RUSSO
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1 Shoham Rd · East Windsor, CT 06088
CT: (860) 623-0569
MA: (413) 785-1158

LETTER OF TRANSMITTAL

DATE: 5-06-24	JOB NO. 2023-030
ATTN: George McGregor	
RE:	
Building Renovation & Addition	
619 Hopmeadow Street	

TO Planning & Community Development Department
933 Hopmeadow Street
Simsbury, CT 06070

WE ARE SENDING YOU ☒ Attached ☐ Under separate cover Via delivery, the following items:

☐ Cover Letter ☒ Paper Prints ☐ Mylars ☐ Specifications ☐ Report ☒ Other

COPIES	DATE	SHEET NO.	DESCRIPTION
5	5-06-24		Cover Letter
5	5-02-24		Application for Site Plan Approval
5	5-0224	-/5	Site Plans
5	5-06-24		Architectural Floor Plans & Elevations
5	5-02024		Drainage Memo
1	5-02-24		Check for Application Fee

THESE ARE TRANSMITTED (as checked below):

☒ For approval ☐ For your use ☐ For review and comment ☐ As requested

☐ For signature ☐ For your records ☐ Returned after loan to us ☐ For bids due_____

REMARKS:

cc: Jesse Sorrentino SENT BY: Timothy Coon

RUSSO
SURVEYORS•ENGINEERS

May 6, 2024

Planning & Community Development Department
Attn. George McGregor
933 Hopmeadow Street
Simsbury, CT 06070

Re: Building Renovation & Addition
619 Hopmeadow Street

Dear George,

On behalf of PR Properties, I am pleased to submit the attached application for Site Plan Approval associated with the proposed building renovation and expansion at 619 Hopmeadow Street in Simsbury. The subject property includes two existing parcels that will be merged. The first parcel, identified as Map G11, Lot 001, consists of 25,530 square feet zoned for professional office (PO). This parcel is currently improved with two commercial buildings. The northern building with the address of 625 Hopmeadow Street is the current location of two medical office uses: The Center for Dental Excellence, LLC and the BPS Periodontics. The southern building with the address of 619 Hopmeadow Street is the location of a law office. The second parcel involved in the application, identified as map G11, Lot 002, consists of 6,558 square feet of undeveloped land zoned R-15. The two parcels will be merged to create a single 32,088 square foot parcel. The merger will work to reduce the existing non-conforming impervious coverage and eliminate a property line to allow for an addition to the building at 619 Hopmeadow Street.

The proposed project includes the addition and renovation of the building at 619 Hopmeadow Street for the purpose of relocating a portion of the existing dental operation at 625 Hopmeadow Street to the new expanded space at 619 Hopmeadow Street. The renovations to the building at 619 Hopmeadow Street will include the demolition of a portion of the existing building and reconstruction and expansion to create a full two-story building with a layout specifically designed for the dental use. The existing building has a footprint of approximately 1,121 square feet and is accessed on the lower level from the existing on-site parking lot, and on the upper level via a walkway from the edge of Woodland Street and stairs from the lower level parking lot. The renovated/expanded building will have a footprint of approximately 1,724 square feet. The walkway and stairs providing access to the upper floor from Woodland Street and the lower parking lot will be re-built. Other improvements to the site will include the construction of a new handicap ramp to provide ADA access from the existing parking lot to the lower level of the building, and an expansion of the existing parking along Woodland Street to add two new parking spaces.

If there are any questions, or you require further information, please call me at (860) 623-0569.

