

ROBERT LAGA  
*Chairman*

NICHOLAS FANNIN  
*Vice Chairman*

RICHARD FRANZETTI, P.E.  
*Wetland Inspector*

ROSE TROMBETTA  
*Secretary*

**TOWN OF CARMEL**  
**ENVIRONMENTAL CONSERVATION BOARD**



60 McAlpin Avenue  
Mahopac, New York 10541  
Tel. (845) 628-1500 - Ext. 190  
[www.ci.carmel.ny.us](http://www.ci.carmel.ny.us)

**BOARD MEMBERS**

Edward Barnett  
Anthony Federice  
Nicole Sedran

**ENVIRONMENTAL CONSERVATION BOARD AGENDA**

**APRIL 7, 2022 – 7:30 P.M.**

**SUBMISSION OF AN APPLICATION OR LETTER OF PERMISSION**

<b><u>APPLICANT</u></b>	<b><u>ADDRESS</u></b>	<b><u>TAX MAP #</u></b>	<b><u>COMMENTS</u></b>
1. Hansen, John	28 Silver Gate Road	86.12-1-1	Construct Single Family Home & Septic System

**MISCELLANEOUS**

2. Minutes – 02/17/22 & 03/03/22

**JOHN KARELL, JR., P.E.**  
**121 CUSHMAN ROAD**  
**PATTERSON, NEW YORK, 12563**  
**845-878-7894 FAX 845 878 4939**  
[jack4911@yahoo.com](mailto:jack4911@yahoo.com)

---

March 20, 2022

Richard Franzetti, P.E., Town Engineer  
Town Hall  
Mahopacc, NY, 10541

Town of Carmel ECB

**Re: ECB Application & SWPPP**  
**Hansen**  
**28 Silvergate Road Carmel (T) Mahopac**  
**TM # 86.12-1-1**

Dear Mr. Franzetti & ECB

Attached herewith please find plans revised in accordance with the comments of the ECB as follows:


1. SWPPP report
2. One set of plans consisting of 3 sheets to Franzetti, 4 sets of plans to the ECB
3. Rain garden calculations

Revisions:

1. Added rain gardens
2. Removed well references
3. Added ECB notes
4. Removed references from the previous Wetlands permit showing access areas for the deep test hole excavation.

If you have any questions please call me at 845 721 0455.

Very truly yours.

  
John Karell, Jr., P.E.

**JOHN KARELL, JR., P.E.**  
**121 CUSHMAN ROAD**  
**PATTERSON, NEW YORK, 12563**  
845-878-7894 FAX 845 878 4939  
[jack4911@yahoo.com](mailto:jack4911@yahoo.com)

---

**STORMWATER POLLUTION PREVENTION PLAN**  
**EROSION AND SEDIMENT CONTROL**

**JOHN HANSEN**  
**28 SILVERGATE ROAD**  
**CARMEL (T)**



February 27, 2022, revised March 20, 2022



## **I. INTRODUCTION**

### **1.1. Project background**

The project site is vacant land located at 28 Silvergate Road in the Town of Carmel, Putnam County, New York. The property is identified as tax map #.86.12-1-1.

#### **Site Description**

The site is 3.4 acres in size. The proposed house construction will result in an increase in impervious area of 2,600 square feet and 0.43 acres ( 18,600 square feet) of total disturbance.

### **1.2. SWPPP Overview**

It is proposed to construct a single family house that will be 1,600 square feet in size. A connection to the Town of Carmel public water supply and septic system will provide water and sewer service to the proposed house. The purpose of this report is to address Storm Water Pollution Prevention and Management for the proposed improvements.

In accordance with the Code of the Town of Carmel and NYSDEC SPDES General Permit for Storm water Discharges from Construction Activities, General Permit GP-0-20-001, because the proposed disturbance for the project exceeds 5,000 square feet, coverage under the General Permit is required, a Notice of Intent (NOI) must be filed and a storm water pollution prevention plan is required for this project.

Construction will begin immediately after receiving approval from the Town of Carmel Building Department of a SWPPP in accordance with the provisions of the Town Code.

## **II. EXISTING SITE CONDITIONS**

### **2.0 General**

The existing property is vacant. The lot is located on the east side of the Silvergate Road in the Town of Carmel.

Generally the topography on the site flows from north to south.. The subject property is located in the NYC Watershed.

### **2.1 Surface Water**

A locally regulated wetland is located on this property..

