

MARION TOWNSHIP  
BOARD OF TRUSTEES  
REGULAR MEETING  
Thursday, January 9, 2020  
7:30 p.m.

Call to Order  
Pledge of Allegiance  
Members Present/Members Absent  
Call to the Public

- 1) Approval of Agenda
- 2) Consent Agenda
  - a. Approval of December 12, 2019 Regular Meeting Minutes
  - b. Complaint Report
  - c. DPW Report
  - d. Zoning Report
  - e. December 17, 2019 HAPRA Minutes
  - f. December 18, 2019 MHOG Agenda/Minutes
  - g. December 18, 2019 HAFA Agenda/Minutes
- 3) Burnham & Flowers Insurance Renewal
- 4) Pfeffer, Hanniford, Palka Contract (\$6,825)
- 5) 2236 Crystal Court Sewer Refund Request
- 6) Water Line for Magnuson Hotel
- 7) 2020 Poverty Exemptions Guidelines
- 8) Board of Review Letter Appeals
- 9) Board of Review Training
- 10) Cell Tower Lease
- 11) Township Computer Upgrades
- 12) Darakjian Property
- 13) Paul Marie Intergovernmental Agreement
- 14) Development Standards

Correspondence and Updates  
Livingston County Update  
Carlisle Wortman Associates, Inc. Donation Letter

Call to the Public  
Adjournment

Reminder: Next Board Packet will be ready after 3pm on Thursday, January 16, 2020

DRAFT

MARION TOWNSHIP  
BOARD OF TRUSTEES  
REGULAR MEETING  
DECEMBER 12, 2019

MEMBERS PRESENT: Les Andersen, Tammy Beal, Dan Lowe, Duane Stokes, Scott Lloyd, Greg Durbin, and Bob Hanvey

MEMBERS ABSENT: None

OTHERS PRESENT: Phil Westmoreland, Spicer; Dave Hamann, Zoning Administrator

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CALL TO ORDER

Bob Hanvey called the meeting to order at 7:30 pm.

PLEDGE OF ALLEGIANCE

BOARD MEMBERS PRESENT

The board members introduced themselves.

CALL TO THE PUBLIC

No response.

APPROVAL OF AGENDA

Les Andersen motioned to approve the agenda. Tammy Beal seconded. **Motion carried.**

CONSENT AGENDA

Greg Durbin motioned to approve the consent agenda. Duane Stokes seconded. **Motion carried.**

RURIK ROAD MAINTENANCE SAD PUBLIC HEARING TO CREATE THE ROLL

Bob Hanvey opened the public hearing. None of the property owners were present; public hearing closed.

RURIK ROAD MAINTENANCE SAD RESOLUTION

Les Andersen motioned to adopt a resolution to approve the roll for Rurik, Irene, Olympia, Adria Drives Snow Removal Special Assessment District, as presented. Greg Durbin seconded. Roll call vote: Lowe, Lloyd, Beal, Hanvey, Durbin, Andersen, Stokes—all yes. **Resolution passed 7-0.**

PARKER DRIVE MAINTENANCE SAD PUBLIC HEARING TO CREATE DISTRICT

Bob Hanvey opened the public hearing. Terrance O'Brien, 3731 Pine, asked for more specific information on snow removal, maintenance, etc. Mike Dobbs, 4655 Parker Drive, said the plan is to grade the roads six times per year, add some additional gravel, and snow plowing for more than 4". Bob Hanvey said one written objection was received from Elaine K. Vaughn regarding 4585 Parker Drive, Parcel #4710-28-302-090. The public hearing was closed.

### PARKER DRIVE MAINTENANCE SAD RESOLUTION TO CREATE DISTRICT

Les Andersen motioned to adopt a resolution to approve the creation of the Parker Drive Road Maintenance Special Assessment District, as presented. Scott Lloyd seconded. Roll call vote: Stokes, Durbin, Hanvey, Lloyd, Beal, Andersen, Lowe—all yes. **Resolution passed 7-0.**

### PARKER DRIVE MAINTENANCE SAD PUBLIC HEARING TO APPROVE THE ROLL

Bob Hanvey opened the public hearing. No objections were heard from those present, one written objection was received from Elaine K. Vaughn regarding 4585 Parker Drive, Parcel #4710-28-302-090, and the public hearing was closed. Mr. Hanvey said he made a minor change to the roll, and there are now 31 shares.

### PARKER DRIVE MAINTENANCE SAD RESOLUTION

Les Andersen motioned to adopt a resolution to approve the roll for the Parker Drive Special Assessment District, as presented. Greg Durbin seconded. Roll call vote: Beal, Andersen, Stokes, Durbin, Lowe, Hanvey, Lloyd—all yes. **Resolution passed 7-0.**

### SCHMAUS SHOW CAUSE HEARING

Shannon Schmaus, 3000 Sesame Drive, was present. Dave Hamann said he had received a complaint about vehicles on the Schmaus' property. Bob Hanvey said he visited the site and feels there is no violation. Les Andersen motioned that the Board of Trustees finds there is no violation at 3000 Sesame. Duane Stokes seconded. **Motion carried.**

### 2019 AUDIT PRESENTATION/AUDIT CONTRACT

Ken Palka was present to thank the board and to present the audit for year ending 6/30/19. Pfeffer, Hanniford & Palka reported an unqualified opinion. He reviewed the financial statements for the General Fund, Assessment Revolving Project Fund, and Water New User Fund. He informed the board members about new accounting requirements for handling escrow funds. The State of Michigan is also adjusting the chart of accounts and wants all entities to have the same by September 2022. Pfeffer, Hanniford & Palka will submit a proposal for work on this project. Mr. Palka also mentioned that the Assessment Revolving Project Fund should be paying interest to the Water New User Fund.

Tammy Beal motioned to accept the audit report as presented and have it sent to the state. Les Andersen seconded. **Motion carried.**

Tammy Beal motioned to accept the contract from Pfeffer, Hanniford & Palka for audit services for years ending 6/30/2020, 6/30/2021, and 6/30/2022 at \$17,900 per year, as presented. Les Andersen seconded. Roll call vote: Hanvey, Lowe, Durbin, Beal, Lloyd, Stokes, Andersen—all yes. **Motion carried 7-0.**

Les Andersen motioned to approve payment of the 2019 audit invoice for \$17,500 as presented. Duane Stokes seconded. Roll call vote: Stokes, Beal, Andersen, Lowe, Hanvey, Lloyd, Durbin—all yes. **Motion carried 7-0.**

### EVERGREEN LANDSCAPE SITE PLAN #02-19

Dan Brockway, 386 Lucy Road, was present on behalf of this project. This is a pole barn for his landscape company's equipment storage and a bay for maintenance; it is not a retail operation. The existing building on the property will stay. The ZBA granted the necessary variances. He will provide a notarized letter to the township that if residential property is developed adjacent to this property, he will install a privacy fence.

Les Andersen motioned to grant final approval for SPR #02-19—Evergreen Landscape, as presented, and provided all revisions requested are made. Duane Stokes seconded. **Motion carried.**

### LOREA SITE PLAN #03-19

David LeClair from Livingston Engineering was present on behalf of this project. This is a landscape supply yard with a retail operation. Tammy Beal motioned to accept the final site plan for SPR #03-19—LoRea Topsoil & Aggregate, as presented, provided all revisions are on the final site plan and that the intergovernmental agreement is approved. Les Andersen seconded. **Motion carried.**

### PAUL MARIE INTERGOVERNMENTAL AGREEMENT

Greg Durbin motioned to approve the intergovernmental agreement for sewer service on Lucy Road, Parcel #4710-01-200-024, between Marion Township, Genoa Charter Township, Genoa-Oceola Sewer and Water Authority, and Paul Marie Properties LLC, as presented, and authorize the clerk to supervisor to sign. Les Andersen seconded. **Motion carried.**

### HOWELL SCHOOLS 2020 SUMMER TAX COLLECTION RESOLUTION

Tammy Beal motioned to adopt a resolution for collection of Howell Public Schools summer school property taxes, as presented. Scott Lloyd seconded. Roll call vote: Lowe, Durbin, Lloyd, Stokes, Andersen, Beal, Hanvey—all yes. **Resolution passed 7-0.**

### DARAKJIAN PROPERTY

Duane Stokes motioned to postpone action on this item. Les Andersen seconded. **Motion carried.**

### FINAL REVIEW OF TXT #03-18—SECTION 17.32 HOME-BASED BUSINESS SPECIAL USE

Greg Durbin said he would like to see language included for parcels less than two acres. Bob Hanvey suggested changing the language to "up to 6 acres" instead of "2 or more acres and less than 6 acres." The board members discussed the number of employees, number of daily trips, number of visitors. Les Andersen said the Planning Commission should be a recommending body, and the Township Board would grant or deny approval.

