

Health and Public Safety Committee

Christian Marcus

Karen Bargy, Chair

Bob Wilson

Minutes - March 22, 2016

Members present: Karen Bargy, Bob Wilson
Members absent: Christian Marcus
Others present: Pete Garwood, Janet Koch, Sheryl Guy

1. The meeting was called to order at 9:00 a.m. by Chair Karen Bargy.

2. Public Comment

None.

3. Commission on Aging (COA)

Millage Request

The Committee, Judy Parliament, COA Director, Sheryl Guy, County Clerk, and Pete Garwood, County Administrator, discussed the language of the millage renewal request.

Motion by Bob Wilson, seconded by Karen Bargy, to recommend the Board of Commissioners approve a millage renewal proposal to be placed on the August primary ballot for 0.4000 mill for four years 2017, 2018, 2019 and 2020 inclusive to provide operational funding for the Antrim County Commission on Aging with the following ballot language:

Commission on Aging Millage Renewal Proposal

Shall the limitation on the amount of ad valorem taxes which may be levied by the County of Antrim, Michigan, against all taxable property within Antrim County be four-tenths (4/10) of 1 mill which is a renewal of 2012 millage (\$0.40 on each \$1,000 of taxable valuation) for a period of four years, 2017, 2018, 2019, and 2020 inclusive, to provide operational funding for the Antrim County Commission on Aging? If approved and levied in its entirety, this millage would raise an estimated \$ 694,925 for the County in 2017. Motion carried – unanimous.

Financial Reports

The reports showed that 16.39% of COA's budgeting year had elapsed. Ms. Bargy asked Ms. Parliament about some revenue and expenditure line items. Health screen line items (#297000-685 and #297000-686) and the 1:1 ratio annuity benefit (#297000-686-714.002) were discussed.

Nifty Thrifty

Ms. Parliament said there is an upcoming fundraising dinner for Nifty Thrifty on Wed., April 27.

4. Probate Court

Agreement for Services/Independent Contractor (attached pgs. 6-10)

At the February 23 Committee meeting, Bill Hefferan, Probate and Family Court Administrator, had asked that the agreement be considered at the current meeting, thus allowing time for Mr. Hefferan and Mr. Garwood to work out some contract details with civil counsel. Mr. Garwood said one discussion point had been if the agreement should include a requirement to have the guardians name the County as an additional insured. He said the County's civil counsel had told him that isn't required. The guardians are required to have appropriate insurance coverage, but there is no need for the County to have confirmation of this. Ms. Guy and Mr. Hefferan agreed that the appointed guardians must provide a sign off regarding worker's compensation.

Motion by Bob Wilson, seconded by Karen Bargy, to recommend the Board of Commissioners approve the contract for use by the Probate Court when contracting for public guardian services and investigative services and authorize the Chair of the Board of Commissioners to sign the contracts. Motion carried – unanimous.

5. Antrim County Transportation (ACT) Update

Financial Reports

Al Meacham, ACT Director, had provided the following documents for the agenda packets: Revenue Schedule 2016, 2016 Expense Schedule, and Miscellaneous Revenue Fiscal Year 2016. It was noted that about 42% of ACT's fiscal year had elapsed.

6. Airport Update

Financial Reports

John Strehl, Airport Manager, had provided the Airport's financial reports in the agenda packets.

Runway Rehab Update

Mr. Strehl said he will present the Mead & Hunt contract at the next Committee meeting for approval at the May Board of Commissioners meeting.

7. Sheriff Department Update

Tele-Rad Proposal

Sheriff Bean distributed copies of an updated proposal from Tele-Rad for adding simulcasting capabilities to the Mancelona tower (**attached pgs. 11-17**), saying that adding simulcast capability to the Mancelona tower will improve signal clarity to the Mancelona area. Sheriff Bean said it will also help provide better signal coverage to a number of other townships. It was noted that on March 9, the 911 Board recommended that the Health & Public Safety Committee move forward with improvements to the Mancelona tower.

Sgt. Gank said the Village of Mancelona is at a lower elevation than the surrounding terrain, which is why transmitting to that area is problematic. Ms. Bargy said the biggest benefit to adding simulcasting capability to the Mancelona tower was that it would add clarity to the system.

Sergeant Mike Gank, 911 Dispatch Sergeant, said the existing situation of repeater towers had been a temporary solution to allow the receiving of fire and rescue pages.

A Tele-Rad representative said receive-only towers assist with getting signals to portable devices. Ms. Bargy asked Sgt. Gank to report back to the Committee regarding whether or not the Orchard Hill tower receives simulcast signals. The 911 Connect program was briefly discussed.

Sgt. Gank said 911 has three funding sources; the 911 millage (Fund 261), cell phone fees that are received by the State of Michigan and passed on to the County (Fund 262), and revenue from the State of Michigan for 911 training purposes (Fund 259). Deb Haydell, County Accountant, told the Committee that although no capital expenditures had been made out of fund 261, that fund could be used for capital expenditures if the Board of Commissioners approves. There is no current revenue from land line surcharges.

Since the expenditures in Fund 262 are regulated by statute, Ms. Bargy said she would like to know how those funds could be spent. She asked Sgt. Gank to provide that information to Ms. Haydell so Ms. Haydell could present that information to the Finance Committee.

Motion by Bob Wilson, seconded by Karen Bargy, to recommend the Finance Committee approve the budgetary proposal from Tele-Rad, Inc. to add the Mancelona tower to the Antrim County Simulcast System at a preliminary cost of \$83,252.80 and approve an additional amount of up to \$3,000.00 for a structural analysis of the tower to be paid for out of the 911 Operating Fund #261000. Motion carried – unanimous.

Sheriff Bean said he will be providing more information regarding Smart 911 to County residents through various means. Sgt. Gank said the anticipated final enrollment is 10% of population.

The Committee took a short break at 10:45 a.m.

Animal Control Cat Cages (attached pgs. 18-21)

Sheriff Bean said the budgeted amount for the cages was \$20,000.

Motion by Bob Wilson, seconded by Karen Bargy, to recommend the Finance Committee accept the bid of Mason Company in the amount of \$18,555.05 to supply cat cages for Animal Control #101000-901-980.430. Motion carried – unanimous.

Animal Control Issue

Sheriff Bean said a letter had been sent in response to a communication from Jan Boss the previous week and there had been no response. He commended the efforts of Mr. Garwood for the composition of the letter. Ms. Bargy asked the Sheriff to communicate any animal control policy changes to the Committee and the Board of Commissioners.

Animal Control Report

The February Animal Control report had been included with the Committee's agenda packets.

Leads Online (attached pgs. 22-27)

Sheriff Bean distributed copies of a revised agreement with Leads Online. Mr. Garwood examined the agreement for the changes recommended by civil counsel.

Motion by Bob Wilson, seconded by Karen Bargy, to recommend the Board of Commissioners approve a one-year agreement with Leads Online to receive electronic reporting and criminal investigation data at a cost of \$1,758 to be paid from the General Fund – Sheriff Dept. #101000-301. Motion carried – unanimous.

8. Emergency Services

Monthly Report

Leslie Meyers, Emergency Services Coordinator, had included a written report in the committee packets. She added that she will be working on updating the Emergency Services website. Ms. Meyers said she is working with Wendy Dawson of the Township Ambulance Authority to write a 2% tribal grant for LUCAS CPR machines for all the rescue rigs in the County. The machines cost approximately \$15,000 each.

Vehicle Status

Ms. Meyers and Mr. Garwood said the Emergency Services SUV could be repaired for approximately \$400, but it had broken down five times in the last year. The vehicle could be repaired and sold on GovDeals.com which might bring in as much as \$1,000. Allowing the vehicle to be salvaged would result in a revenue of approximately \$250. Ms. Meyers asked the Committee to instead allow the vehicle to be part of a full-scale exercise by Antrim County Emergency Services (ACES).

Motion by Bob Wilson, seconded by Karen Bargy, to recommend the Finance Committee approve the transfer of the Ford Expedition title to the Mancelona Township Fire Department for the purpose of vehicle extraction training. Motion carried – unanimous.

Fire Corps

Ms. Meyers said the idea for a county-wide Fire Corps had come out of an ACES meeting. She said a Fire Corps would be a type of a Community Emergency Response Team, a CERT, and would not replace the existing auxiliaries. In the event of a large scale situation, a township fire department could contact the County's Emergency Services Coordinator, who would in turn contact Fire Corps members. The Fire Corps members could assist during an emergency by setting up generators, staffing fire stations, directing traffic, etc. Ms. Meyers said the County's liability insurance covers volunteers and that the township fire chiefs who have responded to the proposed concept endorse it.

Ms. Meyers said there are four active fire auxiliaries in the County. Members of auxiliaries are volunteer only and are not required to have any training. Members of Fire Corps are required to have some training, which is supplied by Region 7. There is no charge for the training. Ms. Meyers told the Committee that an annual \$1000 grant could be obtained once the Fire Corps is established.

Ms. Bargy expressed concerns over the potential for poor communication with the townships regarding the Fire Corps. Ms. Meyers said the Fire Corps would only be called into action after a township requested their assistance.

Motion by Bob Wilson, seconded by Karen Bargy, to recommend that the Board of Commissioners authorize the creation of a county-wide Fire Corps that would report to the Emergency Services Coordinator as required for Federal Emergency Management Act funding. Motion carried – unanimous.

Public Information Officer (PIO)

Ms. Bargy said one of Mr. Garwood's responsibilities as the County Administrator is to be the primary publicity contact for the County. Ms. Meyers said the PIO would function as the publicity contact only when an emergency situation exists. There is no additional compensation for the role. Ms. Meyers said she would look into the possibility of bringing PIO training to the County so others could participate.

Motion by Bob Wilson, seconded by Karen Bargy, to recommend the Chairman of the Board of Commissioners appoint Associate Planner Janet Koch as the Public Information Officer for emergency and disaster situations in Antrim County. Motion carried – unanimous.

9. Various Matters

Health Department of Northwest Michigan

Scott Kendzierski, Director of Environmental Health Services, introduced Casey Clement, sanitarian for Antrim County and Matt Doyle, sanitarian for parts of Antrim and Charlevoix Counties. The Health Department services Antrim, Charlevoix, Emmet, and Otsego Counties.

Mr. Kendzierski said they were working to revise the health department's sanitary code and to get all the counties under one code. After the code is finalized, there will be a legal review, public hearings will be held in each of the four counties. The proposed code will then go to the Board of Health for approval by resolution, after which it will go to the four different Boards of Commissioners for approval by resolution.

Mr. Kendzierski reviewed the proposed changes to the sanitary code (**attached pgs. 28-60**). Some of the changes mentioned were the creation of a definition for the term "failure" of a septic system, the creation of a one-year term for applications, removal of the requirement for permits to be posted on site, and the removal of the two day requirement for final inspections.

North Country Community Mental Health (CMH)

Mr. Garwood told the Committee that he would be scheduling a meeting with himself, Alexis Kaczynski, CMH Director, and Sheriff Bean to discuss the Mental Health Services and Jail Diversion agreement.

10. Public Comment

None.

The meeting was adjourned at 11:56 a.m.

**COUNTY OF ANTRIM
PROBATE COURT SERVICES CONTRACT**

CONTRACT made as of this _____ day of _____, 20__

BETWEEN

The County Probate Court: County of Antrim Probate Court
Antrim County Courthouse
205 East Cayuga
PO Box 130
Bellaire, Michigan 49615

AND

The County: County of Antrim
Antrim County Building
203 East Cayuga
PO Box 187
Bellaire, Michigan 49615

AND

Independent Contractor: _____

Service Provider I.D. # _____

The Project: Public Guardian Services

Funding Source: Antrim County

Antrim County Probate Court agrees to contract for public guardian services by contracting with an Independent contractor who before performing under this contract will be subject to a criminal and protective services background check.

This Contract is between the County of Antrim Probate Court, hereinafter referred to as the COURT, Antrim County hereinafter referred to as the COUNTY and

(Address)

hereinafter referred to as the CONTRACTOR.

ARTICLE 1: SERVICES

- 1.1 CONTRACTOR agrees to perform public guardian services for the Probate Court system.
- 1.2 COURT does not guarantee any set or minimum number of clients to be assigned to CONTRACTOR, nor does CONTRACTOR guaranty or set a minimum number of assignments CONTRACTOR shall accept.

ARTICLE 2: GUARDIAN'S POWERS AND DUTIES

- 2.1 The powers, rights, and duties of a guardian are set forth in MCL 700.5314. A full guardian of a legally incapacitated individual is responsible for the care, custody, and control of the ward but is not liable to third persons for acts of the ward. Except as modified by court order, a guardian has the following powers and duties:
 - Consultation. The guardian must consult with the ward before making a major decision affecting the legally incapacitated individual.
 - Custody. The guardian has custody of the ward and may establish the ward's place of residence, either inside or outside Michigan. The guardian must notify the court within 14 days of any change in the ward's place of residence. The guardian must visit the ward within three months of appointment and at least once within three months after each previous visit.
 - Maintenance, property. If the guardian is entitled to custody, the guardian must provide for the care, comfort, and maintenance of the ward and, when appropriate, arrange for the ward's training and education. The guardian must obtain services to "restore the ward to the best possible state of mental and physical well-being so that the ward can return to self-management at the earliest possible time." Regardless of custody, the guardian must take reasonable care of the ward's personal effects (clothing, vehicles, furniture) and commence protective proceedings if other property of the ward needs protection or if it would be in the ward's best interest to sell the ward's real property.
 - Medical care. A guardian may give any necessary consent or approval so that the ward can receive medical or other professional care, counsel, treatment, or services.

- **Support.** If no conservator has been appointed, a guardian may institute proceedings to compel a person with a duty to support or pay money to the ward to do so and may receive money and tangible property due to the ward and use it for the ward's support, care, and education. The guardian may not use funds from the ward's estate for room and board provided by the guardian or the guardian's spouse, parent, or child unless the charge is approved by the court with notice to at least one of the next of kin of the ward, if notice is possible. The guardian must conserve any excess for the ward's needs. If a conservator is appointed, the guardian must pay to the conservator the amount of the ward's estate received by the guardian in excess of the amount the guardian spends for the ward's current support, care, and education, and must account to the conservator for the amount spent.

ARTICLE 3: COMPENSATION

- 3.1 The COURT agrees to pay the CONTRACTOR at the fixed rate of \$40.00 per month for the provision of public guardian services. This amount represents the aggregate compensation to be paid for travel, motor vehicle expenses while performing the contracted service.

Payment of the invoice shall be approved by the COURT Office and made as promptly as possible by the COUNTY.

ARTICLE 4: PAYMENT

- 4.1 Payment for services will be made on a monthly basis, upon submission of an invoice by the CONTRACTOR.

ARTICLE 5: INSURANCE

- 5.1 It is expressly understood and agreed by CONTRACTOR that CONTRACTOR and any CONTRACTOR Personnel shall not receive any insurance coverage by or through the COURT and/or COUNTY. For purposes of this Section, insurance coverage shall include but, is not limited to, liability, motor vehicle, property damage, and/or worker's compensation insurance."
- 5.2 Any insurance policies purchased and/or maintained by CONTRACTOR for purposes of performing the services under this Contract shall be at the CONTRACTOR's own expense.

ARTICLE 6: ASSIGNMENT AND SUBSTITUTION

- 6.1 Because of the duties and responsibilities of this Contract, this Contract may not be assigned by the CONTRACTOR either in whole or in part to any other person, firm or corporation and no other individual may be substituted except upon approval of the COURT and such substitute individual shall meet all the requirements of this Contract.

ARTICLE 7: TERMINATION

- 7.1 This Contract may be terminated by the COURT upon notice to the CONTRACTOR.

ARTICLE 8: INDEPENDENT CONTRACTOR

- 8.1 The Parties intend that the CONTRACTOR and any CONTRACTOR Personnel be engaged as independent contractors of the COURT and COUNTY. Nothing contained in this Contract will be construed to create the relationship of employer and employee, principal and agent, partnership or joint venture, or any other fiduciary relationship. CONTRACTOR expressly understands and agrees that neither CONTRACTOR, nor any employee or agent of CONTRACTOR, in the performance of CONTRACTOR's services required under this Contract, shall be treated or otherwise considered to be an employee(s) of the COURT and/or COUNTY for taxes, worker's compensation, unemployment compensation, insurance, fringe benefits, or any other purpose. No payroll, employment, or other taxes of any kind shall be withheld or paid by the COUNTY with respect to payments to CONTRACTOR, unless as otherwise required by law. CONTRACTOR understands and agrees that CONTRACTOR is totally responsible for, and shall comply with all laws regarding the timely reporting and payment of all income and other taxes and other governmental liabilities resulting from the performance of CONTRACTOR's services. The CONTRACTOR may not act as agent for, or on behalf of, the COURT and/or COUNTY, or to represent the COURT and/or COUNTY, or bind the COURT and/or COUNTY in any manner.

