FD#14

LBM Engineering, LLC
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CIVIL ENGINEERING - LAND DEVELOPMENT - SITE PLANS – STORMWATER ANAGEMENT

Engineering Report
For Land Use Commissions Submittals
Shewville Heights Open Space Resubdivision,
Ledyard, Connecticut

February 24, 2026
Rev. 05-07-2026

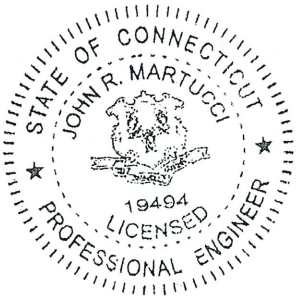
EXISTING CONDITIONS: Reference is made to the following Plan Set: "Plan Showing Shewville Heights Open Space Resubdivision Property of 84 Silas Deane LLC 84 Silas Deane Road Shewville Road and 58 & 59 Seabury Avenue, Ledyard, Connecticut" Scales as Shown February 2026, By Dieter & Gardner, Gales Ferry, CT. The property is located at the east end of Seabury Avenue, east of Seabury Circle. The property is wooded and hilly and drains to the north, east and south.

METHODOLOGY: The Rational Method was used for analyzing runoff rates per Part III of the Town of Ledyard's *Ordinance Regulating the Management of Stormwater Runoff.* The descending leg of the hydrographs are increased by a factor of 2.5 to provide additional stormwater volume. Intensity-Duration-Frequency (IDF) Curves were downloaded from the Northeast Regional Climate Center (NRCC) web site. Gutter Flow Analysis and Storm Sewer System Design calculations are attached to this report.

STORMWATER MANAGEMENT: The proposed development will not change the existing drainage patterns. 2.7 acres of the 48-acre parcel drain to the road's piped storm drain. A proposed detention/water quality basin is sized to hold the volume of up to a 100-year rainfall event. An extended detention underdrain is designed to slowly empty the basin over a 12-hour period which will allow time for suspended solids to settle out. Peak flow rate from the 6-inch PVC pipe will be less than 0.5 CFS. Discharge rate from the detention/water quality basin will be further reduced as it flows over 1,000 feet through wetlands and underbrush. The basin is designed to over-compensate for the runoff through the drainage system to make up for increases for development not associated with the road/storm drain.

CONCLUSION: The proposed development will not have adverse effects on down-gradient properties and is in keeping with the policies and goals of the Ledyard Planning and Zoning Commission.

Submitted by:
LBM Engineering, LLC
John R Martucci
John R. Martucci, P.E.



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JRM	2/2026	11 HALLY LANE		1
CHECKED BY	DATE CHECKED	COLCHESTER, CONNECTICUT 06415	CLIENT NAME	TOTAL PAGES
	REV 5/1/26	TEL: (860)-416-9809		
		EMAIL: JOHN@LBMENGINEERING.COM		

SHEWVILLE HEIGHTS SUB. - DRAINAGE CALCS.

CB 1 STA 11+82, LT (4% SLOPE)

ROAD 200' x 14' ÷ 43,560 — 0.06 AC

OVERLAND 200' x 10' ÷ 43,560 — 0.05 AC

0.11

WEIGHTED 'C' [(0.06 x 0.9) + (0.05 x 0.3)] ÷ 0.11 = 0.63

TG = 366.92 INV 362.22

CB 2 STA. 11+82, RT (4.0 %)

ROAD 200' x 14' ÷ 43,560 — 0.06 AC

DRIVEWAY 75 x 10 — 0.02 AC

OVERLAND 5000 SF ÷ 43560 — 0.11 AC

0.19 AC

WEIGHTED 'C' [(0.08 x 0.9) + (0.11 x 0.3)] ÷ 0.19 = 0.55

TG 366.72 INV = 361.98

CB 3 STA 14+04, LT (1%)

ROAD 212' x 14' ÷ 43,560 — 0.07

OVERLAND 200 x 20 ÷ 43,560 — 0.09

0.16

WEIGHTED C [(0.07 x 0.9 + (0.09 x 0.3)] ÷ 0.16 — 0.56

TG = 360.21 INV 358.95

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JRM	2/2026	11 HALLY LANE COLCHESTER, CONNECTICUT 06415 TEL: (860)-416-9809 EMAIL: JOHN@LBMENGINEERING.COM		2
CHECKED BY	DATE CHECKED REV. 4/2026		CLIENT NAME	TOTAL PAGES

CB 4 STA 14+04 RT (1.0%)

ROAD	212' x 14' ÷ 43,560	0.07 AC
DRIVEWAY	120 x 10	0.03 AC
ROOF	1500	0.03 AC
OVERLAND	(80 x 200 ÷ 43,560) - 0.06	0.30 AC
		0.43 AC

