PD1-1 Depression (OUT)	100yr 240hr	100	0.265	193.00	0.04	658.21	0.007
PD1 Pond (IN)	10yr 24hr	10	1.694	15.60	2.93	(N/A)	(N/A)
PD1 Pond (OUT)	10yr 24hr	10	1.693	17.00	1.93	655.87	0.242
PD1 Pond (IN)	50yr 24hr	50	2.822	15.60	4.62	(N/A)	(N/A)
PD1 Pond (OUT)	50yr 24hr	50	2.822	15.80	4.40	656.16	0.393
PD1 Pond (IN)	100yr 5m	100	0.067	0.35	1.82	(N/A)	(N/A)
PD1 Pond (OUT)	100yr 5m	100	0.067	0.50	1.29	655.03	0.016
PD1 Pond (IN)	100yr 10m	100	0.287	0.35	7.61	(N/A)	(N/A)
PD1 Pond (OUT)	100yr 10m	100	0.287	0.70	1.78	655.64	0.179
PD1 Pond (IN)	100yr 15m	100	0.465	0.40	11.59	(N/A)	(N/A)
PD1 Pond (OUT)	100yr 15m	100	0.465	0.80	2.53	656.06	0.318
PD1 Pond (IN)	100yr 30m	100	0.806	0.45	16.90	(N/A)	(N/A)

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
PD1 Pond (OUT)	100yr 30m	100	0.805	0.80	8.38	656.27	0.473
PD1 Pond (IN)	100yr 1hr	100	1.180	0.55	18.51	(N/A)	(N/A)
PD1 Pond (OUT)	100yr 1hr	100	1.180	0.90	12.27	656.34	0.524
PD1 Pond (IN)	100yr 2hr	100	1.610	0.70	17.06	(N/A)	(N/A)
PD1 Pond (OUT)	100yr 2hr	100	1.609	1.00	13.08	656.35	0.534
PD1 Pond (IN)	100yr 3hr	100	1.854	0.80	14.86	(N/A)	(N/A)
PD1 Pond (OUT)	100yr 3hr	100	1.853	1.15	12.06	656.33	0.522
PD1 Pond (IN)	100yr 6hr	100	2.302	0.90	10.82	(N/A)	(N/A)
PD1 Pond (OUT)	100yr 6hr	100	2.302	1.65	9.22	656.28	0.485
PD1 Pond (IN)	100yr 12hr	100	2.803	5.00	7.70	(N/A)	(N/A)
PD1 Pond (OUT)	100yr 12hr	100	2.802	5.50	7.48	656.25	0.459
PD1 Pond (IN)	100yr 18hr	100	3.097	11.70	6.66	(N/A)	(N/A)
PD1 Pond (OUT)	100yr 18hr	100	3.097	11.80	6.53	656.22	0.441
PD1 Pond (IN)	100yr 24hr	100	3.349	15.60	5.38	(N/A)	(N/A)
PD1 Pond (OUT)	100yr 24hr	100	3.348	15.70	5.29	656.19	0.416
PD1 Pond (IN)	100yr 48hr	100	3.747	40.50	2.96	(N/A)	(N/A)
PD1 Pond (OUT)	100yr 48hr	100	3.747	43.00	2.73	656.07	0.329
PD1 Pond (IN)	100yr 72hr	100	4.036	61.00	2.11	(N/A)	(N/A)
PD1 Pond (OUT)	100yr 72hr	100	4.035	65.00	1.86	655.76	0.213
PD1 Pond (IN)	100yr 120hr	100	4.444	102.00	1.38	(N/A)	(N/A)
PD1 Pond (OUT)	100yr 120hr	100	4.443	102.00	1.37	655.09	0.032
PD1 Pond (IN)	100yr 240hr	100	5.455	204.00	0.83	(N/A)	(N/A)
PD1 Pond (OUT)	100yr 240hr	100	5.455	204.00	0.83	654.80	0.006

Subsection: Time-Depth Curve
Label: B75 - 100 Year Critical
Scenario: 100yr 10m

Return Event: 100 years
Storm Event: 10m100y

Time-Depth Curve: 10m100y	
Label	10m100y
Start Time	0.00 hours
Increment	0.00 hours
End Time	0.08 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.00 hours

Time on left represents time for first value in each row.

Time (hours)	Depth (in)				
0.00	0.00	0.29	0.59	0.77	0.94
0.02	1.08	1.19	1.28	1.35	1.42
0.04	1.48	1.51	1.55	1.58	1.62
0.06	1.66	1.69	1.73	1.75	1.76
0.08	1.80	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 100 Year Critical
Scenario: 100yr 120hr

Return Event: 100 years
Storm Event: 120h100y

Time-Depth Curve: 120h100y	
Label	120h100y
Start Time	0.00 hours
Increment	6.00 hours
End Time	120.00 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 6.00 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)				
0.00	0.00	0.21	0.53	0.85	1.07
30.00	1.39	1.71	2.03	2.35	2.67
60.00	2.98	3.41	3.73	4.16	4.80
90.00	5.44	6.29	7.68	8.95	9.81
120.00	10.66	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
Label: B75 - 100 Year Critical
Scenario: 100yr 12hr