ARTICLE 9: ENUMERATION OF CONTRACT DOCUMENTS

- 9.1 The Contract documents comprise the entire agreement between the COURT and the CONTRACTOR, consist of the following:
- This Contract (pages 1 to 4 inclusive)

There are no other Contract documents other than those listed above in this Article.

ARTICLE 10: MISCELLANEOUS PROVISIONS

- 10.1 This Contract can only be amended, modified or supplemented by written instrument signed by both parties.
- 10.2 The CONTRACTOR, in performing under this Contract, shall not discriminate against any worker, employee, or applicant for employment because of race, color, religion, height, weight, marital status, national origin, ancestry, sex, age, (except where requirements as to age is based upon a bona fide occupational qualification), or handicap (that is unrelated to the individual's ability to perform duties of a particular job or position) under state or federal law.
- 10.3 All solicitations or advertisement for employees placed by or on behalf of the CONTRACTOR, or subcontractor, shall state that all qualified applicants will receive consideration for employment without regard to race, color, religion, height, weight, marital status, national origin, ancestry, sex, age, or handicap.

10.4 This Contract may be executed in any number of counterparts, each of which will be deemed to be an original, and all counterparts, when taken together, will constitute one and the same Contract. The parties agree that signatures on this Contract may be delivered by facsimile or electronically in lieu of an original signature and agree to treat facsimile or electronic signatures as original signatures that bind them to this Contract.

This Contract is entered into as of the day and year first written above and is executed to at least two (2) original copies of which one is to be delivered to the CONTRACTOR and one to the COUNTY.

COUNTY:

Honorable Norman R. Hayes
Probate & Family Division Judge

Date

Michael Crawford, Chairman
Antrim County Board of Commissioners

Date

CONTRACTOR:

Signature

Date

Print Name



January 12, 2015

Director Michael Gank
Antrim County 911
207 E Cayuga St.
Bellaire, MI 49615

Tele-Rad is pleased to present you with this budgetary proposal to add Mancelona into your existing simulcast system. Upon approval further engineering will be done for a formal proposal.

The provided proposal is for budgetary purposes and makes a few assumptions. The height of the microwave dishes in this proposal is 175 feet. This is an estimated height and proper licensing will be required. Structural analysis will be required at each tower. An estimated cost for this would be \$3000 per site that is outside the scope of this proposal.

We appreciate the opportunity provide this proposal and look forward to future opportunities. If you have any questions, please contact the Tele-Rad Team.

Sincerely,

Jessica Spindler
Tele-Rad, Inc.

Antrim County Fire Simulcast Mancelona Add On

1/6/2016

Equipment Racking

Qty	Description	Unit Price	Extended Price	Total
1	Bud Industries RR-1264 -BT 70-5/8"x19" Relay Rack	\$244.00	\$244.00	
1	Isobar Rack Mount Surge Protection	\$97.60	\$97.60	
				\$341.60

Cambium Networks PTP Radio Equipment

Qty	Description	Unit Price	Extended Price	Total
2	NETWORK INDOOR UNIT	\$995.00	\$1,990.00	
2	NIDU EXTENDED WARRANTY PER END, 4 ADDITIONAL YEARS	\$300.00	\$600.00	
2	CAMBIUM PTP 650 CONNECTORIZED END WITH AC+DC (1 END, NEED 2 ENDS)	\$2,795.00	\$5,590.00	
20	COAX GROUNDING KIT	\$26.00	\$520.00	
4	PTP 650 LPU GROUNDING KIT (1 KIT PER ODU)	\$400.00	\$1,600.00	
2	Radio Waves HPD3-4.7 3 FT Dual Polarity Parabolic Antenna	\$5,700.00	\$11,400.00	
2	PTP 650 8-PORT T1/E1 SOFTWARE LICENSE (PER END)	\$300.00	\$600.00	
2	PTP650 EXT. WARRANTY / ADVANCED REPLACEMENT 4 YEARS (PER END)	\$1,050.00	\$2,100.00	
2	Tripp-Lite SMART3000 UPS	\$1,632.00	\$3,264.00	
2	Tripp-Lite Extended Battery Pack for UPS	\$705.60	\$1,411.20	
800	Andrew 7/8" AVA50 Heliax	\$7.30	\$5,840.00	
2	Site Pro 1 Tower Adapter for SP4-4.7NS Antenna (Site Pro 1)	\$350.00	\$700.00	
8	N-Male Positive Stop Connector for AVA50	\$34.65	\$277.20	
8	N Female Positive Stop Connector for AVA50	\$36.02	\$288.16	
100	LMR600 for Antenna and Inbuilding Jumpers	\$2.00	\$200.00	
16	N-Male for LMR600	\$24.00	\$384.00	
4	4.9Ghz Polyphaser	\$95.00	\$380.00	
4	Prelaced 7/8" Cable Hoist	\$25.70	\$102.80	
16	7/8" Ground Kits	\$20.45	\$327.20	
12	7/8" Stackable Hangers 10 Pk	\$39.19	\$470.28	
4	Polyphaser Flange Mount	\$10.00	\$40.00	
50	#6 Green Wire	\$1.50	\$75.00	
2	Universal Rack Shelf	\$150.00	\$300.00	
1	X-Mark/CDT Retractable Shelf	\$191.89	\$191.89	
1	Bud Industries PA-1106 Black Aluminum Panel	\$40.45	\$40.45	
8	Ground Connectors to Halo	\$8.34	\$66.72	
4	Building Entrance Boots for Hardline	\$19.00	\$76.00	
				\$38,834.90

Spectracom GPS Equipment

Qty	Description	Unit Price	Extended Price
	Spectracom SecureSync Master Oscillator (Includes AC Power, OCXO Internal		
1	Oscillator, GPS Primary Reference and 1PPS Output) Order Code 013,14,00,1C,00, 00	\$6,743.00	\$6,743.00
1	SecureSync Option Card w/(X3) 10 MHz Outputs	included	\$0.00
1	SecureSync Option Card w/(X2) CTCSS Outputs	included	\$0.00
1	Spectracom CTCSS filter assembly	\$965.00	\$965.00
1	Spectracom GPS Antenna	\$350.00	\$350.00
1	Spectracom CGPS Antenna	\$355.00	\$355.00
1	Durracom rack mount power supply	\$134.00	\$134.00
50	Andrew FSJ1-50A 1/4" Superflex	\$2.02	\$101.00
1	Andrew Cable Ground Kit	\$18.70	\$18.70
4	Andrew F1PMN-HF-HF N-Male Connectors for 1/4" Superflex Cable	\$32.40	\$129.60

\$8,796.30

GatesAir Mux Equipment

Qty	Description	Unit Price	Extended Price
	Intraplex (Time Delay) Multiplexer (Includes CMSRTD T1 Time Delay Module, MA-		
1	215 Module Adapter & 60W AC Power Supply)	\$4,050.00	\$4,050.00
1	Intraplex Syncrocast3 Tx Timing Module	\$4,325.00	\$4,325.00
1	Intraplex Syncrocast3 Module Adapter for 1015/T Module	\$300.00	\$300.00
1	Intraplex 4 Channel, 4 Wire E&M Voice Module	\$445.00	\$445.00
1	Intraplex 4 Channel, 4 Wire E&M Voice Module Adapter for VF-25 (RJ-45 Connector)	\$295.00	\$295.00
1	Intraplex Syncrocast3 Primary GPS Cable	\$175.00	\$175.00
1	Siemens M25T68L Pre-Wired Type 66 Punch Block W/RJ-45 Connectors	\$90.00	\$90.00
			\$9,680.00
			Equipment Total \$57,652.80

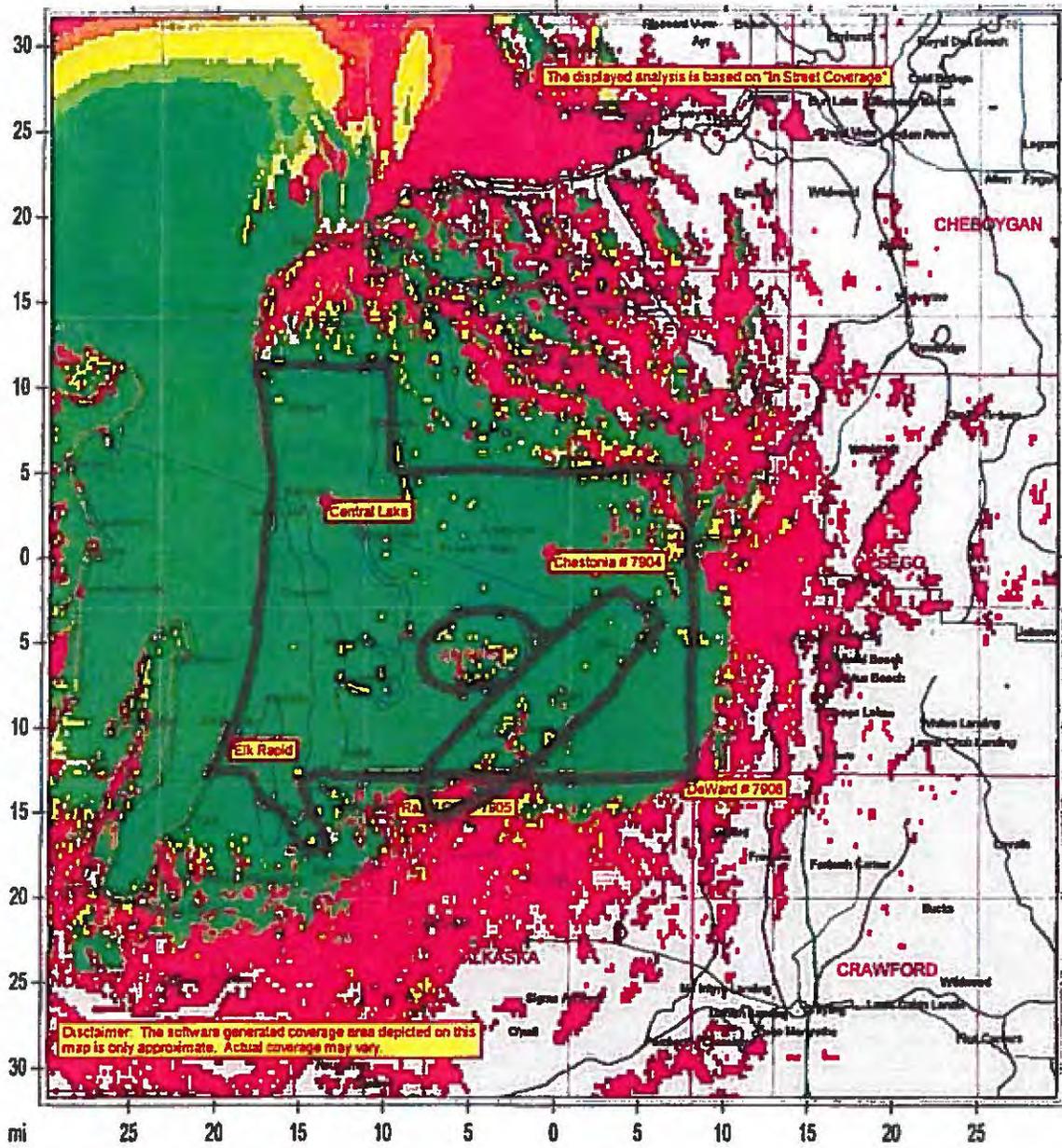
Installation

	Unit Price	Extended Price
1 Program and install PTP radios at both tower sites	\$2,400.00	\$2,400.00
1 Installation of simulcast equipment	\$3,000.00	\$3,000.00
1 Optimization and testing	\$5,000.00	\$5,000.00
1 Modify console	\$1,200.00	\$1,200.00
1 Tower labor, sweep test and path alignment at Chestonia and Mancelona	\$14,000.00	\$14,000.00
		Labor Total \$25,600.00
		Total Project \$83,252.80

Thank you for the opportunity to discuss your Fire Radio System. For the benefit of clarity I will be providing a summary of the history of your fire system and the decisions that have lead us to today and into the future.

- Antrim County first requested a proposal for a simulcast fire system from us in 2009. The system was designed utilizing the then existing tower sites, which included Mancelona. The design in 2009 also required the construction of a larger sturdier tower to be located at Orchard Hill. Working in conjunction with Tele-Rad Antrim County requested FAA approval of a new taller tower as well as approval from MDOT Department of Aeronautics. The permits for this tower were denied due to the proximity of the airport. In addition the estimated cost of the design for a wide band paging solution at that time exceeded \$400,000.00 and the county determined that investment was not possible at the time. As a result the project did not move forward.
- Antrim County again requested a design for a simulcast system in 2011 facing concerns with narrow banding and coverage issues. As a result Tele-Rad designed a new solution at the request of the county that would not require the construction of any new towers. As a result we designed a system utilizing MPSCS towers in addition to some existing Antrim facilities that could accommodate microwave connectivity. Antrim County entered into an agreement with the MPSCS (State of Michigan) to utilize their towers and microwave for no charge to the county. In 2013 Tele-Rad implemented the current Fire radio system utilizing three state towers connected by MPSCS microwave. We also added two additional Fire transmit sites controlled by new digital IP microwave purchased by Antrim County.
- Again in 2014 at the request of Sgt. Bratschi Tele-Rad furnished Antrim County with a proposal to add Mancelona into the simulcast system. This would enhance coverage along the US131 corridor and other area due to terrain. The County did not pursue that addition due to budget concerns. We still recommend that Antrim County consider the addition of Mancelona into the simulcast system.
- For your reference please see the following maps. The first map reflects your existing paging coverage. The problem areas are designated by yellow (weak) and red (no coverage.) The second map which includes the addition of Mancelona reflects the improvements in coverage. The third and final map shows in green the areas that will be improved by adding Mancelona. As you can see Mancelona will improve not only the 131 corridor but also other areas due to challenging terrain.

Antrim County Simulcast Fire Paging System



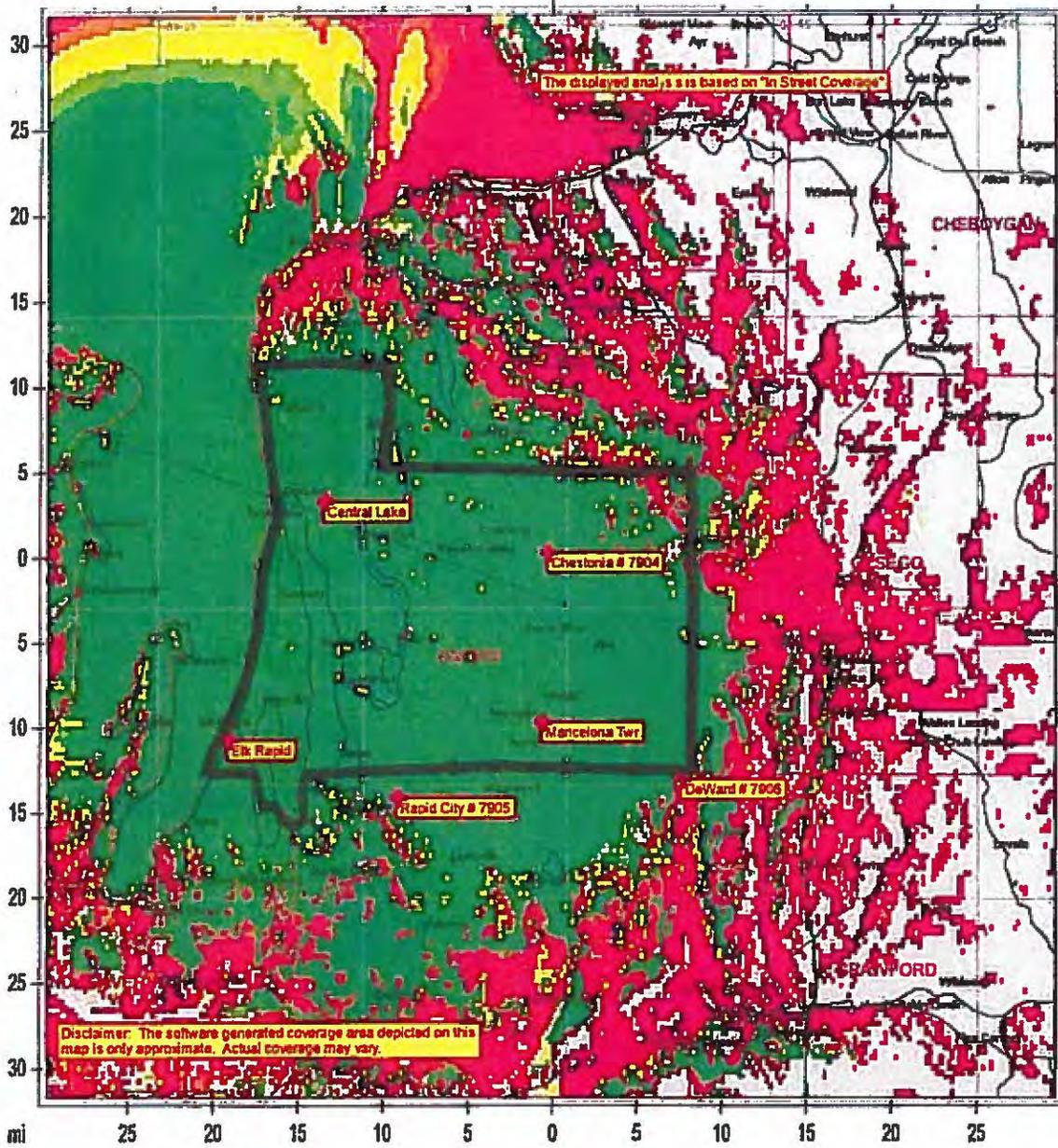
Combined Site - Paging Talk-Out - In Street Coverage