WEIGHTED 'C' [(0.13 x 0.9) + (0.30 x 0.3)] ÷ 0.43 = 0.48

TG 363.21 INV 358.71

CB 5 STA 17+0, LT (LOW POINT)

ROAD 550' x 14 ÷ 43,560 + [1/2 CULDESAC (50² x π) / 2 (0.09 AC)] 0.27 AC

AI = 0.27 x 0.9 = 0.0.24

TG = 360.50 INV 355.25

CB 6 STA 17+0, RT (LOW POINT)

ROAD	550' x 14' ÷ 43,560 + 0.09 (1/2 CULDESAC)	0.27 AC
DRIVEWAYS & ROOF	3 x 3,000 ÷ 43,560	0.21 AC
OVERLAND	45,000 ÷ 43560	1.03 AC
		1.51

WEIGHTED 'C' [(0.48 x 0.9) + (1.03 x 0.3)] ÷ 1.51

AI = 0.49

TG 360.50 INV 355.75

TYPE C Double Grate

PROJECT: SHEWVILLE HEIGHTS SUBDIVISION
PROJECT NO.:
TOWN: Ledyard
ROUTE:
LOCATION: N/A

DESIGNED BY: JRM DATE: 02/23/26
REV: JRM
CHECKED BY: DATE: 5/1/2026

GUTTER FLOW ANALYSIS - 25 YR STORM

Inlet ID	Inlet Station and Offset	Area in Acres (A)	Runoff Coeff. (C)	Time to Inlet (min.)	Rainfall Intensity (in/hr)	AC	Total AC	Q to Inlet (cfs)	Grade of Gutter ft/ft (SL)	Cross Slope Of Shoulder ft/ft (Sx)	Depth of Flow of Gutter (ft)	Gutter Flow Width (ft)	Q Bypassing Inlet (cfs)	AC Bypassing Inlet	AC Entering Catch Basin	Inlet Type
PROPOSED ROAD LEFT GUTTER																
CB 1	11+82, LT	0.110	0.63	10	6.20	0.069	0.069	0.473	0.040	0.043	0.104	2.415	0.000	0.000	0.069	"C"
CB 3	14+04, LT	0.160	0.56	10	6.20	0.090	0.090	0.611	0.010	0.043	0.148	3.449	0.046	0.007	0.082	"C"
CB 5	17+00, LT	0.270	0.9	10	6.20	0.243	0.250	1.708	LOW PT	0.043					0.250	"C"
PROPOSED ROAD RIGHT GUTTER																
CB 2	11+82, RT	0.190	0.55	10	6.20	0.105	0.105	0.713	0.040	0.043	0.121	2.818	0.009	0.001	0.103	"C"
CB 4	14+04, RT	0.430	0.48	10	6.20	0.206	0.208	1.418	0.010	0.043	0.203	4.729	0.315	0.051	0.157	"C"
CB 6	17+00, RT	1.490	0.48	10	6.20	0.715	0.767	5.234	LOW PT	0.043					0.767	"C"
											NOTES:					

LOW POINT ANALYSIS

INLET	Q TO INLET	PERIM.	C WEIR	d WEIR	WIDTH	d ORIFICE										
CB 5	1.708	5.020	3	0.234	5.45	0.041	0.3' DEEP - OK									
CB 6	5.234	7.330	3	0.384	8.93	0.387	0.4' DEEP - OK									

Notes

1.) Manning's n = 0.016 (asphalt).
2.) Tc = 5 minutes minimum for areas with all pavement.
3.) Tc = 10 minutes minimum for small areas with pavement and grass.
4.) All low points operate as a wier. Depth (d) over grate is less than 0.4 feet.

GRATES	PERIM	AREA
C	5.02	3.13
C DOUB	7.33	6.26
CL	7.33	3.13
CL DOUB	11.96	6.26

STORM SEWER SYSTEM DESIGN
DRAINAGE SYSTEM

Client: Sheet No. 1 of 1

Project: SHEWVILLE HEIGHTS SUBDIVISION Prepared By: JRM Date: 02/20/26 Revised: 05/01/26

Proj. No.:

Return Period for Design: 25-YR

Line Segment		Time to Inlet	Time in Pipe	Accumul. Time	A x C Entering	Sum of A x C in	Rainfall Intensity,	**Q in System**	Pipe Data						
From	To	(min.)	(min.)	(min.)	System	System	R (in./hr.)	**(c.f.s.)**	Size (in.)	Length (ft.)	Slope (ft./ft.)	Avg. Vel. (f.p.s.)	**Full Cap. (c.f.s.)**	Headwater (ft.)	Manning "n"
CB 1 11+82,LT	CB 2 11+82,RT	10	0.08	10.0	0.069	0.069	6.2	0.43	15	24	0.010	5.0	6.99	0.30	0.012
CB 2 11+82,RT	CB 4 14+04,RT	10	0.74	10.1	0.103	0.172	6.2	1.07	15	222	0.010	5.0	6.99	0.40	0.012
CB 3 14+04,LT	CB 4 14+04,RT	10	0.08	10.8	0.082	0.082	6.2	0.51	15	24	0.010	5.0	6.99	0.60	0.012
CB 4 14+04,RT	CB 6 17+00,RT	10	0.99	10.9	0.157	0.239	6.2	1.48	15	296	0.010	5.0	6.99	0.55	0.012
CB 6 17+00,RT	CB 5 17+00,LT	10	0.08	11.9	0.767	1.006	6.2	6.24	15	24	0.010	5.0	6.99	1.70	0.012
CB 5 17+00,LT	OUTLET	10	0.08	12.0	0.250	1.256	6.2	7.79	18	50	0.010	10.0	11.37	2.00	0.012

Manning's "n" for, HDPE and RC pipe = 0.012

NOTE: ALL PIPES ARE BELOW FULL CAPACITY.