Return Event: 100 years
Storm Event: 12h100y

Time-Depth Curve: 12h100y	
Label	12h100y
Start Time	0.00 hours
Increment	0.60 hours
End Time	12.00 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.60 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)				
0.00	0.00	0.22	0.60	0.90	1.19
3.00	1.64	2.16	2.91	3.80	4.63
6.00	5.22	5.67	6.04	6.34	6.56
9.00	6.79	6.94	7.09	7.24	7.31
12.00	7.39	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
 Label: B75 - 100 Year Critical
 Scenario: 100yr 15m

Return Event: 100 years
 Storm Event: 15m100y

Time-Depth Curve: 15m100y	
Label	15m100y
Start Time	0.00 hours
Increment	0.01 hours
End Time	0.25 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.01 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)				
0.00	0.00	0.37	0.77	1.00	1.21
0.06	1.39	1.53	1.65	1.74	1.83
0.13	1.90	1.95	2.00	2.04	2.09
0.19	2.13	2.18	2.23	2.25	2.27
0.25	2.30	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
 Label: B75 - 100 Year Critical
 Scenario: 100yr 18hr

Return Event: 100 years
 Storm Event: 18h100y

Time-Depth Curve: 18h100y	
Label	18h100y
Start Time	0.00 hours
Increment	0.90 hours
End Time	18.00 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.90 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)				
0.00	0.00	0.24	0.48	0.73	0.97
4.50	1.21	1.53	1.85	2.18	2.58
9.00	3.06	3.63	4.59	5.64	6.37
13.50	6.85	7.17	7.42	7.66	7.82
18.00	7.98	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
 Label: B75 - 100 Year Critical
 Scenario: 100yr 1hr

Return Event: 100 years
 Storm Event: 1h100y

Time-Depth Curve: 1h100y	
Label	1h100y
Start Time	0.00 hours
Increment	0.05 hours
End Time	1.00 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.05 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)				
0.00	0.00	0.64	1.33	1.73	2.10
0.25	2.42	2.66	2.86	3.02	3.18
0.50	3.30	3.39	3.47	3.55	3.63
0.75	3.71	3.79	3.87	3.91	3.95
1.00	3.99	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
 Label: B75 - 100 Year Critical
 Scenario: 100yr 240hr

Return Event: 100 years
 Storm Event: 240h100y

Time-Depth Curve: 240h100y	
Label	240h100y
Start Time	0.00 hours
Increment	12.00 hours
End Time	240.00 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 12.00 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)				
0.00	0.00	0.25	0.63	1.01	1.27
60.00	1.64	2.02	2.40	2.78	3.16
120.00	3.54	4.05	4.43	4.93	5.69
180.00	6.45	7.46	9.11	10.63	11.64
240.00	12.65	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
 Label: B75 - 100 Year Critical
 Scenario: 100yr 24hr

Return Event: 100 years
 Storm Event: 24h100y

Time-Depth Curve: 24h100y	
Label	24h100y
Start Time	0.00 hours
Increment	1.20 hours
End Time	24.00 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 1.20 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)				
0.00	0.00	0.26	0.51	0.77	1.03
6.00	1.29	1.63	1.97	2.31	2.74
12.00	3.26	3.86	4.88	6.00	6.77
18.00	7.28	7.63	7.88	8.14	8.31
24.00	8.48	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
 Label: B75 - 10 Year Critical
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Time-Depth Curve: 24h10y	
Label	24h10y
Start Time	0.00 hours
Increment	1.20 hours
End Time	24.00 hours
Return Event	10 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 1.20 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)				
0.00	0.00	0.15	0.31	0.46	0.62
6.00	0.77	0.98	1.18	1.39	1.65
12.00	1.96	2.32	2.94	3.60	4.07
18.00	4.38	4.58	4.74	4.89	5.00
24.00	5.10	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
 Label: B75 - 50 Year Critical
 Scenario: 50yr 24hr

Return Event: 50 years
 Storm Event: 24h50y

Time-Depth Curve: 24h50y	
Label	24h50y
Start Time	0.00 hours
Increment	1.20 hours
End Time	24.00 hours
Return Event	50 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 1.20 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)				
0.00	0.00	0.22	0.45	0.68	0.90
6.00	1.13	1.42	1.73	2.03	2.40
12.00	2.85	3.37	4.27	5.25	5.93
18.00	6.38	6.67	6.90	7.12	7.28
24.00	7.43	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
 Label: B75 - 100 Year Critical
 Scenario: 100yr 2hr

Return Event: 100 years
 Storm Event: 2h100y

Time-Depth Curve: 2h100y	
Label	2h100y
Start Time	0.00 hours
Increment	0.10 hours
End Time	2.00 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.10 hours
Time on left represents time for first value in each row.

Time (hours)	Depth (in)				
0.00	0.00	0.80	1.64	2.14	2.58
0.50	2.98	3.28	3.53	3.73	3.93
1.00	4.08	4.17	4.27	4.37	4.47
1.50	4.57	4.67	4.77	4.82	4.87
2.00	4.92	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
 Label: B75 - 100 Year Critical
 Scenario: 100yr 30m

Return Event: 100 years
 Storm Event: 30m100y

Time-Depth Curve: 30m100y	
Label	30m100y
Start Time	0.00 hours
Increment	0.03 hours
End Time	0.50 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.03 hours

Time on left represents time for first value in each row.

