	Official Use Only	
Permit No:	ZA Review Date:	PC Appr/Deny Date:
Date Recvd:	ZA Aprv/Deny Date:	ZBA Aprv/Deny Date:
Denial Reason:		Issued Date:
	APPLICATION FOR CSD	A PERMIT
pplication Notes:	act within the decignated Critica	al Sand Dune Area (CSDA) located on
ne Beaver Island Arch	nipelago of Charlevoix County.	this CSDA permit must be completed
nd approved prior to s	starting any construction.	
		ate; a second year may be approved if
easonable progress is	made on the project.	
. Project Location	Information	
Decient Address.		
28300 High	Island CT. Zip Code: 49782	
County:	Zip Code:	Township:
CHARCEVOLX	49782	ST. JAMES
Property Tax Identificatio	n Number:	
15-013-70	7-537-00	
Name of Nearest Interse	ction and Direction from Project:	1 1011111 1 1
Donegal BM	Rd West to Gull Is	land Rd North to Trant Islan
Subdivision Plat and Lot	Number:	
Port of ST. JAME	5 47 3	55/
Date Lot was Recorded:		
Oct 24	1968	
Street addresses (not a	requirement for this permit application Deport	ation) and date lot was recorded are
obtained from the Char www.equalization@cha	levoix County Equalization Depart	ment at.
. Applicant and Ag	ent Information	Owner has given this permission to do so
The state of the s	s application, it is understood that the	Owner has given this permission to do so.
Owner/Applicant:	narrow	
23281 SA	ST SIDE DR	
City:	State:	Zip Code:
BEAVER 1	The state of the s	49782
Contact Phone Number:	99-0134	
E-Mail Address:	ball A am I am	
Kmeontro	ictors 1/c p gmail. com	
Agent/Contractor:		
T .		I I

City:			State:	Zip Code	5:
Contact Phone I	Number:				
E-Mail Address:					
		7			
Check if Yes:	Check if No:			e) the sole owner o orization from all p	f all project property? roperty owners.
Check if Yes:	Check if No:		part of an Assoc	iation? If yes, nam	e of Association:
Check if Yes:	Check if No:			its required from th	is Association?
Project Des If the propo nland Lake/Stre	sed project p	property is		of a Lake or Str chigan (yes/no):	eam, report:
Check applicabl	e proposed use:		Residential	Multi-Family	Commercial:
Public/Govt:	If other, wh	at type?			
Date Property C	Corners and Proje	ect Corners a	are staked: 7/	130/23	
Estimated mont	h/year of project	start:	10/1/23		
Estimated mont	h/year of project	completion:	10/1/24		
Summary of all	proposed activitie	es (Attach a	separate stateme	ent if more room is	needed):
EXCHUA	Hon For A	lew Hon	re Constructi	on, Includia	5 Installation
of wel	1, Septics	ystem a	and Driver	VAY.	
Property It	nformation			cotod (Sa ft)	
. Property In Size of Parcel (Size	of area being imp	5 74	
Size of Parcel (Acres):			574	

Does any portion of the construction area have slopes that are greater than 33% (or 1-foot vertical rise over 3-foot horizontal plane) – yes or no:

Provide Proof of Ownership:

Attach a copy of a Notice of Assessment or the Charlevoix County Parcel Information which is found at: https://www.charlevoixcounty.org/online_services/

5. Site Plan

The project Site Plan is to be developed as indicated within the directions. The Site Plan is to be attached to this application.

6. Permits that are required to be included with this Application

Type of Permit (If Applicable)	Source of Information	Approved (Y/N)	ID Number	Letter, if deemed not applicable
Part 91 Soil Erosion and Sedimentation Control	Charlevoix County Dept of Building Safety, Soil Erosion Officer. https://www.charlevoixcounty.org	4	P52023- 0123	Yes/No:
Threatened & Endangered Species	Terrestrial Invasive Species Administrator at: invasivespadm.bi@gmail.com or 231-330-0422	REFEL TO VAP		Yes/No:
Septic System	https://www.nwhealth.org	4	C23-233	NA
Driveway/Road Permit	https://www.charlevoixroads.org	4	D23050	NA
Well Permit	https://www.nwhealth.org	4	023-253	NA
The below permits are NOT required to be included with this Application but are required by other entities. These contacts are provided for information only. The building permit needs to be posted at the site.				

