



# ***PIETRZAK & PFAU***

ENGINEERING & SURVEYING, PLLC

December 22, 2021

Donald Serotta, Chairman  
Town of Chester Planning Board  
1786 Kings Highway  
Chester, NY 10918

Re: Oak Woods Subdivision  
Town of Chester – SBL: 15-1-27.41

Dear Mr. Serotta:

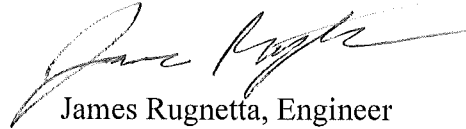
In reference to the above project, attached please find one (1) copy of the revised Subdivision Plan Set, one (1) copy of the Drainage Analysis Report, and one copy of the AG-Data Statement. The plans have been revised in accordance with the comment letter dated November 23, 2021. The responses coincide with your comment letter are as follows:

1. No revisions based on comment.
2. A full Drainage Analysis report has been added to this submission. This Drainage Analysis shows that the proposed peak flow stormwater runoff is decreased from the existing from utilizing rain gardens.
3. All symbols shown on the plans are now noted in the legends located on each sheet.
4. Plans now show soil stockpile locations and stone check dams along driveways. There is now a note on the erosion control plan that states that the rain gardens are to be used as sediment basins during construction and that all upstream areas of the rain gardens are to be stabilized before installation of the rain garden plantings.
5. SHPO letter has been submitted to the town before the previous meeting.
6. Lot 6 driveway now shows slope stabilization blanket areas.
7. Culvert sizes, inverts and slopes are now provided on the plan. The pipe sizing calculation has been included as an attachment with this response letter.
8. An AG-Data statement has been provided with this submission.
9. Driveway Profiles have been included on the plan as sheets 8 and 9.

Please place this item on your next available Planning Board agenda. Should you have any questions or require anything further, please do not hesitate to contact this office.

Very truly yours,

PIETRZAK & PFAU, PLLC

A handwritten signature in black ink, appearing to read "James Rugnetta", is written over a horizontal line.

