

Quible

Quible & Associates, P.C.

ENGINEERING • ENVIRONMENTAL SCIENCES • PLANNING • SURVEYING
SINCE 1959

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November 8, 2023

Jennie Turner, CFM
Senior Planner
Currituck County Planning & Zoning
153 Courthouse Road, Suite 110
Currituck, NC 27929

Re: Construction Drawing Application Packages
Penny's Hill Beach Club (formerly Munson Hill Subdivision)
Corolla, Currituck County, NC

Ms. Turner,

On behalf of South Ocean, LLC, Penny's Hill, LL, & West Beach, LLC, Quible & Associates, P.C. hereby submits a Construction Drawing Application package for the subject referenced project located in Corolla, Currituck County.

The following is attached and shall be considered part of this Application package:

- Two (2) copies of the executed Major Subdivision Application;
- Two (2) copies of the Stormwater Management Narrative;
- Two (2) copies of the CAMA Minor Permit;
- Three (3) copies of the full size Construction Drawing;
- One (1) 8.5"x11" copy of the Construction Drawing;
- One (1) CD containing digital copies of all the documents listed above.

At your earliest convenience, please review and do not hesitate to contact me by phone at (252) 491-8147 or by email at dtillett@quible.com should you have any questions or require additional information.

Sincerely,
Quible & Associates, P.C.



Dylan L. Tillett, P.E.

Enc.: as stated
Cc: South Ocean, LLC, Penny's Hill, LLC, & West Beach, LLC
File

CAMA
MINOR DEVELOPMENT
PERMIT



as authorized by the State of North Carolina, Department of Environment, and Natural Resources and the Coastal Resources Commission for development in an area of environment concern pursuant to Section 113A-118 of the General Statutes, "Coastal Area Management"

Issued to PENNY HILL LLC authorizing development in the Ocean Hazard (AEC) at 1496 MCKAY CT, in Corolla, NC, as requested in the permittee's application, dated 10/02/2023, and received complete on 10/09/2023. This permit, issued on 10/10/2023, is subject to compliance with the application and site drawing (where consistent with the permit), all applicable regulations and special conditions and notes set forth below. Any violation of these terms may subject permittee to a fine, imprisonment or civil action, or may cause the permit to be null and void.

This permit authorizes: Construction of a new roadway:

- (1) All proposed development and associated construction must be done in accordance with the permitted work plat drawings(s) revised plans stamped approved 10/10/2023.
- (2) All construction must conform to the N.C. Building Code requirements and all other local, State and Federal regulations, applicable local ordinances and FEMA Flood Regulations.
- (3) Any change or changes in the plans for development, construction, or land use activities will require a re-evaluation and modification of this permit.
- (4) A copy of this permit shall be posted or available on site. Contact this office at (252) 232-6033 for a final inspection at completion of work.
- (5) Pursuant to 15A NCAC, Subchapter 7J.0406(b), this permit may not be assigned, transferred, sold or otherwise disposed of to a third-party.

(Additional Permit Conditions on Page 2)

This permit action may be appealed by the permittee or other qualified persons within twenty (20) days of the issuing date. This permit must be on the project site and accessible to the permit officer when the project is inspected for compliance. Any maintenance work or project modification not covered under this permit, require further written permit approval. All work must cease when this permit expires on: **DECEMBER 31, 2026**

In issuing this permit it is agreed that this project is consistent with the local Land Use Plan and all applicable ordinances. This permit may not be transferred to another party without the written approval of the Division of Coastal Management.

\$100 PAID ON 10/04/2023

David R. Lubelski

David R. Lubelski
CAMA LOCAL PERMIT OFFICIAL
PO BOX 73
COROLLA, NC 27927

PERMITTEE

Name: PENNYS HILL LLC
Minor Permit # OB2023-102/202302678
Date: 10/06/2023
Page 2

- (6) The permittee is required to contact the Local Permit Officer (252) 232-6033, shortly before he plans to begin construction to arrange a setback measurement that will be effective for sixty (60) days barring a major shoreline change. Construction must begin within sixty (60) days of the determination or the measurement is void and must be redone.
- (7) Dune disturbances will be allowed only to the extent necessary for development and if the dune's protective value is not weakened or reduced. Disturbed dune areas will be immediately stabilized.
- (8) All unconsolidated material resulting from associated grading and landscaping shall be retained on site by effective sedimentation and erosion control measures. Disturbed areas shall be vegetatively stabilized (planted and mulched) within 14 days of construction completion.
- (9) **Work shall be limited to the construction of the sand roadway. Additional permitting is required for the site improvements to the individual lots.**
- (10) **Wetlands are shown within the AEC. Silt fence must be installed prior to any land disturbance activities and shall be maintained until the completion of the project. No approval is permitted for the disturbance of the wetlands. Any work within the wetlands must receive prior CAMA approval.**