Building Permit	Charlevoix County Dept of Building Safety https://www.charlevoixcounty.org	NA	NA	NA
Association	https://theportofstiamesassociation.org or another association as needed	NA	NA	NA

7. Vegetative Assurance Plan

A Vegetative Assurance Plan must be attached and is required to address:

a. Cutting and removal of trees and other vegetation – in accordance with the current version of the Forest Management Guidelines for Michigan.

b. A review of Threatened and Endangered Species and attached applicable state and/or federal permits or letters stating permits are not required. The owner/agent is responsible to pay for these permit fees directly to the issuing agency.

c. A review of Terrestrial Invasive Species (TIS) and attached report describing the findings and treatment plan.

Note: The Beaver Island TIS Administrator is available, for a fee payable to the applicable township, to assist the property owner/agent in creating this plan and connecting the owner/agent with the applicable state/federal authorities. The TIS Administrator must perform the T&E and TIS Reviews. Contact the TIS Administrator at invasivespadm.bi@gmail.com or 231-330-0422.

APPLICANT AUTHORIZATION

I hereby authorize the State of Michigan, County, and/or Township Officials to inspect the site of this project. Further, I certify that the information provided in this application is true and accurate.

Applicant's Signature:

Print Name: Zinest MAZIN	Address: SAST SIDE	Dr.
City: BEAVER Island	State:	Zip Code: 49787
Phone number where you can be co	ontacted during the day:	
231-499-0156		

RETURN APPLICATION/ATTACHMENTS, ALONG WITH FEE PAYMENT(S) TO THE APPLICABLE TOWNSHIP, TO:

Zoning Administrator, via <u>zoningadmin.bi@gmail.com</u>, or P.O. Box 85, Beaver Island, MI 49782.

If you have questions regarding this permit, contact the Zoning Administrator at:

- 231-448-2000 or 231-448-2830 (an alternative office), or
- · Via office hours or by appointment

Official use only: (Same check, payable to the applicable township may be used for any

combination of these fees)

Application Fee Amount	\$500	Check No:
Vegetation Assurance Plan (VAP) Fee Amount (if requested)	\$250	Check No:
VAP by others; but T&E/TIS review Fee Amount	\$150	Check No:

PURCHASER'S STATEMENT

File No.: 2023050207

Purchaser: Emest D. Martin and Julie Martin, husband and write

Seller: Patrick Bonadeo

Settlement Agent: Barron Title Agency (231)547-8003

Place of Settlement: 309 PetoskeyAve., PO Box 399

Charlevoix, MI 49720

Settlement Date: September 8, 2023

Property Location: High Island Ct

Beaver Island, MI 49782

Charlevoix County, Michigan Lot 537, Port St James 7

Dunch non- Orion (Dunch			
Settlement or Closing Fee Recording Fees (03/31/24 Barron Title Agency Charlevotx County Register of De	eds	200,000.00 43.05 250.00 35.00
Gross Amount Due From Purch	aser	TOTAL DEBITS	200,328.05
	CREDITS		North the Committee of
Deposit or Earnest Money Tax Prorations 01/01/23 to 0	08/08/23		1,000,00 1,613,16
Less Total Credits to Purchaser	•	TOTAL CREDITS	2,613.16
	BALANCE	nteres and the set of	the first term with the first term and the property of the section
From Purchaser			197,714.89

SELLER'S STATEMENT

File No.: 2023050207

Purchaser: Emest D. Martin and Julie Martin, husband and wife

Settlement Agent: Barron Title Agency

(231)547-8003

Place of Settlement: 309 Petoskey Ave., PO Box 399

Charlevoix, MI 49720

Settlement Date: September 8, 2023
Property Location: High Island Ct

Beaver Island, MI 49782 Charlevoix County, Michigan

Lat 537 & 538 PSJ

Person in the following in the second ANN FOR POSM SEASON SECOND TO THE	CREDITS		
Purchase Price (Real Prope HOA Prorations	erty) 08/08/23 to 03/31/24		200,000.00 43.00
Total Credits to Seller	•	TOTAL CREDITS	200,043.0
	DEBITS		
Commissions - Total commissio L	ns: 6.0000 % = 12,000.00 ess Deposit Retained 1,000.00 6,000.00 Real Estate One 6,000.00 Ed Wojan Realty		11,000.00
Settlement or Closing Fee	Валтол Title Agency		250.00
2023 Summer Taxes (both lots)	St. James Township Treasurer		693.73
Variance, Legal Work	Barron & Engstrom, PLC		400.0
Document Preparation	Barron & Engstrom, PLC		75.0
HOADues (both lots) Admin Fee	Port St. James Association		83.0
Title Insurance	Real Estate One		199.0
City/County Tax/Stamps	Fidelity National Title-Michigan Charlevoix County Register of Deeds		1,287.0
State Tax/Stamps	Charlevoix County Register of Deeds		220.0
Deposit retained by broker	Character County (Calabat of Decas		1,500.00 1.000.00
Tax Prorations	01/01/23 to 08/08/23		1,613.16
Less Total Reductions to	Amount Due Seller	TOTAL DEBITS	18,320.89

BALANCE

To_Seller

Patrick Bonadeo

181,722.16

Barron Title Assent

* TO BE REFUNDED PER Title Co. PhoNE CALL-CB.