Very truly yours,

Timothy A. Coon

Timothy A. Coon, P.E.
J.R. Russo & Associates, LLC

Attachments
cc: Jesse Sorrentino

Town of Simsbury

Office of Community Planning and Development - Zoning Commission A pplication

DATE: _____ FEE: $ _____ CK #: _____ APP #: _____

PROPERTY ADDRESS: 619 Hopmeadow Street

NAME OF OWNER: P.R. Properties c/o Jesse Sorrentino

MAILING ADDRESS: 625 Hopmeadow Street, Simsbury, CT 06070

EMAIL ADDRESS: jessesorrentino@gmail.com TELEPHONE # 860-658-5552

NAME OF AGENT: J.R. Russo + Associates, LLC; Attn Timothy Coon

MAILING ADDRESS: P.O. Box 938 East Windsor, CT 06088

EMAIL ADDRESS: tcoon@jrrusso.com TELEPHONE # 860-623-0569

ZONING DISTRICT: PO/R-15 LOT AREA: 32,088 (SQ FT) / ACRES

Does this site have wetlands? ☐YES ☒NO Have you applied for a wetlands permit? ☐YES ☒NO

REQUESTED ACTION (PLEASE CHECK APPROPRIATE BOX):

☐ **ZONE CHANGE**: The applicant hereby requests that said premises be changed from zone _____ to zone _____.

☐ **TEXT AMENDMENT:** Please attach proposed changes, including Sections and purposes.

☐ **SPECIAL EXCEPTION:** The applicant hereby requests a public hearing pursuant to Section _____.

☒ **SITE PLAN APPROVAL**: The applicant hereby requests

☐PRELIMINARY ☐FINAL ☒SITE PLAN AMENDMENT pursuant to Section 11

☐ **SIGN PERMIT**

☐ **OTHER (PLEASE EXPLAIN)**: _____

NOTE: Each application must fully comply with the requirements of the Zoning Regulations prior to receipt by the Commission. Each application for zone change and/or special exception shall include a list of names and addresses of abutting property owners and all property owners within 100 feet of the subject site.

A check payable to the Town of Simsbury must accompany this **original signed and dated** application. **Five (5) complete (folded) sets of plans, one (1) paper copy, and a digital copy of the completed application and correspondence** must also be included. If you have a PDF of your plans, we would appreciate a copy of that sent to jhollis@simsbury-ct.gov, as well.

5/2/24 — 5/2/24

Signature of Owner *Date* *Signature of Agent* *Date*

Telephone (860) 658-3245
Facsimile (860) 658-3206

www.simsbury-ct.gov

933 Hopmeadow Street
Simsbury, CT 06070

RUSSO
SURVEYORS·ENGINEERS

P.O. Box 938
EAST WINDSOR, CT 06088
PHONE: (860) 623-0569 FAX: (860) 623-2485

Memo

To: Simsbury Planning Department
From: Timothy Coon, P.E.
Date: 5-02-24
Re: Drainage Memo
Building Renovation & Addition
619 Hopmeadow Street, Simsbury, CT

PR Properties is proposing to renovate the existing building at 619 Hopmeadow Street in Simsbury. The renovations will include the demolition of a portion of the existing building and reconstruction and expansion to create a full two-story building for use as a Dental Surgical facility. The existing building has a footprint of approximately 1,121 square feet and is accessed on the lower level from the existing on-site parking lot, and on the upper level via a walkway from the edge of Woodland Street and stairs from the lower level parking lot. The renovated/expanded building will have a footprint of approximately 1,724 square feet. The walkway and stairs providing access to the upper floor from Woodland Street and the lower parking lot will be re-built. Other improvements to the site will include the construction of a new handicap ramp to provide ADA access from the existing parking lot to the lower level of the building, and an expansion of the existing parking along Woodland Street to add two new parking spaces. The proposed project will result in an increase of impervious area of 800 square feet (sf).

To mitigate the additional runoff resulting from the 800 sf increase in impervious area, a portion of the roof runoff from the renovated building will be collected and diverted to an on-site subsurface infiltration system. The infiltration system will be comprised two 4'x8'x4' concrete gallies. Runoff will be collected from the southern half of the main building and smaller western section of the building (totaling 989 square feet). The infiltration system was sized to store and infiltrate the collected runoff volume for the 100-year, 24 hour design storm.