Greg Durbin motioned to send these items back to the Planning Commission. Les Andersen seconded. **Motion carried.**

### NUISANCE ORDINANCE

Bob Hanvey passed out comments from the attorney regarding enforcement.

Les Andersen motioned to adopt the Marion Township Nuisance Ordinance 19-01, as presented. Greg Durbin seconded. **Motion carried.**

### PLANNING COMMISSION APPOINTMENT

Bob Hanvey recommended reappointing Larry Grunn to the Planning Commission. Greg Durbin motioned to approve that recommendation. Les Andersen seconded. **Motion carried.**

### CORRESPONDENCE & UPDATES

The township has received a \$50,000 letter of credit for the Meadows West project.

Development standards comments are welcome; this will be on an agenda in January.

An Active Shooter seminar from Livingston County MTA is scheduled for Wednesday, January 29, 6 pm at Genoa Township Hall; let the clerk's office know if you'd like to attend.

Erv Suida is still the interim City Manager for the City of Howell.

Les Andersen said that South Lyon approved an ordinance for PDR, and there are state grants available. Something needs to be in the master plan in order to apply for grants.

An email from the State of Michigan regarding CVTRS/CIP submission was received.

The Livingston County monthly update is included in the packet.

HAPRA sent a thank you letter for hosting the buck pole.

**CALL TO THE PUBLIC**

No response.

**ADJOURNMENT**

Tammy Beal motioned to adjourn at 9:26 pm. Duane Stokes seconded. **Motion carried.**

Submitted by: S. Longstreet

\_\_\_\_\_  
Tammy L. Beal, Township Clerk      Date

\_\_\_\_\_  
Robert W. Hanvey, Township Supervisor      Date

# COMPLAINT LOG

Complaint #	Complainant Name	Offender Name	Complaint Details	Action Taken	Date Violation	Show Cause Date	Resolved
#07-19	Gary Hatter 2657 Clivedon	Ron Arnold 2631 Clivedon, 4710-27-102-012	Abandon Van	Letter sent		10/10/2019 sent to attorney foreclosure	closed
#08-19	Garrett White 363 Granite Dr Howell, MI 48843 517-881-6508	Susan Still 220 Granite Dr. Howell, MI 48843 4710-05-200-049	Hobby Kennel with excessive barking 10pm to 6am note: lots of dogs in small neighborhood,	ltr sent return call she was out of town dogs let out 10am and 6pm only while OOT	12/11/2019 db test by supervisor		no proof of violation
#09-19	Greg Gardynk 1260 Peavy Rd Howell, MI 48843 810-923-6486	Family Golf 850 Peavy Rd. Howell, MI 48843	Vacant building, broken windows, Tall grass, Loitering	Ltr to Casa Villa note: no zoning ordinance, need Blight GO			

DPW Report

	2019												
	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
<b>WATER</b>													
NEW	4	2	9	6	5	0	6	5	11	5	2	4	59
EXISTING													
REPLACEMENT													
<b>IRRIGATION</b>													
NEW			2	1	2	1	10		2	2			20
EXISTING													
<b>SEWER</b>													
NEW	4	1	8	4	3	0	7	5	12	5	3	5	57
EXISTING													
<b>TOTAL</b>	<b>8</b>	<b>3</b>	<b>19</b>	<b>11</b>	<b>10</b>	<b>1</b>	<b>23</b>	<b>10</b>	<b>25</b>	<b>12</b>	<b>5</b>	<b>9</b>	<b>136</b>

2019 ZONING REPORT

	'JAN	'FEB	'MARCH	'APRIL	'MAY	'JUNE	'JULY	'AUG	'SEPT	'OCT	'NOV	'DEC	TOTAL
Homes	5	2	9	11	4	5	9	7	12	9	4	4	81
Condo Units													0
Accessory Bldgs.	4	1		3		1	1	1	2	3	2	2	20
Decks		2	1	3	3	3	2	1	2	6	1		24
Pools		1	2	2				1	2	1			9
Additions	1			1	1	1	1		2	1			7
Land Balancing				1				1					2
Other			1	2		1			1				5
<b>TOTAL LAND USES</b>	<b>10</b>	<b>6</b>	<b>13</b>	<b>23</b>	<b>7</b>	<b>11</b>	<b>13</b>	<b>11</b>	<b>21</b>	<b>20</b>	<b>7</b>	<b>6</b>	<b>148</b>
Waivers	3	4	3	10	7	4	5	8	6	4	3	1	58
Finals	8	4	14	6	18	12	11	11	15	8	6	11	124
Site Plans													0
Pre-Planning Meetings			1		1	1					2		5
Sewer Inspections (started collecting data in November)											9	6	6





## Howell Area Parks & Recreation Authority

Bennett Recreation Center

### Regular Board Meeting Minutes

December 17, 2019

#### **Call to Order**

Chairperson Sean Dunleavy called the meeting to order at 7:00 pm.

#### **Pledge of Allegiance**

#### **Attendance**

Chairman Sean Dunleavy, Vice Chair Diana Lowe, Treasurer Bob Ellis, Secretary Tammy Beal, Trustee Jean Graham

#### **Staff**

Director Tim Church, Kevin Troshak

#### **Public**

None

#### **Approval of Agenda**

Bob Ellis made a motion to approve the agenda, supported by Diana Lowe. **Motion carried 5-0.**

#### **Approval of Minutes**

Bob Ellis mentioned that the November minutes should have read that Revenues are \$65K above target but expenses were \$103 K above target, instead of Revenues are \$65K above target but \$103 above target.

Bob Ellis motioned to approve the amended November 19, 2019 Regular meeting minutes, supported by Diana Lowe. **Motion carried 5-0.**

#### **Call to the Public**

None heard.

### Staff Comments

Kevin Troshak reported that the chili cook off will be held February 29<sup>th</sup> here at the Bennett Center. It is \$30 to enter the contest and \$5 per person for tasting.

### Financial Reports ending November 30, 2019

Treasurer Ellis passed out a report with a graph, he reported that through the end of November we are \$77K above our new targeted revenues and \$68K above targeted expenses. Bob feels comfortable with the purchase of the new truck with the way our financial situation looks.

### New 2019 F-250 Truck Purchase

Since the financials look good we will allow the purchase of the new 2019 F-250 truck. Bob Ellis made a motion we purchase the new 2019 F-250 truck not it exceed \$35 K, Diana Lowe supported. Roll call vote: Graham, Ellis, Lowe, Beal, Dunleavy-all yes. **Motion carried 5-0.**

### Check Register and Bank Statements ending November 30, 2019

Everything looks good, we are back on track.

### Directors Report

- There are lots of Christmas events scheduled.
- There have been 300 cars at Christmas in the park.
- Santa's Mailbox has been very busy.
- Santa's workshop had 51 kids attend, teens made the pancakes, High School robotic team volunteered and everything went great.
- Pictures with Santa got their own photo booth from Bulldog IT.
- Bad Santa Trivia has 30 teams out of 34 reserved already, it is Thursday at Aberrant Ales.
- Camps will be held over the holiday break.
- Staff luncheon was held on Friday with 23 attendees.
- Pool is going good, there was 48 signed up for the beach party.

### Old Business

Oceola Township voted to move ahead with engineering on the new building. Tetra Tech will be doing the soil boring tests. They will be using Schaffer Construction out of Brighton as the general contractor.

### New Business

None

Motion at 7:27 pm by Diana Lowe to go into a closed session to do the 2019 evaluation of Executive Director Tim Church, supported by Bob Ellis. Roll call vote: Graham, Ellis, Lowe, Beal, Dunleavy-all yes. **Motion carried 5-0.**

Motion at 7:55 pm by Diana Lowe to come out closed session, supported by Jean Graham. **Motion carried 5-0.**

Diana Lowe motioned to increase the Executive Director's salary by 10% starting in the next fiscal year. Bob Ellis supported. Roll call vote: Graham, Ellis, Lowe, Beal, Dunleavy-all yes. **Motion carried 5-0.**

**Next Meeting**

The next regular meeting is scheduled for Tuesday, January 15, 2020 at 7 pm at the Bennett Center.