BARRON TITLE AGENCY

WARRANTY DEED

atrick Bounda

The undersigned Grantor: Patrick Bonadeo,

whose address is: 32600 Eastside Dr., Beaver Island, MI 49782,

conveys and warrants to Grantee: Ernest D. Martin and Julie Martin, husband and wife,

whose address is: 32280 East Side Dr., Beaver Island, MI 49782,

certain real property situated in the Township of St. James, Charlevoix County, Michigan described as:

See attached Exhibit "A" for complete legal description,

subject to zoning and building regulations, easements, reservations, restrictions and right of ways of record.

The consideration for this Deed consists of the sum of Two Hundred Thousand and 00/100 (\$200,000.00) Dollars.

Effective Date: September 8, 2023

Patrick Bonadeo

NOTARY ACKNOWLEDGEMENT ON FOLLOWING PAGE

STATE OF Michigan
COUNTY OF Charlevoix
I, Julie Gillespie, a Notary Public of the County and State first above written, do hereby certify that
Patrick Bonadeo personally appeared before me this day and acknowledged the due execution of the foregoing instrument
Witness my hand and official seal, this the day of September, 2023
Jerlie Gillesgie

Notary Public Julie Gillespie (i)
Notary, Charlen II County, N.J.
My Commission Expires: 10-4-35

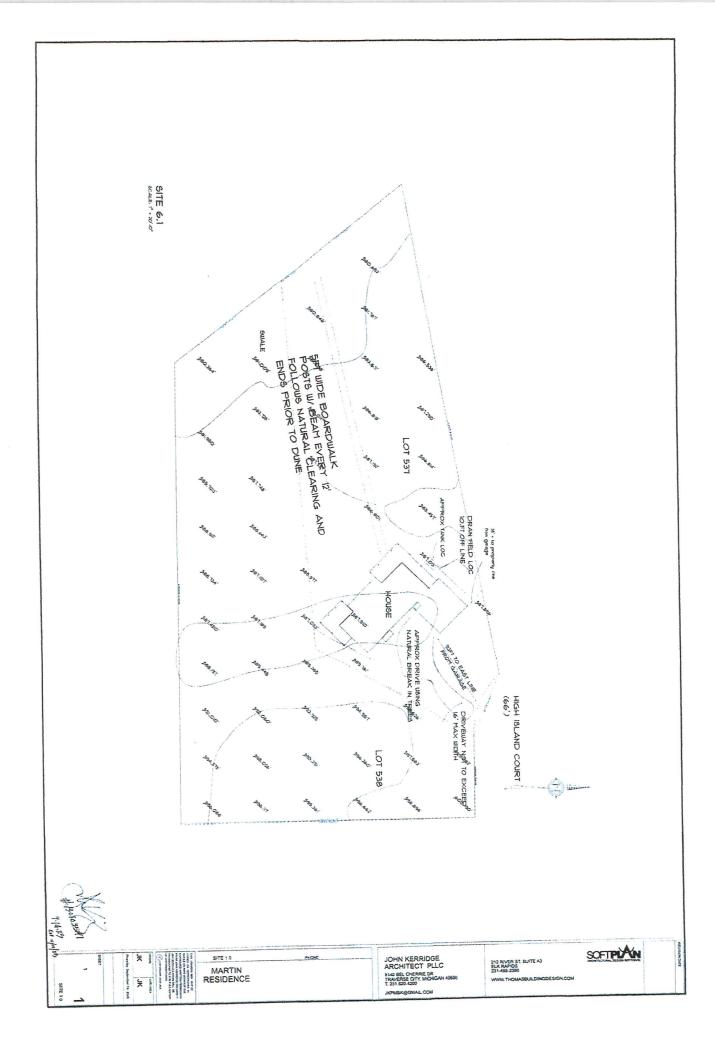
(SEAL)

DRAFTED BY/RETURN TO: Daniel B. Barron, Esq. (without opinion as to title) Barron & Engstrom, P.L.C. P.O. Box 309 Charlevoix, MI 49720 (231) 547-9950 File No.: 2023050207
Tax Code No. 15-013-707-537-00 & 15-013-707-538-00
When recorded return to Grantee
Send subsequent tax bills to Grantee

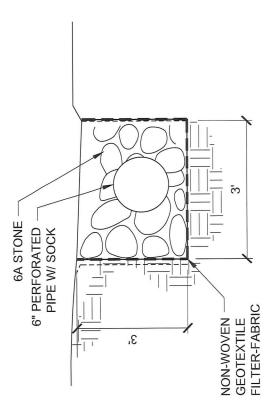
EXHIBIT "A" Legal Description

Land located in the Township of St. James, Charlevoix County, Michigan:

Lots 537 and 538, Port St. James No. 7, according to the Plat recorded in Liber 2 of Plats Pages 164 through 169, Charlevoix County Records.