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JRM	5/2026			5
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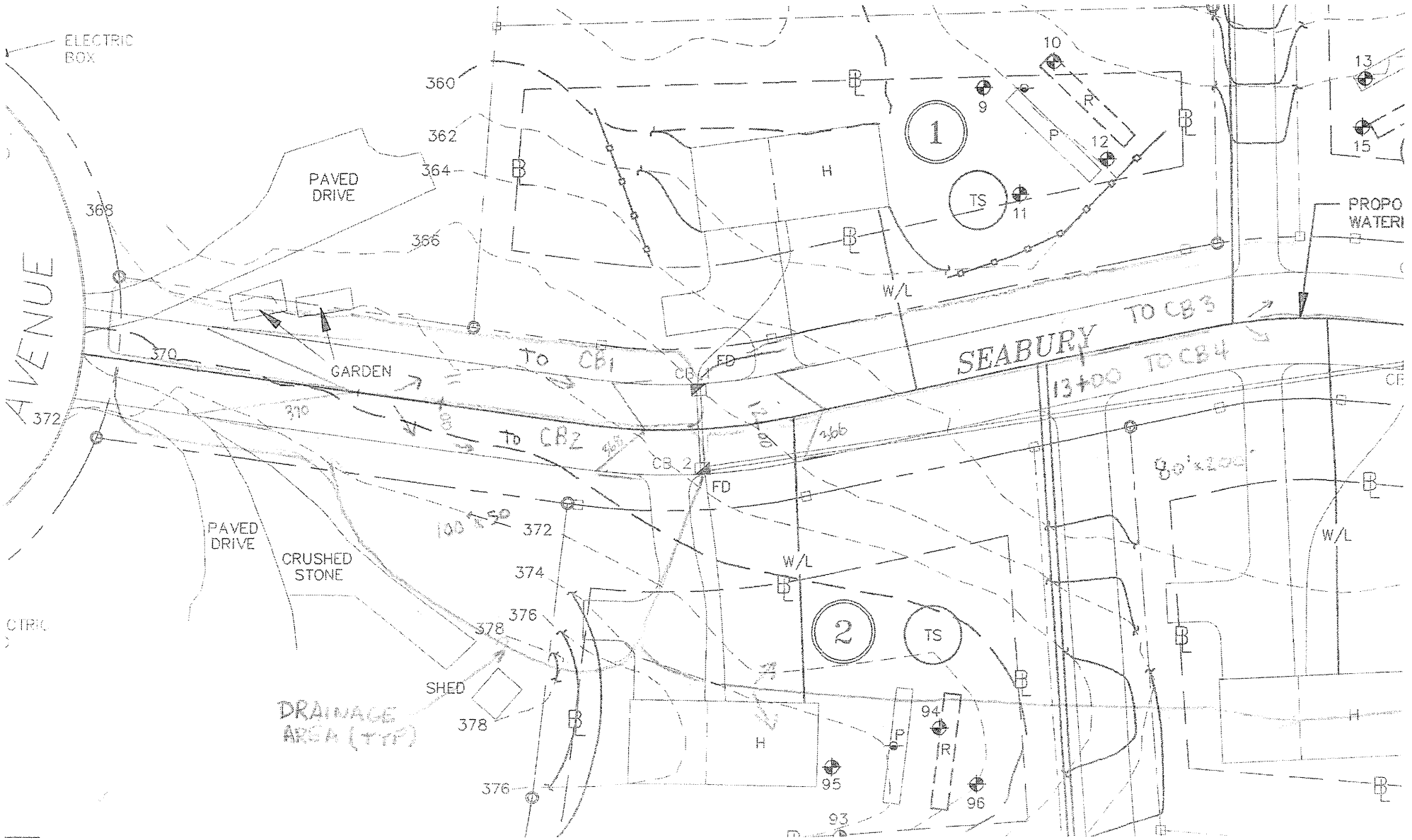
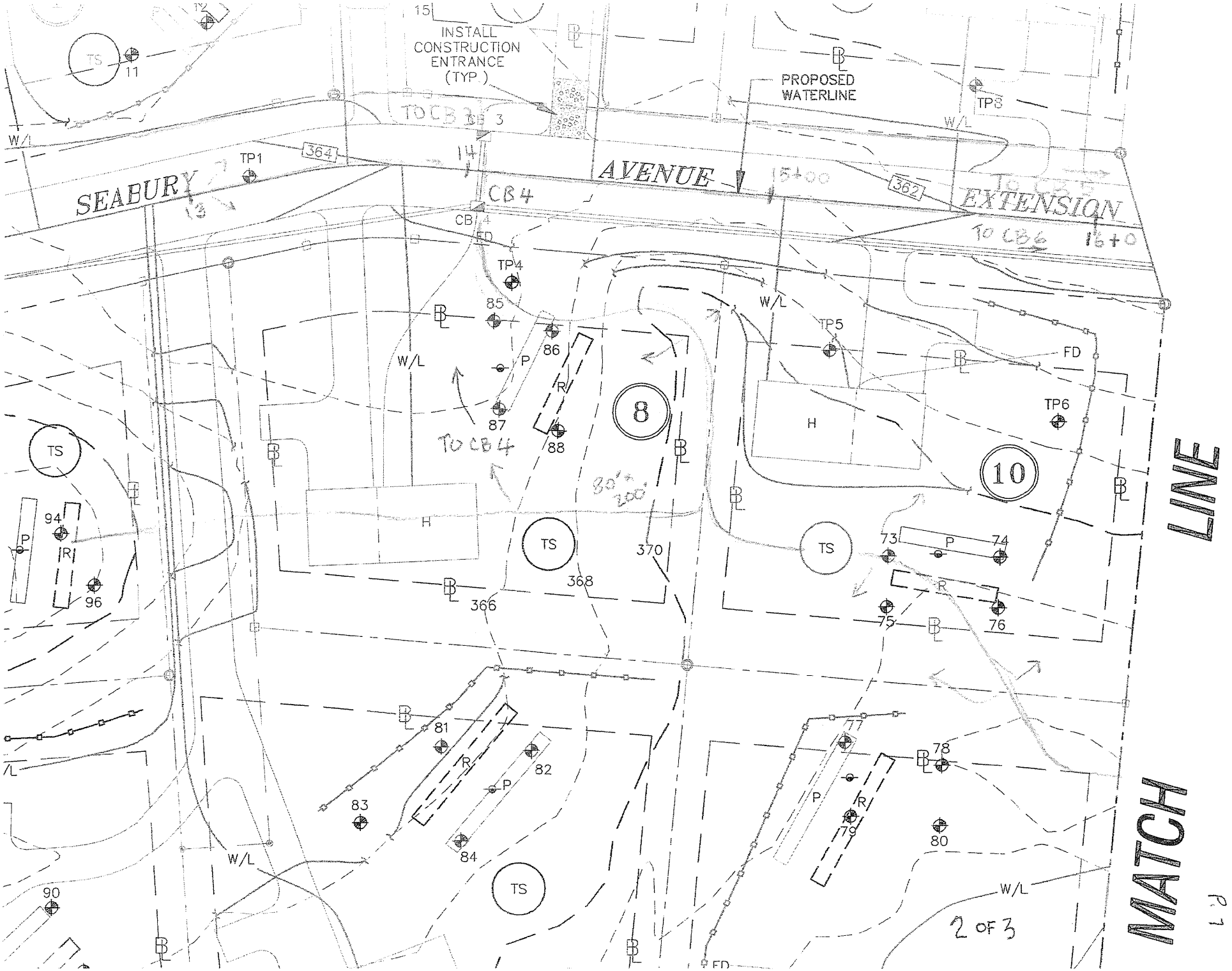
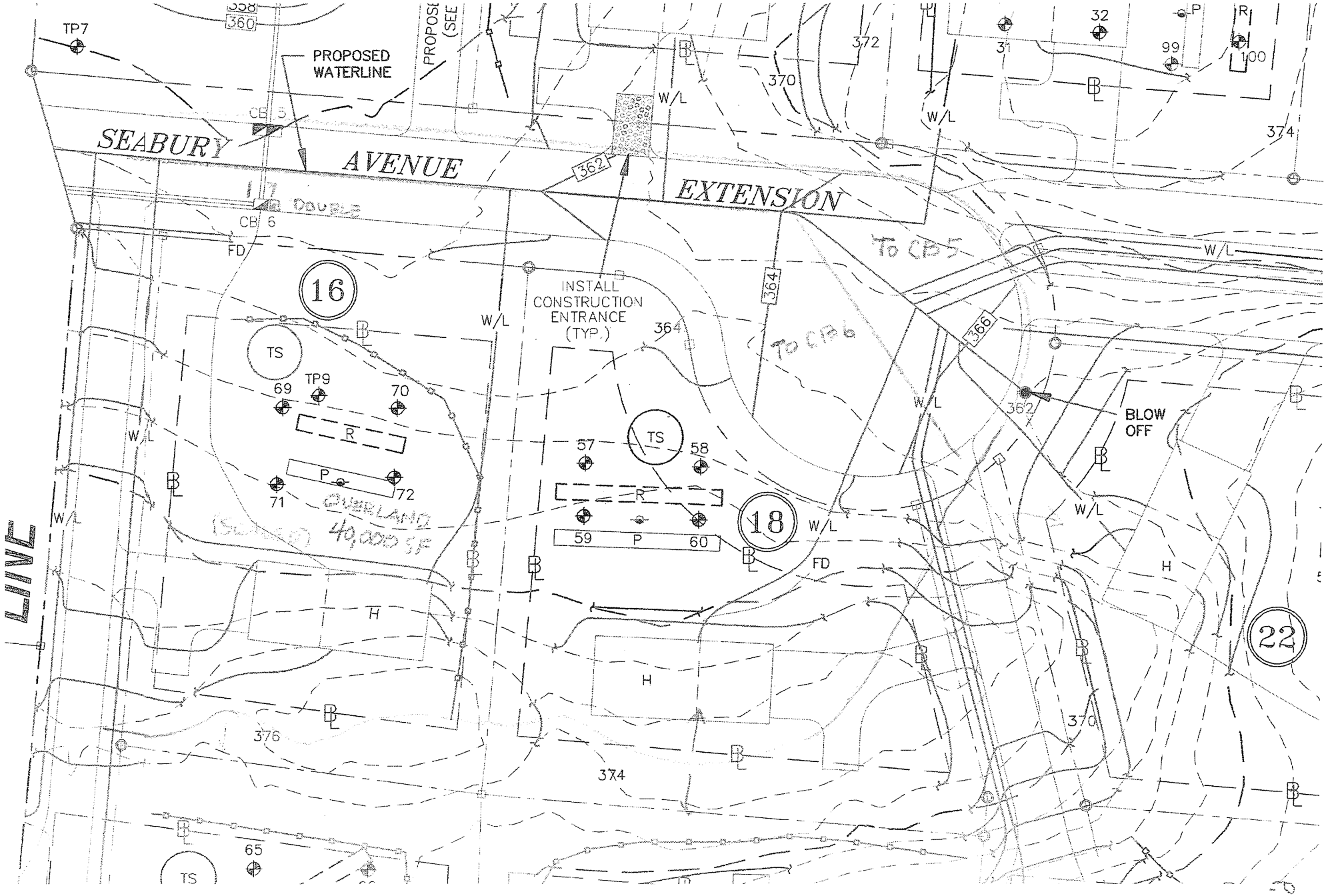
STORM DRAIN TO DETENTION BASIN