James Rugnetta, Engineer

JJR/tmp  
attachment

# Channel Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc.

Wednesday, Dec 22 2021

## Existing 24in. C.M.P.

### Circular

Diameter (ft) = 2.00

Invert Elev (ft) = 639.78

Slope (%) = 3.87

N-Value = 0.016

### Calculations

Compute by: Known Q

Known Q (cfs) = 38.37

### Highlighted

Depth (ft) = 1.79

Q (cfs) = 38.37

Area (sqft) = 2.97

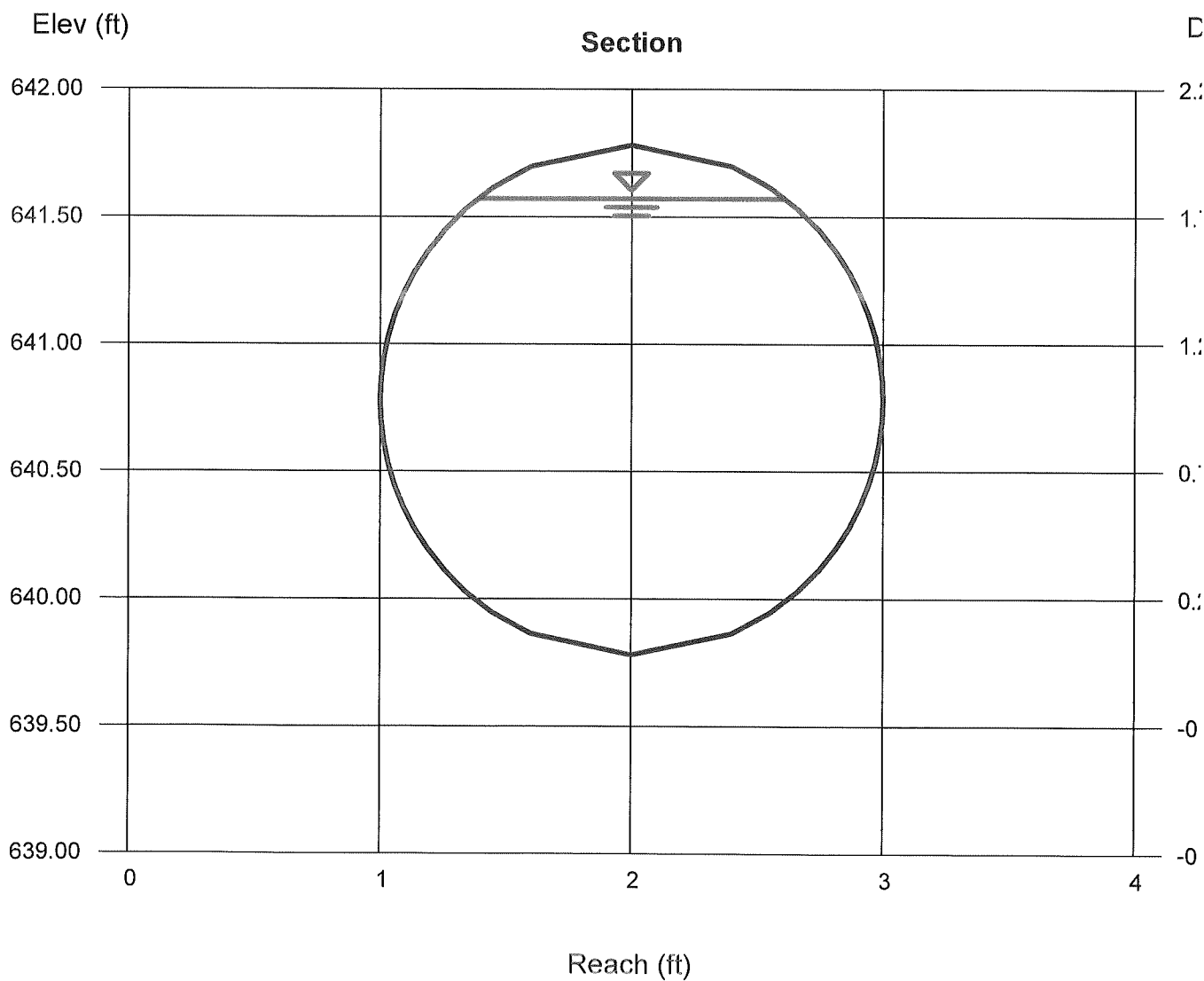
Velocity (ft/s) = 12.93

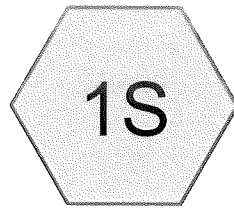
Wetted Perim (ft) = 4.97

Crit Depth, Yc (ft) = 1.95

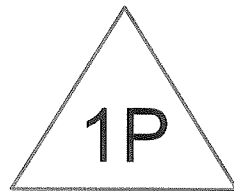
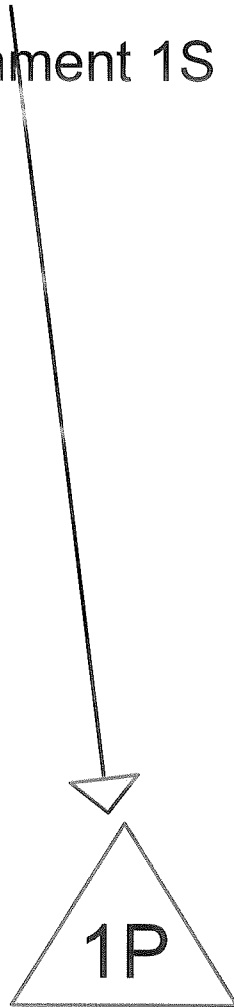
Top Width (ft) = 1.22

EGL (ft) = 4.39

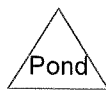
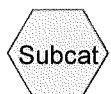




Subcatchment 1S



Design Point 1 (Ditch)



**Routing Diagram for Pipe Analysis**

Prepared by Pietrzak & Pfau Engineering and Surveying, PLLC  
HydroCAD® 10.00-25 s/n 01436 © 2019 HydroCAD Software Solutions LLC

## Pipe Analysis

Type III 24-hr 25 Year Storm Rainfall=6.11"

Prepared by Pietrzak & Pfau Engineering and Surveying, PLLC

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

### Subcatchment 1S: Subcatchment 1S

Runoff Area=595,933 sf 0.00% Impervious Runoff Depth>3.76"  
Flow Length=1,080' Tc=23.1 min CN=79 Runoff=38.37 cfs 4.288 af

### Pond 1P: Design Point 1 (Ditch)

Inflow=38.37 cfs 4.288 af  
Primary=38.37 cfs 4.288 af

Total Runoff Area = 13.681 ac Runoff Volume = 4.288 af Average Runoff Depth = 3.76"  
100.00% Pervious = 13.681 ac 0.00% Impervious = 0.000 ac