NOTE: LAP FABRIC OVER TOP OF STONE UNTIL GRADING IS COMPLETE THEN REMOVE TOP FABRIC



= 0.20 CF per LF of FD

Storage Volume of 6" Pipe:

(pi x 3" x 3" / 144 x 1')

Total Storage Volume of FD = 3.72 CF per LF

= 372 CF

100 LF x 3.72 CF/LF

100 total linear feet

French Drain

 $(3' \times 3' \times 1' - pi \times 3" \times 3" / 144) \times 0.40$ = 3.52 CF per LF of FD

Storage Volume of Stone:

Storage Volume Required = 338 CF

Infiltration Rate = 3 in/hr Drainage Area = 3,072 sf 25-Year Storm = 3.62"

BASIS OF DESIGN

Storage Volume of French Drain

Dimensions: 3 ft H x 3 ft W

Void Ratio: 0.40

FRENCH DRAIN DETAIL

NOT TO SCALE

COUNTY: CHARLEVOIX COUNTY MUNICIPALITY: ST JAMES TOWNSHIP ADDRESS: 28300 HIGH ISLAND COURT DATE: 10/06/2023 DRAWN BY: MLC

CHARLEVOIX COUNTY, MICHIGAN CRITICAL DIINE SITE PLAN

F&V PROJECT NO.

CRITICAL DUNE SITE PLAN
FRENCH DRAIN DETAIL

ספטנו√וא. קרוטןסטיטערים סטטטטע (סטב÷שט ישפואפ טרונוכטו טטחיפ אונפ רוטוו קבווופ אוטרנוו הפאוספווכש (טטט קבווופ אוטרנוו דופוורוו טוטווו.טאט

CHARLEVOIX COUNTY

Department of Building Safety 13513 Division St

Charlevoix, MI 49720 Phone: (231) 547-7236 Fax: (231) 547-7250

Soil Erosion

PERMIT

PERMIT: PS2023-0123

> Issued: 09/13/2023 Expires: 09/12/2025

APPLICANT

MARTIN ERNEST D & JULIE M 33280 EAST SIDE DR **BEAVER ISLAND MI 49782**

Phone: (231) 448 2074

OWNER

MARTIN ERNEST D & JULIE M 33280 EAST SIDE DR BEAVER ISLAND MI 49782 Phone(231) 448 2074

Fax:

28300 HIGH ISLAND CT JOB LOCATION:

CITY/TWP:

ST JAMES

PROPERTY #:

15-013-707-537-00

Under the provision of Part 91, Soil Erosion & Sedimentation Control, Act 451 of the Public Acts of 1994, and the Charlevoix County Stormwater Ordinance, authority is hereby granted for:

Work Description: NEW RESIDENTIAL HOME, WELL, SEPTIC & DRIVEWAY

Soil Erosion Tier 2 **Project Priority:**

MARTIN ERNEST D & JULIE M Responsible Party:

CEA Signature Russell Smith

PERMIT CONDITIONS:

- 1) The Permitted activity shall be completed in accordance with the approved plans and specifications, and the attached general and specific conditions.
- 2) This permit does not waive the necessity for obtaining all other federal, state or local permits.
- 3) Permittee shall notify the permitting agency within one week after completeing the permitted activity or one week prior to the permit expiration date, whichever comes first.

REMARKS:

	Work Type	Fax:	Fee Basis	Item Total
Administration Fee	Standard Item		1.00	55.00 75.00
We will be a second of the sec	Standard Item Standard Item			-

THIS PERMIT WILL NOT TAKE THE PLACE OF ANY PERMIT THAT MAY BE REQUIRED BY THE DEQ OR ARMY CORP. OF ENGINEERS. ISSUANCE OF THIS PERMIT WILL AUTHORIZE ACCESS FOR ONSITE INSPECTIONS BY THIS DEPARTMENT DURING REASONABLE HOURS.

\$130.00 Fee Total: \$130.00 Amount Paid:

\$0.00 Balance Due:

Applicants Job No.