Time (hours)	Depth (in)				
0.00	0.00	0.51	1.05	1.36	1.65
0.13	1.90	2.09	2.25	2.38	2.50
0.25	2.60	2.66	2.73	2.79	2.85
0.38	2.92	2.98	3.04	3.07	3.11
0.50	3.14	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
 Label: B75 - 100 Year Critical
 Scenario: 100yr 3hr

Return Event: 100 years
 Storm Event: 3h100y

Time-Depth Curve: 3h100y	
Label	3h100y
Start Time	0.00 hours
Increment	0.15 hours
End Time	3.00 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.15 hours

Time on left represents time for first value in each row.

Time (hours)	Depth (in)				
0.00	0.00	0.88	1.81	2.36	2.85
0.75	3.29	3.62	3.90	4.12	4.34
1.50	4.50	4.61	4.72	4.83	4.94
2.25	5.05	5.16	5.27	5.33	5.38
3.00	5.44	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
 Label: B75 - 100 Year Critical
 Scenario: 100yr 48hr

Return Event: 100 years
 Storm Event: 48h100y

Time-Depth Curve: 48h100y	
Label	48h100y
Start Time	0.00 hours
Increment	2.40 hours
End Time	48.00 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 2.40 hours

Time on left represents time for first value in each row.

Time (hours)	Depth (in)				
0.00	0.00	0.19	0.46	0.74	0.93
12.00	1.21	1.48	1.76	2.04	2.32
24.00	2.60	2.97	3.25	3.62	4.18
36.00	4.73	5.48	6.68	7.80	8.54
48.00	9.28	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
 Label: B75 - 100 Year Critical
 Scenario: 100yr 5m

Return Event: 100 years
 Storm Event: 5m100y

Time-Depth Curve: 5m100y	
Label	5m100y
Start Time	0.00 hours
Increment	0.00 hours
End Time	0.08 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.00 hours

Time on left represents time for first value in each row.

Time (hours)	Depth (in)				
0.00	0.00	0.16	0.34	0.44	0.54
0.02	0.62	0.68	0.73	0.77	0.81
0.04	0.84	0.87	0.89	0.91	0.93
0.06	0.95	0.97	0.99	1.00	1.01
0.08	1.02	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
 Label: B75 - 100 Year Critical
 Scenario: 100yr 6hr

Return Event: 100 years
 Storm Event: 6h100y

Time-Depth Curve: 6h100y	
Label	6h100y
Start Time	0.00 hours
Increment	0.30 hours
End Time	6.00 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 0.30 hours

Time on left represents time for first value in each row.

Time (hours)	Depth (in)				
0.00	0.00	1.03	2.12	2.76	3.34
1.50	3.86	4.24	4.57	4.82	5.08
3.00	5.27	5.40	5.53	5.66	5.79
4.50	5.92	6.04	6.17	6.24	6.30
6.00	6.37	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve
 Label: B75 - 100 Year Critical
 Scenario: 100yr 72hr

Return Event: 100 years
 Storm Event: 72h100y

Time-Depth Curve: 72h100y	
Label	72h100y
Start Time	0.00 hours
Increment	3.60 hours
End Time	72.00 hours
Return Event	100 years

CUMULATIVE RAINFALL (in)
Output Time Increment = 3.60 hours

Time on left represents time for first value in each row.

Time (hours)	Depth (in)				
0.00	0.00	0.20	0.49	0.79	0.99
18.00	1.28	1.58	1.87	2.17	2.46
36.00	2.76	3.15	3.45	3.84	4.43
54.00	5.02	5.81	7.09	8.27	9.06
72.00	9.85	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time of Concentration Calculations
 Label: Area DEV
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Time of Concentration Results	
Segment #1: User Defined Tc	
Time of Concentration	0.17 hours
Time of Concentration (Composite)	
Time of Concentration (Composite)	0.17 hours

Subsection: Time of Concentration Calculations
 Label: Area DEV
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

==== User Defined
 Tc = Value entered by user
 Where: Tc= Time of concentration, hours

Subsection: Time of Concentration Calculations
Label: Area EX1
Scenario: 10yr 24hr

Return Event: 10 years
Storm Event: 24h10y

Time of Concentration Results

Segment #1: User Defined Tc	
Time of Concentration	0.30 hours

Time of Concentration (Composite)

Time of Concentration (Composite)	0.30 hours
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Subsection: Time of Concentration Calculations
Label: Area EX1
Scenario: 10yr 24hr

Return Event: 10 years
Storm Event: 24h10y

==== **User Defined**
Tc = Value entered by user
Where: Tc= Time of concentration, hours

Subsection: Time of Concentration Calculations
Label: Area FO
Scenario: 10yr 24hr

Return Event: 10 years
Storm Event: 24h10y

Time of Concentration Results

Segment #1: User Defined Tc	
Time of Concentration	1.00 hours

Time of Concentration (Composite)

Time of Concentration (Composite)	1.00 hours
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Subsection: Time of Concentration Calculations
Label: Area FO
Scenario: 10yr 24hr

Return Event: 10 years
Storm Event: 24h10y

==== **User Defined**
Tc = Value entered by user
Where: Tc= Time of concentration, hours

Subsection: Time of Concentration Calculations
Label: Area FO-US
Scenario: 10yr 24hr