Motion to adjourn at 7:56 pm by Bob Ellis, supported by Diana Lowe. **Motion carried 5-0.**

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Approved

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Date

Respectively Submitted by: Tammy L. Beal, Secretary

# Marion, Howell, Oceola, and Genoa Sewer and Water Authority

## System Operational Report



**Cobb-Hall Award**

For

December 18th, 2019

**MHOG Water Authority Meeting**  
December 18, 2019  
5:00 PM at Oceola Township Hall

## AGENDA

1. Approval of the Minutes of November 20, 2019
2. Call to Public
3. Reports
  - Staff Reports: Greg Tatara
  - Treasurer (Robin Hunt)
  - Engineer (Gary Markstrom)
  - CPA (Ken Palka)
4. New Business
  - Correspondence
5. Old Business
6. Adjournment

# Marion Howell Oceola Genoa

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WATER AUTHORITY

## MHOG Water Authority Meeting MINUTES

The Marion, Howell, Oceola, Genoa Water Authority met on November 20, 2019 at 5:00 PM at the Oceola Township Hall. Members present were Bamber, Coddington, Rogers, Hanvey, Schuhmacher, Hunt, Counts and Lowe.

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The meeting was called to order by Chairman Hanvey.

A motion was made by Rogers to approve the minutes of the October 16, 2019 meeting. The motion was seconded by Schuhmacher and carried.

A call to the public was held.

A motion was made by Hunt to obtain a new Zerox 8035 Copier for MHOG. The motion was seconded by Counts and carried.

A motion was made by Rogers to approve a Float in the Fantasy of Lights Parade with an expenditure of up to \$500.00 for lights etc. The motion was seconded by Schuhmacher and carried.

A motion was made by Schuhmacher to approve expenditures of \$212,722.73 from the M.H.O.G. Operating Fund represented by checks numbered 8231-8273, and for direct deposit debits 513 thru 520. The motion was seconded by Coddington and carried.

A motion was made by Counts to approve an expenditure of \$235,384.00 from the MHOG Capital Reserve Replacement Fund represented by checks 1001 and 1002. The motion was seconded by Schuhmacher and carried.

A motion was made by Rogers to approve expenditures of \$108,298.60 from the MHOG Capital Reserve Improvement Fund represented by check numbers 101 and 102. The motion was seconded by Coddington and carried.

A motion was made by Schuhmacher to adopt the 2020 Meeting Schedule with meetings to be held on the 3<sup>rd</sup> Wednesday of each month at 5:00 p.m. at the Oceola Township Hall. The motion was seconded by Counts and carried.

A motion was made by Hunt to adjourn. The motion was seconded by Coddington and carried.

William J. Bamber, Secretary

## HOWELL AREA FIRE AUTHORITY MEETING

Oceola Township Hall

1577 N. Latson Rd. – Howell, MI

December 18, 2019 – 6:00 PM

Authority Board

Members and Other

Officials:

Bill Bamber

Oceola Township

*Chairman*

Mike Coddington

Howell Township

*Vice Chairman*

Mark Fosdick

Cohoctah Township

*Secretary*

Robert Hanvey

Marion Township

*Member*

Nick Proctor

City of Howell

*Treasurer*

Andy Pless

*Fire Chief*

Laura Walker

*Asst. Sec/Treasurer*

1. Meeting called to order at 6:00 pm.
2. Pledge of Allegiance (all stand)
3. Approve minutes of the regular meeting of November 20, 2019
4. Call to Public (items not on agenda)
5. Approve payment of bills and payroll in the amount of \$152,399.96
6. New Business
7. Old Business
8. Closed Session
9. Adjourn

### WELCOME!

Visitors are invited to attend all meetings of the Howell Area Fire Authority Board.

If you wish to address the Board you will be recognized by the Chairman.

## HOWELL AREA FIRE AUTHORITY

November 20, 2019 – 6:00 pm

Oceola Township Hall – 1577 N. Latson Rd. Howell, MI 48843

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**Present:** Chairman Bill Bamber, Vice Chairman Mike Coddington, Treasurer Nick Proctor, Secretary Mark Fosdick, Member Bob Hanvey, Fire Chief Andy Pless, Asst. Sec/Treas. Laura Walker, Attorney Kevin Gentry

Chairman Bill Bamber called the meeting to order at 6:00 pm

**Approve the minutes of the regular meeting of October 16, 2019:** MOTION by Mr. Proctor, SUPPORT by Mr. Coddington to approve the minutes of the regular meeting of October 16, 2019. MOTION CARRIED UNANIMOUSLY.

**Call to Public:** No Response

**Discussion/Approval 2018/2019 Annual Audit Presentation, Ken Palka:** MOTION by Mr. Proctor, SUPPORT by Mr. Fosdick to receive and authorize PHP to send audit to the State of Michigan. MOTION CARRIED UNANIMOUSLY.

**Discussion/Approval Contract renewal for HAFA Attorney Kevin Gentry:** MOTION by Mr. Proctor, SUPPORT by Mr. Fosdick to renew contract for HAFA Attorney Kevin Gentry. MOTION CARRIED UNANIMOUSLY.

**Discussion/Approval 2020 Howell Area Fire Authority Board Meeting Schedule:** MOTION by Mr. Hanvey, SUPPORT by Mr. Proctor to approve the 2020 Howell Area Fire Authority Board Meeting Schedule. MOTION CARRIED UNANIMOUSLY.

**Approve Payment of Bills and Payroll:** MOTION by Mr. Proctor, SUPPORT by Mr. Coddington to authorize payment of bills and payroll in the amount of \$245,121.23. MOTION CARRIED UNANIMOUSLY.

**Enter Closed Session:** MOTION by Mr. Proctor, SUPPORT by Mr. Coddington to enter closed session at 6:25pm. Roll Call Vote taken, 5 yea's and 0 nay's.

**End Closed Session:** MOTION by Mr. Proctor, SUPPORT by Mr. Coddington to end closed session at 6:39pm. Roll Call taken, 5 yea's and 0 nay's.

**Approve minutes of closed session meeting on 10/16/19:** MOTION by Mr. Proctor, SUPPORT by Mr. Coddington to approve minutes of closed session meeting on 10/16/19. MOTION CARRIED UNANIMOUSLY.

**Adjourn:** MOTION by Mr. Proctor, SUPPORT by Mr. Fosdick to adjourn the meeting at 6:40pm.



HAFa Mtg. Minutes  
August 16, 2017  
Page 2

MOTION CARRIED UNANIMOUSLY.

Respectfully Submitted: \_\_\_\_\_  
Laura Walker, Asst. Secretary/Treasurer

Approved By: \_\_\_\_\_  
Mark Fosdick, Secretary

## MONTHLY UPDATE TO THE BOARD

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**TO:** HOWELL AREA FIRE AUTHORITY BOARD OF DIRECTORS  
**FROM:** ANDREW PLESS, FIRE CHIEF  
**SUBJECT:** MONTHLY HAFD REPORT FOR NOVEMBER 2019  
**DATE:** DECEMBER 11, 2019

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During the month of November, the HAFD responded to a total of 140 calls for service. There were 108 calls in November of 2018. The total year-to-date runs for 2019 is 1491. Last year's total at the end of November was 1272.

Some of the more significant events for the month included:

On November 7<sup>th</sup>, Howell Firefighters responded to M59 over I96 for a head on crash school bus vs pickup truck. The driver of the truck was unresponsive and required extrication upon arrival of fire units, due to the patient's critical injuries, FD personnel drove LCA rig to Sparrow Hospital.

On November 19<sup>th</sup>, Howell Firefighters responded to a reported structure fire and one person with burn injuries in the City of Howell. On arrival firefighters had fire showing out a second-floor window of the home and the patient was in the care of EMS, crews were sent to the second and first floor for fire attack. The cause of the fire remains under investigation.

On November 23<sup>rd</sup> Howell Firefighters responded to a reported attached garage fire in Oceola Township. On arrival units reported smoke showing from the garage and eaves of the home. The fire was located in the garage and extinguished while crews checked for extension into the home. The area of origin was a propane heater attached to the wall and the homeowner stated the heater was on at the time of the fire.

On November 23<sup>rd</sup> Howell Firefighters responded to a second reported structure fire in Cohoctah Township. Units arrived to find a working fire on the back porch and spreading up the back of the home. The fire was extinguished, and crews checked for extension, crews requested Consumer to disconnect power to the home due to burnt wiring on the back side of the home. The homeowner advised he had a heat lamp and heated water bowls next to some straw for the cats on the porch.

Training for the month of November consisted of report writing review, SCBA don/doff & inspection, and Float preparation for Fantasy of Lights Parade.