CHARLEVOIX COUNTY ROAD COMMISSION 1251 Boyne Avenue

Boyne City, MI 49712 231.582.7330

County Use Only		
Permit No. D23050		
Issue Date 9-13-23		
Permit Fee \$25.00		
Bond No.		
Amount		

APPLICATION AND PERMIT

To construct, operate, maintain, use and/or remove within a county road right-of-way

If applicant hires a contractor to perform the work, BOTH must complete this form and BOTH assume responsibility for the

provisions of this Application and Permit.

APPLICANT	CONTRACTOR
ADDRESS 33280 East Side Dr CITY/STATE/ZIPBeaver Island MI 49782 TELEPHONE NO. (231)4990136 Applicant's Signature Title Owner Date 9/4/23	NAME KM Contractors ADDRESS 33280 East Side Dr CITY/STATE/ZIP Beaver Island MI 49782 TELEPHONE NO. (231)49901366 Contractor's Signature MA Title Owner Date 9/4/33
FINANCIAL REQUIREMENTS	ATTACHMENTS REQUIRED
Application Fee \$ Permit Fee \$ 35.00	Plans and Specs Bond
Est. Inspec. Fee Bond Other S To Be Billed Receipt Number Dated S CCC Place Dated	Proof of Insurance Yes No P.L \$ P.D. \$ Other
Applicant and/or Contractor request a permit for the purpose in following location: 28300 High Island C	LICATION Indicated herein and/or in attached plans and specifications at the H. Blancy Island MT 49782 Treet Names The Design Boy Red to Gul Island The Design Boy Red to Gul Island The Design Boy Red to Gul Island
Section	Enter street name and distance form nearest intersection or house#
for a period beginning and end understood that all activity resulting from the granting of this preferred to or included hereon and any Attachments for Additi covered under this Permit interferes with any future use of right will move or remove the facility at the direction of the Road C	permit is to be in accordance with all Specifications and Conditions on all Requirements. It is further understood that in the event any facility on the order of the permit Holder, at his/her expense,
General Descript	ion and Nature of Request
DRIVEWAY Use: Commercial Residential 14 ft width	Surface:
CULVERT OF Cross Type: Concrete	Metal Plastic Size: Dia Length
Length Size	itary Sewer
	Page 1 of 3

MISCELLANEOUS (Specify)		
A permit is granted in accept the Permit Holder. Will Remarks: Sersonal Road Road	PERMIT ordance with the foregoing application for the per nen Applicant hires a Contractor the "Permit Hold Roacl - Not Snow Plows Light-of-Way Shall	iod stated above, subject to the following terms agreed to er? is the Applicant and Contractor. Let Cas Luce
	CHARLEVOIX C Approved by	COUNTY ROLD COMPANSION nature Authorized Representative
	9-13-23 Date	Title Managle

- Additional Requirements
- 1. SPECIFICATIONS. All work performed under this permit must be done in accordance with the plans, specifications, maps and statements filed with the Commission and must comply with the Commission's current requirements and specifications on file at its office and M.D.O.T. specifications.
- 2. FEES AND COSTS. Permit Holder shall be responsible for and pay all fees established by the Commission in connection with the applications for an issuance of this permit.
- 3. BOND. Permit Holder shall provide a cash deposit, letter of credit or bond in a form and amount acceptable to the Commission at the time permit is issued, if in the sole judgement of the Commission such security is necessary before work commences.
- 4. INSURANCE. Permit Holder shall furnish proof of liability and property damage insurance in the amount stated on this permit naming the Commission as an insured. Such insurance shall cover a period not less than the term of this permit and shall provide that it cannot be cancelled without ten (10) days advance notice by certified mail with return receipt required to the Commission.
- 5. INDEMNIFICATION. Permit Holder shall hold harmless and indemnify and keep indemnified the Commission, its officers and employees from all claims, suites and judgements to which the Commission, its officers, or employees may be subject and for all costs and actual attorney fees which may be incurred on account of injury to persons or damage to property, including property of the Commission, whether due to the negligence of the Permit Holder or the joint negligence of the Permit Holder and the Commission, whether due to the negligence of the Permit Holder or the joint negligence of the Permit Holder and the Commission, arising out of the work under this permit, or in connection with work not authorized by this permit, or resulting from failure to comply with the terms of this permit, or arising out of the continued existence of the work product which is the subject of this permit.

Permit Holder shall also hold harmless and indemnify and keep indemnified the Commission, its officers and employees from all claims, suite and judgements to which the Commission, its officers or employees may be subject and for all costs and actual attorney fees which may be incurred on account of any claims which are made or brought for damage to trees or other natural vegetation arising out of the work under this permit or in connection with work not authorized by this permit, or resulting from failure to comply with the terms of this permit, or arising out of the continued existence of the work product which is the subject of this permit.

