



Job Name: 6 Hastings Road
Address: 6 Hastings Road
Municipality: Village of Wesley Hills
SBL: 41.14-1-35
Date: Oct-24
Rev Date:

Total Area 0.82 acres

Existing Conditions:

Impervious Area: 0.1 acres
Lawn: 0.72 acres

Proposed Conditions:

Impervious Area: 0.32 acres
Lawn: 0.5 acres

Design Storm:

100 year storm, 24 hour rainfall
9 inches

Soil Characteristics:

Soil Type:

Hydrologic Soil Group: C
Existing Curve Number: 77
Proposed Curve Number: 83

Soil Percolation Rate:

Estimate:

Rate: 0.02 inches/min
Diameter: 12 inches

Perc rate

0.00139 CF/SF/min
2.00 CF/SF/day

Required Storage Volume:

Use 100 year, 24 hour rainfall

Existing Conditions:

$$S=(1000/CN)-10$$

2.99

$$Q=(P-0.2S)^2/(P+0.8S)$$

6.20

Proposed Conditions

$$S=(1000/CN)-10$$

2.05

$$Q=(P-0.2S)^2/(P+0.8S)$$

6.94

Difference in Runoff Depth:

0.74 inches

Storage volume

2195.38 CF

Drywell Storage Volume

Required Storage Volume= 2195.38 CF

Use:

5 ft diameter drywell

5.5 ft depth

18 inch stone surround

0.4 Void Space for Stone

Area of Drywell

19.63 SF

Area Including Stone

50.24 SF

Area of Stone

30.62 SF

Volume of Diameter

107.94 CF

Volume of Stone

243.74 CF

Volume after Voids

97.50 CF

Volume Storage

205.43 CF

Drywell percolation - 24 hours:

Side wal area

86.35 SF

Assume no percolation in bottom area

Percolation Volume

172.70 CF/day

Total drywell Volume - 24 hours

378.13 CF

Calculate drywells required:

5.81

Use

6 drywells

2268.81 CF

2268.81 >

2195.38

WATERSHED/ SUBBASIN ID	HYDROLOGIC GROUP	COVER TYPE	HYDROLOGIC COND.	TOTAL AREA(AC)	IMPERVIOUS AREA			PERVIOUS AREA			WEIGHTED CN
					AREA(AC)	CN	A * CN	AREA(AC)	CN	A * CN	
Existing											
	C	Impervious	Good	0.10	0.10	98	9.80	0.00	98	0.00	98
	C	Lawn	Good	0.72	0.00	74	0.00	0.72	74	53.28	74
TOTAL:				0.82	0.10		9.80	0.72		53.28	77
Proposed											
	C	Impervious	Good	0.32	0.32	98	31.36	0.00	98	0.00	98
	C	Lawn	Good	0.50	0.00	74	0.00	0.50	74	37.00	74
TOTAL:				0.82	0.32		31.36	0.50		37.00	83

Soil Map—Rockland County, New York




**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

10/11/2024
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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 1:24,000.

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: Rockland County, New York

Survey Area Data: Version 22, Aug 25, 2024

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

Date(s) aerial images were photographed: May 31, 2022—Oct 27, 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
CrB	Cheshire gravelly fine sandy loam, 2 to 8 percent slopes	0.0	0.6%
CuB	Cheshire-Urban land complex, 2 to 8 percent slopes	0.4	22.2%
WeB	Wethersfield gravelly silt loam, 3 to 8 percent slopes	1.5	77.2%
Totals for Area of Interest		1.9	100.0%

Rockland County, New York

WeB—Wethersfield gravelly silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9v5l

Elevation: 30 to 690 feet

Mean annual precipitation: 47 to 50 inches

Mean annual air temperature: 48 to 52 degrees F

Frost-free period: 135 to 215 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Wethersfield and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wethersfield

Setting

Landform: Hills, till plains

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Crest

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy acid till derived mainly from reddish sandstone, shale, and conglomerate, with some basalt

Typical profile

H1 - 0 to 13 inches: gravelly silt loam

H2 - 13 to 22 inches: gravelly loam

H3 - 22 to 60 inches: gravelly fine sandy loam

Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: 20 to 38 inches to densic material

Drainage class: Well drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 18 to 30 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: C

Ecological site: F145XY012CT - Well Drained Dense Till Uplands

Hydric soil rating: No

Minor Components

Charlton

Percent of map unit: 5 percent

Hydric soil rating: No

Cheshire

Percent of map unit: 5 percent

Hydric soil rating: No

Riverhead

Percent of map unit: 5 percent

Hydric soil rating: No

Wallington

Percent of map unit: 5 percent

Hydric soil rating: No

Data Source Information

Soil Survey Area: Rockland County, New York

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