Return Event: 10 years
Storm Event: 24h10y

Time of Concentration Results

Segment #1: User Defined Tc	
Time of Concentration	0.75 hours

Time of Concentration (Composite)

Time of Concentration (Composite)	0.75 hours
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Subsection: Time of Concentration Calculations
Label: Area FO-US
Scenario: 10yr 24hr

Return Event: 10 years
Storm Event: 24h10y

==== **User Defined**
Tc = Value entered by user
Where: Tc= Time of concentration, hours

Subsection: Time of Concentration Calculations
Label: Area PD1
Scenario: 10yr 24hr

Return Event: 10 years
Storm Event: 24h10y

Time of Concentration Results

Segment #1: User Defined Tc	
Time of Concentration	0.49 hours

Time of Concentration (Composite)

Time of Concentration (Composite)	0.49 hours
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Subsection: Time of Concentration Calculations
Label: Area PD1
Scenario: 10yr 24hr

Return Event: 10 years
Storm Event: 24h10y

==== **User Defined**
Tc = Value entered by user
Where: Tc= Time of concentration, hours

Subsection: Time of Concentration Calculations
Label: Area PD1-1
Scenario: 10yr 24hr

Return Event: 10 years
Storm Event: 24h10y

Time of Concentration Results	
Segment #1: User Defined Tc	
Time of Concentration	0.08 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.08 hours

Subsection: Time of Concentration Calculations
Label: Area PD1-1
Scenario: 10yr 24hr

Return Event: 10 years
Storm Event: 24h10y

==== **User Defined**
Tc = Value entered by user
Where: Tc= Time of concentration, hours

Subsection: Time of Concentration Calculations
Label: Area PR
Scenario: 10yr 24hr

Return Event: 10 years
Storm Event: 24h10y

Time of Concentration Results	
Segment #1: User Defined Tc	
Time of Concentration	1.00 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	1.00 hours

Subsection: Time of Concentration Calculations
Label: Area PR
Scenario: 10yr 24hr

Return Event: 10 years
Storm Event: 24h10y

==== **User Defined**
Tc = Value entered by user
Where: Tc= Time of concentration, hours

Subsection: Time of Concentration Calculations
Label: Area S1
Scenario: 10yr 24hr

Return Event: 10 years
Storm Event: 24h10y

Time of Concentration Results

Segment #1: User Defined Tc	
Time of Concentration	0.11 hours

Time of Concentration (Composite)

Time of Concentration (Composite)	0.11 hours
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Subsection: Time of Concentration Calculations
Label: Area S1
Scenario: 10yr 24hr

Return Event: 10 years
Storm Event: 24h10y

==== **User Defined**
Tc = Value entered by user
Where: Tc= Time of concentration, hours

Subsection: Time of Concentration Calculations
Label: Area UNR
Scenario: 10yr 24hr

Return Event: 10 years
Storm Event: 24h10y

Time of Concentration Results

Segment #1: User Defined Tc	
Time of Concentration	0.08 hours

Time of Concentration (Composite)

Time of Concentration (Composite)	0.08 hours
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Subsection: Time of Concentration Calculations
Label: Area UNR
Scenario: 10yr 24hr

Return Event: 10 years
Storm Event: 24h10y

==== **User Defined**
Tc = Value entered by user
Where: Tc= Time of concentration, hours

Subsection: Time of Concentration Calculations
 Label: Area UPSTREAM
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Time of Concentration Results

Segment #1: User Defined Tc

Time of Concentration	0.17 hours
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Time of Concentration (Composite)

Time of Concentration (Composite)	0.17 hours
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Subsection: Time of Concentration Calculations
 Label: Area UPSTREAM
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

==== User Defined
 Tc = Value entered by user
 Where: Tc= Time of concentration, hours

Subsection: Runoff CN-Area
 Label: Area DEV
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area
 Label: Area EX1
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area
 Label: Area FO
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area
 Label: Area FO-US
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area
 Label: Area PD1
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area
 Label: Area PD1-1
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area
 Label: Area PR
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area
 Label: Area S1
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area
 Label: Area UNR
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area
 Label: Area UPSTREAM
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Elevation vs. Volume Curve
 Label: FO Detention
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ac-ft)
654.10	0.000
656.40	0.000
658.50	1.710
660.00	2.800
660.50	3.200

Subsection: Elevation vs. Volume Curve
 Label: PD1 Pond
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ac-ft)
654.10	0.000
655.00	0.008
656.00	0.276
656.50	0.644

Subsection: Elevation vs. Volume Curve
 Label: PD1-1 Depression
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ac-ft)
657.90	0.000
658.00	0.000
658.20	0.006
658.50	0.020

Subsection: Elevation vs. Volume Curve
 Label: Pond
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ac-ft)
649.00	0.000
652.00	0.000
655.00	1.534
656.50	2.458
657.50	3.000

Subsection: Elevation vs. Volume Curve
 Label: PR Detention
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ac-ft)
653.32	0.000
657.30	0.000
658.50	1.180

Subsection: Outlet Input Data
 Label: OF PD1-1
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Requested Pond Water Surface Elevations	
Minimum (Headwater)	657.90 ft
Increment (Headwater)	0.05 ft
Maximum (Headwater)	658.50 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Irregular Weir	Weir PD1-1	Forward	TW	658.20	658.50
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data
 Label: OF PD1-1
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Structure ID: Weir PD1-1
Structure Type: Irregular Weir