PSJA ARCHITECTURAL COMMITTEE BUILDING APPROVAL NOTICE

1 A 1 1 A 1 337	Project location in Port Saint James. Lot #3375ubulvision 1 5373	7.5	Approved by:		 in his absence.	•	B	 		
	Project location in Port Sair	28700 HAH ISCAND CT.	Project description:	NEW COUSTAUCTION	· income and income	CHINE EN FOT WALTEN	A 14 man 22 2 So CACTEDE DR.	Address. Sold Con District M.	CITY: DEFINE FLANKED LINE	R. 616.



Permit Issued To: Ernest Martin 33280 East Side Dr Beaver Island, MI 49782 (231) 448-2074

Health Department of Northwest Michigan Charlevoix 220 West Garfield Charlevoix, MI 49720 (231) 547-6523

Mail Permit To: Edward Wojan 26300 Back Hwy Beaver Island, MI 49782

Permitted Lo	cation:			
Address:	28300 High Island	d	Permit Number:	C23-253
County:	Charlevoix		Permit Type:	Septic and Well Permit
Township:		Section: 29	Permit Issued For:	Conventional System
	Port St. James	Lot: 537	Replacement or Repair:	No
Tax ID #:	15-013-707-537-0	00	Residential/Non-Residential:	Residential

Design Criteria			
Number of Bedrooms:	3	Soil Classification:	S (Sand)
Gallons Per Day:	375	Seasonal High Water Table:	>74 inches

		S	System Design	Specifications	3		
Septic Ta	Gallons nk 1000	Proposed ch Call our office	nanges to permit r ce at the number l	nust be approved isted above if you	prior to installat have any questi	ion. ons regarding this	
Design Type	Absorption	Size of Pipe	Number of Laterals	Length of Drainbed	Width of Drainbed	Max. Depth of Bed Bottom	Pipe Spacing
Drainbed	750 Sq. Ft.	4"	7	30 Feet	25 Feet	26"	3.5 Feet

Permit Requirements/Conditions:

- 1. Isolate all portions of the system a minimum of 50' from all water well(s).
- 2. Contractor responsible for maintaining 10' from all property lines with any portion of the wastewater system.
- 3. Drainfield replacement area not available.
- 4. Provide level area for drainfield by cutting and grading as needed

ALL WELL PERMIT CONDITIONS

- 1. Owner responsible to obtain a safe bacteriological water sample prior to use. Sample bottles available at health department offices.
- 2. Well driller is required to submit a well record to the owner and the health department within 60 days of well
- 3. Isolate the new well a minimum of 50' from any potential sources of contamination, including all portions of the septic
- 4. If an artesian flow is encountered the flow shall be contained within the permanent well casing as required. No flow shall be allowed outside the casing without written deviation approval from this agency.

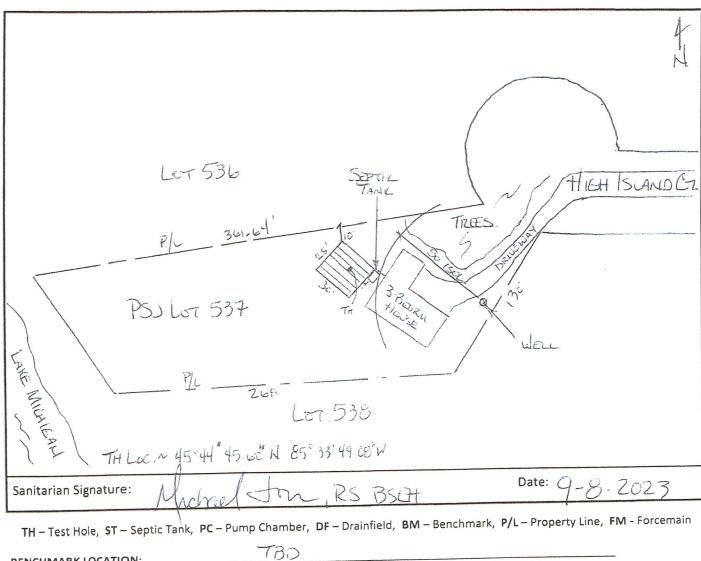
Issued by: Michael Jones, RS BSEH

EH Supervisor/Sanitarian

Date Issued: September 06, 2023 Permit Expires 2 years from date issued.

Site Plan Drawing Attached or on Reverse Side

Share your experience with us by visiting www.nwhealth.org and completing a client satisfaction survey.



BENCHMARK LOCATION:

RELATIVE ELEVATION:

BENCHMARK ELEVATION:

BOTTOM OF STONE ELEVATION:

FINAL INSPECTIONS AND APPROVALS (Section 4-15): "... The owner or owner's agent shall notify the Health Officer when the wastewater system is installed and the project is ready for inspection. Notification must be provided a minimum of TWO (2) WORKING DAYS prior to anticipated system completion and desired final inspection by the Health Officer..."