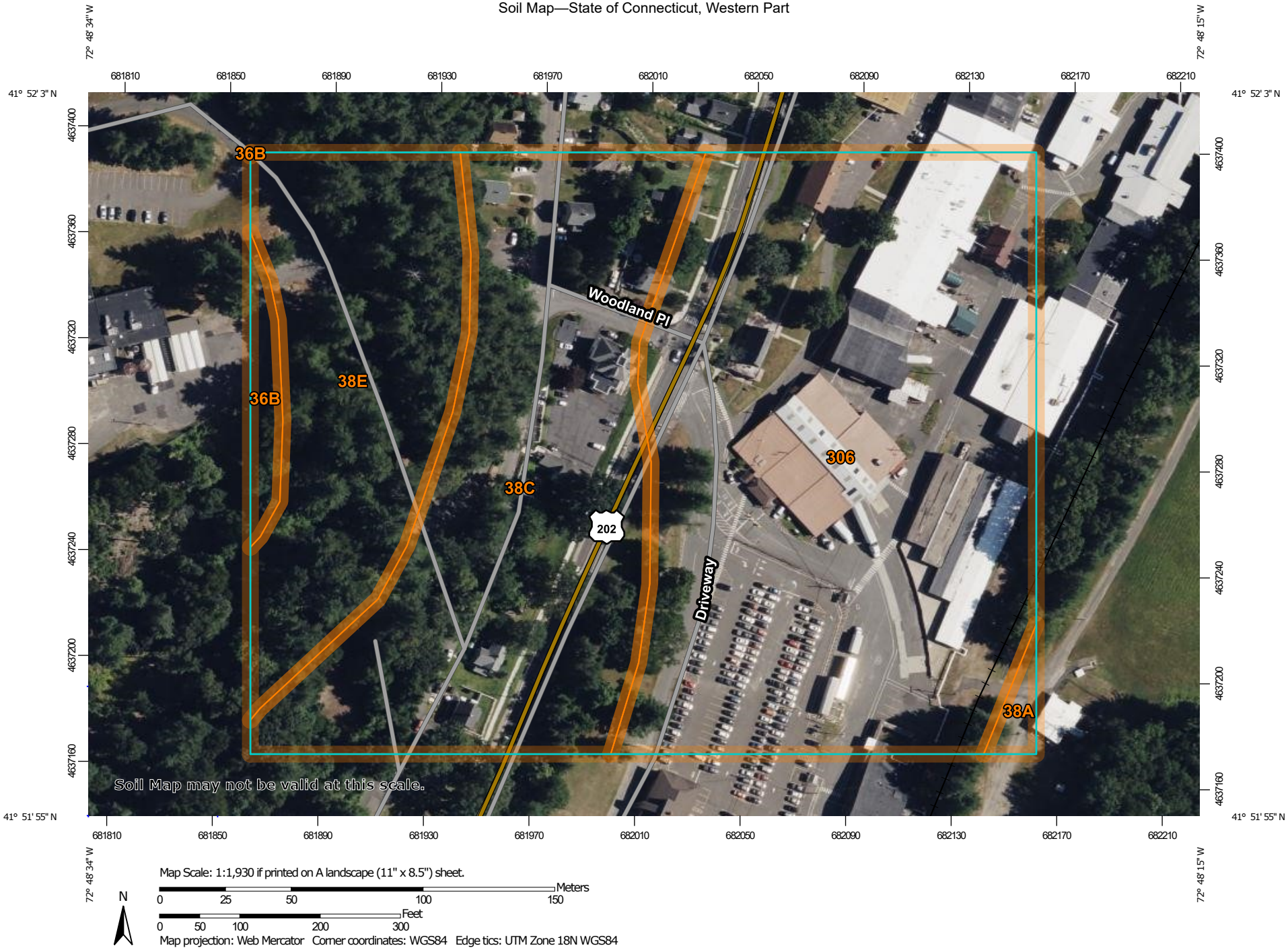
Based on the NRCS Soil Survey (attachment 1), soils at the site are classified as Hinckley loamy sand. These are characterized as excessively well drained, gravelly loamy sand soils which fall within Hydrologic Soil Group (HSG) A. The applicable Rawl's Rate for HSG A soils is 8.27 inches/hour. This rate was used as the design infiltration rate for sizing the subsurface system.