Station (ft)	Elevation (ft)
0.00	0.30
45.86	0.00
70.86	0.30

Lowest Elevation 658.20 ft
 Weir Coefficient 3.00 (ft^{0.5}/s)

Structure ID: TW
 Structure Type: TW Setup, DS Channel

Tailwater Type	Free Outfall

Convergence Tolerances

Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft ³ /s
Flow Tolerance (Maximum)	10,000 ft ³ /s

Subsection: Outlet Input Data
 Label: RF PR
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Requested Pond Water Surface Elevations	
Minimum (Headwater)	653.32 ft
Increment (Headwater)	0.05 ft
Maximum (Headwater)	658.50 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Orifice-Circular	Orifice PR	Forward	TW	653.32	658.50
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data
 Label: RF PR
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Structure ID: Orifice PR	
Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	653.32 ft
Orifice Diameter	15.00 in
Orifice Coefficient	0.820

Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall

Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft ³ /s
Flow Tolerance (Maximum)	10.000 ft ³ /s

Subsection: Outlet Input Data
 Label: RF/OF FO
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Requested Pond Water Surface Elevations	
Minimum (Headwater)	654.10 ft
Increment (Headwater)	0.05 ft
Maximum (Headwater)	660.50 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Orifice-Circular	Orifice FO	Forward	TW	654.10	660.50
Rectangular Weir	Weir FO	Forward	TW	660.00	660.50
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data
 Label: RF/OF FO
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Structure ID: Orifice FO	
Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	654.10 ft
Orifice Diameter	10.00 in
Orifice Coefficient	0.820

Structure ID: Weir FO	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	660.00 ft
Weir Length	20.00 ft
Weir Coefficient	3.00 (ft ^{0.5})/s

Subsection: Outlet Input Data
 Label: RF/OF PD1
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Requested Pond Water Surface Elevations	
Minimum (Headwater)	654.10 ft
Increment (Headwater)	0.05 ft
Maximum (Headwater)	656.50 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Culvert-Circular	Culvert PD1	Forward	TW	654.14	656.50
Irregular Weir	Weir PD1	Forward	TW	655.94	656.50
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data
 Label: RF/OF PD1
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Structure ID: Weir PD1
Structure Type: Irregular Weir

Station (ft)	Elevation (ft)
0.00	0.56
30.00	0.00
53.00	0.56

Lowest Elevation 655.94 ft
 Weir Coefficient 3.00 (ft^{0.5}/s)

Structure ID: Culvert PD1
 Structure Type: Culvert-Circular

Number of Barrels 1
 Diameter 8.00 in
 Length 36.10 ft
 Length (Computed Barrel) 36.10 ft
 Slope (Computed) 0.011 ft/ft

Outlet Control Data

Manning's n 0.013
 Ke 0.200
 Kb 0.054
 Kr 0.200
 Convergence Tolerance 0.00 ft

Inlet Control Data

Equation Form Form 1
 K 0.0045
 M 2.0000
 C 0.0317
 Y 0.6900
 T1 ratio (HW/D) 1.089
 T2 ratio (HW/D) 1.192
 Slope Correction Factor -0.500

Use unsubmerged inlet control 0 equation below T1 elevation.
 Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control, interpolate between flows at T1 & T2...

T1 Elevation	654.87 ft	T1 Flow	1.00 ft ³ /s
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Subsection: Outlet Input Data
 Label: RF/OF PD1
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Use unsubmerged inlet control 0 equation below T1 elevation.
 Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control, interpolate between flows at T1 & T2...

T2 Elevation	654.93 ft	T2 Flow	1.14 ft ³ /s
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Subsection: Outlet Input Data
 Label: RF/OF PD1
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Structure ID: TW
 Structure Type: TW Setup, DS Channel

Tailwater Type Free Outfall

Convergence Tolerances

Maximum Iterations 30
 Tailwater Tolerance (Minimum) 0.01 ft
 Tailwater Tolerance (Maximum) 0.50 ft
 Headwater Tolerance (Minimum) 0.01 ft
 Headwater Tolerance (Maximum) 0.50 ft
 Flow Tolerance (Minimum) 0.001 ft³/s
 Flow Tolerance (Maximum) 10.000 ft³/s

Subsection: Outlet Input Data
 Label: RF/OF Pond
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Requested Pond Water Surface Elevations

Minimum (Headwater) 649.00 ft
 Increment (Headwater) 0.05 ft
 Maximum (Headwater) 657.50 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Orifice-Circular	Orifice Pond	Forward	TW	649.00	657.50
Rectangular Weir	Weir Pond	Forward	TW	656.50	657.50
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data
 Label: RF/OF Pond
 Scenario: 10yr 24hr

Return Event: 10 years
 Storm Event: 24h10y

Structure ID: Orifice Pond	
Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	649.00 ft
Orifice Diameter	3.08 in
Orifice Coefficient	0.610
Structure ID: Weir Pond	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	656.50 ft
Weir Length	18.00 ft
Weir Coefficient	3.00 (ft ^{0.5})/s
Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft ³ /s
Flow Tolerance (Maximum)	10.000 ft ³ /s