BEFORE calling for final inspection: Make sure, at a minimum, the following that apply are **COMPLETED**:

- Septic tank, baffle, filters, solid outlet piping (sch40/SDR35), pump chamber and risers Installed
- Riser Lids comply with 59 pound weight standard (ASTM 1227 70-C).
- Pump installation is complete and ready for inspection
- Pump chamber is full of water and ready for pressure test, if applicable
- Alarm and floats are functional and energized
- All drainfield materials are installed and ready for inspection
- Filter Fabric is placed over stone

Fees may be charged for incomplete installations that require follow-up inspections for system Approval



	Well Approval Infor	mation and Water	Sample Voucher
Address:	28300 High Island	Permit Number:	C23-253
County:	Charlevoix	Permit Type:	Septic and Well Permit
Township:	St. James Section: 29	Permit Issued:	September 06, 2023
Tax ID #:	15-013-707-537-00		

The Michigan Department of Environmental Quality (MDEQ) has established a well approval process for newly constructed private water well. There are three elements that must be satisfied in order for a newly installed well to be considered approved:

- 1. Approval of the water well record and abandonment log (if applicable). All well and abandonment records when received from the well driller are reviewed by the Health Department for approval.
- 2. Safe Water Samples. As part of the well permit service, you are entitled to one Bacteriological and one Partial Chemical test through the Northern Michigan Regional Laboratory. Request forms, sample bottles, and mailing containers are available at any of our branch offices. *Samples must be to the lab within 30 hours of collection ask about our free sample shipment program. Please bring this voucher when picking up your sample bottles.
- An Approved Final Inspection. Health Departments are only required to conduct final inspections on 10% of permitted wells annually. If you would like to arrange for a final inspection of your well, contact our department after well completion.
- 4. For additional information regarding water wells, visit our website at www.nwhealth.org under Permits and Licenses and New Well or you can call any of our branch offices to have literature sent directly to your home address.

Antrim Office 209 Portage Drive Bellaire, MI 49659 231-533-8670 Charlevoix Office 220 West Garfield Charlevoix, MI 49720 231-547-6523 Emmet Office 3434 Harbor-Petoskey Road Harbor Springs, MI 49740 231-347-6014 Otsego Office 95 Livingston Blvd Gaylord, MI 49735 989-732-1794

VEGETATION ASSURANCE PLAN FOR A NEW RESIDENCE 28300 HIGH ISLAND CT, BEAVER ISLAND, CHARLEVOIX COUNTY SEPTEMBER 15, 2023

Property: Tax ID Number 03-707-537-00 and 013-707-537-00; These two 1-acre (more or less) lots are Lot numbers 537 and 538 of Port St James Subdivision #7. They are located just off of Gull Island Road on High Island Ct. The two lots were recorded on 5/27/1968.

The Township required TIS Plan is embedded within this Vegetation Assurance Plan; therefore, a separate TIS report will not be forthcoming.

Project site description: This property is situated on Lake Michigan near the north end of Donegal Bay. The property is located on the northwest portion of Beaver Island. The new home will be sited on the eastmost portion of Lot 537, thereby requiring a short driveway and be located as far away from a swale system located landward for the crest near the shoreline.

The 2.0-acre property is a combination of open and forested dunes. It also contains an interdunal wetland (swale) between the foredune and main dune. The 0.20-acre construction site contains the following plant species:

Invasive species

Spotted knapweed (Centaurea stoebe)

Threatened/endangered species

Pitcher's thistle (*Cirsium pitcher*)—state threatened; legally protected Lake Huron tansy (*Tanacetum bipinnatum* ssp. *huronense*)—state threatened

Native species at construction site

Northern white-cedar (*Thuja occidentalis*)

White spruce (*Picea glauca*)

White pine (*Pinus strobus*)

Tamarack (Larix laricina)

Balsam fir (Abies balsamea)

Paper birch (Betula papyrifera)

Creeping juniper (*Juniperus horizontalis*)

Common juniper (*Juniperus communis*)

Buffaloberry (Shepherdia canadensis)

St. John's wort (*Hypericum perforatum*)

Bearberry (Arctostaphylos uva-ursi)

Shrubby cinquefoil (Dasiphore fruticose)

Smooth rose (Rosa blanda)

Wormwood (Artemisia campestris)

Plains puccoon (*Lithospermum caroliniense*)

White death-camas (Zigadenus elegans ssp. glaucus)

Yarrow (Achillea millefolium)

Grass-of-parnassus (Parnassia palustris)

Starry false Solomon's seal (*Maianthemum stellatum*)

Twinflower (Linnaea borealis)

Smooth aster (Aster laevis)

Gillman's goldenrod (Solidago simplex)

Ohio goldenrod (Solidago ohioensis)

Baltic rush (Juncus balticus)

Smooth scouring rush (Equisetum laevigatum)

Sand reed grass (Calamovilfa longifolia)

Little bluestem (Schizachyrium scoparium)

An EGLE CSDA representative, Ms. Keri Kent, visited this site on August 31, 2023, and advised that the house/garage, septic, and well locations were staked in acceptable locations given the location of a sensitive and unique swale system behind the crest located near the shoreline.