## Pipe Analysis

Type III 24-hr 25 Year Storm Rainfall=6.11"

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### Summary for Subcatchment 1S: Subcatchment 1S

Runoff = 38.37 cfs @ 12.32 hrs, Volume= 4.288 af, Depth> 3.76"

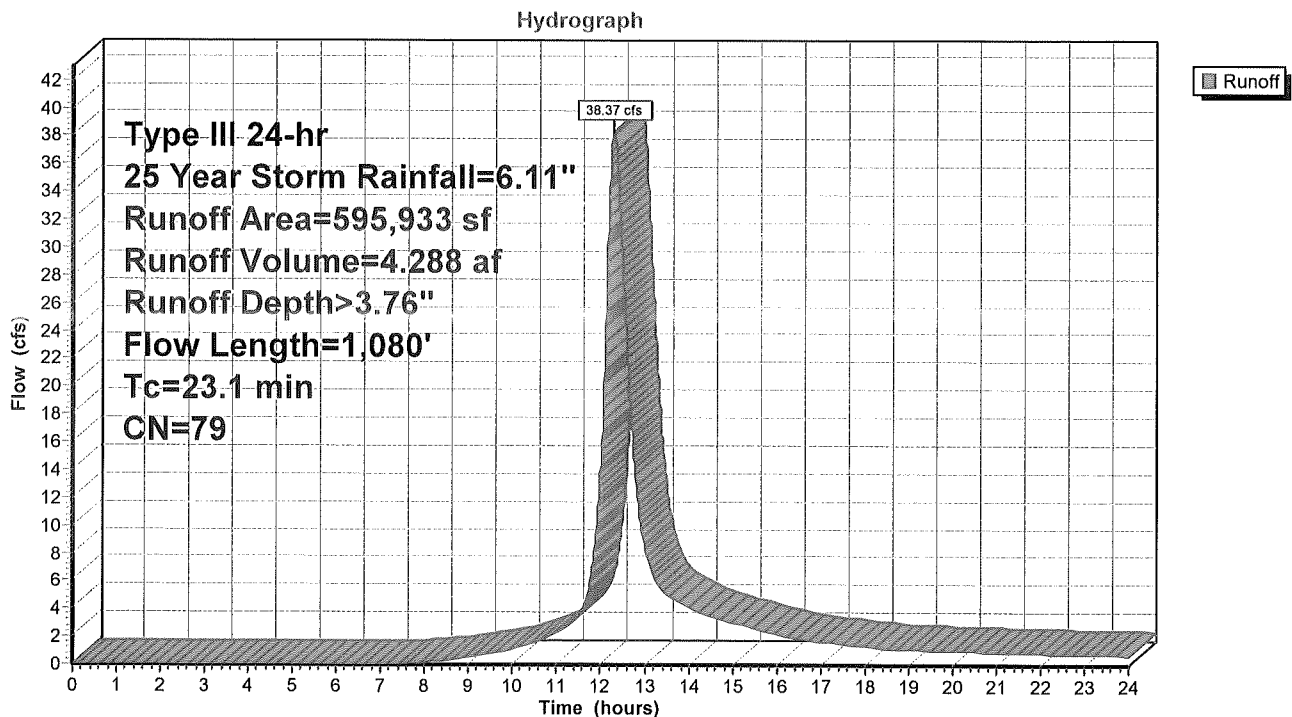
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
Type III 24-hr 25 Year Storm Rainfall=6.11"

Area (sf)	CN	Description
595,933	79	Woods, Fair, HSG D
595,933		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.5	100	0.1204	0.16		<b>Sheet Flow, Sheet Flow</b>
					Woods: Light underbrush n= 0.400 P2= 3.17"
12.6	980	0.0671	1.30		<b>Shallow Concentrated Flow, Shallow C flow</b>
					Woodland Kv= 5.0 fps
23.1	1,080	Total			

### Subcatchment 1S: Subcatchment 1S



## Pipe Analysis

Type III 24-hr 25 Year Storm Rainfall=6.11"

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### Summary for Pond 1P: Design Point 1 (Ditch)

Inflow Area = 13.681 ac, 0.00% Impervious, Inflow Depth > 3.76" for 25 Year Storm event  
Inflow = 38.37 cfs @ 12.32 hrs, Volume= 4.288 af  
Primary = 38.37 cfs @ 12.32 hrs, Volume= 4.288 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Pond 1P: Design Point 1 (Ditch)