	AREA	ROOF & PAV'T	O'LAND
CB1	0.11	0.06	0.05
CB2	0.19	0.08	0.11
CB3	0.16	0.07	0.09
CB4	0.43	0.13	0.30
CB5	0.27	0.27	—
CB6	1.51	0.48	1.03
	2.67	1.09	1.58 AC



ROAD DRAINAGE AREAS
1 of 2 (1"=40')


INSTALL CONSTRUCTION ENTRANCE (TYP.)
PROPOSED WATERLINE
SEABURY AVENUE
EXTENSION
TO CB3
CB4
TO CB4
TO CB6
TP1
TP3
TP4
TP5
TP6
W/L
FD
TS
H
P
R
8
10
85
86
87
88
94
96
73
74
75
76
78
79
80
81
82
83
84
90
370
368
366
364
362
30' x 200'
MATCH LINE
2 OF 3


SEABURY AVENUE EXTENSION
PROPOSED WATERLINE
PROPOSED (SEE
TP7
CB 5
CB 6
FD
16
18
22
INSTALL CONSTRUCTION ENTRANCE (TYP.)
TS
TP9
69
70
71
72
57
58
59
60
P
R
H
W/L
362
364
366
370
372
374
376
BLOW OFF
To CB5
To CB6
LIVE
65
99
100

3 OF 3

COMPUTATIONS FOR:

ORIFICE SIZING WORKSHEET
SHEWVILLE HEIGHTS
LEDYARD, CT

Project	
Made By:	JRM
Date:	5/6/2026
Rev:	
Date:	

ORIFICE SIZING FOR EXTENDED DETENTION UNDERDRAIN

BASIN VOLUME AT SPILLWAY = 15,550 CUBIC FT
TARGET VOLUME (HALF EMPTY) = 7,775 CF

ConnDOT Drainage Manual Equation 10.32

Qav = VOL./T

VOLUME (FT^3)	7,775	
T (SEC.)= 12 Hrs =	43,200	
Qav (CFS) =	0.1800	Target Q at Half Volome

ConnDOT Drainage Manual Equation 10.18

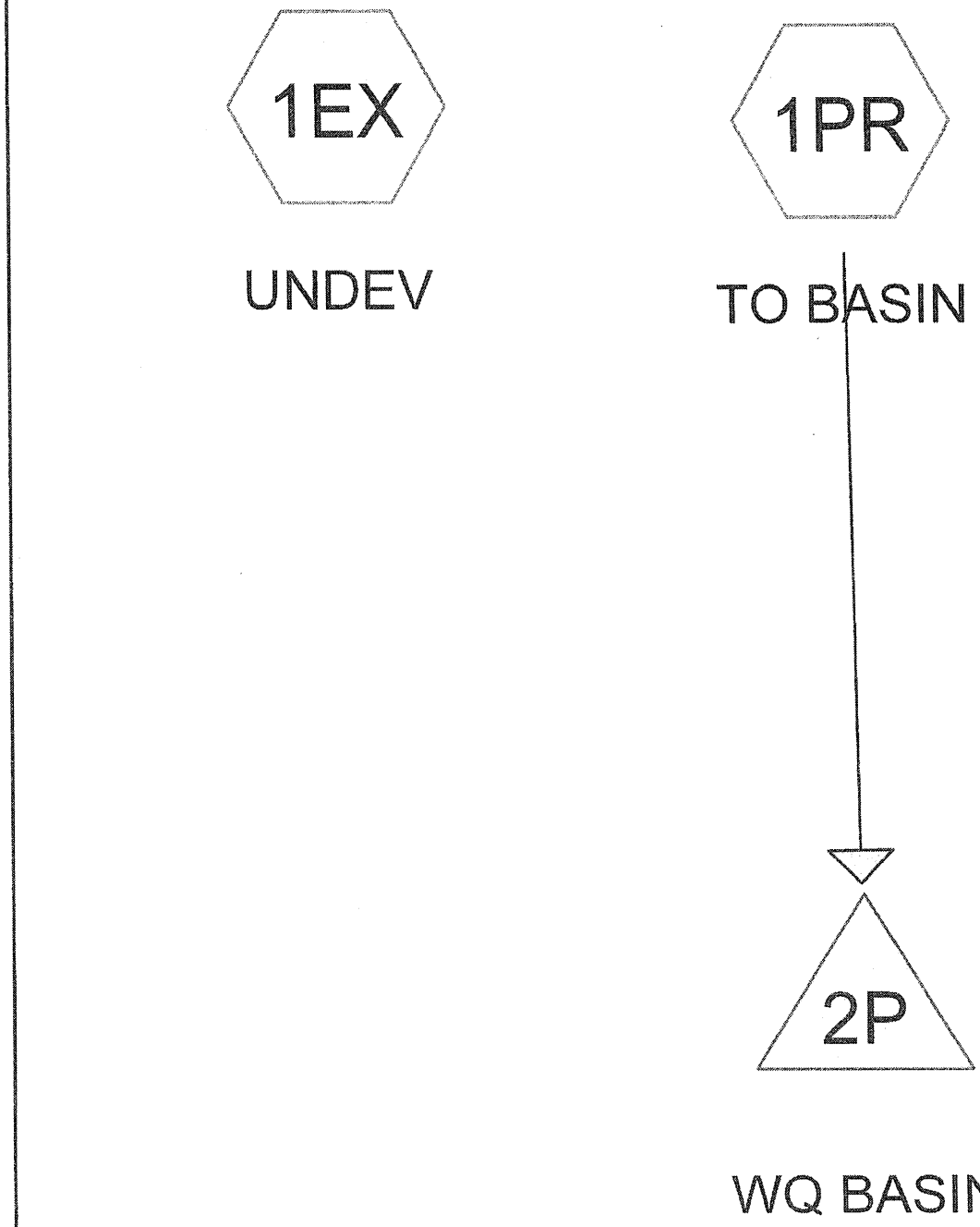
$Q = Kor\ D^2\ Ho^{0.50}$ Kor = 3.78

Q = Flow in CFS
Kor= Oriface Coefficient = 3.78
D= Oriface
H= Head in Feet

HEAD AT FULL = 3.5'

