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Receipt Number

Livingston County Department of Public Health  
Environmental Health Division  
2300 E. Grand River \* Suite 102 \* Howell, MI 48843  
Fax (517) 546.9853 \* Phone (517) 546.9858  
http://co.livingston.mi.us/health

SEV2015-00375  
Case No.  
08-23-300-028  
Current Desc. #

SOILS EVALUATION FOR SUB-SURFACE SEWAGE DISPOSAL SYSTEMS

Location: BULLARD RD HARTLAND MI 48353  
 Township: Hartland  
 Section No.: 23  
 Subdivision/Acreage: 1 / 3.2  
 Lot, Parcel: 1  
 Page 2 of 2

**Location and Directions:** BULLARD RD

BULLARD N OF M-59

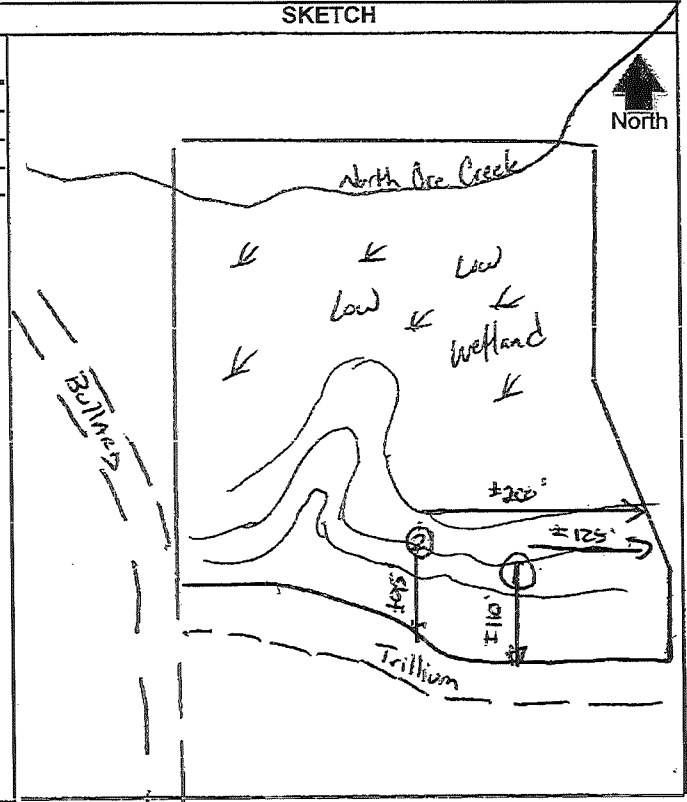
**Applicant**

MITCHELL ANDERSON  
10382 DUNHAM  
HARTLAND MI 48353  
PH1 810-341-4970

**Owner**

HEAVENER ROSS E  
3113 AUTUMN CT  
MILFORD MI 48380

SOIL DESCRIPTION						
Boring #	Soil Type	Desc	Beg Depth	End Depth	SWT	WT Depth
12/22/15	1 Sandy Loam	TS	0.00	1.00		
	1 Fine Sand/Loamy S:	DRY	1.00	7.00	7.00	
12/22/15	2 Sandy Loam	TS	0.00	1.00		
	2 Fine Sand/Loamy S:	DRY	1.00	6.00	5.00	



**Suitable with Special Restrictions**

Within 800 feet of a potential or known source of contamination **No**

Alternative Review: **No**

Oversize: N

Comments:

**Conditions**

- Locate the system in the exact area of the approved soil borings.
- 100% cutdown to sand at +/- 1 ft., then lay stone and tile, 24" max., 12" min. cover.
- BOTTOM OF STONE TO BE NO DEEPER THAN 12" BELOW GRADE, GRADE ESTABLISHED AT BORING #2, DATED 12-22-15.
- Install a septic tank filter on the outlet end of the septic tank.
- \*\* Note: Maintain enough area for a future replacement septic area.