**The next meeting of the Howell Area Fire Authority Board is scheduled for Wednesday December 18<sup>th</sup>, 2019 at 6:00 pm.**

**HOWELL AREA FIRE DEPARTMENT  
FIRE MARSHAL DIVISION**

1211 W. Grand River

Howell, MI 48843

517-546-0560

FAX: 517-546-6011

[firemarshal@howellfire.net](mailto:firemarshal@howellfire.net)

**DATE:** December 11, 2019  
**TO:** Chief Pless  
Fire Authority Board  
**FROM:** Jamil Czubenko, Assistant Chief/Fire Marshal  
**REF:** November 2019 Month End

The month of November 2019 was busy in the Fire Marshal Division. The 2019 Fantasy of Lights Parade is one of the projects that the FMD was involved with.

The FMD also participated in emergency responses and department training throughout the month.

As a member of the Fantasy of Lights committee, planning continued for the November 29th event. The HAFD tuned up Santa's sleigh and carried Santa and Mrs. Clause through the parade.

This year's events drew tens of thousands of people into the City of Howell. The HAFD also performed safety inspections of all floats and assisted in setup and tear down as needed. This event was successful and went without any incident.

The Parade used a staging method this year again, requiring some planning for FD responses to and from the Main Fire Station. In the years past, the Old Citizen parking lots were utilized for all float staging. This year, the staging was along Grand River from Byron Rd to the Howell High School Drive. A plan for response was developed and shared with all firefighters so that our responses would not be affected.

The FMD has been involved with buyers and sellers of property for vacant property and existing buildings throughout our jurisdiction. A few proposals for projects have been submitted for review and comment.

To date approximately 1900 kids and 1700 adults have made public education contact with the HAFD, totaling approximately 334 personnel hours.

The HAFD visited 6 homes and installed a total of 2 smoke detectors and 2 CO detectors. To date, 264 working smoke detectors plus the 129 smokes and 33 CO detectors we've installed.

72 new inspections and 13 re-inspections were completed. These numbers include the outlet mall and all of their suites. 39 plan reviews, consultations and fire safety tests were also completed.

December 2019 brings us more planning for future projects, various fire prevention events and Christmas and a New Year.

# Howell Area Fire Department

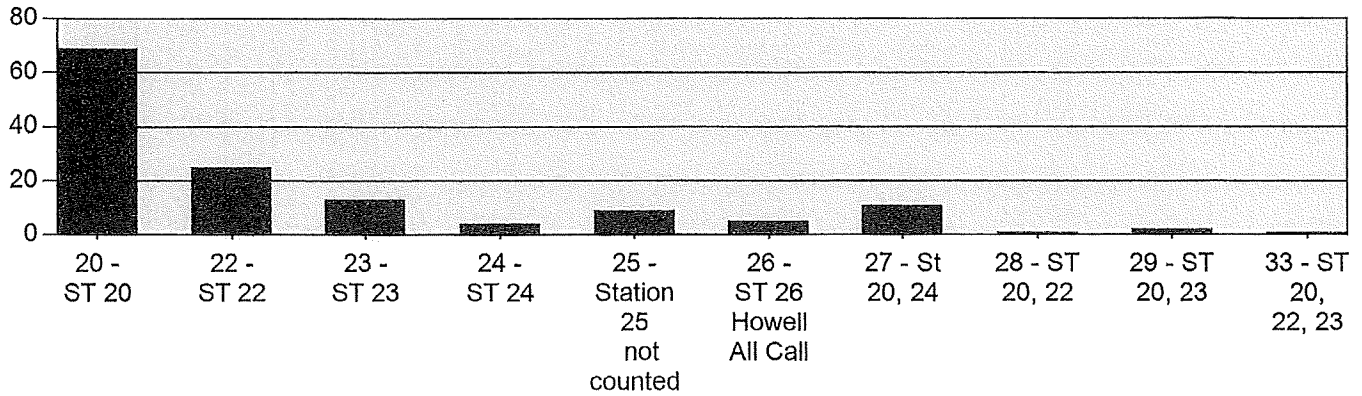
Howell, MI

This report was generated on 12/5/2019 9:24:00 AM



## Incidents per Station for Date Time Range for Station

Start Time: 00:00 | End Time: 23:00 | Incident Type(s): All Incident Types | Station: All Stations | Start Date: 11/01/2019 | End Date: 11/30/2019



STATION	COUNT
20 - ST 20	69
22 - ST 22	25
23 - ST 23	13
24 - ST 24	4
25 - Station 25 not counted	9
26 - ST 26 Howell All Call	5
27 - St 20, 24	11
28 - ST 20, 22	1
29 - ST 20, 23	2
33 - ST 20, 22, 23	1
<b>TOTAL:</b>	<b>140</b>

Only Reviewed Incidents included. This report totals the Incidents and groups by the Station specified in Basic 1. End Time menu returns all matches inside the chosen hour (ex: 23:00 returns all matching results from 23:00 - 23:59).

# Howell Area Fire Department



Howell, MI

This report was generated on 12/5/2019 8:59:13 AM

## ZONE: MARION - MARION TOWNSHIP

2019-1312	611 - Dispatched & cancelled en route	11/01/2019	727 COUNTY FARM RD	BR20
2019-1316	600 - Good intent call, other	11/02/2019	1996 TRIANGLE LAKE RD	CH23
2019-1324	736 - CO detector activation due to malfunction	11/05/2019	5744 LANGE RD	EN23,INSP2
2019-1339	311 - Medical assist, assist EMS crew	11/07/2019	1231 N ALSTOTT DR	BR20
2019-1340	311 - Medical assist, assist EMS crew	11/07/2019	5427 ARBORETUM TRL	EN20
2019-1361	651 - Smoke scare, odor of smoke	11/11/2019	886 HURLEY DR	DR24, CH2, CH20, LT20, EN21, EN22, EN23, EN24, E
2019-1362	324 - Motor vehicle accident with no injuries.	11/11/2019	2999 W COON LAKE RD	EN21,EN23
2019-1363	444 - Power line down	11/11/2019	1740 PEAVY RD	BR23,EN20
2019-1386	311 - Medical assist, assist EMS crew	11/18/2019	355 HARMON RD	BR20
2019-1389	745 - Alarm system activation, no fire - unintentional	11/18/2019	1699 DUTCHER RD	EN23
2019-1390	611 - Dispatched & cancelled en route	11/18/2019	1699 DUTCHER RD	CH2
2019-1392	746 - Carbon monoxide detector activation, no CO	11/19/2019	841 HURLEY DR	EN23
2019-1408	745 - Alarm system activation, no fire - unintentional	11/23/2019	56 S BURKHART RD	EN20
2019-1413	118 - Trash or rubbish fire, contained	11/24/2019	3738 COUNTY FARM RD	CH23,EN20
2019-1417	311 - Medical assist, assist EMS crew	11/25/2019	4964 YAX POINTE DR	BR23,FM2
2019-1418	140 - Natural vegetation fire, other	11/25/2019	1874 COUNTY FARM RD	BR23,CH23
2019-1419	736 - CO detector activation due to malfunction	11/25/2019	4846 W SCHAFFER RD	EN23,LT23
2019-1430	444 - Power line down	11/27/2019	3024 SESAME DR	BR23
2019-1431	445 - Arcing, shorted electrical equipment	11/27/2019	PINCKNEY RD	BR20
2019-1434	440 - Electrical wiring/equipment problem, other	11/27/2019	105 MARION MEADOWS DR	CH23,EN23
2019-1447	140 - Natural vegetation fire, other	11/29/2019	594 FOXFIRE DR	BR20
2019-1453	311 - Medical assist, assist EMS crew	11/30/2019	2876 CEDAR LAKE RD	BR23,LT23
2019-1455	631 - Authorized controlled burning	11/30/2019	2256 SEXTON RD	BR20,BR23
2019-1457	311 - Medical assist, assist EMS crew	11/30/2019	4404 SUNDANCE CIR	BR23,LT23

Total # Incidents for MARION:

24



**Township of Marion, Livingston**  
2877 W. Coon Lake Rd.  
Howell, MI 48843  
*(Effective January 1, 2020)*



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**PFEFFER • HANNIFORD • PALKA**  
*Certified Public Accountants*

John M. Pfeffer, C.P.A.  
Patrick M. Hanniford, C.P.A.  
Kenneth J. Palka, C.P.A.

Members:  
AICPA Private Practice Companies Section  
MACPA

225 E. Grand River - Suite 104  
Brighton, Michigan 48116-1575  
(810) 229-5550  
FAX (810) 229-5578

December 12, 2019

Marlon Township  
Board of Trustees  
2877 West Coon Lake Road  
Howell, Michigan 48843

Dear Honorable Board Members:

As you know the State of Michigan has over the last few years been making changes to the state chart of accounts with the goal to have a chart which will be used by all local governments for consistency purposes. The state has communicated to us the final chart should be complete by December 31, 2019.