Proposed development: This project is for the construction of a new 64' by 28' home with two decks attached to the home that are 8' to 12' deep depending on the location. A 28' by 28' garage is attached to the home. The home and garage will be built on a crawlspace foundation. A new septic system and well are part of this project. A new driveway will be constructed in an opening of a blown-up dune near the county road. Both trees and shrubs need to be removed for the construction work. A few Pitcher's thistles were found where the septic system will be located. This requires a DNR permit to 'take' these plants.

Special considerations: This property includes an interdunal wetland (swale) between the shoreline and construction site. This natural feature is considered "imperiled" by Michigan Natural Features Inventory and warrants protection. The plant species in this swale are often rare, threatened, or of special concern. For this reason we are including a list of plants found in the swale on the property:

Native species in interdunal wetland (swale):

Paper birch (Betula papyrifera)

Tamarack (Larix laricina)

White spruce (Picea glauca)

Northern white-cedar (Thuja occidentalis)

Shrubby cinquefoil (*Dasiphora fruticose*)

Kalm's St. John's wort (*Hypericum kalmianum*)

Creeping juniper (Juniperus horizontalis)

Blueleaf willow (Salix myricoides)

Buffaloberry (Shepherdia canadensis)

Scouring rush (Equisetum hyemale)

Smooth scouring rush (Equisetum laevigatum)

Spikemoss (Selaginella selaginoides)

Purple false foxglove (Agalinis purpurea)

Northern paintbrush (Castilleja septentrionalis)

Limestone calamint (Clinopodium arkansanum)

Bastard-toadflax (Comandra umbellate)

Sand coreopsis (Coreopsis lanceolate)

Linear-leaved sundew (Drosera linearis)

Round-leaved sundew (Drosera rotundifolia)

Grass-leaved goldenrod (Euthamia graminifolia)

Small fringed gentian (*Gentianopsis virgate*) Bog lobelia (*Lobelia kalmia*)

Balsam ragwort (Packera paupercula)

Grass-of-parnassus (Parnassia glauca)

Butterwort (Pinguicula vulgaris)

Silverweed (Potentilla anserina)

Birds-eye primrose (Primula mistassinica)

Ohio goldenrod (Solidago ohioensis)

Panicled aster (Symphyotrichum lanceolatum)

False asphodel (Triantha glutinosa)

Common bog arrow-grass (*Triglochin maritima*)

Redtop (Agrostis gigantea)

Narrow-leaved reedgrass (Calamagrostis stricta)

Leiberg's panic grass (Dichanthelium leibergii)

Baltic rush (*Juncus balticus*)
Twig-rush (*Cladium mariscoides*)
Spikerush (*Eleocharis* sp.)

To protect this rare natural community, we propose a raised boardwalk over the swale. This boardwalk will protect the native plants in the swale while allowing beach access for the owners. Any trees removed from the property should not be allowed to fall in the swale and should be transported off the property by hauling them up the dune to the proposed driveway.

Propose actions for maintaining site stability during and after construction: Soil and sedimentation control measures will be placed in accordance with the Part 91 Permit.

Roof drainage will be controlled with gutters and downspouts. Downspouts will be discharged into French drains.

Proposed revegetation of the site: Restoration will include native plantings within the disturbed areas. The property owners will become aware of their two-year obligation to monitor the new growth and replace any plants that did not survive.

Other concerns: The invasive species spotted knapweed (*Centaurea stoebe*) was found on this property, although in very low numbers. Construction equipment may bring more seeds to the site and cause a dramatic increase in the spotted knapweed population. The homeowner will be introduced to spotted knapweed and how to remove it in the future.

This report was prepared by R.S. Welke and with professional input from Drs. Beth and Ed Leuck, retired biology professors who were associated with the Central Michigan University Biological Station on Beaver Island for over 30 years. Dr. Ed Leuck has written a book on the Beaver Island flora (*The Plants of Beaver Island*). Phyllis Higman, a botanist with Michigan Natural Features Inventory (MNFI), identified the plant species in the interdunal wetland.

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