Met?	Date
N	12/22/15
N	12/22/15
N	12/22/15
N	12/22/15

BCF

**Beau C. Forgette**  
Environmental Health Representative

**December 22, 2015**  
Date

Soils evaluation based on criteria stated in Livingston County Sanitary Code, effective January 4, 1993.

This is NOT a permit. A suitable soils rating is NOT a guarantee that a permit to construct an on-site subsurface sewage disposal system will be granted. Changing conditions that might result in permit denial are explained in more detail on the reverse side.

A soils evaluation is conducted by the Environmental Health Division of the Livingston County Department of Public Health to determine the suitability of utilizing on-site subsurface sewage disposal for a particular parcel of property. Comments might be made regarding the utilization of an on-site water well supply strictly from previous personal experience in the general area, but in no instance can the information on this evaluation be specific for any particular parcel. We advise any prospective buyer to contact a licensed well driller, familiar with the area, for more specific information on water quality, yield, depth of wells, etc. The following discussion describes those factors which are evaluated and their effect on the operation of subsurface sewage disposal facilities.

1. Soil type and permeability is a quality of a soil that enables it to transmit water or air. Slow permeable soils, such as clays and silts, are not suitable for utilizing on-site subsurface sewage disposal. Wetland soils such as muck and marl are poorly drained and therefore unsuitable for subsurface sewage disposal.
2. Highest known groundwater evaluation is an important consideration in determining if a site is suitable for the utilization of subsurface sewage disposal. In addition to the problems associated with saturated conditions, bacteria and viruses can survive if allowed to move in a water medium. Groundwater is considered "waters of the state" and must be protected from contamination by maintaining adequate isolation distances-- Where the highest zone of groundwater saturation is less than 2 1/2 ft. below the original ground surface the site will be considered unsuitable.
3. Deep excavations or cut-down systems can only be accepted under the following conditions:
  - a. Adequate and suitable material is within 12 ft. of the original grade.
  - b. The soils encountered shall not be saturated.
  - c. The drinking water aquifer will not become contaminated as a result of the wastewater discharge.
4. Other considerations evaluated during a soils evaluation include but are not limited to:
  - a. Adequate suitable area for a replacement system.
  - b. Isolation distances to water well supplies, surface waters, severe slopes, and property lines.
  - c. If the site is subject to flooding.

**NOTICE**

This soil evaluation is valid for a specific building site. Any change in the legal description or a division of the original parcel into smaller parcels may void the original soils evaluation. A suitable soils evaluation does not necessarily mean that a permit to construct a subsurface sewage disposal system will automatically be issued. Some factors that might change the rating for permit approval include:

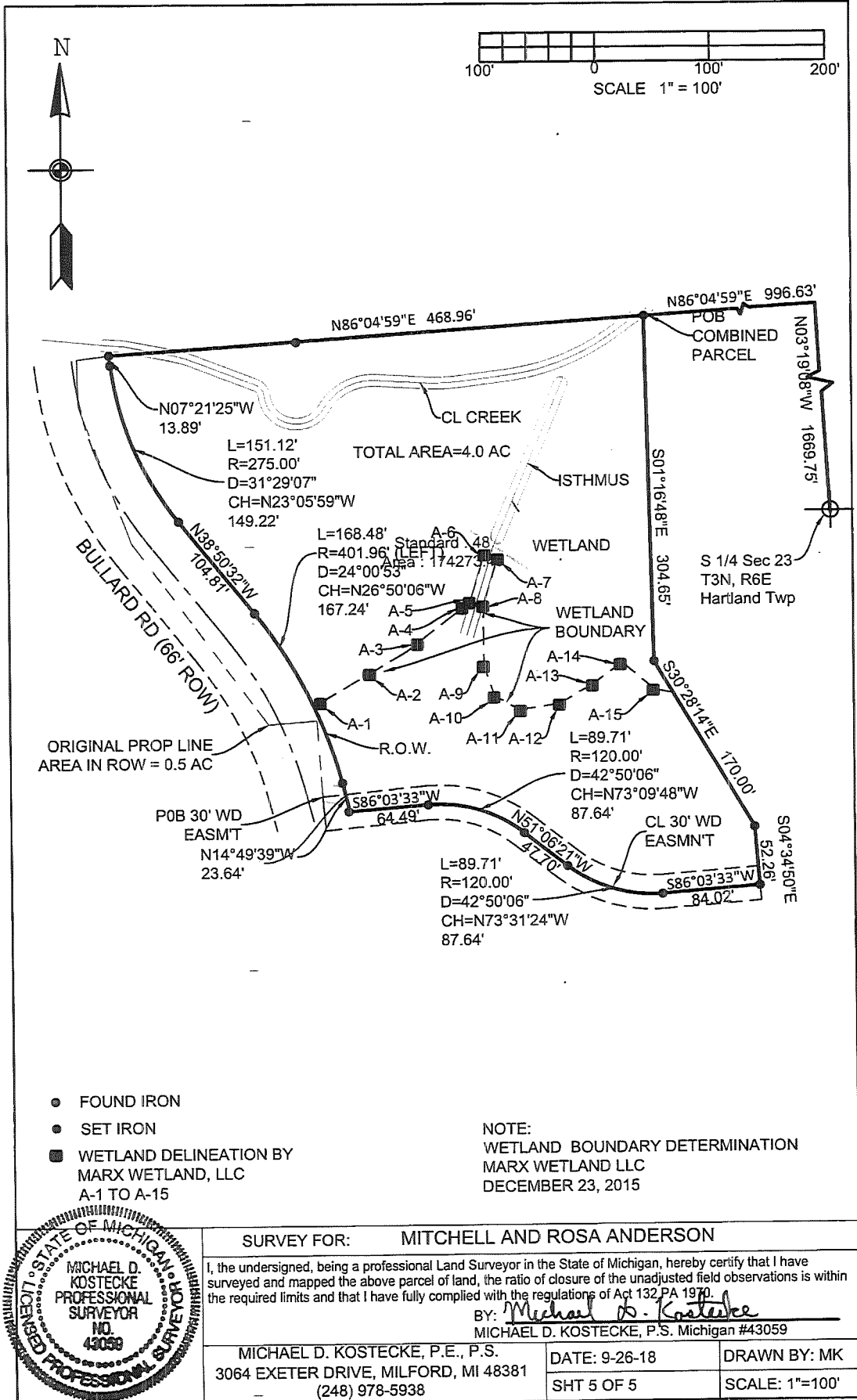
- a. Revisions to the current Sanitary Code Requirements for Permit Approval. This soils evaluation was conducted under the criteria for Permit Approval stated in the Livingston County Sanitary Code effective January 4, 1993.
- b. Grading, filling or excavation on the parcel.
- c. Construction on neighboring properties where location of water wells and/or sewage disposal systems encroach on required isolation distances.
- d. A soils evaluation for commercial property is only valid if specific wastewater flow is stated.

**SWT - Seasonal Water Table**  
**GW - Ground Water**  
**WT - Water Table**

**LEGEND - Soil Description**

MOT	Mottled
GRE	Grey
HEA	Heavy
WET	Wet
SAT	Saturated
LIG	Light
DRY	Dry

# CERTIFICATE OF SURVEY



- FOUND IRON
- SET IRON
- WETLAND DELINEATION BY MARX WETLAND, LLC A-1 TO A-15

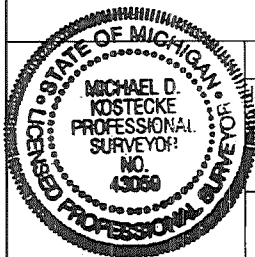
**NOTE:**  
 WETLAND BOUNDARY DETERMINATION  
 MARX WETLAND LLC  
 DECEMBER 23, 2015