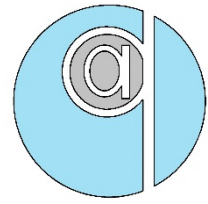
SIGNATURE: 
PERMITTEE

DATE: 10/10/2023

Stormwater Management Plan Narrative

Penny's Hill Beach Club

August 2023



General

This narrative will detail the stormwater management plan for the Penny's Hill Beach Club (formerly Munson Hill Subdivision) located in Corolla, Currituck County.

The proposed subdivision is 25.72 acres in total size. The existing land is vacant and consists of coastal dunes and valleys that are typical for this area. Portions of Penny's Hill, recognized by Currituck County as a protected significant dune, are located on the western portion of the property. Residential and vacant lots are the primary uses for the properties surrounding the subdivision. This project is located in the SFR district and is accessed by sand/dirt paths as typical throughout the district. The property currently drains to low lying areas within the parcel and eventually drain into the ground water system via subsurface infiltration.

The owners are proposing a reconfiguration of the existing 4-lot subdivision in which a right of way will be relocated and an access easement (McKay Ct.) will be abandoned. The existing subdivision included the McKay Ct. easement to access the three ocean front lots. Environmental setbacks have changed overtime which has slowly decreased the buildable areas within these lots. The owner is proposing the removal of the easement and reconfiguration of the Ocean Pearl right of way to better access all lots and improve the alignment with current Ocean Pearl right of way to the north. Reconfiguration of the Ocean Pearl right of way is triggering the requirement for the Major Subdivision Application process. It should be noted that no new lot will be created by this Application package.

Stormwater runoff from this project is infiltrated through the sandy soils, eventually making its way to the ground water system.

The following narrative sections will detail the parameters of the stormwater management plan and demonstrate compliance with the County Stormwater Management requirements.

Summary of Existing Conditions

As stated above, the subject parcels are currently vacant with scattered coastal dune vegetation. Lot 3 is under construction for a single family dwelling structure and has an active building permit with Currituck County. There are a mix of dunes and valleys that are typical for this coastal area. The existing stormwater runoff is directed and conveyed via sheetflow to the low-lying areas on the property. The natural sandy soils allow for infiltration into the groundwater system.

Summary of Proposed Conditions

As previously mentioned, this project proposes a reconfiguration to the existing 4-lot subdivision in which the Ocean Pearl right of way is relocated and the McKay Court easement is abandoned. A sand road will be proposed to access the lots along the new Ocean Pearl Right of Way. This application package does not propose to create an increase of the existing number of lots in this subdivision.

It has been determined that Currituck County will allow the alternative stormwater runoff capacity analysis for this project. Runoff from impervious surfaces will be infiltrated from overland flow to the existing subsurface groundwater system. The infiltration will provide treatment by sandy soil filtration into the existing groundwater system. A copy of the stormwater calculations can be found in Appendix A. The stormwater calculations provide evidence that the subdivision has adequate subsurface storage in excess of a 4" rainfall event for the maximum built upon area on the lots as well as the coverage of the sand road inside the project area. The drainage area for this subdivision closely follows the property lines to the north and south and are bound by the proposed new right of way on the west and the landward toe of dune system on the east.

The filtration by soil and partial vegetation during the overland flow is considered the primary treatment method, followed by the secondary treatment of infiltration into the subsurface. During infiltration the runoff will undergo filtration of particulates and pollutants by the natural sandy soils within the area prior to making its way into the existing groundwater system.

The storage in the subsurface will be sized to be large enough to satisfy the requirements of the 4" rainfall event. At a minimum, the computed, available subsurface storage is in excess of the required storage.

Soils

Quible & Associates performed an on-site soil boring to verify soil characteristics. Information collected on site generally agrees with the United States Department of Agriculture, Soil Conservation Service Soil Survey of Currituck County, which maps the site as follows:

- Dt – Duckston Fine Sand, 0 to 2 percent slopes
- DwD – Dune Land-Newhan Complex, 2 to 40 percent slopes
- Du – Dune Land, no slopes defined
- NN – Beaches-Newhan Association, 0 to 10 percent slopes
- Cu – Currituck Mucky Peat, 0 to 1 percent slopes

Conclusions

The proposed stormwater improvements will provide an effective stormwater management system for the proposed 4-lot subdivision reconfiguration that complies with the Currituck County requirements.