We appreciate the opportunity to submit a proposal to assist your township in making the conversion from your current chart to the revised chart of accounts.

After reviewing your current chart and estimating the time it will take to make the conversion, we are submitting an estimated fee for the assistance in converting the chart of accounts.

We estimate the fee to be approximately \$6,825 for Marion Township. If our time will exceed this amount we will discuss this with management prior to incurring the time. Our hourly rate for this engagement is \$105 per hour.

The assistance includes working with your Officials and accountant in comparing your current chart to the revised chart submitted by the State. The process also includes giving suggestions as to how various costs will now need to be allocated in a more detailed manner (depending on how much is allocated currently). Since the Township uses Quick books, we will do the conversion for you in Quick books.

Thank you for this opportunity to assist the Township in converting the chart of accounts to the new required chart of accounts.

We look forward to discussing this with you.

Sincerely,

Kenneth Palka

MEMO

To: Marion Township Board  
 From: Bob Hanvey  
 Subject: Sewer refund request 2236 Crystal Court  
 Date: January 9, 2020

Mr. Kubiak is requesting a refund on his sewer bill for water used in his irrigation system that did not enter the sanitary sewer system. For six months usage he paid \$672.00 for sewer, most of which was for irrigation. He has not lived in the home long enough to establish a usage pattern to use to calculate a refund amount.

My suggestion is to use the flat rate billing amount to determine a reasonable refund. Six months of flat rate sewer is \$139.54. If we subtract that from what he paid his refund will be \$532.46. A refund should not be issued until he pays for an irrigation meter.

Posted	Action	Other Info	Read Type	Read	Usage	Amount	Balance
12/27/2019	Payment Posted	R19-095836		0.00	0.00	(\$740.88)	\$0.00
Item Name				Billed Usage		Amount	
MARS-Sewer Usage				80		(\$358.40)	
MMHW-Water Usage				80		(\$361.60)	
MSRS-Sewer RTS				0		(\$10.88)	
MWRS-1" Mtr RTS				0		(\$10.00)	
8/14/2019	Payment Posted	R19-085528		0.00	0.00	(\$650.88)	\$0.00
Item Name				Billed Usage		Amount	
MARS-Sewer Usage				70		(\$313.60)	
MMHW-Water Usage				70		(\$316.40)	
MSRS-Sewer RTS				0		(\$10.88)	
MWRS-1" Mtr RTS				0		(\$10.00)	



**Bob Hanvey**

---

**From:** Zack Kubiak [REDACTED]  
**Sent:** Friday, December 06, 2019 11:43 AM  
**To:** 'supervisor@mariontownship.com'  
**Cc:** 'Natasha Kubiak'  
**Subject:** ATTN Bob: Sewer rate adjustment

Good Morning Bob,

My name is Zack Kubiak. I spoke with you on the phone a few weeks back regarding my water bill and a potential adjustment.

My wife and I are seeking a sewer rate adjustment on our bill. We bought our house last year and were unaware that an irrigation meter was needed. When we purchased our lawn this summer we were frequently watering to ensure the growth of the newly purchased sod and were not aware that we would be paying for sewer water due to not having the irrigation meter installed.

My wife and I are planning to purchase an irrigation meter and have it installed to avoid this issue moving forward. I recently spoke to Carol at MHOG and she explained to me that if my wife and I would have been aware of the necessity of a second meter, we could have saved roughly \$600 on the invoices we have paid thus far.

We would really appreciate if you and the board of Marion Township could consider an adjustment/credit to our water account dating back to our summer bill. Between my wife and myself we currently are only utilizing a standard amount of water each quarter in our household and are not using an excessive amount of water that would result in a high bill.

Thank you for your time and I hope you can help us out in any way possible.

Thanks,

**Zack Kubiak**

MEMO

To: Marion Township Board  
From: Bob Hanvey  
Subject: Water service line installation for Magnuson (Best Western)  
Date: January 9, 2020

The property owner has paid-in-full for 26 REUs for the hotel but there is no service line at that location on the west side of D-19. Our normal procedure is to bring the service to the property line at Township expense.

I am requesting authorization to arrange with MHOG to tap the water main on the east side of D-19 and bore under the road to the property line on the west side of the road to be paid by the Township Water New User Fund.

MEMO

To: Marion Township Board  
From: Bob Hanvey  
Subject: Poverty Exemptions and Board of Review letter appeals for residents  
Date: January 9, 2020

The Township Board has to approve Poverty Exemption Guidelines for 2020. The attached resolution is proposed for 2020. The Guidelines set by the Township **shall not be set lower** than the Federal Poverty Guidelines. The attached resolution uses those guidelines but has been modified by moving the dollar amounts up one level from the Federal Guidelines.

The Guidelines **shall** also include an asset level test. An asset test means the amount of cash, fixed assets or other property that could be used, or converted to cash for use in the payment of taxes. The proposed Guidelines are the same as last years at Marion Township.

Also attached is a proposed resolution is to allow Marion Township residents to appeal to the Board of Review by written letter. Non-resident property owner letter appeals are allowed by statute.

**RESOLUTION TO ADOPT POVERTY EXEMPTION POLICY AND GUIDELINES  
FOR 2019 INCOME AND ASSET TESTS**

RESOLUTION #2020-nn  
January 9, 2020

\_\_\_\_\_ motioned to adopt a resolution to set the following policy and guidelines for 2020 Poverty Exemptions, Seconded by \_\_\_\_\_

In order to qualify for a poverty exemption, property owners must submit an application using the form attached to this resolution. The Board of Review shall consider the income and asset guidelines listed below. Applicants exceeding the guidelines in one of the tests may qualify for partial exemptions if they have shortages in the other test.

Income Test: The income guidelines shall be the adjusted Federal Poverty Guidelines as follows:

<u>Size of Family Unit</u>	<u>Poverty Guidelines</u>
1	\$16,910
2	\$ 21,330
3	\$ 25,750
4	\$ 30,170
5	\$ 34,590
6	\$ 39,010
7	\$ 43,430
8	\$ 47,850
For each additional person	\$ 4,420

Asset Test: To be eligible for a 100% poverty exemption for 2020, residents shall have a maximum of \$50,000 in net assets, excluding their principal residence, retirement accounts, and accounts having a substantial penalty for withdrawals.

Upon roll call vote, the following voted "Aye":

The following voted "Nay":

The following abstained:

Resolution

The supervisor declared the motion

I, the undersigned, the duly qualified and acting Clerk for the Township of Marion, Livingston County, Michigan, DO HEREBY CERTIFY that the foregoing is a true and complete copy of certain proceedings taken by the Board of Trustees at a meeting held on the 9th day of January 2020, and further certify that the above Resolution was adopted at said meeting.

\_\_\_\_\_  
Marion Township Clerk

\_\_\_\_\_  
Date

RESOLUTION TO ALLOW RESIDENTS TO FILE LETTER APPEALS  
TO THE BOARD OF REVIEW FOR 2020

RESOLUTION #2020-nn  
January 9, 2020

\_\_\_\_\_ motioned to adopt a resolution to set the following policy for 2020 Letter Appeals to the Board of Review, Seconded by \_\_\_\_\_

Marion Township property owners may file an appeal of the assessed value of their real or personal property by written letter to the Board of Review for consideration. The letter will preserve their right to appeal to the Michigan Tax Tribunal. The letter must arrive at the township by noon on the last day of the final scheduled Board of Review hearings.

Upon roll call vote, the following voted "Aye":

The following voted "Nay":

The following abstained:

Resolution

The supervisor declared the motion

I, the undersigned, the duly qualified and acting Clerk for the Township of Marion, Livingston County, Michigan, DO HEREBY CERTIFY that the foregoing is a true and complete copy of certain proceedings taken by the Board of Trustees at a meeting held on the 9th day of January 2020, and further certify that the above Resolution was adopted at said meeting.

\_\_\_\_\_  
Marion Township Clerk

\_\_\_\_\_  
Date

MEMO

To: Marion Township Board  
From: Bob Hanvey  
Subject: Board of Review member training  
Date: January 9, 2020

Attached is a letter from MTA about changes to assessing that will require training for Board of Review members. This topic may be included in the audit for Livingston County units that will be conducted during 2020.

As of now, one of our regular BOR members will not be able to attend classroom training for the 2020 assessing year. If the requirement is enforced prior to the March Board of Review meetings, our alternate who did attend training will be called on to sit in place of the regular member that did not attend training.