<b>SURVEY FOR: MITCHELL AND ROSA ANDERSON</b>		
I, the undersigned, being a professional Land Surveyor in the State of Michigan, hereby certify that I have surveyed and mapped the above parcel of land, the ratio of closure of the unadjusted field observations is within the required limits and that I have fully complied with the regulations of Act 132 PA 1970.		
BY: <u>Michael D. Kostecke</u> MICHAEL D. KOSTECKE, P.S. Michigan #43059		
MICHAEL D. KOSTECKE, P.E., P.S. 3064 EXETER DRIVE, MILFORD, MI 48381 (248) 978-5938	DATE: 9-26-18 SHT 5 OF 5	DRAWN BY: MK SCALE: 1"=100'

# CERTIFICATE OF SURVEY

Parcel: Combined Parcel  
 Part of the Southwest 1/4 of Section 23, Town 3 North, Rang 6 East, Hartland Township, Livingston County, Michigan, more particularly described as follows:  
 Commencing at the South 1/4 corner of said Section 23; thence along the North-South 1/4 line of said Section 23,  
 North 03 degrees 19 minutes 08 seconds West, 1669.75 feet;  
 thence South 86 degrees 42 minutes 18 seconds West, 996.63 feet;  
 to the Point of Beginning of the described Parcel;  
 thence South 00 degrees 38 minutes 25 seconds East, 304.51 feet;  
 thence South 29 degrees 49 minutes 51 seconds East, 170.00 feet;  
 thence South 03 degrees 56 minutes 27 seconds East, 52.28 feet;  
 thence along the centerline of a 30 feet wide Shared Driveway and Public Utility Easement (as described below), the following five (5) courses:  
 1) South 86 degrees 03 minutes 33 seconds West, 84.02 feet;  
 2) Northerly on an arc left, having a length of 89.71 feet, a radius of 120.00 feet, a central angle of 42 degrees 50 minutes 06 seconds and a long chord which bears  
 3) North 72 degrees 31 minutes 24 seconds West 87.64 feet;  
 4) North 51 degrees 06 minutes 21 seconds West, 47.70 feet;  
 Northerly on an arc left, having a length of 89.71 feet, a radius of 120.00 feet, a central angle of 42 degrees 50 minutes 06 seconds and a long chord which bears  
 5) North 72 degrees 31 minutes 24 seconds West 87.64 feet;  
 thence along the East ROW of Bullard Rd. (66 feet wide),  
 the following five (5) courses:  
 1) North 14°49'39" West, 23.64 feet;  
 2) Northerly on an arc left, having a length of 168.48 feet, a radius of 401.96 feet, a central angle of 24 degrees 00 minutes 53 seconds and a long chord which bears  
 3) North 38 degrees 50 minutes 32 seconds West, 104.81 feet;  
 Northerly on an arc right, having a length of 151.12 feet, a radius of 275.00 feet, a central angle of 31 degrees 29 minutes 07 seconds and a long chord which bears  
 4) North 23 degrees 05 minutes 58 seconds West 149.22 feet;  
 5) thence North 07 degrees 21 minutes 25 seconds West, 13.89 feet;  
 thence North 86 degrees 42 minutes 18 seconds East, 469.30 feet to the Point of Beginning, containing 4.0 acres, and subject to any easements of record.



**SURVEY FOR: MITCHELL AND ROSA ANDERSON**

I, the undersigned, being a professional Land Surveyor in the State of Michigan, hereby certify that I have surveyed and mapped the above parcel of land, the ratio of closure of the unadjusted field observations is within the required limits and that I have fully complied with the regulations of Act 132 PA 1970

BY: Michael D. Kostecke  
 MICHAEL D. KOSTECKE, P.S. Michigan #43059

MICHAEL D. KOSTECKE, P.E., P.S.  
 3064 EXETER DRIVE, MILFORD, MI 48381  
 (248) 978-5938

DATE: 9-26-18  
 SHT 4 OF 5

DRAWN BY: MK  
 SCALE: 1"=100'