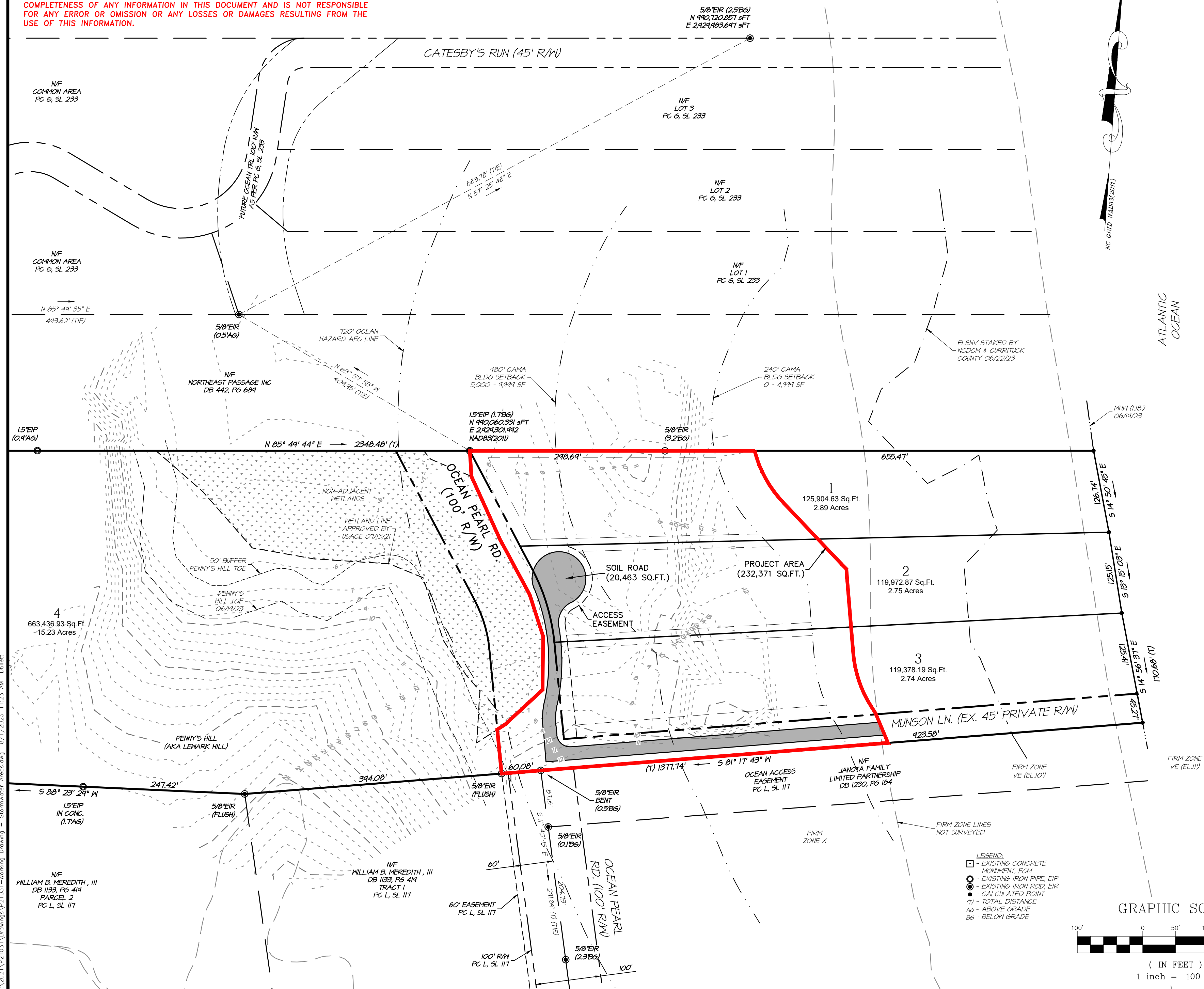
Appendix A

Stormwater Calculations

NOTE: THIS DOCUMENT IS PRELIMINARY – NOT FOR CONSTRUCTION, RECORDATION, SALES OR CONVEYANCES – THIS DOCUMENT IS FOR DISCUSSION PURPOSES ONLY! EXISTING INFORMATION SHOWN ON THIS DOCUMENT IS BASED ON BEST AVAILABLE DATA AND IS NOT A CERTIFIED SURVEY. ALL INFORMATION SHOWN ON THIS DOCUMENT IS SUBJECT TO ANY REQUIREMENTS BY ANY REGULATORY AGENCY, ENTITY OR AUTHORITY.