The subsurface system was modeled using Applied Microcomputer System's HydroCAD™ Stormwater Modeling System. This computer software employs the SCS Technical Release 55

and 20 (TR-55 & TR-20) methodology. The rainfall for the 100-year storm event, taken from NOAA Atlas 14, is 8.56 inches (attachment 2). The resulting HydroCAD data sheets are provided as Attachment 3. The calculations indicate that the proposed subsurface system is sufficiently sized to store and infiltrate the runoff collected from the roof during the 100-year storm event. Based on the calculations, and the fact that the area of the roof from which runoff is collected (989 sf) exceeds the increase in impervious area resulting from the project (800 sf), it is concluded that the proposed development will not result in an increase in runoff from the site, and no negative impacts are expected downstream.

ATTACHMENT 1

SOILS INFORMATION



Map Scale: 1:1,930 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 25 50 100 150

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Connecticut, Western Part
Survey Area Data: Version 1, Sep 15, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 14, 2022—Oct 6, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
36B	Windsor loamy sand, 3 to 8 percent slopes	0.3	1.6%
38A	Hinckley loamy sand, 0 to 3 percent slopes	0.1	0.7%
38C	Hinckley loamy sand, 3 to 15 percent slopes	5.2	30.9%
38E	Hinckley loamy sand, 15 to 45 percent slopes	3.1	18.5%
306	Udorthents-Urban land complex	8.1	48.3%
Totals for Area of Interest		**16.8**	**100.0%**

State of Connecticut, Western Part

38C—Hinckley loamy sand, 3 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2svmb
Elevation: 0 to 1,290 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Hinckley and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hinckley

Setting

Landform: Kame terraces, outwash plains, kames, eskers, moraines, outwash terraces, outwash deltas
Landform position (two-dimensional): Footslope, toeslope, shoulder, backslope, summit
Landform position (three-dimensional): Nose slope, side slope, crest, head slope, riser, tread
Down-slope shape: Convex, concave, linear
Across-slope shape: Convex, concave, linear
Parent material: Sandy and gravelly glaciofluvial deposits derived from gneiss and/or granite and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 8 inches: loamy sand
Bw1 - 8 to 11 inches: gravelly loamy sand
Bw2 - 11 to 16 inches: gravelly loamy sand
BC - 16 to 19 inches: very gravelly loamy sand
C - 19 to 65 inches: very gravelly sand

Properties and qualities

Slope: 3 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Minor Components

Windsor

Percent of map unit: 5 percent
Landform: Kame terraces, outwash plains, outwash terraces, outwash deltas, kames, eskers, moraines
Landform position (two-dimensional): Footslope, shoulder, backslope, toeslope, summit
Landform position (three-dimensional): Nose slope, side slope, crest, head slope, riser, tread
Down-slope shape: Convex, concave, linear
Across-slope shape: Convex, concave, linear
Hydric soil rating: No

Merrimac

Percent of map unit: 5 percent
Landform: Eskers, moraines, outwash terraces, outwash plains, kames
Landform position (two-dimensional): Shoulder, toeslope, backslope, footslope, summit
Landform position (three-dimensional): Side slope, head slope, nose slope, crest, riser, tread
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Agawam

Percent of map unit: 3 percent
Landform: Kame terraces, outwash plains, kames, eskers, moraines, outwash terraces, outwash deltas
Landform position (two-dimensional): Footslope, backslope, shoulder, toeslope, summit
Landform position (three-dimensional): Nose slope, side slope, crest, head slope, tread, riser
Down-slope shape: Convex, concave, linear
Across-slope shape: Convex, concave, linear
Hydric soil rating: No

Sudbury

Percent of map unit: 2 percent
Landform: Outwash terraces, kame terraces, outwash plains, moraines, outwash deltas
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear

ATTACHMENT 2

PRECIPITATION DATA

NOAA Atlas 14, Volume 10, Version 3
Location name: Simsbury, Connecticut, USA*
Latitude: 41.8666°, Longitude: -72.8072°
Elevation: 184 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sandra Pavlovic, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Orlan Wilhite