- National Borders
 County Borders
 State Borders
 Highways
 Railroads
- Water Features
 Lat/Lon Grid

Map Scale: 1:611779 1" = 9.66 mi V/H Size: 63.41 x 59.42 mi

Antrim County Simulcast Fire Paging System With Mancelona



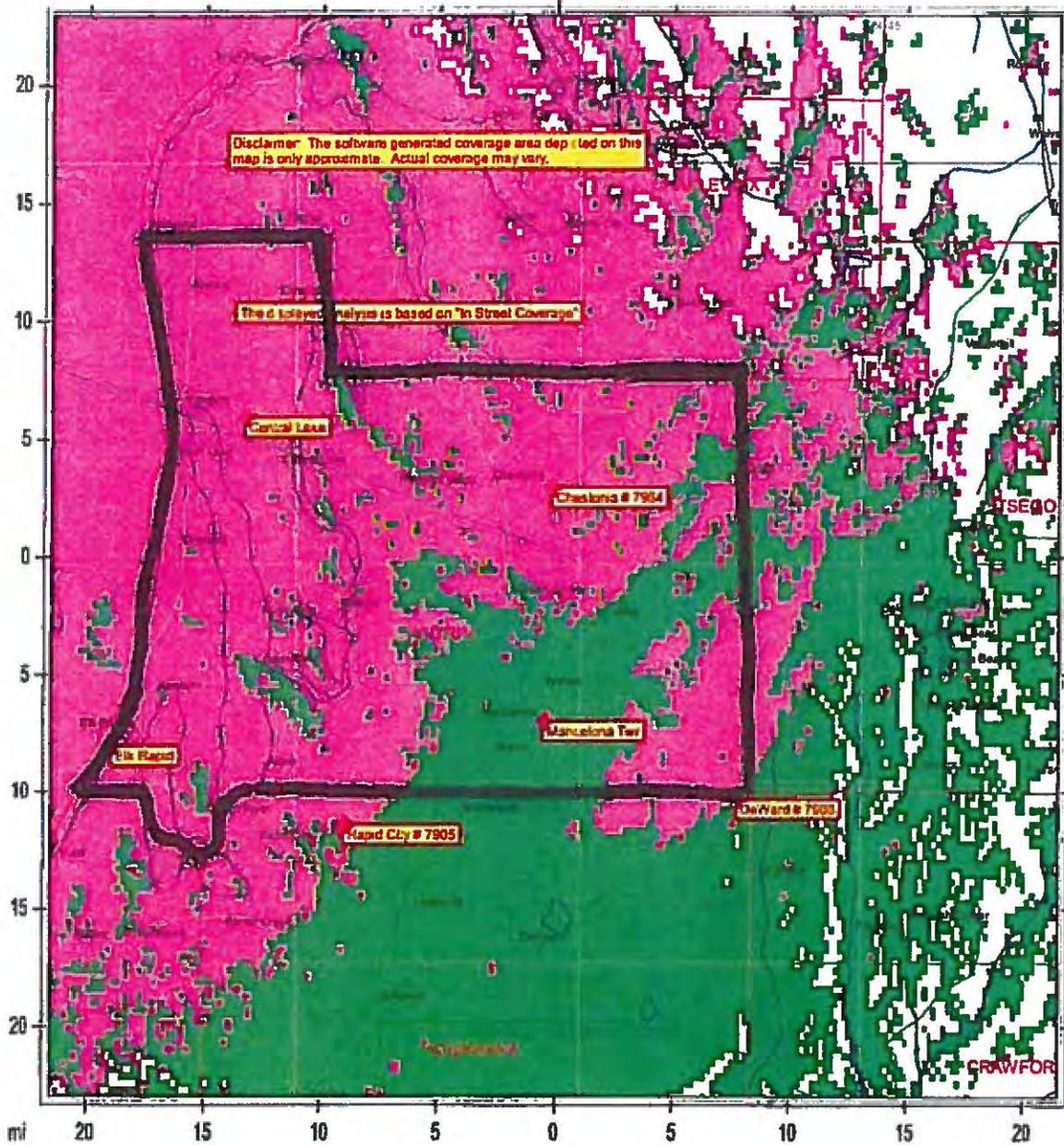
Combined Site - Paging Talk-Out - In Street Coverage



- National Borders — County Borders — State Borders — Highways — Railroads
- Water Features — Lat/Lon Grid

Map Scale: 1:611779 1" = 9.66 mi VJH Size: 63.41 x 59.42 mi

Antrim County Simulcast Fire Paging System With Mancelona



MLS Combined Site - Paging Talk-Out - Mancelona Green

- National Borders
 County Borders
 State Borders
 Highways
 Railroads
- Water Features
 Lat/Lon Grid

Map Scale: 1:438915 1" = 6.93 mi V/H Size: 45.94 x 43.05 mi



260 Depot Street P. O. Box 365 Leesburg, OH
 45135 Phone (937) 780-2321 (800) 543-5567
 Fax (937) 780-6336 E-mail info@masonco.com
 website: www.masonco.com

Quote No: 132390

QUOTATION TO: Antrim County Animal Control
 Ellen
 4660 M88 Hwy
 Bel Air, MI 49615
 (231) 533-6421
 southerne@antrimcounty.org

Architect:

Date: 2/24/2016

Line Num	Quantity	Item Description	Price Each	Sub-Total	Total
MATERIAL QUOTATION					
1.	1	Cat Tower Corner System Consisting Of: 8 Standard units 24" wide x 24" deep, with 4 shelves 1 Corner unit with 3 shelves	13,945.11		
		Units have tempered glass dutch doors, lower door height of 16" FRP sides and backs			
		Sub Total	13,945.11	13,945.11	
		Total			13,945.11
2.	2	Double Stacked Fiberglass Cat Condo, 5' wide with removable divider	2,549.97		
		Sub Total	2,549.97	5,099.94	
		Total			5,099.94

\$19,045.05

Less: Quantity Discount

-1,300.00

17,745.05

Plus: Shipping and Handling:

810.00

F.O.B. Destination

\$18,555.05

Please contact your Sales Representative for current estimated shipment date.

Upon receipt of signed approval drawings, a date for delivery will be agreed on and production will commence. If this date slips by more than two weeks after production commences, Mason will continue its manufacturing schedule and store the equipment at a nominal charge, and customer will pay the balance due less 10%, with full payment due upon shipment.

Equipment is shipped via motor freight using 48' to 53' long semi-tractor trailers. Customers are responsible for unloading the equipment, unless other arrangements have been made. If lift gate service or limited inside delivery is needed, additional charges will apply and this must be scheduled in advance.

This price includes all fittings and hardware for normal installation with the exception of PVC pipe and fittings for plumbing of equipment.

Material pricing will be held firm for an order placed within 30 days.

Shipping cost is subject to change and should be confirmed when placing your order.

Need Kennel cleaning supplies? Your purchase of Mason Equipment is an important investment



260 Depot Street P. O. Box 365 Leesburg, OH
45135 Phone (937) 780-2321 (800) 543-5567
Fax (937) 780-6336 E-mail info@masonco.com
website: www.masonco.com

Quote No: 132390

QUOTATION TO: Antrim County Animal Control
Ellen
4660 M88 Hwy
Bel Air, MI 49615
(231) 533-6421
southerne@antrimcounty.org

Architect:

Date: 2/24/2016

Line Num	Quantity	Item Description	Price Each	Sub-Total	Total
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MATERIAL QUOTATION

that deserves superior care. Mason offers cleaning and disinfecting products custom formulated specifically for our equipment. Contact your Mason Sales Consultant to learn more.



260 Depot Street P. O. Box 365 Leeburg, OH 45135
Phone (937) 780-2321 (800) 543-5567
Fax (937) 780-6336 E-mail info@masonco.com
website: www.masonco.com

Quote No: 132390

QUOTATION TO: Antrim County Animal Control
Ellen
4660 M88 Hwy
Bel Air, MI 49615

Phone: 2315336421
Email: southerne@antrimcounty.org

Date: 2/24/2016

PAYMENT TERMS (Please initial the options selected)

(initial) SPECIAL BONUS OFFER ON ORDERS OVER \$1,000:
If FULL payment of the contract amount is being sent by check or money order at the time the order is placed. Deduct 2% from the net materials amount. Discount does not apply to any prepaid freight, sales tax, or installation charges. BALANCE DUE ON THIS ORDER AFTER 2% DISCOUNT APPLIED: \$18,200.15
CREDIT CARD PAYMENTS DO NOT APPLY. Payment must be received within five business days.

(initial) Standard terms: 25% non-refundable deposit is enclosed with order. The 75% balance due will be paid two weeks prior to the scheduled shipping date.

METHOD OF PAYMENT AND AMOUNT ENCLOSED
(Please initial the option selected and indicate the amount enclosed.)

(initial) Payment will be by check or money order. Payment of \$_____ is enclosed.
(indicate amount)

-OR-

(initial) Payment will be by credit card (we accept MasterCard, VISA, or Discover).
Please fill out the credit card authorization form.

The Mason Company, LLC ("Mason")

Chad Selt

I accept this proposal and agree to the terms and conditions.

Authorized Signature

Buyer Accepted by: _____	Date: _____	_____
_____	_____	Mailing Address
Company or individual's Name (please print or type)	City	State Zip
_____	_____	Shipping Address
Authorized Signature	City	State Zip



AUTHORIZATION: Buyer acknowledges and accepts these Terms and Conditions by signing the quote and payment terms on the preceding page.

TAXES - Unless specified to the contrary, state or municipal taxes related to the sale, use, or transportation of the ordered products will be for Buyer's account, and if paid or required to be paid by Mason, the amount thereof will be added to and become a part of the price payable by Buyer.

FREIGHT - Unless specified to the contrary, all prices are FOB source and subject to change. Delivery of products may be made by the carrier selected by Mason, either by a single delivery or in lots. Title and risk of loss arising from any cause pass to Buyer upon delivery to a carrier. Buyer shall be responsible and liable for expenses arising from the unloading of products consigned to Buyer. Times of delivery are estimated but are not guaranteed. Mason shall not be liable to compensate Buyer for damages resulting from delays in shipment and delivery due to causes beyond Mason's control; including, but not limited to, strikes, fire, floods, accidents, delays or defaults of a supplier or contractor, government regulations, failure of production of facilities and disruptions due to transportation facilities. In the event of any delay in delivery due to any cause beyond the control of Mason, Buyer agrees either to accept delivery at such time as can be effected, or, at his option, compensate Mason for all costs of production (including, but not limited to costs of materials, labor, and overhead) incurred up to the time Mason receives written notice of Buyer's desire to have production of the order stopped.

Mason's freight quotations are estimates obtained from software furnished to Mason by truck lines and are not guaranteed to be accurate by either Mason or the truck lines.

Customers are sometimes subject to additional freight charges not included in Mason's quotation. Examples include:

- A) Some customers request the carrier call them prior to delivery. Most truck lines charge a fee for this service.
- B) Truck lines sometimes charge extra for delivery to residential addresses in certain areas of the country.
- C) Truck lines often charge storage fees if a customer will not take delivery of a shipment within a stated amount of time after its arrival at the delivering terminal.
- D) Carriers may charge a redelivery fee if more than one trip to the final destination for unloading is required.

Unless specified to the contrary, Buyer agrees to pay any additional freight or accessorial charges.

CANCELLATION - Orders are not cancelable, either in whole or in part, nor is material returnable for credit. All deposits are non-refundable.

PERIOD OF LIMITATION - Any claim against Mason for alleged breach of this agreement shall be commenced within one year after said claim has occurred. Any legal claims shall be filed in Ohio. Mason's liability for damages is limited to the consideration actually paid to Mason.

NO DAMAGE FOR DELAY - Mason shall not be liable for, and Customer covenants not to assert, claims or demands for construction or project delays, or other losses, costs or expenses of any nature whatsoever, caused by or attributed to delays in engineering, shipping, delivery or other performance required of Mason or caused by or attributed to missing, mis-fabricated or otherwise defective or deficient drawings, materials, products and installation. No representation, promise, or undertaking of Mason with respect to any proposed or required date shall be construed to be an undertaking by Mason to assume liability for losses, costs or damages of the type disclaimed in the preceding sentence. If any portion of the foregoing disclaimer is determined to be subject to a common law or statutory exception, or is otherwise held to be unenforceable in whole or part, the remaining portion shall be unaffected. **UNDER NO CIRCUMSTANCES WHATSOEVER SHALL MASON BE LIABLE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES FROM ANY DELAY FOR ANY DAMAGES WHATSOEVER FROM DELAYS CAUSED BY FACTORS BEYOND MASON'S REASONABLE CONTROL.** Breach of this covenant shall entitle Mason to recover damages for the costs and expenses, including attorneys' fees, Mason incurs defending against such claims.

FORCE MAJEURE - Mason will not be liable to Customer for any inability or delay attributable to circumstances over which Mason has no control. If circumstances over which Mason has no control occur, Mason's time for performance will be extended by the period of any delay attributable to the circumstances.

SCHEDULING - Mason will attempt to schedule each project to accommodate customer's needs. Customer covenants and warrants it will use its best efforts to communicate to Mason changes in project date as soon as they are known, suspected or anticipated so Mason can modify its production schedule. Should the customer change the scheduled project date after it has been accepted by Mason, Mason will reschedule the project to a date that fits with Mason's production and/or shipment schedule. Mason will not be responsible for any losses the Customer incurs as a result of this change in schedule. Furthermore this change in schedule will not relieve the Customer from fulfilling his obligations under this agreement.

AGENCY AGREEMENT

This LeadsOnline, LLC AGENCY AGREEMENT ("Agreement"), dated March 1, 2016 ("Effective Date") is made between Antrim County Sheriff's Office ("Agency") and LeadsOnline LLC ("Leads").

SCOPE OF AGREEMENT

Leads operates and maintains an electronic reporting and criminal investigation system for receiving Data for the use of Law Enforcement Officials in their official duties. Leads acts in the capacity of an agent for such Law Enforcement Agencies for the purpose of collecting, maintaining and disseminating Data.

Agency desires to utilize Leads' System to support its investigations.

Subject to the terms of this Agreement and in consideration of the mutual covenants stated below, the parties agree as follows:

1. Definitions

- 1.1 "Data" means all information provided by Reporting Business and Law Enforcement Agencies about transactions, including (but not limited to) the transaction number, item number, product UPC code, quantity and ingredients, make, model, proper description, serial number, name, address, identification number, telephone number, date of birth and any images recorded during the course of a transaction according to official request, statutory requirement or otherwise.
- 1.2 "GLBA" means the Gramm-Leach-Bliley Act of 1999, together with the Privacy Rule and Safeguards Rule promulgated by the U.S. Federal financial institution regulators and the Federal Trade Commission.
- 1.3 "Law Enforcement Agency" means any agency duly authorized by municipal, state, county or federal government to enforce laws or investigate crimes.
- 1.4 "Law Enforcement Official" means a person employed and authorized by a Law Enforcement Agency to, in their official duties, access Data and/or submit Data for official use by Law Enforcement Agencies.
- 1.5 "Leads' System" is Leads' electronic reporting and criminal investigations system for receiving Data for access by Law Enforcement Officials.
- 1.6 "Reporting Business" shall mean any entity that records Data regarding (a) the receipt or sale of products regulated by law, including but not limited to the Combat Methamphetamine Act of 2005 and (b) the receipt or other disposition of merchandise or materials, and reports such Data for access by Law Enforcement Officials according to official request, statutory requirement or otherwise.