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*MHW VALUE OF 118' NAVD '88 DERIVED FROM NOAA'S NOS TIDAL STATION DUCK, FRP PIER, NORTH CAROLINA, STATION I.D. 8651310. WATERFRONT LOT OWNERSHIP TO SHORELINE. WATER BODY BOUNDARIES ARE DYNAMIC AND WILL CHANGE OVER TIME.



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 NOT FOR
 CONSTRUCTION**

CERTIFICATION

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STORMWATER AREA SKETCH

**PENNY'S HILL BEACH CLUB
 SOUTH OCEAN LLC & WEST BEACH LLC**

NORTH CAROLINA
 CURRITUCK COUNTY
 FRUITVILLE TOWNSHIP

PROJECT NO.	P21031
DRAWN BY	JMH
CHECKED BY	DLT/JMH
SCALE	1"=100'
ISSUE DATE	8/1/23

G:\2021\21031\Drawings\21031-Working Drawing - Stormwater Areas.dwg 8/1/2023 11:23 AM Dillet

Project: Penny's Hill Beach Club (formerly Munson Hill)
 Quible Project Number: P21031
 Title: Subdivision Stormwater Calculations
 Date: 8/1/2023

Project Area (red outline): 232,371 sf

Lot Coverage Area:

	<u>Total Area (sf)</u>	<u>30% Lot Coverage (sf)</u>
Lot 1	125,905	37,772
Lot 2	119,973	35,992
Lot 3	119,378	35,813
Total		109,577

Soil Road Coverage Area: 20,463 sf
 (20' Wide Soil Road Inside Project Area)

Total Coverage: 130,040 sf

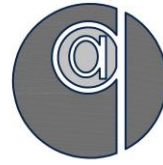
Total Open Space in Project Area: 102,331 sf
 (Project Area - Total Coverage)

Required Stormwater Storage: 43,347 cf
 (Total Coverage x 4" rainfall event)

Seasonal High Water Table:	5.6 ft	(Attached Soil Boring Memo)
Top of Storage Shelf Height:	7 ft	(Lowest Spillover Elevation)
Storage Shelf Height:	1.4 ft	(7.0' - 5.6' = 1.4')
Soil Porosity:	31.6%	(Attached Soil Boring Memo)

Available Stormwater Storage: 45,271 cf

MEMORANDUM



Quible SINCE 1959
& Associates, P.C.

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Phone: (252) 261-3300

Fax: (252) 261-1260

Web: www.quible.com

To: Dylan Tillett, P.E.

From: Brian Rubino, P.G.

Date: February 7, 2022

Re: **P21031 Soil Borings**
Munson Hill Subdivision, Currituck County, NC

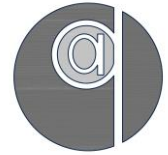
Dylan,

On February 1, 2022, we visited the Site to conduct shallow soil borings in the location of the future stormwater infiltration/storage areas for future homesites. The purpose of the evaluation was to understand lithologic conditions, to determine the depth and elevation of the Season High Water Table (SHWT), and to measure infiltration rates and porosity for Stormwater Management System design. Soils from the borings were found to be loose, unconsolidated, quartz-dominated sand (fine-medium grained) from the ground surface down to at least 80 inches below ground surface for each of the three boring locations.

A summary of boring data collected and observed is as follows:

Soil Boring	Ground Elevation (ft); (NAVD 88)	Approx. Groundwater Elevation (ft); (NAVD 88)	Approx. Elevation of SHWT (ft); (NAVD 88)
B-1	10.5	5.2	5.6
B-2	9.3	5.3	5.6
B-3	11.1	5.3	5.6

Infiltration rate field testing of the in-situ soils in the immediate vicinity of B-2 was conducted using a double ringed infiltrometer. This procedure measures the natural downward movement of water to the groundwater table which can be relied upon to design Site stormwater collection, storage and treatment systems in the area tested. Prior to measuring the infiltration rates, water was added to the rings to saturate underlying soils until a constant infiltration rate was obtained. Duplicate 15-minute infiltration tests were conducted and the results were averaged. Based on the infiltration tests conducted, the infiltration rate was found to be greater than **24 inches/hr.**



I collected representative soil samples from each of the boring locations at zones above the SHWT. Upon my return to the office, I tamped exactly 500 mL of sand into a graduated container and poured water into the container with the sand sample from a separate graduated container and marked 500 mL until both the sand and the water read 500 mL. The volume of water that was poured into the sand was read directly from the container (158 mL) and divided by the volume of the sand (500 mL). The product of the two volumes (0.316) times 100 yields the porosity of the sample as a percentage. For the sands found at the above property, we can expect a porosity of 31.6%.