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.348** (0.268-0.449)	**0.417** (0.320-0.539)	**0.530** (0.405-0.687)	**0.623** (0.474-0.812)	**0.751** (0.555-1.02)	**0.847** (0.615-1.18)	**0.948** (0.669-1.38)	**1.06** (0.712-1.58)	**1.22** (0.790-1.89)	**1.35** (0.854-2.13)
10-min	**0.494** (0.380-0.637)	**0.591** (0.454-0.763)	**0.750** (0.574-0.972)	**0.882** (0.672-1.15)	**1.06** (0.786-1.45)	**1.20** (0.871-1.68)	**1.34** (0.948-1.95)	**1.50** (1.01-2.24)	**1.73** (1.12-2.67)	**1.91** (1.21-3.02)
15-min	**0.581** (0.447-0.749)	**0.695** (0.534-0.898)	**0.882** (0.676-1.14)	**1.04** (0.789-1.35)	**1.25** (0.925-1.71)	**1.41** (1.02-1.97)	**1.58** (1.12-2.29)	**1.77** (1.19-2.63)	**2.03** (1.32-3.14)	**2.25** (1.42-3.56)
30-min	**0.785** (0.604-1.01)	**0.943** (0.724-1.22)	**1.20** (0.919-1.56)	**1.41** (1.08-1.84)	**1.71** (1.26-2.33)	**1.93** (1.40-2.70)	**2.16** (1.52-3.14)	**2.42** (1.62-3.60)	**2.78** (1.80-4.31)	**3.08** (1.95-4.87)
60-min	**0.989** (0.761-1.28)	**1.19** (0.914-1.54)	**1.52** (1.16-1.97)	**1.79** (1.36-2.34)	**2.16** (1.60-2.96)	**2.45** (1.78-3.42)	**2.74** (1.94-3.98)	**3.07** (2.06-4.57)	**3.54** (2.29-5.47)	**3.91** (2.48-6.18)
2-hr	**1.28** (0.987-1.63)	**1.53** (1.18-1.96)	**1.94** (1.50-2.50)	**2.29** (1.75-2.96)	**2.76** (2.06-3.76)	**3.11** (2.28-4.34)	**3.49** (2.49-5.08)	**3.93** (2.65-5.83)	**4.59** (2.98-7.07)	**5.14** (3.26-8.09)
3-hr	**1.47** (1.14-1.87)	**1.76** (1.37-2.25)	**2.24** (1.74-2.88)	**2.64** (2.04-3.41)	**3.19** (2.39-4.34)	**3.60** (2.65-5.02)	**4.04** (2.90-5.89)	**4.57** (3.08-6.77)	**5.38** (3.50-8.26)	**6.07** (3.86-9.52)
6-hr	**1.84** (1.44-2.34)	**2.24** (1.75-2.84)	**2.88** (2.24-3.66)	**3.40** (2.64-4.37)	**4.14** (3.12-5.60)	**4.67** (3.46-6.50)	**5.26** (3.81-7.66)	**5.99** (4.06-8.83)	**7.13** (4.65-10.9)	**8.12** (5.18-12.7)
12-hr	**2.26** (1.78-2.85)	**2.79** (2.20-3.52)	**3.65** (2.86-4.62)	**4.36** (3.40-5.55)	**5.34** (4.05-7.20)	**6.06** (4.52-8.40)	**6.85** (5.00-9.97)	**7.85** (5.34-11.5)	**9.44** (6.17-14.4)	**10.8** (6.92-16.8)
24-hr	**2.64** (2.10-3.31)	**3.32** (2.63-4.16)	**4.43** (3.49-5.57)	**5.34** (4.20-6.76)	**6.61** (5.06-8.89)	**7.53** (5.66-10.4)	**8.56** (6.31-12.5)	**9.90** (6.74-14.4)	**12.1** (7.91-18.3)	**14.0** (8.97-21.6)
2-day	**2.96** (2.36-3.68)	**3.78** (3.02-4.71)	**5.13** (4.08-6.41)	**6.25** (4.94-7.86)	**7.80** (6.01-10.5)	**8.91** (6.76-12.3)	**10.2** (7.60-14.9)	**11.9** (8.12-17.3)	**14.7** (9.68-22.2)	**17.3** (11.1-26.6)
3-day	**3.22** (2.58-3.99)	**4.13** (3.31-5.12)	**5.62** (4.48-6.99)	**6.85** (5.44-8.58)	**8.55** (6.62-11.4)	**9.78** (7.46-13.5)	**11.2** (8.38-16.3)	**13.1** (8.96-18.9)	**16.3** (10.7-24.5)	**19.2** (12.4-29.4)
4-day	**3.47** (2.79-4.28)	**4.44** (3.57-5.49)	**6.03** (4.82-7.48)	**7.35** (5.84-9.17)	**9.16** (7.11-12.2)	**10.5** (8.00-14.4)	**12.0** (8.99-17.4)	**14.0** (9.60-20.2)	**17.4** (11.5-26.2)	**20.5** (13.2-31.4)
7-day	**4.16** (3.36-5.10)	**5.25** (4.24-6.46)	**7.05** (5.67-8.69)	**8.53** (6.82-10.6)	**10.6** (8.25-14.0)	**12.1** (9.25-16.5)	**13.7** (10.3-19.9)	**16.0** (11.0-23.0)	**19.8** (13.1-29.6)	**23.2** (15.0-35.3)
10-day	**4.84** (3.93-5.92)	**6.00** (4.86-7.34)	**7.89** (6.37-9.70)	**9.46** (7.59-11.7)	**11.6** (9.08-15.3)	**13.2** (10.1-17.9)	**15.0** (11.3-21.5)	**17.3** (12.0-24.8)	**21.2** (14.1-31.6)	**24.7** (16.0-37.5)
20-day	**6.98** (5.70-8.48)	**8.19** (6.68-9.96)	**10.2** (8.26-12.4)	**11.8** (9.54-14.5)	**14.1** (11.0-18.3)	**15.7** (12.1-21.0)	**17.5** (13.1-24.7)	**19.9** (13.8-28.3)	**23.6** (15.7-34.9)	**26.8** (17.4-40.6)
30-day	**8.79** (7.21-10.6)	**10.0** (8.20-12.1)	**12.0** (9.81-14.6)	**13.7** (11.1-16.7)	**16.0** (12.5-20.6)	**17.7** (13.6-23.4)	**19.5** (14.5-27.0)	**21.7** (15.1-30.7)	**25.0** (16.8-37.0)	**27.9** (18.2-42.1)
45-day	**11.0** (9.09-13.3)	**12.3** (10.1-14.8)	**14.4** (11.8-17.4)	**16.1** (13.1-19.6)	**18.4** (14.5-23.5)	**20.2** (15.5-26.4)	**22.0** (16.3-30.0)	**24.1** (16.9-33.9)	**26.9** (18.1-39.5)	**29.2** (19.1-44.0)
60-day	**12.9** (10.7-15.5)	**14.2** (11.7-17.1)	**16.4** (13.4-19.8)	**18.1** (14.8-22.1)	**20.6** (16.2-26.1)	**22.5** (17.2-29.2)	**24.4** (17.9-32.8)	**26.2** (18.4-36.8)	**28.6** (19.3-41.9)	**30.4** (19.9-45.7)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