2. Responsibilities of Agency

- 2.1 Agency agrees that the protection of usernames and passwords used to access Leads services and any Data accessed via Leads by its Law Enforcement Official is the

responsibility of Agency. Agency agrees to maintain such information in a secure manner and to not provide login credentials to any other person.

- 2.2 Agency is responsible for the accuracy of information submitted by Agency's Law Enforcement Officials in registration for Law Enforcement Agency's accounts.
- 2.3 Agency agrees that accounts will be used only by the Law Enforcement Official to whom the account is registered.
- 2.4 Agency represents and warrants that it shall only access, use and disclose Data for use in Agency's official Law Enforcement Agency duties.
- 2.5 Agency agrees to not divulge Data or information obtained through Leads' System to anyone other than Law Enforcement Officials within Agency's Law Enforcement Agency, with the exception of disclosure necessary for the purpose of prosecution of crimes within Agency's jurisdiction investigated by Agency.
- 2.6 Agency is responsible for securing Data accessed from Leads' System, and agrees to comply with all applicable statutes, laws and regulations for use and disclosure of non-public personal information, including federal and state data security breach laws and the GLBA.
- 2.7 Agency is responsible for using devices and browsers capable of connecting via an encrypted internet connection.
- 2.8 Agency is responsible for promptly notifying Leads when a user is no longer employed by Agency or is otherwise no longer authorized to access Leads' System.
- 2.9 Agency agrees to promptly notify Leads of any conditions that Agency believes may represent or result from a security incident or vulnerability, including the possible compromise of a user's password. Please send any notifications to privacy@leadsonline.com.
- 2.10 Agency will pay subscription fees according to the schedule set forth in Attachment 'A' which by this reference is incorporated herein.

3. Responsibilities of Leads

- 3.1 Leads agrees to operate and maintain the Leads System for the purpose of receiving Data for access only by Law Enforcement Officials.
- 3.2 Leads agrees to secure Data using administrative, technical and physical safeguards as set forth in applicable law, including the GLBA.
- 3.3 Leads agrees to provide use of Leads' System with the capabilities specified in Attachment 'A'.

4. Conditions for use of Leads' System

- 4.1 Leads' System and website, including but not limited to written materials, text, graphics, logos, software, functionality, icons and images are the exclusive proprietary property of Leads and are protected under the United States Copyright Act (17 U.S.C.) , as well as by all applicable state and international copyright laws, and by the Lanham Act (15 U.S.C. §§1051-1141n). Agency Agrees to abide by any additional copyright notices, trademarks, information, or restrictions contained in any content on Leads' System and

website. Leads' System and website may be used solely for the purposes expressly provided for herein, and no aspect of the Leads' System or website may be used for any other purpose whatsoever. Any other use is unauthorized and will constitute an infringement upon the proprietary rights of Leads. No authority to use any content on Leads' System, website, or any other intellectual or other property of Leads not expressly granted by this Agreement shall be implied.

- 4.2 Agency agrees to not decompile or otherwise copy or use content on the Leads' System or website or other proprietary information of Leads for purposes of reverse-engineering or reconstruction, and to not remove, overprint or deface any notice of copyright, trademark, logo, legend, or other notices from any materials Agency obtains from Leads' System or website.
- 4.3 Agency represents it is a Law Enforcement Agency.
- 4.4 Leads may modify or upgrade any aspect of Leads' System at any time without notice. Leads agrees to make commercially reasonable efforts to perform such modifications in a manner that is not disruptive to Agency.
- 4.5 Subject to the terms of this Agreement, Agency hereby appoints Leads as its agent for the sole purpose of collecting, maintaining and disseminating Data from Reporting Businesses. This agency appointment is effective as of the registration date of Agency's initial user.
- 4.6 Leads uses a number of checks to identify inaccurate or incomplete Data, but cannot and does not represent or endorse the accuracy or reliability of Data or other information submitted by Reporting Business and Law Enforcement Agencies. Data is provided by Reporting Businesses and Law Enforcement Agencies according to the laws and practices enforced in Reporting Businesses' jurisdiction using their proprietary operational software.
- 4.7 Leads will provide reasonable instructions to Reporting Businesses regarding uploading Data to the Leads' System, but is not responsible for ensuring their compliance with their Data reporting obligations.
- 4.8 Agency will not discourage Reporting Businesses from submitting Data via Leads.

5. Term

- 5.1 This Agreement will become effective as of the date first set forth above and remain in effect for one (1) year plus any initial partial year (the "Initial Term") or until termination by Leads or Agency as described below.
- 5.2 Neither party is obligated to renew this Agreement. Upon expiration of the Initial Term and any renewal term, Agency may renew this Agreement for an additional one-year term. Mutual agreement to be evidenced by Leads' submission of a valid invoice for the renewal year, and Agency's payment of such invoice within 30 days of renewal.
- 5.3 Following ten (10) days' notice and a ten (10) day cure period, either party may without further notice, terminate this Agreement if the other party (a) fails to perform any material obligation required under this Agreement or (b) violates any laws, rules or regulations related to this Agreement.

5.4 Agency may terminate this Agreement by providing 60 days' written notice to Leads prior to the next contract year if funding to make the next scheduled payment is not appropriated to the Agency for this Agreement.

6. Disclaimer and Indemnification

6.1 EXCEPT FOR THE REPRESENTATIONS SET FORTH IN SECTION III OF THIS AGREEMENT, LEADS SPECIFICALLY DISCLAIMS ALL REPRESENTATIONS, CONDITIONS, AND WARRANTIES, WHETHER EXPRESS OR IMPLIED, ARISING BY STATUTE, OPERATION OF LAW, USAGE OF TRADE, CUSTOM, COURSE OF DEALING, OR OTHERWISE, INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANTY OF MERCHANTABILITY, MERCHANTABILITY, SATISFACTORY QUALITY, THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND/OR ANY AND ALL OTHER IMPLIED WARRANTIES AND EXPRESS WARRANTIES (OTHER THAN THOSE SET FORTH HEREIN, IF ANY) WITH RESPECT TO LEADS' SYSTEM. LEADS' SYSTEM, INCLUDING ALL DATA, CONTENT, SOFTWARE, FUNCTIONS, MATERIALS AND INFORMATION MADE AVAILABLE ON OR ACCESSED THROUGH LEADS' WEBSITE IS PROVIDED, AND ACCEPTED AND/OR USED, "AS IS" WITH ALL FAULTS AND WITHOUT WARRANTY OF ANY KIND.

6.2 IN NO EVENT SHALL LEADS BE LIABLE FOR OTHER DIRECT, INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR EXEMPLARY DAMAGES OR LOSSES, INCLUDING, WITHOUT LIMITATION, LOST PROFITS, DOWNTIME COSTS, LABOR COST, OVERHEAD COSTS OR CLAIMS OF THE REPORTING BUSINESS, ITS AFFILIATES OR ANY OTHER THIRD PARTY, EVEN IF LEADS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. NOTWITHSTANDING THE FOREGOING, AT AN ABSOLUTE MAXIMUM, LEADS LIABILITY SHALL BE LIMITED TO THE AMOUNT OF MONEY IT IS PAID BY AGENCY TO LEADS.

6.3 Leads shall indemnify, hold harmless, protect and defend Agency and its officials, officers, employees, agents and authorized volunteers (the "Indemnified Parties") from and against all losses, liabilities, judgments, costs, expenses, damages (including damages to the Leads' System), attorney's fees, and other costs, including all costs of defense, arising from all suits of law or actions of every nature for or on account of the infringement of any trade secrets, patents, trademarks, copyrights or other proprietary right of any other party by reason of the use or integration of any proprietary materials, equipment, devices or processes, originally incorporated, or provided and used, by Leads in the performance of the services provided under this Agreement. Notwithstanding the foregoing, if the foregoing described losses, liabilities, judgments, costs, expenses, damages and the like arise due to the misuse of the Data or any other breach of this Agreement by Agency, Leads' liability under this paragraph shall be reduced proportionately by the amount of loss, liability, judgment, cost, expense, damage and the like arising due to such misuse or breach by Agency.

7. Miscellaneous

7.1 Neither party will be liable for any failure or delay in performing an obligation under this Agreement that is due to causes beyond its reasonable control, including any act that would be considered force majeure.

7.2 If any provision of this Agreement is held to be unenforceable, in whole or in part, such holding will not affect the validity of the other provisions of this Agreement, unless either party deems the unenforceable provision to be essential to this Agreement, in which



6900 Dallas Parkway, Suite 825, Plano, TX 75024

leadsonline.com T 972-361-0900 F 972-361-0901 TF 800-311-2656

case either may terminate this Agreement, effective immediately upon notice to the other party.

- 7.3 Leads reserves the right to disclose any information in response to an official government request or duly authorized subpoena.
- 7.4 Any waiver by either party of a breach of any provision of this Agreement by Agency or delay in enforcing any rights shall not operate or be construed as a waiver of any other or subsequent breach by Agency.
- 7.5 This Agreement constitutes the entire agreement between the parties, and supersedes all prior agreements and understandings, written or oral, between the parties relating to the subject matter hereof. This Agreement may not be modified, changed or discharged, in whole or in part, except by an agreement in writing signed by both parties. The mere acceptance of any work order, purchase order or other document containing provisions purported to modify or enlarge the obligations or liabilities of either party shall not be construed as acceptance of such provisions.
- 7.6 Nothing in this Agreement, express or implied, is intended to confer upon any person, other than the parties hereto, any benefits, rights, or remedies under or by reason of this Agreement. There are no third-party beneficiaries to this Agreement. The only persons who may enforce or benefit from this Agreement and any rights under this Agreement are Agency and Leads.
- 7.7 This Agreement shall be governed by and construed in accordance with the laws of the State of Michigan, without regard to conflicts of laws provisions. Sole and exclusive jurisdiction and venue for any action or proceeding arising out of or related to this Agreement shall be an appropriate state or federal court located in Michigan.
- 7.8 Neither party will assign its rights or duties under this Agreement without first providing written notice to the other party with at least 30 days to object to such assignment and in doing so, immediately terminate the Agreement without penalty.

LEADS

LeadsOnline LLC

Signature: _____

Print Name: David K. Finley

Title: President & CEO

Date: _____

Address: 6900 Dallas Parkway, Suite 825
Plano, Texas 75024

Tax ID: 42-1720332

AGENCY

Antrim County Sheriff's Office

Signature: _____

Print Name: _____

Title: _____

Date: _____

Address: 107 Grove St.
Bellaire, MI 49615

AGENCY AGREEMENT – Attachment 'A'
SCOPE OF WORK AND ANNUAL SUBSCRIPTION FEE

LeadsOnline System Capability	TotalTrack
Online reporting system for all pawn/secondhand stores	✓
Unlimited accounts/searches for your personnel working your cases	✓
Images of property, sellers, vehicles, thumbnails, etc. as reported	✓
Legacy data import (from existing in-house database)	✓
Updates, training and support for agency personnel and businesses	✓
Transaction Monitor – Audit system for reporting compliance	✓
ReportIt citizen property inventory system	✓
Automated NCIC/stolen property hits	✓
Message Inbox (alerts and communication to and from businesses)	✓
Daily Stats (hits and statistics for each investigator)	✓
Property Hold Management System	✓
Nationwide search access	✓
Saved (continuous) searches/Email hit alerts	✓ 50
eBay First Responder Service	✓
Persons of Interest inter-agency suspect information system	✓
Suspect variations and associations reports	✓
Total Fixed Annual subscription fee due on March 1, 2016	\$1,758

**HEALTH DEPARTMENT OF NORTHWEST MICHIGAN
ENVIRONMENTAL HEALTH DIVISION**

DISTRICT SANITARY CODE - SUMMARY OF MAJOR PROPOSED REVISIONS - March 2, 2016

This summary shows the significant changes from the Antrim, Charlevoix and Otsego District Sanitary Code to the proposed Antrim, Charlevoix, Emmet and Otsego District Sanitary Code. Emmet County currently has a separate code and the differences will be conveyed in another summary of changes document.

The overall intent is to combine the entire jurisdiction under a single code and to make changes that will enhance the process of approving and permitting water and wastewater systems, while adhering to the mission of the health department in protecting the public, the environment and preventing the spread of disease.

Article I – Authority, Jurisdiction and Administration:

1. Combined authority and jurisdiction to include Antrim, Charlevoix, Emmet and Otsego Counties

Article II – Definitions:

1. Added, removed and modified several definitions to make administrative corrections, clarify definitions or to use current industry terminology.

Article III – Land Divisions, Subdivisions and Condominium Developments:

1. Provided approval criteria for land divisions, subdivisions and condominium developments.

Article IV – Sewage Treatment and Disposal:

1. Edited 4-1 by removing the language regarding sewage discharges and created a definition of failure in Section 2.
2. Changed the term of Operation Permits from 3 year to 5 year permits.
3. Created a term for applications – 1 year
4. Removed the requirement for permits to be on site.
5. Modified the Approval Criteria for wastewater systems to reference other sections of the code and eliminate redundancy.
6. Removed the varying levels of performance standards by removing a Total Phosphorous standard.
7. Removed requirement for 24/7 remote monitoring capability.
8. Requires a 5 year prepaid maintenance contract instead of a 3 year.
9. Added language for initial approval of the operation permit for ATS.
10. Removed the 2 day requirement for final inspections.
11. Adds language under change of use that references an “increased effluent burden”.

Article V – Requirements for Construction of Individual Sewage Treatment and Disposal Systems:

1. Added a maximum burial depth for septic tanks and pump chambers, for structural and maintenance considerations.
2. Removed requirement for septic tank markers.
3. Removed the requirement for effluent filters, except for pumped systems.
4. Added section prohibiting Holding Tanks for new construction.
5. Added a section defining a minimum pump chamber volume.
6. Incorporated our lid safety policy into code (weight standard)
7. Created a table for vertical separation requirements for site approval and system design (replaces redundant information in site approval sections).
8. Added isolation standards for easements.
9. Corrected soil textural classification for Loam.
10. Added a minimum weight for filter fabric.
11. Added a section on Forcemain construction.
12. Reduced orifice minimum diameter to 1/8"
13. Eliminated redundancies in easement section.

Article VI – Wells and Water Supplies:

1. Upgraded section on contaminated water supplies to reflect contaminants other than bacteriological.
2. Updated section on well abandonment.
3. Eliminated section on Pump and Well Rooms – addressed in Michigan’s well construction code.

Article VII – Public Health Nuisances:

1. No changes.

Article VIII – Garbage and Rubbish:

1. Minor adjustments to language of some sections.

Article IX – Permit Revocation:

1. Changed to Article IX instead of X.

Article X – Variances:

1. Improved existing variance sections to outline when a variance can be issued, under what circumstances and that conditions may be imposed in the issuance of a variance

2. A section regarding granted appeals having a condition to connect to sewer when available was added.
3. A section allowing an administrative review **prior** to a variance denial was added. This section references the standard of decision and variance conditions articulated in the appeals section.

Article XI – Board of Appeals:

1. Separates the standard of decision from the granting of conditions into two sections.

Article XII – Interpretation, Injunctive Relief, Penalty, Severability and Amendments:

1. No changes.

**HEALTH DEPARTMENT OF NORTHWEST MICHIGAN
DISTRICT SANITARY CODE
ANTRIM, CHARLEVOIX, EMMET and OTSEGO COUNTIES**

ARTICLE I AUTHORITY, JURISDICTION AND ADMINISTRATION

1-1 INTENT

The intent of this code is to protect the environment and the public health, safety and welfare in Antrim, Charlevoix, Emmet and Otsego Counties.

1-2 AUTHORITY AND TITLE

The District Board of Health of Antrim, Charlevoix, Emmet and Otsego Counties govern the District Health Department currently known as the Health Department of Northwest Michigan. Under authority Act 368 of the Public Acts of 1978, the District Board of Health may enact these regulations for the protection of public health and sanitation. These regulations shall be known as the District Sanitary Code and may be called the "code" elsewhere in these regulations.

1-3 JURISDICTION AND ADMINISTRATION

The Health Officer shall have jurisdiction throughout Antrim, Charlevoix, Emmet and Otsego Counties, including all cities, villages and townships, in the administration and enforcement of these regulations, including all amendments hereafter adopted unless otherwise specifically stated. Nothing herein contained shall be construed to restrict or abrogate the authority of any municipality to adopt more restrictive ordinances. The Health Officer shall have the right to delegate any administrative or enforcement authority or duty granted by this code to an employee or agent of the Health Department of Northwest Michigan or its successor.