D (inch)	D (FT.)	H	Q (CFS)
2.00	0.167	2.00	0.1485
2.25	0.188	2.00	0.1879
2.50	0.208	2.00	0.2320
2.75	0.229	2.00	0.2807

USE 2-1/4" ORIFICE



Subcat Reach Pond Link

Routing Diagram for BASIN 05-2026
Prepared by LBM Engineering LLC, Printed 5/9/2026
HydroCAD® 10.20-8a s/n 09192 © 2025 HydroCAD Software Solutions LLC

Summary for Subcatchment 1EX: UNDEV

Runoff = 2.51 cfs @ 0.17 hrs, Volume= 2,933 cf, Depth= 0.30"

Runoff by Rational method, Rise/Fall=1.0/2.5 xTc, Time Span= 0.00-6.00 hrs, dt= 0.01 hrs
GALESFERRY 2-yr Duration=12 min, Inten=3.10 in/hr

Area (ac)	C	Description	Land Use
2.670	0.30	EXISTING UNDEVELOPED	
2.670		100.00% Pervious Area	

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Subcatchment 1PR: TO BASIN

Runoff = 4.51 cfs @ 0.17 hrs, Volume= 5,279 cf, Depth= 0.54"
Routed to Pond 2P : WQ BASIN

Runoff by Rational method, Rise/Fall=1.0/2.5 xTc, Time Span= 0.00-6.00 hrs, dt= 0.01 hrs
GALESFERRY 2-yr Duration=12 min, Inten=3.10 in/hr

Area (ac)	C	Description	Land Use
1.090	0.90	PAVEMENT & ROOFS	
1.580	0.30	OVERLAND	
2.670	0.54	Weighted Average	
2.670		100.00% Pervious Area	

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry, MINIMUM**

Summary for Pond 2P: WQ BASIN

Inflow Area = 116,305 sf, 0.00% Impervious, Inflow Depth = 0.54" for 2-yr event
Inflow = 4.51 cfs @ 0.17 hrs, Volume= 5,279 cf
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-6.00 hrs, dt= 0.01 hrs
Peak Elev= 357.17' @ 0.62 hrs Surf.Area= 3,691 sf Storage= 5,279 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	355.50'	15,550 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
355.50	2,650	0	0
357.50	3,900	6,550	6,550
359.50	5,100	9,000	15,550

Device	Routing	Invert	Outlet Devices
#1	Primary	359.00'	**6.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=355.50' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Subcatchment 1EX: UNDEV

Runoff = 3.73 cfs @ 0.17 hrs, Volume= 4,362 cf, Depth= 0.45"

Runoff by Rational method, Rise/Fall=1.0/2.5 xTc, Time Span= 0.00-6.00 hrs, dt= 0.01 hrs
GALESFERRY 10-yr Duration=12 min, Inten=4.62 in/hr

Area (ac)	C	Description	Land Use
2.670	0.30	EXISTING UNDEVELOPED	
2.670		100.00% Pervious Area	

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Subcatchment 1PR: TO BASIN

Runoff = 6.71 cfs @ 0.17 hrs, Volume= 7,851 cf, Depth= 0.81"
Routed to Pond 2P : WQ BASIN

Runoff by Rational method, Rise/Fall=1.0/2.5 xTc, Time Span= 0.00-6.00 hrs, dt= 0.01 hrs
GALESFERRY 10-yr Duration=12 min, Inten=4.62 in/hr

Area (ac)	C	Description	Land Use
1.090	0.90	PAVEMENT & ROOFS	
1.580	0.30	OVERLAND	
2.670	0.54	Weighted Average	
2.670		100.00% Pervious Area	

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry, MINIMUM**

Summary for Pond 2P: WQ BASIN

Inflow Area = 116,305 sf, 0.00% Impervious, Inflow Depth = 0.81" for 10-yr event
Inflow = 6.71 cfs @ 0.17 hrs, Volume= 7,851 cf
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-6.00 hrs, dt= 0.01 hrs
Peak Elev= 357.83' @ 0.62 hrs Surf.Area= 4,095 sf Storage= 7,851 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	355.50'	15,550 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
355.50	2,650	0	0
357.50	3,900	6,550	6,550
359.50	5,100	9,000	15,550