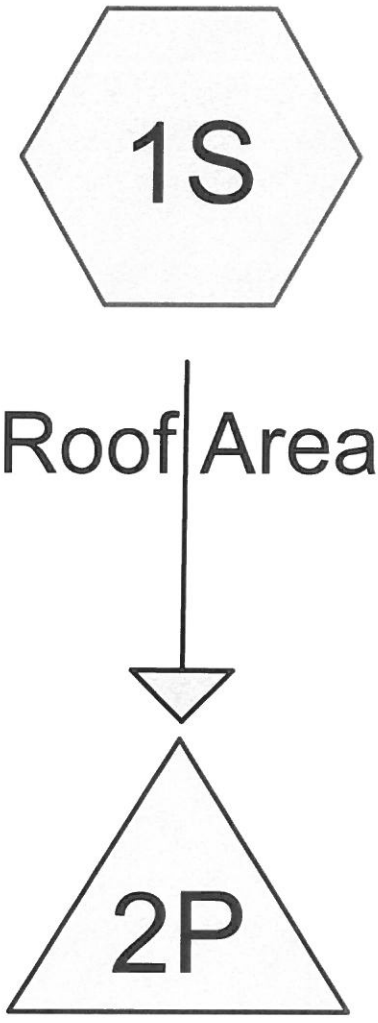
Please refer to NOAA Atlas 14 document for more information.