1-4 ENFORCEMENT

All premises affected by these regulations shall be subject to inspection by the Health Officer, and the Health Officer may collect such samples for laboratory examination as he or she deems necessary for the enforcement of these regulations.

1-5 RIGHT OF ENTRY AND INSPECTION

The Health Officer may inspect any premises at reasonable times with the consent of the owner or person in charge of the premises. No person shall molest or resist the Health Officer in the discharge of the Health Officer's duty. In the event that a Health Officer is refused permission to inspect any premises at reasonable times, the Health Officer shall have authority to apply for an administrative search warrant pursuant to MCL 333.2241 through MCL 333.2247; MSA 14.15(2241) through MSA 14.15(2247).

1-6 ESTABLISHMENT AND HANDLING OF FEES

All fees for service shall be established by the District Board of Health. All fees for service shall be collected by the Health Department of Northwest Michigan and shall be receipted for and deposited with the Charlevoix County Treasurer and credited to the Health Department of Northwest Michigan.

1-7 ABATEMENT OF NUISANCES

Nothing stated in this code shall be construed to limit the power of the Health Officer to order the immediate and complete abatement of a public nuisance or menace to public health.

1-8 AMENDMENTS

The Health Department of Northwest Michigan, with the approval of all Boards of Commissioners of Antrim, Charlevoix, Emmet and Otsego Counties, may from time to time amend, supplement or change these regulations. Notice of a public hearing on any such proposed changes shall be given by the Health Department of Northwest Michigan as provided in MCL 333.2442; MSA 14.15(2442).

1-9 OTHER LAWS AND REGULATIONS

The regulations of this code are standards supplemental to the rules and regulations duly enacted by the Michigan Department of Health and Human Services (MDHHS), and the laws of the State of Michigan relating to public health. Where any of the provisions of this code and the provisions of any local ordinance, statute, State rule or regulation, the more restrictive shall prevail.

1-10 REPORTS

The Health Officer shall present an Annual Report to the Boards of Commissioners. The report shall be presented after January 1 and before May of each year.

ARTICLE II

DEFINITIONS

As used in this code or a permit that is issued pursuant to this code, the following definitions shall apply:

2-1 ABANDONED WATER SUPPLY

An abandoned water supply means a water supply whose use has been permanently discontinued, a water supply or portion thereof which is in such disrepair that its continued use for the purpose of obtaining water is impractical, a water supply which has been left uncompleted, a water supply which is a threat to other sources of water, or a water supply which is or may be a health or safety hazard.

2-2 ABSORPTION SYSTEM

Absorption system is the collective term for trench excavation, bed excavation or other alternate method used to uniformly distribute septic tank effluent to subsurface soil by means of a network of distribution piping in washed aggregate with covering soil and vegetation or other means of applying effluent to a subsurface soil interface.

2-3 ADVANCED TREATMENT SYSTEM (ATS)

An advanced treatment system (ATS) is an on-site wastewater system that provides for the collection, treatment and uniform disposal of wastewater using advanced technologies to pre-treat wastewater effluent prior to a soil absorption system.

2-4 APPROVED/APPROVAL

Approved or approval denotes that a condition, facility, thing, premise, action or use, has been reviewed by the Health Agency and has been determined to be in satisfactory compliance with the intent, purpose and applicable standards of these regulations.

2-5 AVAILABLE SEWER SYSTEM

Available sewer system means a publicly operated sanitary sewer system or a privately operated community

wastewater system located in a right-of-way, easement, highway, street or public way which crosses, adjoins, or abuts upon the property and passing not more than 200 feet at the nearest point from a structure in which sanitary sewage originates and when the local governmental agencies having jurisdiction will allow connection to that sewer.

2-6 AVAILABLE WATER SUPPLY

Available water supply means a waterworks system that provides water for drinking or household purposes to persons other than the supplier of the water and is located in a right-of-way, easement, highway, street or public way which crosses, adjoins, or abuts upon the property and passing not more than 200 feet at the nearest point from a structure and when the local governmental agencies having jurisdiction will allow connection to that water supply.

2-7 BEDROOM (NON-COMMON ROOM)

Any space in the conditioned area of a dwelling unit or accessory structure which can be used for the placement of beds, bunks, fold-away beds or other furniture used for sleeping, or which could reasonably be expected to be used as such. Non-common rooms which could include but is not limited to; bunk rooms, lofts, storage rooms, craft rooms, offices, dens, exercise rooms, bonus rooms, toy rooms. etc. may be considered bedrooms with respect to the design basis for a wastewater system under the provisions outlined within this code.

2-8 BENEFITED PARCEL

A benefited parcel means a legally recognized parcel of land, separate from the burdened land, which is or will be served by a proposed sewage treatment and disposal system.

2-9 BURDENED LAND

The term burdened land means a separately recognized parcel of land, separate from the benefitted parcel, over or under which any portion of a sewage treatment and disposal system will be located.

2-10 CONVENTIONAL SUBSURFACE SEWAGE DISPOSAL SYSTEM

A system which includes a building sewer, one or more septic tanks, a subsurface drain field, and all associated connections, fittings, and appurtenances.

2-11 DISTRIBUTION DEVICES

The term distribution device means a watertight receptacle installed with proper footings, provided with outlets on the same horizontal plane, used for the purpose of assuring the equal distribution of the septic tank effluent when such effluent is being disposed of by means of any absorption system.

2-12 DISTRIBUTION HEADER / MANIFOLD

A conduit used to disperse septic tank effluent in equal amounts to the distribution network in a soil absorption system.

2-13 DISTRIBUTION NETWORK

A distribution network is a system of pipe lines or other means used to disperse septic tank effluent uniformly throughout a soil absorption system.

2-14 DISTRICT BOARD OF HEALTH

The term District Board of Health shall mean the District Board of Health of Antrim, Charlevoix, Emmet and Otsego Counties. The District Board of Health is comprised of two (2) appointed County commissioners from each of the Counties of Antrim, Charlevoix, Emmet and Otsego and the Health Officer, Medical Director and Division Directors of the Health Department of Northwest Michigan.

2-15 DOSING

Application of septic tank effluent to the absorption field in controlled amounts, so as to intermittently introduce a measured amount of wastewater effluent to the soil interface and allowing for a uniform wetting front that migrates downward through the soil profile permitting for an intermittent phase where soil pores are filled with oxygen.

2-16 DOSING CHAMBER - PUMPING CHAMBER

A watertight tank or receptacle used for the purpose of retaining septic tank effluent pending its automatic discharge of a measured amount of effluent to a designated point in the distribution system.

2-17 EFFLUENT BURDEN

The volume of sewage generated by human activity which includes but is not limited to; the number of bedrooms, facility or home occupancy, number and type of water using fixtures, water use characteristics and patterns and other factors.

2-18 ELEVATED ABSORPTION (MOUND) SYSTEM

Any soil absorption system having its infiltrative surface any distance above the natural ground surface and/or fill placed for the sole purpose of leveling the site for installation.

2-19 FAILURE – SEWAGE TREATMENT AND DISPOSAL SYSTEM

Where effluent from a sewage treatment and disposal system is exposed to the surface of the ground, backing up into a structure or is permitted to drain onto the surface of the ground or into any lake, river, storm sewer or stream, or where the seepage of effluent is endangering a public or private water supply or where a public health nuisance is created by a system improperly constructed or maintained.

2-20 FILL MATERIAL

Fill material shall mean clean medium textured sand, free of clay, silt, black dirt, and vegetation or other undesirable foreign material, or other material specified and approved by the Health Officer.

2-21 GARBAGE

Rejected food wastes, including waste accumulation of animal, fruit or vegetable matter used or intended for food or that attend the preparation, use, cooking, dealing in or storing of meat, fish, fowl, fruit, or vegetables or other putrescible wastes.

2-22 GRADE DROP-OFF

Drop-off means a man-made cut or natural slope where side slope is in excess of 50%.

2-23 GRAVITY FLOW

Flow without induced pressure, as characterized by a free liquid surface.

2-24 HABITABLE BUILDING

The term habitable building shall mean any structure or part thereof where persons live, sleep, reside, are employed, or congregate and which is occupied in whole or in part.

2-25 HEALTH AGENCY

The term Health Agency shall mean the Health Department of Northwest Michigan or successor agency or health department serving the counties of Antrim, Charlevoix, Emmet and Otsego.

2-26 HEALTH OFFICER

The term Health Officer shall mean the Director of the Health Department of Northwest Michigan and/or his authorized representatives.

2-27 IMPERVIOUS / LIMITING STRATUM

Impervious / limiting strata shall mean any material which has a permeability rate slower than 60 minutes per inch and which includes bedrock formations, peat, muck, marl and soils that have impervious soil structures.

2-28 INFILTRATIVE SURFACE

The soil - aggregate interface below an absorption bed, trench, drywell, block trench etc. or soil surface at the base of a chamber, graveless distribution or drip irrigation network where effluent begins to fill the pore spaces of the porous material below a soil absorption system.

2-29 LICENSED PROFESSIONAL ENGINEERS

The term licensed professional engineer shall mean a professional civil engineer who is licensed under article 20 of the occupational code, Act 299 of the Public Acts of 1980, being §§399.2001 to 339.2014 of the Michigan Compiled Laws.

2-30 LOW PRESSURE DISTRIBUTION

Flow induced by pumping or other means as characterized by minimum pressures of four (4) feet of pressure head (or 1.73 pounds per square inch) in the distribution piping.

2-31 MAXIMUM HIGH GROUNDWATER ELEVATION

Maximum high ground water elevation means the elevation of the upper surface of the zone of saturation as may occur during the normally wet periods of the year. The term includes perched and apparent conditions that are seasonally saturated for a time period in excess of two weeks. For the purpose of this code, the high ground water elevation will be determined by observing subsurface saturated conditions and/or groundwater indicators, such as soil mottling and redoximorphic features.

2-32 MOTTLING

Mottling, also known as redoximorphic features, is the result of the oxidation, reduction and translocation of soil minerals (primarily iron and manganese) and begins to occur after a soil has been periodically saturated for significant lengths of time. The actual standing water may be above or below the mottled zone resulting from seasonal fluctuations in water table or in response to other temporal climatic events.

2-33 NATURAL GROUND SURFACE

The ground surface formed on the site through the forces of nature and not altered by man through excavating, importing fill soil or other means. Ground surfaces altered by man, independent of the length of time, are not considered natural.

2-34 ORDINARY HIGH WATER MARK

The term “ordinary high water mark”, relative to any surface water body, means the line between upland and bottomland which persists through successive changes in water levels, below which the presence and action of the water are so common or recurrent that the character of the land is marked distinctly from the upland and is apparent in the soil itself, the configuration of the surface of the soil, and the vegetation.

On an inland lake that has an established legal lake level, it means the high established level. Where water returns to its natural level as the result of the permanent removal or abandonment of a dam, it means the natural ordinary high water mark.

On Great Lakes waters regulated by the Michigan Department of Environmental Quality, the term refers to the known high water elevation established at 580.5 feet International Great Lakes Datum (IGLD) 1985 for Lake Michigan and its connected tributaries.

2-35 OWNERS, PERSONS OWNING PREMISES

The terms owners and persons owning premises shall mean both the owner of title and of record and those occupying or in possession or control of any property or premises.

2-36 PERSON

The term person shall mean an individual, firm, partnership, party, corporation, company, society, association or other legal entity.

2-37 PREMISES

Premises shall mean a tract or parcel of land which is occupied or on which a habitable building or buildings are located and shall include the building or buildings.

2-38 PUBLIC WATER SUPPLY

A public water supply means a water supply which provides water for drinking or household purposes to persons other than the supplier of water and that meet the definitions of public water supplies as outlined in Act 399, P.A. 1976 as amended.

2-39 REPLACEMENT WATER WELL

A water well that is installed to provide water to a premise as a result of the existing water well or water supply being unable to provide water of adequate quantity or quality or when the construction or location of the existing water well or water supply poses a potential threat to the public health.

2-40 RUBBISH

Non-putrescible solid wastes excluding ashes consisting of both combustible and non-combustible wastes, such as paper, cardboard, metal containers, wood, glass, bedding, demolished building materials and litter of any kind that will be detrimental to the public health and safety.

2-41 SEPARATE, LEGALLY RECOGNIZED PARCEL

A "separate, legally recognized parcel" means a parcel of land, which is described in a legal description separate from the benefited parcel and which was created in compliance with applicable law.

2-42 SEPTIC TANK

A watertight receptacle used for the purpose of receiving all sewage and so designed as to permit the collection of solids from such wastes and to permit such retained solids to undergo decomposition therein.

2-43 SEPTIC TANK RISER

The term septic tank riser means a device that is connected to a septic tank, extends to ground surface and has a cover or lid which prevents unauthorized access. Risers present a means to readily locate and provide access for inspection and routine maintenance of a septic tank.

2-44 SEWAGE

The liquid waste from all habitable buildings, as well as human excreta, as well as wastes from toilets, urinals, sinks, laundries, shower baths, bath tubs, dishwashers, garbage grinders, and septic tank overflow or effluent and any other liquid waste of organic or chemical nature, either singularly or in any combination.

2-45 SEWAGE TREATMENT AND DISPOSAL FACILITIES

Those devices used in the treatment and disposal of sewage, including but not limited to, a holding tank, privy, seepage pit, dry well, block trench, sewer line, septic tank, absorption field, trench, or bed. These facilities are identified as methods of disposal that are routinely encountered, but do not necessarily comprise methods that are approvable under this code.

2-46 SEWAGE TREATMENT AND DISPOSAL SYSTEM

The term sewage treatment and disposal system shall mean the method of disposing of sewage into the soil by means of a sewer line connected to a septic tank or aerobic tank and a soil absorption system or any other similar device, appurtenances or method approved by the Health Officer.

2-47 SEWAGE (EFFLUENT) FILTER

A device intended to filter suspended solids from septic tank effluent prior to conveyance to a soil absorption system.

2-48 SEWER LINE

Any watertight pipe or conduit used for the conveying of sewage.

2-49 SOIL PERMEABILITY

The measure of the rate at which liquid (typically water) passes in one direction through soil under saturated conditions. Soil permeability is determined through standardized field textural analysis procedures, using USDA textural classifications and could include influential soil structure characteristics.

2-50 STREAM

A stream is a natural or artificial body of water that has definite banks, a bed, and visible evidence of a flow of water.

2-51 SUCCESSOR BUILDING

Any premise that replaces a premise that during construction, remodeling or renovation activities and where the premises square footage is greater than fifty (50) percent replaced or expanded.

2-52 SURFACE WATER

The term surface water means any of the following: the Great Lakes and their connecting waterways, inland lakes, rivers, streams, ponds and areas that present standing water.

2-53 TOE OF MOUND

The perimeter of a mound where it's fill material and cover meets the natural ground surface.

2-54 WATER SUPPLY

Water supply means a system of pipes and structures through which water is obtained, including, but not limited to, the source of the water, such as wells, hauled water storage tanks, and pumping and treatment equipment, storage tanks, pipes and appurtenances, or a combination thereof, used or intended to furnish potable water for domestic or consumer use.

2-55 WELL

Well means an opening in the surface of the earth for the purpose of removing groundwater for domestic use, irrigation well, recharge well, or open loop geothermal wells.

ARTICLE III LAND DIVISIONS, SUBDIVISIONS AND CONDOMINIUM DEVELOPMENTS

3-1 REQUIREMENTS

A permit or approval of a parcel less than one acre, a proposed platted subdivision development or a proposed condominium development, where the development is not served by a publicly operated water supply system and public sanitary sewer system, shall be issued if the requirements of this code have been met.

3-2 DEVELOPMENT PROPOSALS

Developments which propose the use of individual water supply and/or sewage treatment and disposal systems, privately owned public water supply and/or privately owned community wastewater treatment and disposal systems or the use of existing water supply and/or sewage treatment and disposal systems shall be submitted to the Health Officer for review and approval. A licensed professional engineer or licensed land surveyor shall prepare and submit for review a development report and supporting documentation regarding the suitability of the site for the proposed use.

The licensed professional engineer or licensed land surveyor shall submit a certification of suitability of the site for the proposed use in regards to the installation of or use of existing water supplies and/or sewage treatment and disposal systems through the submittal of a narrative outlining his/her findings and conclusions which support his/her certification of suitability.