If the STC determines that training other than in-person classroom training will be adequate the alternate may not be needed.

[Reply to Group](#)

[Reply to Sender](#)



Dec 20, 2019 3:16 PM

Cindy Dodge

MTA is meeting regularly with the State Tax Commission regarding the process for implementing all the changes from the Assessing Reform. The details for what it will mean for BOR members to be trained has not been determined yet, so we don't have any answers to the questions you have posed other than it will likely not be required until 2021 when the BOR are appointed to a new term of office.

These topics and more will be discussed at upcoming MTA trainings in January and February. In January, there will be three locations with a workshop on the Board's role and responsibilities to the BOR. In February, BOR training will be held at 14 sites across the state. For more information and registration see link below:

[www.michigantownships.org/upcoming\\_train.asp](http://www.michigantownships.org/upcoming_train.asp)

-----  
Cindy Dodge  
Member Information Liaison  
Michigan Townships Association  
Lansing MI  
-----

MEMO

To: Marion Township Board  
From: Bob Hanvey  
Subject: Cell Tower Lease  
Date: January 9, 2020

Attached for review and comment are several documents related to our current cell tower lease. These documents have not been reviewed by our attorney. These offers are from the current lease holder.

The first document is an email summarizing the two proposed modifications.

The second is a more formal proposal for a lease extension.

The third is the page from our current lease that includes paragraph 22 that is referred to in paragraph 3 in the document above.

The fourth is a more formal proposal for a lease buyout.

The fifth is a comparison of lease rates in the area.



**Bob Hanvey**

---

**From:** Dinning, Pat <Patricia.Dinning@crowncastle.com>  
**Sent:** Friday, December 13, 2019 12:06 PM  
**To:** supervisor@mariontownship.com  
**Subject:** Marion Township, MI Ground Lease Extension 843372  
**Attachments:** 843372 Marion Township, MI Term Extension Letter.pdf; 843372 Marion Township, MI Area Rents.pdf; 843372 Marion Township, MI Easement Purchase.pdf

Hi Bob,

Happy Friday! It was good to meet you over the phone this week.

Attached and below are the two options I mentioned, a regular term extension and a perpetual easement purchase. If these are not of interest we can also extend the term and prepay a portion or all of the lease or a fee simple purchase of our area.

Term Extension:

- Add six 5-year automatic options to extend the term. The additional term will provide the following:
  - Long term revenue for the Township.
  - The Term in a ground lease is critical in keeping and attracting additional carriers (co-locators) on the tower, they prefer terms of 40 plus years.
- Additional 15% base rent increase at the start of the extended term in addition to the 15% scheduled increase.
- Remove the separate ground lease requirement in Section 22.
  - The carriers do not like having two separate agreements and will likely choose another nearby site.
  - They prefer to have us handle thru one lease.
  - Speeds the carrier's "time to air" which is critical to deliver high quality coverage to their customers.
- Replace the separate ground lease requirement with 30% revenue share for each future subtenant.
  - This provision is the fastest way to increase the Townships revenue.
- Business Summary Report
  - Once per year the Township can request this report to ensure they are receiving the correct revenue share payment.
  - To request contact our Land Owners Help Desk; LOHD@crowncastle.com
- Add an option for up to 1,000 SF of additional land for the new subtenant.
  - This lets the carrier know that they can get the land they needed quickly.
- Add Competitor Right of First Refusal.
  - If another wireless telecommunications person or entity makes you an offer to buy your interest in the lease or property, you would provide us the opportunity to meet those terms and purchase it directly from you. We prefer to keep our relationship directly with you our landlord, not an unknown third party.
- \$10,000 signing bonus.
  - As appreciation for working with us on the above changes.

The other method is for us to purchase a perpetual easement.

- \$380,000 lump-sum payment.

In addition, Crown will buy-out your exiting ground lease that is associated with this site.

In both scenarios, Crown Castle will prepare the agreements for your review and signature in addition to any other necessary documents (i.e. title work, survey) at our cost.

Please let me know if you have any questions regarding the options above.

Once the Township has made a decision on which method they prefer, please sign the corresponding letter attached. I will then submit it to our property committee for approval here and have our legal group prepare the associated documents for your review, final approval and signature.

Thanks for your help with this Bob.

Have a good weekend.

*Pat*

**PATRICIA L. DINNING, CCIM**  
Government Site Lease Specialist  
T. 941-309-1614  
[Patricia.Dinning@CrownCastle.com](mailto:Patricia.Dinning@CrownCastle.com)

**CROWN CASTLE**  
301 N. Cattlemen Road, Suite 200  
Sarasota, FL 34232  
[www.CrownCastle.com](http://www.CrownCastle.com)

This email may contain confidential or privileged material. Use or disclosure of it by anyone other than the recipient is unauthorized. If you are not an intended recipient, please delete this email.

DOC 2



Crown Castle  
301 North Cattlemen Road, Ste 200  
Sarasota, FL 34232

Tel: 941.309-1614  
[Patricia.Dinning@CrownCastle.com](mailto:Patricia.Dinning@CrownCastle.com)  
[www.crowncastle.com](http://www.crowncastle.com)

December 12, 2019

Sent via e-mail to: [supervisor@mariontownship.com](mailto:supervisor@mariontownship.com)  
Phone: 517- 546-1588

Bob Harvey  
Township Supervisor  
Marion Township  
2877 W. Coon Lake Road  
Howell, MI 48843

RE: Business Unit # 843372  
Site Name: Marion Township  
Site Address: 2861 West Coon Lake Road

Current Lease: By and between, NCWPCS MPL 31 – Year Sites Tower Holdings LLC, a Delaware limited liability company, by; CCATT LLC, a Delaware limited liability company, its Attorney-in-Fact, (“Lessee”) and Marion Township, a Michigan Municipal Corporation, Howell, MI (“Lessor”), for a 900 square foot leased area upon which a cell tower has been erected.

Revised Lease terms:

1. The Lease currently provides for two (2) remaining five (5) year renewal terms. That Lease section will be amended to provide that the remaining term of the Lease will be extended, in addition to the above-mentioned renewal terms, by an additional six (6), five (5) year automatic renewal terms. The new final Lease expiration date will be November 30, 2063. The base rent shall continue to adjust by 15% per five-year term pursuant to the terms of the lease,
2. On December 1, 2033 the monthly rent shall increase one-time by an amount equal to fifteen percent (15%) of the monthly rent in effect for the immediately preceding month (“One-Time Rent Increase”) in addition to the regular percentage rent increase that is scheduled to occur pursuant to the Lease on the same date (“Regular Rent Escalation”). The Regular Rent Escalation shall be applied first, and then the One-time Rent Increase shall be applied after the rent is increased pursuant to the Regular Rent Escalation.
3. Delete Section 22 of the Lease Agreement dated November 6, 2003 and replace with the following:

In addition to the rent currently paid by Lessee to Lessor pursuant to the Lease, as further consideration for the right to exclusively use and lease the Property, if, after full execution of the Lease Amendment, Lessee subleases, licenses or grants a similar right of use or occupancy in the Property to an unaffiliated third party not already a subtenant on the Property (each a “Future Subtenant”), Lessee agrees to pay to Lessor thirty percent (30%) of the rental, license or similar payments actually received by Lessee from such Future Subtenant (excluding any reimbursement of taxes, construction costs, installation costs, or revenue share reimbursement) (the “Additional Rent”)

within thirty (30) days after receipt of said payments by Lessee. Lessee shall have no obligation for payment to Lessor of such share of rental, license or similar payments if not actually received by Lessee. Non-payment of such rental, license or other similar payment by a Future Subtenant shall not be an event of default under the Lease. Lessee shall have sole discretion as to whether, and on what terms, to sublease, license or otherwise allow occupancy of the Property. There shall be no express or implied obligation for Lessee to sublease, license or otherwise allow occupancy of the Property. Notwithstanding anything in this paragraph to the contrary, the parties agree and acknowledge that revenue derived from subtenants and any successors and/or assignees of such subtenants who commenced use and/or sublease of the Property prior to execution of the Lease Amendment shall be expressly excluded from the Additional Rent and Lessor shall have no right to receive any portion of such revenue. Lessee will have the right to sublease or license use of the Property without the consent or approval of Lessor. Lessee shall provide written notice to Lessor within sixty (60) days after such sublease or license is fully executed.