### **2.2 Soils**

#### **2.1.1. Hydrologic Soils/NRCS Web Soils Survey**

Soils on the entire property are classified by the United States Department of Agriculture Soil Conservation Service as Ridgebury Complex, 3-8% (RgB) and Woodbridge Loam 3-8% (WdB) Hydrologic Soil Group B from the Web Soil Survey.

The pre developed site consists of woods in good condition, wetland and wetland buffer.

#### **2.1.2. Site Geotechnical Evaluation**

Review of the soil characteristics indicates a rock depth of greater than 7.

#### **2.3. Groundwater**

Groundwater is greater than 4-5 feet below grade.

#### **2.4. Natural Resources**

Natural resources contained on the site is the woodland area. The woodland will be removed for the construction of the house and driveway.

#### **2.5. New York State Register of Historic Places Assessment**

There are no Historic places on this property.

#### **2.6. Critical Habitat**

There are no critical habitats on this property.

#### **2.7. Offsite Drainage**

No changes in drainage patterns are proposed.

#### **2.8 Pre-construction Drainage Areas**

No changes to pre construction runoff patterns will result from the construction of this project.

#### **2.9 Potential sources of pollution**

Potential sources of pollution which may be reasonably expected to affect the quality of stormwater discharges.

- Sediment – all disturbed areas will be stabilized



### **III. Stormwater Management, Treatment and Conveyance**

A. Storm water treatment is not required. Management of stormwater from this property will be discharging roof and driveway drainage to three rain gardens, one for the driveway and two for the house as mitigation for disturbance within the wetland 100 foot buffer. .

B. Stormwater conveyance for this project consists of piping from the house and driveway to the rain gardens. .

### **IV. Stormwater Management**

Treatment of stormwater is not required by DEC but will be provided as wetland mitigation.

### **V. Erosion and Sediment Control**

#### **A. Temporary Erosion and Sediment Control Measures**

1. Temporary erosion and sediment control measures in the design of this project are silt fence. The driveway will be provided with a stabilized construction entrance. The contractor will be responsible for daily sediment cleanup on the driveway, if any. Silt fence are proposed to be installed along the downslope of all areas of disturbance as shown on the site plan, or as determined to be necessary during construction.

2. Runoff will be controlled within the project area. Bare soil areas, disturbed areas, will be seeded and mulched to control possible erosion and slow the velocity of runoff. Such activities shall be initiated by the end of the next business day and completed within 7 days from the date the current soil disturbance activity ceased.

3. Initial grading shall take place to install the sediment control measures. Soil stockpiles shall be stabilized away from any drainage structures or natural drainage paths. Once final grading has been achieved in any area that area shall be seeded and mulched and not redisturbed again.

4. Soil stockpiles must be protected with seeding and/or mulching as soon as possible but no longer than 7 days after ceasing activity. (see item # 2 above)

5. Measures must be in place prior to disturbance of a particular area in order to prevent sediment from traveling off site. This is accomplished on this site by the proper installation of silt fence.

6. Dust shall be controlled to keep the amount of particles/sediment generation by construction activity to a minimum. This will be accomplished by seeding and mulching of disturbed areas and wetting areas prone to airborne dust.

7. All temporary and permanent sediment and erosion control measures must be checked on a weekly basis for functionality and stability. This includes the silt fencing and the stabilized construction entrance. Any bare spots in areas previously seeded will be reseeded and

remulched as soon as necessary. In areas where soil erosion and sedimentation is found to be a problem and measures are not in place, appropriate measures must be installed as required by the supervising engineer.

8. Final grading shall match approximately the cut and fill lines as shown on the plans. This must be accomplished within 7 days of the end of the construction activity unless otherwise specified under the Town or DEC permits. (see item # 2 above)

9. Temporary measures shall not be removed until all disturbed areas protected by such measures are fully and properly stabilized.

10. Permanent non structural measures to remain in place are re-established areas of grass and landscaping within the non impervious areas.

11. Pollution prevention measures that will be utilized to prevent construction debris from becoming a pollutant source include:

...Litter control – refuse containers will be provided on the site for the deposition of any debris. The contractor shall police the site at the end of each day, collect litter and deposit litter in the refuse containers.

...Construction chemicals – all construction chemicals including but not limited to equipment fuels and oils and cleaning solvents shall be stored in appropriate containers and within a locked facility overnight.

Any spills of construction chemicals will be immediately cleaned up in accordance with appropriate procedures.

Any significant spill will be immediately reported to the NYSDEC pursuant to State Regulations, procedures and requirements.