Device	Routing	Invert	Outlet Devices
#1	Primary	359.00'	**6.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=355.50' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Subcatchment 1EX: UNDEV

Runoff = 4.49 cfs @ 0.17 hrs, Volume= 5,251 cf, Depth= 0.54"

Runoff by Rational method, Rise/Fall=1.0/2.5 xTc, Time Span= 0.00-6.00 hrs, dt= 0.01 hrs
GALESFERRY 25-yr Duration=12 min, Inten=5.56 in/hr

Area (ac)	C	Description	Land Use
2.670	0.30	EXISTING UNDEVELOPED	
2.670		100.00% Pervious Area	

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Subcatchment 1PR: TO BASIN

Runoff = 8.08 cfs @ 0.17 hrs, Volume= 9,452 cf, Depth= 0.98"
Routed to Pond 2P : WQ BASIN

Runoff by Rational method, Rise/Fall=1.0/2.5 xTc, Time Span= 0.00-6.00 hrs, dt= 0.01 hrs
GALESFERRY 25-yr Duration=12 min, Inten=5.56 in/hr

Area (ac)	C	Description	Land Use
1.090	0.90	PAVEMENT & ROOFS	
1.580	0.30	OVERLAND	
2.670	0.54	Weighted Average	
2.670		100.00% Pervious Area	

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry, MINIMUM**

Summary for Pond 2P: WQ BASIN

Inflow Area = 116,305 sf, 0.00% Impervious, Inflow Depth = 0.98" for 25-yr event
Inflow = 8.08 cfs @ 0.17 hrs, Volume= 9,452 cf
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-6.00 hrs, dt= 0.01 hrs
Peak Elev= 358.21' @ 0.62 hrs Surf.Area= 4,323 sf Storage= 9,452 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	355.50'	15,550 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
355.50	2,650	0	0
357.50	3,900	6,550	6,550
359.50	5,100	9,000	15,550

Device	Routing	Invert	Outlet Devices
#1	Primary	359.00'	**6.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=355.50' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Subcatchment 1EX: UNDEV

Runoff = 5.65 cfs @ 0.17 hrs, Volume= 6,608 cf, Depth= 0.68"

Runoff by Rational method, Rise/Fall=1.0/2.5 xTc, Time Span= 0.00-6.00 hrs, dt= 0.01 hrs
GALESFERRY 100-yr Duration=12 min, Inten=6.99 in/hr

Area (ac)	C	Description	Land Use
2.670	0.30	EXISTING UNDEVELOPED	
2.670		100.00% Pervious Area	

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Subcatchment 1PR: TO BASIN

Runoff = 10.17 cfs @ 0.17 hrs, Volume= 11,895 cf, Depth= 1.23"
Routed to Pond 2P : WQ BASIN

Runoff by Rational method, Rise/Fall=1.0/2.5 xTc, Time Span= 0.00-6.00 hrs, dt= 0.01 hrs
GALESFERRY 100-yr Duration=12 min, Inten=6.99 in/hr

Area (ac)	C	Description	Land Use
1.090	0.90	PAVEMENT & ROOFS	
1.580	0.30	OVERLAND	
2.670	0.54	Weighted Average	
2.670		100.00% Pervious Area	

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry, MINIMUM**

Summary for Pond 2P: WQ BASIN

Inflow Area = 116,305 sf, 0.00% Impervious, Inflow Depth = 1.23" for 100-yr event
Inflow = 10.17 cfs @ 0.17 hrs, Volume= 11,895 cf
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-6.00 hrs, dt= 0.01 hrs
Peak Elev= 358.75' @ 0.62 hrs Surf.Area= 4,650 sf Storage= 11,895 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	355.50'	15,550 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
355.50	2,650	0	0
357.50	3,900	6,550	6,550
359.50	5,100	9,000	15,550

Device	Routing	Invert	Outlet Devices
#1	Primary	359.00'	**6.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=355.50' (Free Discharge)
↳**1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

SILAS DEANE

1.17

PROPOSED EMERGENCY ACCESS

INLAND WETLANDS

N/F
RONALD A.
&
ANNE H. DONOVAN
TRUSTEE

PAVED DRIVE

GARDEN

AVENUE

PAVED DRIVE

CRUSHED STONE

N/F
BRIAN A.
&
BROOKE JOHNSON

N/F
BARBARA KIL

N/F
DAVID F.
&
MARY H. FOLTZ

N/F
MASHANTUCKET PEQUOT TRIBAL NATION

N/F
PATRICI

EXISTING DRAINAGE AREA MAP

1" = 100'