4. Once per calendar year, Lessor may submit a written request to Lessee for a business summary report pertaining to Lessee's rent obligations for Future Subtenants (as defined herein) for the prior twelve (12) month period, and Lessee shall provide such written report to Lessor within sixty (60) days after Lessee's receipt of such written request. Lessor shall send such written request to the Notice address set forth in the Lease Amendment.
5. As further consideration for Lessee entering into the Lease Amendment, during the term of the Lease, Lessee shall have an irrevocable option ("Option") to lease up to a maximum of 1,000 additional square feet of real property adjacent to the existing lease area at a location to be determined at Lessee's sole discretion ("Additional Lease Area") on the same terms and conditions set forth in the Lease. If Lessee elects to exercise the Option, Lessee shall pay no additional rent for the Additional Lease Area than for the existing lease area at the time Lessee exercises the Option. Lessee may exercise the Option by providing written notice to Lessor at any time. Within 30 days after Lessee's exercise of the Option, Lessor shall execute and deliver an amendment to the Lease, a memorandum of lease and/or amendment, and any other documents necessary to grant and record Lessee's interest in the Additional Lease Area. In addition, within 30 days after Lessee's exercise of the Option, Lessor shall obtain and deliver any documentation necessary to free the Additional Lease Area from any mortgages, deeds of trust, liens or encumbrances.
6. If Lessor receives an offer from any person or entity that owns towers or other wireless telecommunications facilities (or is in the business of acquiring Lessor's interest in the Lease) to purchase fee title, an easement, a lease, a license, or any other interest in the lease area, or Lessor's interest in the Lease, or an option for any of the foregoing, Lessor shall provide written notice to Lessee of said offer, and Lessee shall have a right of first refusal to acquire such interest on the same terms and conditions in the offer, excluding any terms or conditions which are (i) not imposed in good faith or (ii) directly or indirectly designed to defeat or undermine Lessee's possessory or economic interest in the Property
7. Lessee will pay to Lessor a one-time amount of Ten Thousand Dollars (\$10,000.00) for the full execution of the Lease Amendment within sixty (60) days of the full execution of the Lease Amendment ("Conditional Lease Amendment Signing Bonus"). In the event that the Lease Amendment (and any applicable memorandum of lease and/or amendment) is not fully executed by both Lessor and Lessee for any reason, Lessee shall have no obligation to pay the Conditional Lease Amendment Signing Bonus to Lessor.
8. All other Lease terms will remain the unchanged.

Upon receipt of this document evidencing Lessor's acceptance of the revised Lease terms herein, Lessee shall submit these terms to its property committee. Upon approval by its property committee, Lessee shall prepare a Lease Amendment that incorporates the terms and conditions described in this document. In connection therewith, the parties acknowledge and agree that this document is intended to summarize the terms and conditions to be included in the Lease Amendment. Upon receipt of a satisfactory Lease Amendment, Lessor hereby agrees to execute the Lease Amendment without any unreasonable delay. Neither party will be bound by the terms set forth herein until the Lease Amendment is fully executed.

If this document accurately sets forth our understanding regarding the foregoing, please so indicate by signing and returning to Lessee via e-mail to [Patricia.Dinning@CrownCastle.com](mailto:Patricia.Dinning@CrownCastle.com).

Lessor:  
Marion Township,  
a Michigan Municipal Corporation  
Howell, MI

\_\_\_\_\_

Dated \_\_\_\_\_

\_\_\_\_\_  
Print Name

Lessee:  
NCWPCA MPL 31- Year Sites Tower Holdings LLC,  
a Delaware limited liability company

By: CCATT LLC,  
a Delaware limited liability company,  
its Attorney-in-Fact

\_\_\_\_\_  
Heather Chadwick, Acquisition Manager

Dated: \_\_\_\_\_

expenses, prepaid Rent, and business dislocation expenses, provided that any award to Tenant will not diminish Landlord's recovery. Tenant will be entitled to reimbursement for any prepaid Rent on a prorata basis.

20. **CASUALTY.** Landlord will provide notice to Tenant of any casualty affecting the Property within seventy two (72) hours of the casualty. If any part of the Communication Facility or Property is damaged by fire or other casualty so as to render the Premises unsuitable, in Tenant's sole determination, then Tenant may terminate this Agreement by providing written notice to the Landlord, which termination will be effective as of the date of notice of termination; provided, however there will be no termination of this Agreement if such fire or other casualty was the result of any act, neglect or omission of Tenant, ant successor, assign, agent, employee, contractor, subcontractor or sublessee of Tenant. Upon such termination, Tenant will be entitled to collect all insurance proceeds payable to Tenant on account thereof and to be reimbursed for any prepaid Rent on a prorata basis and excepting therefrom any insurance proceeds to which Landlord would be entitled under this Agreement or any policy of insurance insuring Landlord's interest in the Property or leased Premises.

21. **WAIVER OF LANDLORD'S LIENS.** Landlord waives any and all lien rights it may have, statutory or otherwise, concerning any property belonging to Tenant that comprises the Communication Facility or any portion thereof. The Communication Facility shall be deemed personal property for purposes of this Agreement, regardless of whether any portion is deemed real or personal property under applicable law. Landlord consents to Tenant's right to remove all or any portion of the Communication Facility from time to time provided such removal is in accordance with this lease or any amendment thereto.

22. **COLLOCATION.** Tenant shall notify Landlord in writing of all requests for tower collocation. Any party requesting tower collocation shall be required to execute a ground lease with Landlord and a separate tower/structure collocation agreement with Tenant. The ground lease with Landlord shall be executed prior to execution of the tower/structure collocation agreement with Tenant.

23. **MISCELLANEOUS.**

(a) **Amendment/Waiver.** This Agreement cannot be amended, modified or revised unless done in writing and signed by an authorized agent of the Landlord and an authorized agent of the Tenant. No provision may be waived except in a writing signed by both parties.

(b) **Memorandum/Short Form Lease.** Either party will, at any time upon fifteen (15) business days prior written notice from the other, execute, acknowledge and deliver to the other a recordable Memorandum or Short Form of Lease. Either party may record this Memorandum or Short Form of Lease at any time, in its absolute discretion.

(c) **Bind and Benefit.** The terms and conditions contained in this Agreement will run with the Property and bind and inure to the benefit of the parties, their respective heirs, executors, administrators, successors and assigns.

(d) **Entire Agreement.** This Agreement and the exhibits attached hereto, all being a part hereof, constitute the entire agreement of the parties hereto and will supersede all prior offers, negotiations and agreements with respect to the subject matter of this Agreement.

(e) **Governing Law.** This Agreement will be governed by the laws of the state in which the Premises are located, without regard to conflicts of law.

(f) **Interpretation.** Unless otherwise specified, the following rules of construction and interpretation apply: (i) captions are for convenience and reference only and in no way define or limit the construction of the terms and conditions hereof; (ii) use of the term "including" will be interpreted to mean "including but not limited to"; (iii) whenever a party's consent is required under this Agreement, except as otherwise stated in the Agreement or as same may be duplicative, such consent will not be unreasonably withheld, conditioned or delayed; (iv) exhibits are an integral part of the Agreement and are incorporated by reference into this Agreement; (v) use of the

DOC 4



Crown Castle  
301 North Cattlemen Road, Ste 200  
Sarasota, FL 34232

Tel: 941.309-1614  
Patricia.Dinning@CrownCastle.com  
[www.crowncastle.com](http://www.crowncastle.com)

December 12, 2019

Sent via e-mail to: [supervisor@mariontownship.com](mailto:supervisor@mariontownship.com)  
Phone: 517- 546-1588

Bob Hanvey  
Township Supervisor  
Marion Township  
2877 W. Coon Lake Road  
Howell, MI 48843

RE: Business Unit # 843372  
Site Name: Marion Township  
Site Address: 2861 West Coon Lake Road

This letter agreement ("Letter Agreement") sets forth the terms of the agreement related to the acquisition of a perpetual easement ("Transaction") by Global Signal Acquisitions IV LLC, a Delaware limited liability company ("Grantee") from Marion Township, a Michigan Municipal Corporation ("Grantor"), over a 1,900 square foot parcel of real estate identified by Grantee as the above Business Unit located in Howell, Livingston County, Michigan, together with access and utilities easements ("Property"). The Property will be clarified by the Survey (as defined below).