Four copies of the site report, site development plan and supporting documentation shall be submitted to the Health Officer and shall include but not be limited to the following:

- A. A narrative statement and site development plan that articulates and conveys the proposed use, size and arrangement of units and/or lots.
- B. Indicate all areas in excess of twelve (12) percent slope. Also, show all natural drainage areas and structures.
- C. A site development plan in a scale not to exceed 1":60'.
- D. In the case of waterfront property indicate high water elevations and two (2) foot vertical contour intervals if ground water table is within sixty inches (60") of the natural ground surface.
- E. Show maximum high ground water table where such is within sixty inches (60") of the natural ground surface.
- F. The location and results of soil evaluations using procedures acceptable to the Health Agency.
- G. For developments proposing to utilize individual or privately owned public water supplies, information which demonstrates the availability of ground water that is of acceptable quality and quantity in a formation which is adequately protected with respect to potential sources of contamination must be provided.
- H. The proposed name of the development.
- I. Location as to Section Number, Town, Range, Township and County.
- J. The name and address of the owner, proprietor and applicant.
- K. North point, date, street names, unit and/or lot and development dimensions.
- L. Typical layout of the single family dwelling and facilities for each individual unit and/or lot. If the proposed use of units and/or lots will be for other than single family residences, the use and location shall be indicated and a typical layout showing building and facility locations provided for each unit and/or lot so used.
- M. Existing and proposed contours where site modifications are proposed. Site modifications shall be shown in two (2) foot vertical contour intervals.
- N. Existing and proposed utility easements.
- O. Location of existing structures, wells and sewage treatment and disposal systems.
- P. Location of lakes, rivers, streams or other surface waters or where conditions of ponding or flooding are known to occur and where such conditions may be in conflict with the development of safe and adequate systems for water supply and sewage treatment and disposal systems.
- Q. Any potential sources of contamination of proposed water supplies for the project.
- R. The location of water supplies used to determine water supply suitability relative to development location.
- S. The signature and seal of the licensed professional engineer or licensed land surveyor preparing the report.
- T. Other information as deemed necessary by the Health Agency to demonstrate site suitability.

3-3 CRITERIA FOR DEVELOPMENT APPROVAL

No portion of a development plan or a preliminary development plan may be approved for onsite water supply or sewage treatment and disposal where one or more of the following conditions exist:

- A. A publicly operated sewer system is not available.
- B. The natural ground surface is less than sixty (72) inches above any of the following:
 - 1. Maximum high water table elevation.
 - 2. Impervious soil stratum.
 - 3. Ordinary high water mark of adjoining lake, stream or other surface waters.
 - 4. Bedrock formations, peat, muck or marl
- C. The property lacks sufficient area to provide for the minimum horizontal isolation requirements of Section 5-11 for each water well and/or sewage treatment and disposal system proposed.
- D. The requirements of State of Michigan Act 59 PA 1978 and/or Act 288 PA 1967 as amended or any Administrative Rules promulgated under these Acts can not be met. Where the requirements of these Acts conflict with the provisions of this code, the most restrictive shall prevail.
- E. Ponding or flooding are known to occur, and such conditions might be in conflict with the development of safe and adequate systems for water supply and sewage treatment and disposal.
- F. An adequate and protected water supply is not available.

3-4 ENVIRONMENTAL APPROVAL

A development plan shall be approved when conditions noted in the site report, supporting documentation and certification of suitability and when the unit and/or lot size or arrangement of units and/or lots have been demonstrated to meet the requirements of this code. The review of the development plan shall take into account the anticipated use to be made of any unit, lot or division of land.

The Health Officer shall review the information submitted and determine if the information is accurate, representative and adequately supports the certification of suitability. If the Health Officer determines the development plan, supporting documentation and certification of suitability adequately demonstrates that the proposed development meets the requirements of this code and all state statutory requirements or administrative rules, then he shall send to the municipal corporation an approval of environmental suitability.

3-5 DEED RESTRICTIONS, RESTRICTIVE COVENANTS AND ADVISORIES

The agency may require, as a condition of approval, that the owner record deed restrictions, restrictive covenants and/or advisories for the protection of the public health, safety and welfare and the environment.

3-6 FINAL APPROVAL

Final approval of a development which proposes the use of individual water supply and/or sewage treatment and disposal systems, privately owned public water supply and/or privately owned community wastewater treatment and disposal systems or the use of existing water supply and/or sewage treatment and disposal systems shall not be granted approval until the conditions and/or restrictions for approval have been made part of the master deed and/or restrictive covenants for the proposed development and a copy of the recorded master deed and/or restrictive covenants are submitted for review.

ARTICLE IV

SEWAGE TREATMENT AND DISPOSAL

The intent of this article is to provide regulations to control the installation and maintenance of private, semi-private and public sewage treatment and disposal systems where no municipal sewage facility is available; to establish minimum criteria for such installation; to protect the health, safety and welfare of the people of Antrim, Charlevoix, Emmet and Otsego Counties.

4-1 SEWAGE TREATMENT AND DISPOSAL ON ALL PREMISES

It shall be unlawful for any person to construct, alter, occupy or maintain any premise which is not equipped with a sewage treatment and disposal system that complies with this code or which creates a condition where sewage effluent is discharged or deposited upon the surface of the ground or into a roadside ditch or watercourse, stream or lake, or into any drain other than a sanitary sewer or other systems approved by the Health Officer.

Existing sewage treatment and disposal systems determined by the Health Officer to be in good functional status may be granted continued operation until a change of use is proposed or created or the use of that system results in a failure, as defined in Article II, Section 2-19.

4-2 CONSTRUCTION PERMIT REQUIRED

It shall be unlawful for any person to construct, repair, alter, extend or operate any sewage treatment and disposal facility within Antrim, Charlevoix, Emmet or Otsego Counties unless they have a construction permit issued by the Health Officer and for which a final approval has been granted pursuant to this code. As used in this code, the term "permit" includes any conditions contained within the permit.

4-3 OPERATION PERMIT REQUIRED

It shall be unlawful for any person to install or operate any Advanced Treatment System (ATS) or any sewage treatment and disposal system that uses an easement for the conveyance or disposal of residential or commercial wastewater within Antrim, Charlevoix, Emmet or Otsego Counties unless they have an operation permit issued by the Health Officer.

Operation permits shall expire on December 31 of the fifth year after issuance.

4-4 TERM OF PERMITS

Any construction permit issued pursuant to the requirements of the preceding sections shall be valid for the term of twenty-four (24) months from the date of issuance, unless revoked as provided in the following.

Any operation permit issued pursuant to the requirements of the preceding sections shall be valid for the term of up to sixty (60) months from the date of issuance and expiring on December 31st of the fifth calendar year, unless revoked as provided in the following.

4-5 PERMIT APPLICATION

A completed Health Agency approved application and fee for a construction or operation permit shall be required for any installation of a sewage treatment and disposal system. The application for the proposed sewage treatment and disposal system shall include information and data, as the Health Officer may require, and be signed by the owner or owner's representative. An application that is not complete shall not be approved.

If the stated requirements of this code are met, a construction or operation permit shall be issued by the Health Agency, subject to the terms and conditions established by the Health Officer.

4-6 TERM OF APPLICATIONS

Any application received by the Health Department shall, if incomplete, have a term of twelve (12) months from the date of application submittal. A complete application shall include all information and documents required for the service applied for. Any incomplete application exceeding the expiration date shall be considered invalid and expired and all associated permit application fees will be forfeited.

4-7 CHANGES AND REVISIONS

No changes shall be made in the approved plans without the written consent of the Health Agency and the property owner or the property owner's authorized agent. A revision in development plans, constructing or installing sewage treatment and disposal facilities inconsistent with the permit or a change in site conditions, from those upon which the approval was based, may require an application for a new permit, and all sections of this code pertaining to new permits will then apply.

4-8 CRITERIA FOR CONSTRUCTION PERMIT APPROVAL – CONVENTIONAL SEWAGE TREATMENT AND DISPOSAL SYSTEM

A conventional sewage treatment and disposal system may be permitted at a site where all of the following site characteristics or conditions exist:

- A. An available sewer system is not available.
- B. The area of the proposed sewage treatment and disposal system complies with the minimum vertical separation requirements for conventional systems in Table 5-10.
- C. The property served includes sufficient area to provide for the minimum horizontal isolation distances required in Table 5-11.

4-9 CRITERIA FOR CONSTRUCTION PERMIT APPROVAL -- ELEVATED ABSORPTION FIELD (MOUND)

An elevated absorption field (mound) may be permitted at a site where all of the following conditions are met:

- A. An available sewer system is not available.
- B. The area of the proposed sewage treatment and disposal system complies with the minimum vertical separation requirements for elevated absorption systems in Table 5-10.
- C. The property served includes sufficient area to provide for the minimum horizontal isolation distances required in Table 5-11.
- E. The natural ground slope does not exceed twelve (12) percent.
- F. The site is not subject to flooding or significantly impacted by surface runoff.

4-10 CRITERIA FOR CONSTRUCTION PERMIT APPROVAL – ADVANCED TREATMENT SYSTEM (ATS)

An Advanced Treatment System shall be permitted where the applicant has provided competent, material and substantive evidence which allows the Health Agency to find that all of the following standards have been met and all of the following required information has been provided:

- A. An available sewer system is not available.
- B. The area of the proposed sewage treatment and disposal system complies with the minimum vertical separation requirements for advanced treatment systems in Table 5-10.

- C. The property served includes sufficient area to provide for the minimum horizontal isolation distances required in Table 5-11.
- D. The natural ground slope does not exceed twelve (12) percent.
- E. The ATS Unit is NSF/ANSI 40, Class I-2005 certified for residential wastewater treatment systems.
- F. The proposed ATS is capable of producing effluent with:
 - i. Biological Oxygen Demand (BOD₅) less than or equal to 30 mg/L
 - ii. Total Suspended Solids (TSS) less than or equal to 30 mg/L
 - iii. Total Inorganic Nitrogen (TIN) less than or equal to 30 mg/L
- G. The site is not subject to flooding or significantly impacted by surface runoff.
- H. A wetland determination may be required and, if required by law, a wetland permit shall be obtained prior to issuance of a construction permit.
- I. The applicant shall provide the Health Agency with the maintenance specifications of the manufacturer and the maintenance specifications of the engineer for the entire ATS.
- J. The applicant shall provide the Health Agency with a notarized copy of a Notice of Advanced Treatment System that has been recorded with the Register of Deeds in the county in which the premises is located and which contains the page and liber numbers of the recordation.
- K. An approved operation permit shall be acquired for the proposed Advanced Treatment System (ATS).
- L. A maintenance contract meeting the requirements of Section 4-11 shall be provided prior to permit approval.

4-11 MAINTENANCE CONTRACTS – ADVANCED TREATMENT SYSTEM (ATS)

A maintenance contract shall be submitted to this Health Agency for approval and is required prior to issuance of the operation permit for an Advanced Treatment System (ATS). At a minimum the maintenance contract shall provide that:

- A. The ATS shall be inspected and the effluent sampled and evaluated not less than annually by a maintenance contractor who shall be a licensed professional engineer, State of Michigan or nationally registered sanitarian in private practice or a certified ATS inspector.
- B. The first operation and maintenance inspection shall be conducted thirty (30) to ninety (90) days of ATS start-up.
- C. The inspection(s) and any regular maintenance required by the manufacturer, design engineer and operation permit shall be prepaid for five (5) years.
- D. Required inspection(s) shall determine and inspection report(s) shall describe whether the ATS:
 - i. Is functioning in compliance with the standards of section 4-10(F.) and include all analytical testing which has been done to make this determination.
 - ii. Continues to be compliance with the maintenance specifications of the manufacturer.
 - iii. Continues to be compliance with the maintenance specifications of the engineer for the ATS.
 - iv. Continues to be compliance with conditions imposed by all permits issued by the Health Agency

- v. The ATS is performing in the manner in which it was approved.
- E. The inspection report must include a description of all maintenance performed on the ATS or any of its components since the last inspection report.
- F. The maintenance contract must be assignable to subsequent owners of the premises, which is equipped with the ATS.
- G. The maintenance contractor acknowledges the obligation to notify the Health Agency of a discontinuation of services as required by Section 4-12.
- H. An operation and maintenance inspection report shall be submitted to the Health Agency and the property owner within thirty (30) days of any inspections required by the Health Agency.
- I. The Health Agency, as deemed necessary, may require additional inspections and inspection parameters.

4-12 TERMINATION OF MAINTENANCE CONTRACT – ADVANCED TREATMENT SYSTEM (ATS)

The property owner and maintenance contractor shall notify the Health Agency within thirty (30) days if for any reason the services required by the maintenance contract are or will no longer be performed.

4-13 CRITERIA FOR OPERATION PERMIT APPROVAL – ADVANCED TREATMENT SYSTEM (ATS)

The initial operation permit shall be issued by the Health Agency for an Advanced Treatment System (ATS) documented to have the capability to meet the requirements of Section 4-10(E and F) and which has a maintenance contract meeting the requirements of Section 4-11.

An operation permit renewals shall be issued by the Health Agency if the applicant has provided competent, material and substantive evidence which allows the Health Agency to find that the ATS is in compliance with Section 4-10(F) and that the property owner has a valid maintenance contract in effect as required by this code.

4-14 FAILURE OF AN ADVANCED TREATMENT SYSTEM (ATS)

If the ATS fails to meet the standards in Section 4-10(F), any provision of the maintenance contract or a condition of the construction permit or operation permit, the owner shall immediately notify the Health Officer of the failure and immediately take action to identify and correct the cause(s) of the failure. Corrections and additional effluent sampling shall be conducted to demonstrate compliance with Section 4-10(F) without endangerment to public health or the environment.

Where the cause of failure cannot be corrected within a one-month period, the owner shall enter into an agreement approved by the Health Officer to provide for the proper disposal of septage generated on the property. The Health Officer shall approve such an agreement if it provides, in a timely manner, for the lawful disposal of septage by a State of Michigan licensed septage hauler until such time as the ATS can operate as required by the operation permit.

4-15 FINAL INSPECTIONS AND APPROVALS

The Health Officer shall make such inspections at the site as deemed necessary to assure that the wastewater system was installed in compliance with the code and with any conditions required on the permit. The owner or the owner's agent shall notify the Health Officer when the wastewater system is installed and the project is ready for inspection.

The wastewater system must be left in a condition that allows for proper inspection and may not be put into

use prior to an inspection and approval by the Health Officer, except with the permission of the Health Officer and submittal of a sewage treatment and disposal system affidavit.

Where engineered systems are required, the system shall be inspected by the design engineer and an "as-built" drawing shall be submitted to the Health Agency within thirty (30) working days.

4-16 INSPECTIONS – ADVANCED TREATMENT SYSTEMS (ATS)

For Advanced Treatment Systems (ATS), the following inspections shall be performed by a licensed professional engineer and the engineer shall certify, on a form provided by the Health Agency, that the following have been met:

- i. The advanced treatment unit or facility is installed according to the engineered site plan.
- ii. The advanced treatment system is installed in compliance with the ATS construction permit and all conditions.
- iii. All system components and appurtenances are installed correctly.
- iv. Advanced treatment unit or facility is in good working condition, functioning properly and meets all manufacturer design parameters.

4-17 CONDEMNATION OF EXISTING INSTALLATIONS

A "failed" sewage treatment and disposal system shall be repaired, rebuilt, or replaced by a system constructed according to stated requirements of this code or connected to an available sewage system within a period of time specified by the Health Officer.

4-18 SUCCESSOR BUILDINGS

A building or mobile home using an existing sewage treatment and disposal system may be replaced or succeeded by a building or mobile home which may use the same treatment and disposal system provided approval of the Health Officer is first obtained and the system is deemed adequate for the replacement building in terms of the provisions of this code.

4-19 CHANGE OF USE

Any change in use that may increase the potential effluent burden of an existing premises or into an existing sewage treatment and disposal system shall require approval of the Health Officer as to the adequacy of the sewage treatment and disposal system in terms of the stated requirements of this code.

ARTICLE V REQUIREMENTS FOR CONSTRUCTION OF INDIVIDUAL SEWAGE TREATMENT AND DISPOSAL SYSTEMS

5-1 DESIGN CRITERIA

The standards herein shall be the minimum design criteria and shall apply to all sewage treatment and disposal systems. For systems serving uses other than single or two-family residences, Michigan established rules, guidelines or criteria or the District Sanitary Code will be applied, whichever is more restrictive.

Where the provisions of this code or any criteria established by the State of Michigan do not address critical components of a wastewater system design or installation, other accepted practices may be applied as deemed necessary by the Health Officer.

For all sewage treatment and disposal systems, plans and specifications shall be submitted. If the plans and specifications meet the requirements of this code and any applicable state statutes and rules, a permit shall be

issued by the Health Agency.

5-2 SEPTIC TANKS

Design and construction of septic tanks shall be subject to the approval of the Health Officer prior to construction or installation. All septic tanks should be designed and installed to be watertight including; watertight seams, penetrations and access risers in high water table conditions. In areas of high groundwater conditions, septic tank buoyancy calculations shall be provided to the Health Agency for review and necessary ballasting provided, at the time of installation, to secure tank placement.