...Construction debris will be collected and placed in roll off containers and disposed off site in at an appropriate disposal facility. (Part III.B.1.j)

## **B. Permanent Erosion Control Measures**

1. Permanent erosion control measures employed in the design of the project include stabilization of all disturbed areas with grass and rain gardens with rip rap overflows for driveway and roof drainage.

## **VI. Inspection & Maintenance of Stormwater and Erosion Control Measures**

### **A. Inspection and Reporting Requirements**

All erosion control measures are to be inspected weekly. In the case of a rain event, measures



must be checked immediately after. Inspections shall be made by a qualified professional and reports will be kept on site in a dedicated mailbox labeled, "Stormwater Documents".

## **B. Responsibilities**

The project contractor and/or subcontractors shall be responsible to install, construct, repair, replace, inspect and maintain the temporary erosion and sediment control practices included in the SWPPP. The project contractor/subcontractor shall be responsible for constructing the post construction storm water management practices included in the SWPPP. Such measures will be maintained by the project contractor/subcontractor during the entire construction period.

Permanent measures will be maintained by the owner of the property.  
(Part III.A.6) (Part IV)

Developer:

John Hansen  
225 Ice Pond Road  
Brewster, NY, 10509

Owner/ Applicant  
Same as developer

The *owner or operator* shall have each of the contractors and subcontractors identify at least one person from their company that will be responsible for implementation of the SWPPP. This person shall be known as the *trained contractor*. The *owner or operator* shall ensure that at least one *trained contractor* is on site on a daily basis when soil disturbance activities are being performed.

The *owner or operator* shall have each of the contractors and subcontractors identified above sign a copy of the following certification statement below before they commence any *construction activity*:

"I hereby certify that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for storm water discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I understand that certifying false, incorrect or inaccurate information is a



violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings. "

In addition to providing the certification statement above, the certification page must also identify the specific elements of the SWPPP that each contractor and subcontractor will be responsible for and include the name and title of the person providing the signature; the name and title of the *trained contractor* responsible for SWPPP implementation; the name, address and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification statement is signed.

The *owner or operator* shall attach the certification statement(s) to the copy of the SWPPP that is maintained at the construction site. If new or additional contractors are hired to implement measures identified in the SWPPP after construction has commenced, they must also sign the certification statement and provide the information listed above.

### **C. Temporary Measures**

#### **1. Construction Entrance(s)**

The construction entrances shall be maintained in a condition which will prevent tracking or flowing of sediment onto the public right of way. This will require, sweeping and washing the driveway surfaces, periodic top dressing with addition stone or additional length as conditions demand based on daily inspections and repair and/or clean out of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights of way must be immediately removed.

#### **2. Silt Fence**

Silt fence is proposed down gradient from all disturbed areas proposed on the site. Silt fence is used to collect the transported sediment load due to runoff and to slow said runoff, in an effort to prevent erosion. The silt fence is a temporary barrier of geotextile fabric supported by fence posts at a 10 foot maximum interval.

Sediments shall be removed from behind the fence when it becomes 0.5 feet deep at the fence. It should also be inspected regularly, at least once a week and repaired as needed to maintain a barrier.

## **D. Permanent Measures**

### **1. Permanent vegetation**

All grassed areas shall be maintained to provide a vegetative cover to hold soils in place.

#### 2. Rain Gardens

Invasive species will be removed and plantings replaced as necessary.

#### 3. Yard Drain

Sediment will be removed as necessary.

## **VII. General Requirements for Owners or Operators with Permit Coverage**

A. The *owner or operator* shall maintain a copy of the General Permit (GP-0-20-001), NOI, *NOI Acknowledgment Letter*, SWPPP, MS4 SWPPP Acceptance form and inspection reports at the construction site until all disturbed areas have achieved *final stabilization* and the NOT has been submitted to the Department.

The documents must be maintained in a secure location, such as a job trailer, on-site construction office, or mailbox with lock. The secure location must be accessible during normal business hours to an individual performing a compliance inspection. (Part II.B.C.2)

B. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4*, the *owner or operator* shall notify the *MS4* in writing of any planned amendments or modifications to the post-construction stormwater management practice component of the SWPPP required by Part III.A. 4. and 5. of this permit. Unless otherwise notified by the *MS4*, the *owner or operator* shall have the SWPPP amendments or modifications reviewed and accepted by the *MS4* prior to commencing construction of the post-construction stormwater management practice. (Part II.C.5)

C. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4* and meet subdivision 2a. or 2b. of this Part, the *owner or operator* shall also have the *MS4* sign the “MS4 Acceptance” statement on the NOT. The *owner or operator* shall have the principal executive officer, ranking elected official, or duly authorized representative from the *regulated, traditional land use control MS4*, sign the “MS4 Acceptance” statement. The *MS4* official, by signing this statement, has determined that it is acceptable for the *owner or operator* to submit the NOT in accordance with the requirements of this Part. The *MS4* can make this determination by performing a final site inspection themselves or by accepting the *qualified inspector's* final site inspection certification(s) required in Part V.3. (Part V.A.4)

D. Within 10 days after the installation of all erosion control plan measures, the applicant shall submit to the Building Inspector a letter from the qualified professional who designed the plan for JAB, Inc, stating that all erosion control measures have been constructed and installed in compliance with the approved plans.

E. Various certifications are required to be completed as follows:

1. SWPPP Modification Summary Sheet
2. SWPPP Preparer Certification
3. Contractor and Sub-contractor Certification

These documents are appended to this SWPPP.

### **VIII. Conclusions**

In conclusion, the proposed project shall not result in any negative impact to existing hydrologic condition at the vicinity of the property and proposed storm water management practices conforms to NYSDEC Storm water Management Design Manual and GP-0-20-001. In addition, the design of all storm water management practices meets the requirements of the Town of Carmel.



**JOHN KARELL, JR., P.E.**  
**121 CUSHMAN ROAD**  
**PATTERSON, NEW YORK, 12563**  
845-878-7894 FAX 845 878 4939  
[jack4911@yahoo.com](mailto:jack4911@yahoo.com)

---

## **DRAINAGE STUDY**

March 20, 2022

**HANSEN, 28 SILVERGATE ROAD, CARMEL (T)**

### **DESIGN PARAMETERS**

Proposed Impervious area house roof = 1,560 square feet, use 1,600

Proposed Impervious area driveway = 800 feet

Design Storm = 3.1 inches

Soils: , Hydrologic Group B

### **WATER QUALITY VOLUME**

$$WQV = (P)(RV)(A)/12$$

#### **House**

$$P=3.1 \quad RV=0.95 \quad A=1,600 \text{ SF}$$

$$WQV = 3.1(0.95)(1,600)/12 = 392 \text{ cf}$$

#### **Driveway**

$$P=3.1 \quad RV=0.95 \quad A=800 \text{ SF}$$

$$WQV = 3.1(0.95)(800)/12 = 196 \text{ cf}$$

$$\text{Pretreatment Volume} = 25\% (WQV) = .25 (196) = 98 \text{ CF required}$$

Settling required for driveway drainage

Use one concrete structure, 4 ft x 3.5 ft x 4.5 ft, 63 cubic feet, gross capacity. Capacity 12 inches below top is 49 CF, total 98 CF



## PROPOSED RAIN GARDEN DESIGN

It is proposed to treat the storm water from all impervious surfaces in three (3) rain gardens. The design of the rain gardens are as follows:

Impervious area house= 1,560 use 1,600 sf. Use 2 rain gardens each designed at 800 sf  
Impervious area driveway = 800 sf Use One rain garden.

Treatment area; 2,400 square feet at 100% impervious  
Rain garden section: 12" soil (0.2 porosity), 6" drainage layer (0.4 porosity, 8" ponding depth 6"

Design storm: 3.1" of rainfall  
Proposed Rain Garden Area : 220 square feet  
RV = 0.95

$WQV = (\text{Rainfall in inches})(0.05 + (0.009)(\% \text{ impervious}))(\text{treatment area})/12$   
 $WQV = (3.1)(0.95)(800)/12$   
 $WQV = 196 \text{ cf}$

Soil Volume =  $(220 \text{ sq ft})(1 \text{ ft})(0.20) = 44 \text{ cf}$   
Drainage Layer Volume =  $(220 \text{ sq ft})(0.5 \text{ ft})(0.40) = 44 \text{ cf}$   
Ponding volume =  $(220 \text{ sq ft})(0.5 \text{ ft}) = 110 \text{ cf}$

Total Treatment Volume =  $44 + 44 + 110 = 198 \text{ cf} > 196 \text{ cf}$

**Three (3) rain gardens at 22 x 10 ft (200 sf) will be provided to treat the roof and driveway impervious areas. One (1) settling basin, catch basin, will be provided before the rain garden for the driveway. The settling basin will discharge to the rain garden. Two rainage gardens of similar size will be provided to treat the roof drainage. The flow from the roof will discharge to distribution box which will be split in two, half to each rain garden. All underground piping will be 6" pvc.**