Index

A

Area DEV (Runoff CN-Area, 10 years (10yr 24hr))...52

Area DEV (Time of Concentration Calculations, 10 years (10yr 24hr))...32, 33

Area EX1 (Runoff CN-Area, 10 years (10yr 24hr))...53

Area EX1 (Time of Concentration Calculations, 10 years (10yr 24hr))...34, 35

Area FO (Runoff CN-Area, 10 years (10yr 24hr))...54

Area FO (Time of Concentration Calculations, 10 years (10yr 24hr))...36, 37

Area FO-US (Runoff CN-Area, 10 years (10yr 24hr))...55

Area FO-US (Time of Concentration Calculations, 10 years (10yr 24hr))...38, 39

Area PD1 (Runoff CN-Area, 10 years (10yr 24hr))...56

Area PD1 (Time of Concentration Calculations, 10 years (10yr 24hr))...40, 41

Area PD1-1 (Runoff CN-Area, 10 years (10yr 24hr))...57

Area PD1-1 (Time of Concentration Calculations, 10 years (10yr 24hr))...42, 43

Area PR (Runoff CN-Area, 10 years (10yr 24hr))...58

Area PR (Time of Concentration Calculations, 10 years (10yr 24hr))...44, 45

Area S1 (Runoff CN-Area, 10 years (10yr 24hr))...59

Area S1 (Time of Concentration Calculations, 10 years (10yr 24hr))...46, 47

Area UNR (Runoff CN-Area, 10 years (10yr 24hr))...60

Area UNR (Time of Concentration Calculations, 10 years (10yr 24hr))...48, 49

Area UPSTREAM (Runoff CN-Area, 10 years (10yr 24hr))...61

Area UPSTREAM (Time of Concentration Calculations, 10 years (10yr 24hr))...50, 51

B

B75 - 10 Year Critical (Time-Depth Curve, 10 years (10yr 24hr))...23

B75 - 100 Year Critical (Time-Depth Curve, 100 years (100yr 10m))...15

B75 - 100 Year Critical (Time-Depth Curve, 100 years (100yr 120hr))...16

B75 - 100 Year Critical (Time-Depth Curve, 100 years (100yr 12hr))...17

B75 - 100 Year Critical (Time-Depth Curve, 100 years (100yr 15m))...18

B75 - 100 Year Critical (Time-Depth Curve, 100 years (100yr 18hr))...19

B75 - 100 Year Critical (Time-Depth Curve, 100 years (100yr 1hr))...20

B75 - 100 Year Critical (Time-Depth Curve, 100 years (100yr 240hr))...21

B75 - 100 Year Critical (Time-Depth Curve, 100 years (100yr 24hr))...22

B75 - 100 Year Critical (Time-Depth Curve, 100 years (100yr 2hr))...25

B75 - 100 Year Critical (Time-Depth Curve, 100 years (100yr 30m))...26

B75 - 100 Year Critical (Time-Depth Curve, 100 years (100yr 3hr))...27

B75 - 100 Year Critical (Time-Depth Curve, 100 years (100yr 48hr))...28

B75 - 100 Year Critical (Time-Depth Curve, 100 years (100yr 5m))...29

B75 - 100 Year Critical (Time-Depth Curve, 100 years (100yr 6hr))...30

B75 - 100 Year Critical (Time-Depth Curve, 100 years (100yr 72hr))...31

B75 - 50 Year Critical (Time-Depth Curve, 50 years (50yr 24hr))...24

F

FO Detention (Elevation vs. Volume Curve, 10 years (10yr 24hr))...62

M

Master Network Summary...2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

O

OF PD1-1 (Outlet Input Data, 10 years (10yr 24hr))...67, 68

P

PD1 Pond (Elevation vs. Volume Curve, 10 years (10yr 24hr))...63

PD1-1 Depression (Elevation vs. Volume Curve, 10 years (10yr 24hr))...64

Pond (Elevation vs. Volume Curve, 10 years (10yr 24hr))...65

PR Detention (Elevation vs. Volume Curve, 10 years (10yr 24hr))...66

R

RF PR (Outlet Input Data, 10 years (10yr 24hr))...69, 70

RF/OF FO (Outlet Input Data, 10 years (10yr 24hr))...71, 72

RF/OF PD1 (Outlet Input Data, 10 years (10yr 24hr))...73, 74, 75, 76

RF/OF Pond (Outlet Input Data, 10 years (10yr 24hr))...77, 78

CRITICAL DURATION ANALYSIS - COMPARISON

HAEGER ENGINEERING, LLC
consulting engineers and land surveyors

Project: Reserve at Muir Park [61 Unit Plan]
Location: Prospect Heights, IL
Project #: 18-219

Prepared: PAC
Reviewed: TAS
Date: 07/22/20

Existing Flow Analysis:

Flow	Recurrence Interval	Pond Pack Results	5min Storm Event	10min Storm Event	15min Storm Event	30min Storm Event	1hr Storm Event	2hr Storm Event	3hr Storm Event	6hr Storm Event	12hr Storm Event	18hr Storm Event	24hr Storm Event	48hr Storm Event	72hr Storm Event	5d Storm Event	10d Storm Event	Critical Event
Q-36IN to Wheeling Road	10-Year	Q Peak (cfs)	1.86	8.36	10.56	13.93	15.54	16.09	15.61	13.96	12.43	11.47	10.40	7.47	5.46	3.67	2.31	16.09
	50-Year	Q Peak (cfs)	5.28	11.66	15.85	19.81	21.23	20.11	15.61	18.37	16.74	15.18	13.58	9.53	8.07	5.30	3.21	21.23
	100-Year	Q Peak (cfs)	7.26	13.67	18.09	22.28	23.87	23.06	21.57	19.35	17.90	16.88	15.06	10.42	8.69	6.06	3.62	23.87
Q-Lot 117/118 Sewer	10-Year	Q Peak (cfs)	0.38	3.05	3.30	6.39	7.30	7.07	6.37	4.92	4.51	4.25	3.75	2.53	2.00	1.35	0.86	7.30
	50-Year	Q Peak (cfs)	1.73	7.58	8.36	12.00	13.38	13.91	6.37	11.41	10.08	8.94	7.31	3.63	2.77	1.99	1.21	13.91
	100-Year	Q Peak (cfs)	2.60	9.92	10.85	15.32	18.37	20.04	18.70	14.99	12.42	10.84	8.78	4.51	3.13	2.27	1.37	20.04

Proposed Flow Analysis:

Flow	Recurrence Interval	Pond Pack Results	5min Storm Event	10min Storm Event	15min Storm Event	30min Storm Event	1hr Storm Event	2hr Storm Event	3hr Storm Event	6hr Storm Event	12hr Storm Event	18hr Storm Event	24hr Storm Event	48hr Storm Event	72hr Storm Event	5d Storm Event	10d Storm Event	Critical Event
Q-36IN to Wheeling Road	10-Year	Q Peak (cfs)	2.24	8.61	10.18	12.68	13.96	14.21	13.80	12.43	11.29	10.56	9.71	7.26	5.42	3.78	2.53	14.21
	50-Year	Q Peak (cfs)	5.59	11.40	13.60	15.47	15.95	16.18	16.09	15.64	14.77	13.60	12.36	7.83	7.83	5.30	3.37	16.18
	100-Year	Q Peak (cfs)	7.53	12.61	14.97	15.84	16.51	17.35	16.99	15.94	15.02	13.60	9.93	8.37	6.01	3.76	17.51	
Q-Lot 117/118 Sewer	10-Year	Q Peak (cfs)	0.21	1.91	2.70	3.35	3.63	3.77	3.71	3.32	3.04	2.83	2.50	1.87	1.49	1.01	0.64	3.77
	50-Year	Q Peak (cfs)	1.29	3.50	4.52	5.59	10.23	11.38	10.75	8.66	7.46	6.57	5.38	2.05	2.05	1.48	0.90	11.38
	100-Year	Q Peak (cfs)	1.68	4.22	5.46	8.98	14.46	15.53	14.38	11.21	9.21	8.03	6.52	3.37	2.31	1.69	1.02	15.53

Difference:

Flow	Recurrence Interval	Pond Pack Results	5min Storm Event	10min Storm Event	15min Storm Event	30min Storm Event	1hr Storm Event	2hr Storm Event	3hr Storm Event	6hr Storm Event	12hr Storm Event	18hr Storm Event	24hr Storm Event	48hr Storm Event	72hr Storm Event	5d Storm Event	10d Storm Event	Critical Event
Q-36IN to Wheeling Road	10-Year	Q Peak (cfs)	0.38	0.25	-0.38	-1.25	-1.58	-1.88	-1.81	-1.53	-1.14	-0.91	-0.69	-0.21	-0.04	0.11	0.22	-1.88
	50-Year	Q Peak (cfs)	0.31	-0.26	-2.25	-4.34	-5.28	-3.93	0.48	-2.73	-1.97	-1.58	-1.22	-1.70	-0.24	0.00	0.16	-5.28
	100-Year	Q Peak (cfs)	0.27	-1.06	-3.12	-6.44	-7.36	-5.71	-4.06	-2.36	-1.96	-1.86	-1.46	-0.49	-0.32	-0.05	0.14	-7.36
Q-Lot 117/118 Sewer	10-Year	Q Peak (cfs)	-0.17	-1.14	-0.60	-3.04	-3.67	-3.30	-2.66	-1.60	-1.47	-1.42	-1.25	-0.66	-0.51	-0.34	-0.22	-3.67
	50-Year	Q Peak (cfs)	-0.44	-4.08	-3.84	-6.41	-3.15	-2.53	4.38	-2.75	-2.62	-2.37	-1.93	-1.58	-0.72	-0.51	-0.31	-6.41
	100-Year	Q Peak (cfs)	-0.92	-5.70	-5.39	-6.34	-3.91	-4.51	-4.32	-3.78	-3.21	-2.81	-2.26	-1.14	-0.82	-0.58	-0.35	-6.34

DETENTION VOLUME PROVIDED

PROJECT: Reserve at Muir Park [61 Unit Plan]

PERMIT NUMBER: _____

LOCATION: 1001 Oak Avenue, Prospect Heights, IL

DATE: 7/22/2020

AREA UNITS (CHOOSE WITH DROP-DOWN)

Units:

POND / VAULT / SURFACE DETENTION VOLUME

Elevation (ft)	Area (ft ²)	Average Area (ft ²)	Increment Volume (ac-ft)	Cumulative Volume (ac-ft)
652.00	10189.00			0.00
		11000.50	0.25	
653.00	11812.00			0.25
		12673.50	0.29	
654.00	13535.00			0.54
		14447.00	0.33	
655.00	15359.00			0.88
		16321.50	0.37	
656.00	17284.00			1.25
		17784.00	0.20	
656.50	18284.00			1.45