5-3 SEPTIC TANKS – MINIMUM VOLUME

The minimum liquid capacity of a septic tank serving a single dwelling shall be 1,000 gallons for a dwelling having three (3) bedrooms or less, and 250 additional gallons for each additional bedroom in excess of three (3).

5-4 SEPTIC TANKS – MAXIMUM BURIAL

A septic tank, pump chamber or other tank that is a component of a wastewater system, shall have a maximum burial depth of thirty-six (36) inches below finished grade.

5-5 SEPTIC TANK RISERS

Each septic tank installed, where the top of the tank is greater than eighteen inches (18") below finished grade, shall have a septic tank riser installed and terminated at finished grade. Septic tank risers shall be installed to provide access for routine maintenance, minimize odors and to prevent unauthorized and unsupervised entry.

5-6 HOLDING TANKS - PROHIBITED

Sewage holding tanks are prohibited for new construction, successor buildings or change of use and are only allowable for replacement situations for existing structures, where the approval criteria under Sections 4-8, 4-9 and 4-10 cannot be met and where the Health Officer approves of their use.

5-7 PUMP CHAMBERS

The pump chamber shall have a reserve volume that provides for temporary loss of power or other pump failure, shall have a high level warning device and shall be provided with a septic tank riser with a watertight connection to the top of the tank. The minimum liquid capacity of the pump chamber shall be 250 gallons. Design and construction of pump chambers shall be subject to the prior approval of the Health Officer.

5-8 RISER LIDS – WEIGHT STANDARD

For new or replacement wastewater systems permitted under the authority of the Health Department of Northwest Michigan, septic tank and pump chamber riser lids must be constructed of concrete, cast iron or other durable material heavy enough or weighted to prevent access by children, meeting ASTM 1227 07-C standards, which specify a minimum weight of 59 pounds.

5-9 PUMP DISCHARGE SEWAGE (EFFLUENT) FILTERS

Pump discharge filters are required where the distribution orifice size is less than ¼ inch. Maximum pump discharge filter opening/screening size shall not exceed the maximum orifice size in the distribution network.

5-10 VERTICAL SEPARATION REQUIREMENTS

**TABLE 5-10 MINIMUM VERTICAL SEPARATION DISTANCES
(INCHES OF SEPARATION)**

The infiltrative surface of a sewage treatment and disposal system shall be separated by the minimum vertical distances from the item named:

<u>Water Table¹</u>	<u>Ordinary High Water Mark²</u>	<u>Impervious/Limiting Stratum</u>
48	48	60

The natural ground surface within the entire sewage treatment and disposal system area shall be separated by the minimum vertical distances from the items named for the types of systems noted:

<u>Type of System</u>	<u>Water Table</u>	<u>Ordinary High Water Mark²</u>	<u>Impervious/Limiting Stratum</u>
Conventional	48	48	60
Elevated Absorption Field	24	24	36
Advanced Treatment (ATS)	12	12	24

¹Water table can not be artificially lowered to meet requirement. ²Measurement from relative elevation of ordinary high water mark

5-11 HORIZONTAL ISOLATION REQUIREMENTS

The components of a sewage treatment and disposal system shall be located not closer than the following horizontal distances away from the item named:

**TABLE 5-11 MINIMUM HORIZONTAL ISOLATION DISTANCES
(FEET TO SEWAGE TREATMENT AND DISPOSAL SYSTEM COMPONENT)**

<u>FROM</u>	<u>Absorption Field</u>	<u>Sewers¹</u>	<u>Sewers²</u>	<u>Septic Tank³</u>
Wells ⁴ or Suction Lines	50	10	50	50
Pressure Water Line (buried)	10	10	10	10
Property Line	10	10	10	10
Easement Boundary	10	5	5	10
Foundation Wall or Footing Drain	10	NA	5	5
Drainage Tile	10	10	10	10
Grade Drop-Off	20	5	10	10
Lake, Stream or Surface Water	100	10	50	50

¹Cast Iron, Schedule 40 PVC (plastic) or equivalent. ²Other materials, including force main. ³Includes pump and dosing chambers.

⁴Applies to individual residential water supply wells, for Type II A or B, and Type III water supplies refer to Act 399, P.A. 1978. ⁵In the case of Lake Michigan or connected water bodies, isolation shall be measured from the Ordinary High Water Mark as defined in Article II. In the case of other lakes or streams, isolation shall be measured from the known high water mark.

5-12 ABSORPTION FIELD AREA

A new wastewater absorption field shall provide a basal area for a minimum of two (2) bedrooms. An absorption field, trench or bed shall provide not less than the following basal areas for each bedroom served:

**TABLE 5-12 MINIMUM SOIL ABSORPTION FIELD BASAL AREA
(SQUARE FEET PER BEDROOM)**

SOIL TEXTURAL CLASSIFICATION ¹	TRENCH AREA REQUIRED	BED AREA REQUIRED
Course to Medium Sand	125	250
Fine Sand	165	330
Loamy Sand	190	380
Sandy Loam	250	500
Silt Loam, Loam	300	Not Suitable
Sandy Clay Loam	330	Not Suitable
Clay Loams and Clays ²	Not Suitable	Not Suitable

¹ Soils can have varying amounts of sand, silt and clay and therefore can have a wide range of permeabilities. Soil structure can have a greater effect on permeability than texture alone and will be considered in determining permeability rates and absorption area requirements. ² There are other soils with permeabilities over 60 min/in which would fall into the "Not Suitable" category (Silt, Silty Clay, Sandy Clay etc.).

5-13 ABSORPTION TRENCHES - SPACING

An absorption trench shall have one (1) distribution pipe centered in the trench width. Trench system spacing shall be constructed to provide a minimum of four (4) feet of undisturbed soil between trenches.

5-14 ABSORPTION BEDS

An absorption bed shall have two (2) or more parallel distribution pipes. The outermost pipes shall be located not closer than six (6) inches and not further than twenty four (24) inches from the bed side wall. The maximum spacing center to center of distribution pipes shall be four (4) feet for gravity flow and five (5) feet for low pressure distribution.

5-15 TRENCH AND BED CONSTRUCTION DETAILS

The following additional requirements shall apply to trenches and beds:

TABLE 5-15 TRENCH AND BED CONSTRUCTION DETAILS

ITEM	MAXIMUM	MINIMUM
Number of trenches	----	2
Length of single lateral pipe (feet)	75	----
Width of trench (inches)	48	18
Trench or bed bottom below finished grade (inches)	30	----
Depth of aggregate below laterals (inches)	----	6
Depth of aggregate above laterals (inches)	----	2
Total depth of aggregate	----	12
Size of Aggregate ¹ (inches)	1 ½	1/2
Slope of trench or bed bottom	Level	Level
Slope of gravity flow pipe (inches per 75 feet)	1.5	Level
Diameter of gravity flow pipe (inches)	----	4

¹ Fines not to exceed 1% loss by wash through sieve analysis gradation of aggregate

5-16 FILTER FABRIC

Filter (geotextile) fabric is required for all soil absorption systems at the interface between the top of the drainfield aggregate and the final disposal field soil cover. Filter fabric must be a non-woven fabric with a weight greater than ½ oz. per square yard and not to exceed 2.0 oz. per square yard.

5-17 PUMPING

Where site conditions require, wastewater effluent may be pumped to another septic tank or the absorption system. It is preferred that pumping shall be from a separate chamber downstream from the septic tank. Where wastewater effluent is pumped to a septic tank, the receiving tank must be a two-compartment tank prior to final disposal. Pumping capacity shall be sufficient to deliver the required flow against static head and pipe friction.

5-18 DOSING

A sewage treatment and disposal system may include provisions for dosing the absorption field. When dosing is employed, the frequency shall be suitable for the absorption field soil texture, and the dosing volume shall be compatible with the distribution pipe volume.

5-19 FORCEMAIN CONSTRUCTION

A septic system forcemain shall be constructed of schedule 40 PVC/ SDR 21 (or equivalent) with the use of solvent welded couplings. High density polyethylene (HDPE) pipe may be used if installed as a single seamless pipe or with fusion joints only. All forcemain pipe shall have a minimum pressure rating of 160PSI regardless of diameter and shall be protected from freezing either by depth of bury below anticipated frost lines or by adequate insulation.

Forcemains which cross under drives, roads, or other anticipated traffic areas shall be sleeved inside secondary larger diameter piping in the traffic zone for ease of maintenance.

Tracer wire shall be required on all forcemain installations greater than 300' on the same property septage originates, or any installation to an off-site drainfield location. The tracer wire shall be rated for direct burial with HDPE, high molecular weight polyethylene HMWPE coating, or high strength copper clad steel (CCS). The coating shall be green in color per the American Public Works Association (APWA) uniform standards. Installation shall be in accordance with industry standards which includes, but is not limited to, adequately protected termination points that are marked for future use.

5-20 LOW PRESSURE DISTRIBUTION

When effluent is applied by means of low pressure distribution piping, the distribution network and its perforations (orifices) shall be sized to provide acceptably uniform application rates when lateral pipe friction is considered. As a guide, the calculated application flow rates should not differ by more than ten (10) percent in the orifices of a single lateral pipe, nor by more than fifteen (15) percent in the orifices of all the lateral pipes.

The minimum inside diameter of low pressure distribution piping shall be one inch (1) and the minimum diameter of pipe perforations shall be one-eighth inch (1/8"). Orifice shields shall be utilized to uniformly distribute septic tank effluent and to prevent orifice obstruction. The design of a low pressure distribution system shall be in accordance with generally accepted engineering practices.

5-21 ELEVATED ABSORPTION SYSTEM (MOUND)

Any elevated absorption field, including those associated with Advanced Treatment Systems (ATS), shall be subject to all applicable requirements stated elsewhere in Article V, and to the following additional

requirements:

- A. Preferred location shall be on level ground or at the crest of slopes. In any location, adequate means for diverting surface run-off shall be provided.
- B. An elevated absorption field on sloping ground shall have its longer dimension across the slope. Vertical requirements for isolation from water or unsuitable soils shall be measured at the up-slope edge or corner of the field.
- C. The ground below a mound shall be free of brush, stumps, and long grasses. The natural soil shall be scarified in a manner which provides good interface with the sand fill, but which does not compact or otherwise alter the soil structure. Plowing to eight (8) inches deep is an acceptable method. Rototilling is not. On sloping ground, furrows shall be made to lie across the slope. Site preparation shall not proceed when unusual moisture content has made the soil vulnerable to smearing or compacting.
- D. Mound fill material shall be subject to the prior approval of the Health Officer. Before the absorption aggregate is placed, the fill material shall be compacted sufficiently to insure against future settlement and loss of vertical isolation distance.
- E. The absorption field area shall be as required in Table 5-12 for the fill material used. The preferred shape for a bed is long and narrow.
- F. The base of the fill material at the natural soil (i.e., toe of mound) shall have an area which equals or exceeds the area required in Table 5-12 for the natural soil type in the column for bed bottom. On a sloping site, only the area directly below the absorption field and downslope to the toe of the mound may be considered as contributing to the required area.
- G. Effluent shall be distributed by means of low-pressure distribution piping. Distribution piping shall be provided with a means to clean and maintain the distribution network (clean-outs, lateral sweeps etc.)
- H. Perimeter fill material must extend from the final finished grade and extend in all directions from the absorption field in a 3:1 slope, three (3) feet of horizontal extent for every one (1) feet of vertical height.
- I. The covering material above the absorption field shall be sand to loamy sand in texture and shall have grass cover established and maintained to prevent soil erosion.
- J. An elevated absorption system may be required to be designed by a licensed professional engineer. If required, plans and specifications shall be in accordance with generally accepted engineering practices and shall bear the engineers stamp or seal.

5-22 SEWAGE TREATMENT AND DISPOSAL SYSTEM EASEMENTS

Any sewage disposal and treatment system that requires the use of burdened land other than the premises benefitted parcel for any portion of the sewage disposal and treatment system must be in compliance with the following.

- A. If the applicant will place any portion of the sewage disposal system on a burdened land, then an easement must be prepared and recorded in accordance with this section. If burdened land(s) are owned by the applicant, then the applicant shall comply with section 5-22(C).
- B. The easement shall be in a recordable form approved by the Health Agency. The Health Agency shall determine whether the form of the easement meets this code, whether the easement document is ambiguous and the easement document is legally binding. The easement document must include at a minimum all of the following:

- i. Legal description of the easement
 - ii. Legal description of the benefitted parcel and burdened land(s)
 - iii. Purpose or use of the buildings served by the septic system
 - iv. Maximum effluent burden which can be placed on the burdened land
- C. If the applicant will place any portion of the sewage disposal system on a burdened land that is also owned by the applicant, then the applicant shall have prepared and sign an affidavit in a form approved by the Health Agency that contains at a minimum the legal descriptions of the burdened land and the benefitted parcel; the names of all owners; the existence of the portion of the sewage disposal system that is located on the burdened parcel; and a statement that, at the time of separation of the common ownership of the benefitted and burdened parcels, an easement document must be prepared and recorded with the County Register of Deeds as required by this regulation and the terms of the septic permit that is located on the benefitted parcel.
- D. The Health Agency shall require proof that all documents which must be in recordable form have been recorded with the County Register of Deeds prior to the issuance of the sewage disposal system permit.
- E. An operation permit must be obtained from the Health Agency for any sewage disposal system requiring an easement. The operation permit shall allow the use of off-site or remote disposal of residential or commercial wastewater for a maximum of five (5) years from the time of permit issuance.
- A new operation permit must be obtained every five (5) years for as long as the easement is used in conjunction with a benefitted parcel for the purposes of sewage conveyance and disposal and also when there is any change in use of the benefitted parcel.
- F. An operation permit shall be issued by the Health Agency if the applicant has provided competent, material and substantial evidence which allows the Health Agency to find that the permit conditions are being complied with, no safety hazards exist and there are no reported or visible indications of failure or malfunction of the system have occurred.
- G. No person shall:
- 1. Use or occupy a premises on a benefitted parcel when the sewage disposal system that serves the benefitted parcel is not in compliance with these regulations, the operation permit or operation permit conditions.
 - 2. Use or occupy a premises that is required by law to be served by a sewage disposal system when any portion of the sewage disposal system is located on two (2) or more legally recognized parcels of land unless there is compliance with these regulations.

5-23 ALTERNATIVE METHODS

An alternative method of sewage treatment and disposal may be approved by the Health Officer if it provides equal or better treatment of sewage than the methods provided in this code. Proposals for alternative methods must be submitted for review by the Health Officer. If approved, all conditions required by the Health Officer must be complied with.

5-24 PRIVIES

All privies shall be constructed and maintained in a manner that does not create a public health nuisance. All premises are restricted from having water under pressure or plumbing where privies are permitted for wastewater disposal. All privies must be constructed using a watertight vault approved by the Health Officer. Privies can only be approved on sites that meet the site approval criteria outlined in Section 4-8.

ARTICLE VI

WELLS AND WATER SUPPLIES

It is hereby recognized that supply of safe potable water is fundamental to individual, public, and community health; that water supply facilities installed and operated in a proper manner are necessary for safeguarding public health; that water supplies furnishing water for human consumption need to be isolated and protected from sewage or other sources of pollution; and that contamination of water resources and supplies, or the creation of conditions menacing the public health, should be prevented.

6-1 WATER SUPPLIES

All water supplies shall be located, constructed and maintained in accordance with the specifications outlined in Act 399, P.A. 1978 and Part 127 of Act 368, P.A. 1976 and administrative rules.

6-2 PERMIT REQUIRED

It shall be unlawful for any person to install a water supply within Antrim, Charlevoix, Emmet or Otsego County unless a permit has been issued by the Health Officer

6-3 PERMIT APPLICATION

An application signed by the applicant, for a permit to install a water well shall be required for any installation. A plan of the proposed water well installation, with such data as the Health Officer may require shall be submitted on forms supplied by the Health Agency.

6-4 CRITERIA FOR PERMIT APPROVAL

The Health Officer shall have the right to deny a permit where one or more of the following conditions exist:

- A. An available public water supply exists.
- B. The property served lacks sufficient area to achieve the minimum isolation distances required in Table 6-8 and in applicable state law and regulations.
- C. The site is subject to ponding or flooding.
- D. No wastewater facilities are proposed, exist or are allowable on the site.

6-5 PERMIT ISSUANCE

If the proposed installation meets the requirements of this code, a permit shall be issued by the Health Agency.

6-6 INSPECTIONS

The Health Officer shall make such inspections at the site as he or she deems necessary.