Back to Top

PF graphical

ATTACHMENT 3

HYDROCAD ANALYSIS



Subcat Reach Pond Link

Routing Diagram for 2023-030 PR Properties
Prepared by JR Russo & Associates, Printed 5/2/2024

Summary for Subcatchment 1S: Roof Area

Runoff = 0.19 cfs @ 12.07 hrs, Volume= 0.014 af, Depth> 7.65"
Routed to Pond 2P : Drywell

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-YR Rainfall=8.56"

	Area (sf)	CN	Description
*	989	98	Impervious
	989		100.00% Impervious Area

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

Summary for Pond 2P: Drywell

Inflow Area = 0.023 ac,100.00% Impervious, Inflow Depth > 7.65" for 100-YR event
Inflow = 0.19 cfs @ 12.07 hrs, Volume= 0.014 af
Outflow = 0.03 cfs @ 12.57 hrs, Volume= 0.020 af, Atten= 84%, Lag= 29.8 min
Discarded = 0.03 cfs @ 12.57 hrs, Volume= 0.020 af

Routing by Sim-Route method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 181.92' @ 12.57 hrs Surf.Area= 115 sf Storage= 194 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 37.2 min (768.9 - 731.8)

Volume	Invert	Avail.Storage	Storage Description
#1A	179.30'	87 cf	**6.40'W x 18.00'L x 4.00'H Field A** 461 cf Overall - 243 cf Embedded = 218 cf x 40.0% Voids
#2A	179.30'	187 cf	**Concrete Galley 4x8x4** x 2 Inside #1 Inside= 42.0"W x 43.0"H => 12.47 sf x 7.50'L = 93.6 cf Outside= 52.8"W x 48.0"H => 15.20 sf x 8.00'L = 121.6 cf
		274 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	179.30'	**8.270 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 172.00'

Discarded OutFlow Max=0.03 cfs @ 12.57 hrs HW=181.92' (Free Discharge)
↑**1=Exfiltration** (Controls 0.03 cfs)

Pond 2P: Drywell - Chamber Wizard Field A

Chamber Model = Concrete Galley 4x8x4 (Concrete Galley, UCPI 4x8x4 Galley or equivalent)
Inside= 42.0"W x 43.0"H => 12.47 sf x 7.50'L = 93.6 cf
Outside= 52.8"W x 48.0"H => 15.20 sf x 8.00'L = 121.6 cf

2 Chambers/Row x 8.00' Long = 16.00' Row Length +12.0" End Stone x 2 = 18.00' Base Length
1 Rows x 52.8" Wide + 12.0" Side Stone x 2 = 6.40' Base Width
48.0" Chamber Height = 4.00' Field Height

2 Chambers x 93.6 cf = 187.1 cf Chamber Storage
2 Chambers x 121.6 cf = 243.3 cf Displacement

460.8 cf Field - 243.3 cf Chambers = 217.5 cf Stone x 40.0% Voids = 87.0 cf Stone Storage

Chamber Storage + Stone Storage = 274.1 cf = 0.006 af
Overall Storage Efficiency = 59.5%
Overall System Size = 18.00' x 6.40' x 4.00'

2 Chambers
17.1 cy Field
8.1 cy Stone