STORM SEWER DETENTION VOLUME

Diameter (in)	Length (ft)	Volume (ac-ft)
12	0	0.00

TOTAL DETENTION VOLUME

Pond / Vault / Surface Detention Volume (ac-ft)

1.45

Storm Sewer Detention Volume (ac-ft)

0.00

Total Detention Volume (ac-ft)

1.45

VAULT STORAGE CALCULATIONS

PROJECT: Reserve at Muir Park [61 Unit Plan] **PERMIT NUMBER:** _____

LOCATION: 1001 Oak Avenue, Prospect Heights, IL **DATE:** 7/22/2020

AREA UNITS (CHOOSE WITH DROP-DOWN)

Units: ft²

UNDERGROUND VAULT STORAGE: VAULT #1

1. Vault Bottom	652.0	ft
2. Vault Top	655.0	ft
3. Vault Height	3.0	ft
4. Vault Area	9,258	sf
5. Effective Vault Volume (90% Efficiency)	24,997	cf

UNDERGROUND VAULT STORAGE: VAULT #2

1. Vault Bottom	652.0	ft
2. Vault Top	656.5	ft
3. Vault Height	4.5	ft
4. Vault Area	1,202	sf
5. Effective Vault Volume (90% Efficiency)	4,868	cf

UNDERGROUND VAULT STORAGE: VAULT #3

1. Vault Bottom	652.0	ft
2. Vault Top	656.5	ft
3. Vault Height	4.5	ft
4. Vault Area	1,202	sf
5. Effective Vault Volume (90% Efficiency)	4,868	cf

UNDERGROUND VAULT STORAGE: VAULT #4

1. Vault Bottom	652.0	ft
2. Vault Top	656.5	ft
3. Vault Height	4.5	ft
4. Vault Area	1,817	sf
5. Effective Vault Volume (90% Efficiency)	7,359	cf

UNDERGROUND VAULT STORAGE: COMBINED VOLUME

1. Effective Vault Volume (90% Efficiency)	42,092	cf
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ORIFICE DISCHARGE RATE

PROJECT: Reserve at Muir Park - Detained Dev Area [61 Unit]

PERMIT NUMBER: _____

LOCATION: 1001 Oak Avenue, Prospect Heights, IL

DATE: 7/22/2020

RESTRICTOR INFORMTION

1. Orifice Number	1		
2. Orifice diameter, d	3.08	in	
3. Discharge Coefficient, C_d	0.61		
4. Invert Elevation	649.00	ft	
5. High Water Elevation, HWL	655.88	ft	
6. Tail Water Elevation	N/A	ft	

ACTUAL RELEASE RATE

6. Free Flow Actual Release Rate at HWL	0.66	cfs	
7. Submerged Actual Release Rate at HWL	0.00	cfs	

STAGE-DISCHARGE TABLE CONDITION (SELECT FROM DROP-DOWN)

Free-flow

STAGE-DISCHARGE TABLE

Elevation (ft)	Orifice 1 (cfs)	Orifice 2 (cfs)	Total (cfs)
652.00	0.43		0.43
653.00	0.50		0.50
654.00	0.56		0.56
655.00	0.61		0.61
655.82	0.66		0.66
655.88	0.66		0.66
656.00	0.66		0.66
656.50	0.69		0.69

HWL

BOX CULVERT OVERFLOW STRUCTURE - WEIR & GRATE CAPACITY

PROJECT: Reserve at Muir Park [61 Unit Plan] **PERMIT NUMBER:** _____
LOCATION: 1001 Oak Avenue, Prospect Heights, IL **DATE:** 7/22/2020

WEIR INFORMATION

1. Weir Number	1		
2. Weir Length	18.00	ft	
3. Weir Coefficient	3.0		
4. Weir Elevation	656.50	ft	
5. Hydraulic Grade Line (HGL) Crest	657.10	ft	

GRATE INFORMATION

1. Grate Number	1		
2. Grate Area	154.00	sf	
3. Open Area of Grate	129.36	sf	
4. Orifice Coefficient	0.6		
5. Grate Elevation	657.00	ft	
6. Hydraulic Grade Line (HGL) Crest	657.10	ft	

ACTUAL RELEASE RATE

6. Free Flow Actual Release Rate at HGL Crest	222.06	cfs	
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STAGE-DISCHARGE TABLE

Elevation (ft)	Weir 1 (cfs)	Grate 1 (cfs)	Total (cfs)
656.50	0.00	0.00	0.00
657.00	19.09	0.00	19.09
657.10	25.10	196.97	222.06
657.20	31.63	278.55	310.18
657.30	38.64	341.16	379.80
657.40	46.11	393.93	440.04
657.50	54.00	440.43	494.43

OUTFALL SEWER CAPACITY

PROJECT: RESERVES AT MUIR PARK
 SUBJECT: STORM SEWER
 Assumptions: n = 0.013 for RCP

MH/CB No.	q (cfs)	Diam. (in)	Slope (%)	Pipe full Q	Pipe full V	q/Q Capacity	v/V
A	18.73						
A to B		36	0.18	28.30	4.00	0.66	0.93
B							