6-7 DEVIATION FROM TERMS OF THE PERMIT

Failure to construct according to the terms of the permit shall be deemed a violation of these regulations for which the owner and/or installer shall be held liable. Such failure may result in the revocation of the permit and the proper abandonment of the well by plugging in accordance with Part 127 of Act 368, PA 1976 as amended.

6-8 ISOLATION DISTANCES

A private residential well shall be located not closer than the following horizontal distances away from the

source of pollution named:

TABLE 6-8 MINIMUM HORIZONTAL ISOLATION DISTANCES

SOURCE OF POLLUTION	MINIMUM DISTANCE (FEET)
Septic Tank	50
Absorption Field	50
Building Sewer of Cast Iron, Schedule 40 PVC (plastic) or equivalent	10
Building Sewer of other materials, including force mains	50
Oil and Gas Wells	300
Other sources	50

Other water supply wells shall be isolated in accordance with state statutes and administrative rules.

6-9 CONTAMINATED WATER SUPPLIES

When at least two (2) consecutive samples of water from an existing well show coliform organisms present or where an established EPA Maximum Contaminant Level (MCL) has been exceeded, such water supplies shall be considered contaminated. Consecutive samples shall mean those taken by the Health Officer at least seven (7) days apart.

Contaminated water supplies shall be repaired or replaced to meet the requirements of this code within a time period specified by the Health Officer. Contaminated water supplies which, in the judgment of the Health Officer, represent an immediate health hazard shall be posted with suitable signs at each outlet, or the outlet shall be made inoperative.

6-10 PLUGGING OF ABANDONED WELLS

At the time a replacement water well is installed, an approved public water supply is connected to a premise or if an existing water well is no longer in use or becomes a potential threat to the public health or groundwater supply or otherwise determined to be abandoned; the existing water well shall be plugged in accordance with the requirements outlined in Part 127, Act 368, of the Public Acts of 1978 and Administrative Rules as amended.

ARTICLE VII PUBLIC HEALTH NUISANCES

7-1 HEALTH OFFICER

It shall be the duty of the Health Officer to investigate all nuisances, sources of filth, and potential sources of illness that may be injurious to the health of the inhabitants of Antrim, Charlevoix, Emmet or Otsego counties.

7-2 ABATEMENT

Whenever any nuisance, source of filth, or potential cause of illness shall be found, the Health Officer shall order the owner or occupant thereof to remove or abate same within a specified time, but such correction shall not be required in less than twenty-four (24) hours, unless deemed necessary by the Health Officer. Failure to comply with such an order shall be deemed a violation of this code.

ARTICLE VIII

GARBAGE AND RUBBISH

8-1 SCOPE

These regulations are intended to complement the requirements of Part 115 of the Natural Resources and Environmental Protection Act, Public Act 451 of 1994, as amended, and the administrative rules promulgated pursuant to that Act.

8-2 ACCUMULATION OF GARBAGE

No person shall permit to accumulate upon their premise any garbage except in durable, covered containers of rodent proof, fly proof and watertight construction. Garbage containers shall not be filled to overflowing or permitted to become foul smelling or a breeding place for vermin or flies.

8-3 ACCUMULATION OF RUBBISH

No person shall permit to accumulate upon their premise any rubbish except in durable containers adequately sized to enclose all accumulated wastes.

8-4 DISPOSAL OF GARBAGE AND RUBBISH

Garbage and rubbish shall be disposed of in a manner which creates neither a nuisance nor a menace to health, and in accordance with the provisions of Part 115 of the Natural Resources and Environmental Protection Act, Public Act 451 of 1994, as amended, and the administrative rules promulgated pursuant to that Act.

An individual disposing of garbage and rubbish from their own household upon their own property shall do so in a manner that does not create a nuisance or hazard to public health. The disposal or accumulation of garbage or rubbish that may invite the breeding or collection of flies, mosquitoes, rodents or vermin is prohibited.

ARTICLE IX PERMIT REVOCATION

9-1 REVOCATION OF PERMITS

Any permit issued pursuant to this code may be revoked by the Health Officer if the Health Officer finds that one or more of the following circumstances exist:

- A. Changes have taken place on or to the site so that the construction or operation of the object of the permit cannot comply with this code;
- B. The object of the permit is not constructed, is not operated, is not maintained or does not perform as required by this code or the applicable permit;
- C. The premises to be served by the object of the permit is not constructed or operated as stated in the permit application;
- D. The permit holder does not comply with the requirements of this code or the terms of the applicable permit; or
- E. The permit application is incomplete or inaccurate.

9-2 PERMIT REVOCATION PROCEDURE

The revocation of a permit shall be taken pursuant to notice to the permit holder by the mailing of the notice of revocation via certified first class mail to the permit holder at the mailing address of the permit holder as provided in the application for the permit. The Health Officer may, but is not required to post the notice of revocation on the premises.

The notice of revocation shall contain the reasons for the revocation and notice that the permit holder has the right to request a meeting with the Health Officer. The request for the meeting shall be in writing and shall be made within sixty (60) days of the date of the posting of the notice of revocation. After the meeting, the Health Officer may continue the revocation, rescind the revocation or impose such conditions of the reinstatement of the permit as are necessary to require that the sewage treatment system is constructed as required by this code. If the permit holder is not satisfied with the decision of the Health Officer after the meeting, then the permit holder may appeal the Health Officer's decision to the Board of Appeals.

ARTICLE X VARIANCES

10-1 VARIANCE – WHEN PERMITTED

- A. A variance from the requirements of this code is not permitted for new structures, the expansion of an existing structure, the replacement of an existing structure when the replacement structure has more bedrooms or has an increased floor area or the construction or operation of a new sewage disposal and treatment system.
- B. A variance from the requirements of this code may be granted by the Health Officer for the replacement of an existing sewage disposal and treatment system for an existing structure if the proposed structure does not violate section 10-1(A).

10-2 VARIANCE STANDARDS

Where, owing to special conditions of the property, strict compliance with the provisions of this code would be physically impossible for the replacement of an existing sewage disposal and treatment system, the Health Officer or Board of Appeals shall have the power to authorize one or more variances from the requirements of this code. No such variance of the provisions of this code shall be granted unless all of the following facts and conditions exist:

- A. There are exceptional or extraordinary circumstances or conditions applicable to the property.
- B. The granting of such variance will not be detrimental to the health, welfare and safety of the public or materially injurious to other properties in the area which it is located.
- C. The proposed variance is for a sewage disposal and treatment system that is a replacement for a failed or inoperative, existing sewage disposal and treatment system and the structure to be served by the replacement system does not violate section 10-1(A).

10-3 WRITTEN DECISION

A decision regarding a request for a variance made by the Health Officer or Board of Appeals shall be made in writing and shall include the facts and the basis for the determination regarding whether the variance standards were met or not met.

10-4 CONDITIONS ON VARIANCE

Conditions may be imposed on the variance that are designed to implement compliance with the performance standards of this code or that are necessary to provide the same protection to persons or the environment as if there had been strict compliance with the provisions of this code.

10-5 CONDITION – CONNECTION TO SEWER WHEN AVAILABLE

All variances granted by the board of appeals for wastewater systems that do not comply with this regulation must include a condition that requires the connection to an available sewer system at the time of sewer installation. Connection to the available sewer system must occur within 180 days from the date when the sewer becomes available and documentation of connection must be provided to the Health Agency.

10-6 ADMINISTRATIVE REVIEW

Prior to a variance denial, an administrative review may be conducted by the Health Officer. The administrative review shall follow the standard of decision outlined in Section 11-5 and any granted variance shall comply with Section 11-6.

10-7 DENIAL OF VARIANCE

The denial of a variance may be appealed to the Board of Appeals.

ARTICLE XI

BOARD OF APPEALS

11-1 BOARD OF APPEALS FOR EACH COUNTY

The Board of Commissioners of each county shall appoint three (3) persons who shall serve as a Board of Appeals for that county. One (1) or more alternates may also be appointed. An alternate may serve in the absence or disqualification of a regular member of the Board of Appeals. The duty of such Board shall be to consider appeals from the decision of the officials charged with the enforcement of the code and which relate to property that is located within that county.

11-2 COMPENSATION

The compensation for each member shall be that sum established for regular Board of Health meetings, and shall be paid by the County to its own Board of Appeals.

11-3 APPEALS

Each appeal shall be in writing and shall be filed with the Health Officer. Such appeal must specify the following: the order, requirement, decision or determination that is being appealed; the section(s) of this code that apply to the appeal; and those facts on which the appellant will rely to support the appeal. An appeal that is incomplete is not ripe for decision by the Board of Appeals.

An appeal must be filed within thirty (30) days after the date of the decision that is being appealed. An untimely appeal shall be dismissed by the Board of Appeals. The appellant shall deposit a fee with the Health Officer when the appeal is filed. Fees for appeals shall be as established by the Board of Health.

The Health Officer shall transmit to the Board of Appeals a summary report of all previous action taken and the entire file pertaining to the subject of the appeal.

The final disposition of such appeal shall be in writing, concurred in by two (2) or more members of the Board, and may reverse, modify, or affirm the decision or the determination made by the Health Officer.

11-4 HEARINGS

The Board of Appeals shall set a reasonable time for the hearing and give due notice thereof to the appellant. The Board of Appeals shall decide the appeal within a reasonable time. The hearing shall be held in the county in which the property that is related to the subject matter of the appeal is located.

11-5 STANDARD FOR DECISION

Decisions shall be made by a majority of a quorum of the Board of Appeals. The decision of the Board of Appeals shall be the final administrative decision, shall be in writing, and shall include specific findings of fact by the Board of Appeals, and further, shall be subject to such judicial review as by law may be provided.

In deciding an appeal, the Board of Appeals shall determine the following:

- A. The Health Officer accurately determined the existing site conditions.
- B. The Health Officer properly interpreted and applied the requirements of the code for the existing site conditions.

11-6 APPEALS DECISION AND CONDITIONS

The Board of Appeals may affirm, reverse, wholly or in part, a decision of the Health Officer. The Board of Appeals may include any conditions in its decision that the Health Officer could have made.

The Board of Appeals may grant a variance or variances or impose conditions on the appellant or the property or premises in its decision. Any such granting of a variance or imposed conditions shall:

- A. Be designed to implement compliance with this code as much as the facts of the situation allow.
- B. Provide the same protection to the public health or the environment as if there had been strict compliance with the provisions of this code.

11-7 MEETINGS - RULES OF PROCEDURE

The Board of Appeals shall meet at such times as the Board may determine. The Board shall set a place of meeting and all meetings shall be open to the public. The Board shall adopt its own rules of procedure, and keep a record of its proceedings, showing the question(s) considered. The presence of three (3) members of the Board or alternate members of the Board shall constitute a quorum. Said meetings shall be conducted in accordance with the "Open Meetings Act", as amended.

11-8 NOTICES

The Board of Appeals may send notice to the adjoining land owners surrounding the parcel of land in question, or any other interested person, but is not required to do so.

**ARTICLE XII INTERPRETATION, INJUNCTIVE RELIEF, PENALTY,
SEVERABILITY AND AMENDMENTS**

12-1 INTERPRETATION

Where not inconsistent with the text, words used in the present tense include the future; words in the singular include the plural; and words in the plural include the singular. The word "shall" is always mandatory and not merely directory. Words or terms not defined herein shall be interpreted in the manner of their common meaning.

12-2 INJUNCTIVE RELIEF

Notwithstanding the existence or pursuit of any other remedy, the Health Officer may maintain in a court of competent jurisdiction, an action for an injunction or other process against any person to restrain or prevent violations of the code.

12-3 VIOLATION - CIVIL INFRACTION

No person or legal entity shall violate any provision or requirement of this code. A violation of this code shall be a municipal civil infraction as provided in MCL 600.113(c). A minimum fine of \$200.00 plus all damages, attorney fees and costs allowed by law shall be imposed for each violation. The failure to pay a court order authorized under MCL 600.8727 as amended shall allow the Health Officer to file a lien against the premises or property that is related to the violation as authorized by MCL 600.8737, as amended. Each day in which a person fails to comply with the provisions of this code shall constitute a separate and complete violation.

12-4 SEVERABILITY

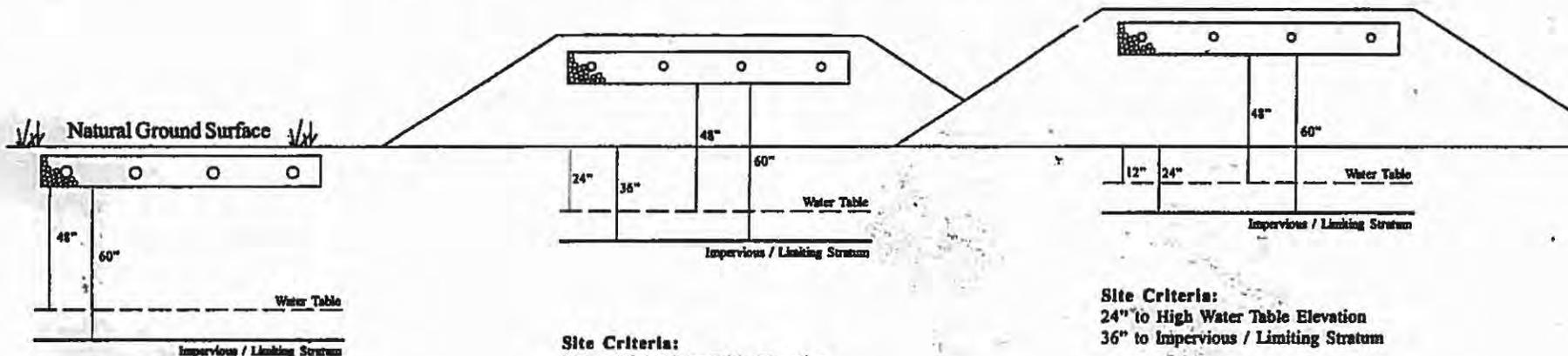
The provisions of this code are hereby declared to be severable and if any clause, sentence, word, section or provision is declared void or unenforceable for any reason by a court of competent jurisdiction, the remaining portions of said code shall remain in full force and effect.

12-5 AMENDMENTS

The District Board of Health, with the approval of Antrim, Charlevoix, Emmet and Otsego County Boards of Commissioners, may from time to time amend, supplement or change these regulations with the approval of all Boards. Any such amendment, supplement, or change of these regulations shall be preceded by such public hearings and notice as are required by state statute.

DRAFT

Wastewater Treatment and Disposal System Summary



Site Criteria:
 48" to High Water Table Elevation
 60" to Impervious / Limiting Stratum

Primary Treatment:
 Septic Tank(s)
 Risers and Lids

Secondary Treatment:
 Soil Absorption System
 Gravity Flow
 4" Distribution Network

Soil Absorption System Separation:
 48" to High Water Table Elevation
 60" to Impervious / Limiting Stratum

Site Criteria:
 24" to High Water Table Elevation
 36" to Impervious / Limiting Stratum

Primary Treatment:
 Septic Tank(s)
 Risers and Lids

Pumping:
 Pump Chamber - Discharge Filter
 Audio / Visual Alarms
 Risers and Lids

Secondary Treatment:
 Soil Absorption System - Mound
 Low Pressure Distribution - Uniform Distribution
 1.25" - 1.5" Distribution Network
 Orifice Shields
 Clean-outs

Soil Absorption System Separation:
 48" to High Water Table Elevation
 60" to Impervious / Limiting Stratum

Site Criteria:
 24" to High Water Table Elevation
 36" to Impervious / Limiting Stratum

Primary Treatment:
 Septic Tank(s)
 Risers and Lids

Secondary Treatment:
 Engineered Advanced Treatment Unit
 - Aerobic, Fixed Media, Suspended Media
 Risers and Lids

Pumping:
 Pump Chamber - Discharge Filter
 Audio / Visual Alarms
 Risers and Lids

Tertiary Treatment:
 Soil Absorption System - Mound
 Low Pressure Distribution - Uniform Distribution
 1.25" - 1.5" Distribution Network
 Orifice Shields
 Clean-outs

Soil Absorption System Separation:
 48" to High Water Table Elevation
 60" to Impervious / Limiting Stratum

Operation and Maintenance:
 Ongoing operation and maintenance contracts and permitting.

Effluent Quality		
Septic Tank (mg/l)	ATS	Reduction
BOD: 155-286	6.25	96 - 98%
TSS: 155-330	9.75	93.7 - 97%
TIN: 26-75	12.14	53.3 - 83.8%
Total Coliform (TC) 10^4 - 10^8 cfu/100ml		
Fecal Coliform (FC) 10^4 - 10^{10} cfu/100ml		
TC and FC Non-Detect after 2' of soil		