For and in consideration of Fifty Dollars (\$50.00) to be paid by Grantee to Grantor within thirty (30) days after full execution of this Letter Agreement, the parties agree as follows:

1. Grantor shall convey to Grantee a perpetual easement for a communications facility, over, under and across the Property (including easements for 24 hrs. a day/7 days a week access and utilities) for a purchase price of Three Hundred Eighty Thousand Dollars (\$380,000.00) ("Purchase Price"). Grantor shall convey the easement to Grantee pursuant to a Grant of Easement and Assignment of Lease ("Agreement") prepared by Grantee.
2. Currently Grantor and NCWPCS MPL 31 – Year Sites Tower Holdings LLC, a Delaware limited liability company, by CCATT LLC, a limited liability company, Its Attorney in Fact are parties to a lease dated November 6, 2003 for approximately 900 square feet of Grantor's property (Lease). The parties agree that the Property being granted pursuant to the Agreement shall include said 900 square feet plus an additional 1,000 square feet of Grantor's property for a total of 1,900 square feet, all of which shall be described and shown on the Survey. As further consideration of the Purchase Price, Grantor will assign to Grantee its interest in the Lease. The defined term "Transaction" as used in this Letter Agreement shall include the assignment of Grantor's interest in the Lease. If applicable, at the closing of the Transaction, the Purchase Price shall be reduced by an amount equal to the portion of any rent or other payments previously paid to Grantor pursuant to the Lease for any period of time after the closing of the Transaction.

3. Consummation of the Transaction will be subject to:
  - a. approval of this Letter Agreement by Grantee's property committee;
  - b. the execution and delivery by Grantor of all forms required by applicable taxing authorities, and any documents required by Grantee's title insurer evidencing the authority of the party executing such documents on Grantor's behalf;
  - c. performance by Grantee of environmental screening of the Property's soil conditions with results satisfactory to Grantee and its lender;
  - d. receipt by Grantee of a survey in form and substance satisfactory to Grantee ("Survey"); and,
  - e. Grantee's receipt of a title commitment with respect to the Property, to be obtained, stating that Grantor has good, indefeasible and marketable fee simple title to the Property, free and clear of all liens and encumbrances except such matters as may be acceptable to Grantee.
4. Upon satisfaction of the contingencies described in Section 3 of this Letter Agreement to Grantee's sole satisfaction, the parties shall execute the Agreement.
5. From the date of this Letter Agreement until the Agreement is fully executed, Grantor shall not directly or indirectly solicit, initiate or encourage submission of proposals or offers relating to any disposition or encumbrance of the Property in whole or in part and shall not transfer or encumber the Property in whole or in part.
6. Irrespective of whether the Transaction is consummated, Grantee and Grantor each will pay its own out-of-pocket expenses.
7. Notwithstanding anything to the contrary contained herein, Grantee has the complete right to terminate this Letter Agreement prior to closing without damages.
8. Grantor shall cooperate in all ways, including but not limited to providing information, signing documents and seeking execution by third parties of documents that will remove, subordinate or satisfy any mortgages, deeds of trusts, liens or other encumbrances affecting the Property.
9. Grantor agrees that the information contained in this Letter Agreement and other information conveyed by Grantee to Grantor concerning the Transaction, whether written or oral, constitutes confidential information that will not be disclosed without the prior written consent of Grantee.



10. Grantor acknowledges that the Grantee does not provide tax advice, and that the Grantor shall be responsible for any income tax liability incurred by Grantor as a result of the Transaction. Grantor understands that it should consult its own tax and/or accounting professional regarding tax-related questions.
11. The Agreement shall include a legal description of the Property to be inserted by Grantee upon Grantee's receipt of the Survey.
12. Grantor represents and warrants that:
  - a. Grantor is duly authorized and has the full power, right and authority to enter into this Letter Agreement, and subject to the following item 11.b., to perform Grantor's obligations herein;
  - b. Grantor understands that if the Property is subject to a mortgage, deed of trust or is otherwise used as collateral for a loan, then the consent of Grantor's lender to the Transaction is probably required. Grantor understands that if such consent is required then failure to obtain such consent could place Grantor in default of such loan and subject the Property to foreclosure by such lender. Grantor hereby holds harmless Grantee from any cost, damage or liability which Grantor may incur as a result of closing this Transaction without such consent;
  - c. Grantor has no knowledge of any pending or threatened condemnation proceedings or other similar proceedings relating to the Property;
  - d. Grantor has no knowledge of any special or general assessment levied, pending or threatened against the Property;
  - e. There is no litigation or proceedings pending, or to Grantor's knowledge threatened, against or relating to the Property in whole or in part;
  - f. Grantor agrees that Grantee may, but shall not be obligated to, extend any time periods set forth herein in order to (a) determine whether these representations and warranties are true and correct and (b) permit Grantor to perform any corrective actions necessary to make such representations and warranties true and correct as of the closing; and,
  - g. From the date of this Letter Agreement through the date that Grantor executes the Agreement, Grantor shall use its best efforts to ensure that the foregoing representations and warranties shall remain true and correct and Grantor shall promptly notify Grantee if any representation or warranty is or possibly may not be true or correct. Grantor's representations, warranties and covenants shall survive the closing.

If this Letter Agreement accurately sets forth our understanding regarding the foregoing, please so indicate by signing and returning to the undersigned the enclosed copy of this letter.

Grantor:  
Marion Township,  
a Michigan Municipal Corporation,  
Howell, MI

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

Grantee:  
Global Signal Acquisitions IV LLC,  
a Delaware limited liability company

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

Doc 5

Alternate Site Distance	Leased Area Sq Ft	Base Rent Expense (Monthly)	Rev Share Expense (Monthly)	Total Rent Expense	Price Per Sq Ft	License Count	Structure Type	Tower Height w/Out Appurt
MARION TOWNSHIP	900	\$2,281.31	\$0.00	\$2,281.31	\$2.53	2	MONOPOLE	194.00
6	10,000	\$976.95	\$0.00	\$976.95	\$0.10	2	MONOPOLE	195.00
7	10,000	\$1,021.47	\$0.00	\$1,021.47	\$0.10	1	MONOPOLE	170.00
8	5,625	\$665.50	\$0.00	\$665.50	\$0.12	2	MONOPOLE	190.08
8	1,232	\$1,923.28	\$0.00	\$1,923.28	\$1.56	3	MONOPOLE	180.92
10	3,600	\$1,028.50	\$0.00	\$1,028.50	\$0.29	1	MONOPOLE	190.00
11	2,400	\$2,600.00	\$0.00	\$2,600.00	\$1.08	1	MONOPOLE	165.00
11	2,500	\$1,425.76	\$0.00	\$1,425.76	\$0.57	2	MONOPOLE	159.00
12	20,000	\$1,356.82	\$0.00	\$1,356.82	\$0.07	1	SELF SUPPORT	250.00
12	5,663	\$1,641.60	\$0.00	\$1,641.60	\$0.29	3	MONOPOLE	180.00
12	5,625	\$1,322.50	\$0.00	\$1,322.50	\$0.24	1	MONOPOLE	191.00
13	2,500	\$1,046.72	\$1,827.43	\$2,874.15	\$0.42	3	SELF SUPPORT	220.00
13	10,000	\$913.08	\$0.00	\$913.08	\$0.09	1	MONOPOLE	190.00
13	10,000	\$1,402.81	\$0.00	\$1,402.81	\$0.14	1	SELF SUPPORT	242.33
13	1,600	\$1,267.39	\$0.00	\$1,267.39	\$0.79	1	MONOPOLE	150.00
13	2,500	\$3,258.35	\$0.00	\$3,258.35	\$1.30	1	MONOPOLE	145.00
13	5,625	\$1,378.64	\$0.00	\$1,378.64	\$0.25	1	MONOPOLE	195.00
16	2,640	\$1,692.73	\$0.00	\$1,692.73	\$0.64	1	MONOPOLE	150.50
16	5,625	\$1,302.44	\$300.00	\$1,602.44	\$0.23	2	MONOPOLE	183.00

MEMO

To: Marion Township Board  
From: Bob Hanvey  
Subject: Township wide computer upgrades  
Date: January 9, 2020

We need to approve purchasing computers from I.T.RIGHT so we can complete the upgrade to Microsoft Windows 10. We previously approved them as the vendor for the upgrade.

Attached are two quotes, one for the server and one for the twelve workstations. Two of our older workstations failed in December and were already replaced.

The quote for the server needs to be modified to remove line 5, the APC battery backup. We have one that has had the batteries replaced recently and will work fine with the new server.

The quote for the workstations needs to be modified to change line 2 from quantity 12 to 10, the units on the counters do not need Microsoft Office. We need to add to the quote four monitors for users that frequently have multiple applications in use.

The failure and replacement of the two units last provided us an opportunity to test Microsoft Windows 10 and everything worked fine. Those two units were purchased as emergency replacements.

I am requesting a resolution for a budget modification for account 6903-797, Computers/Software from \$20,000 to \$25,000, and authorization to purchase the computer upgrades from I.T.RIGHT as on the attached quotes, modified as described above, not to exceed \$20,000.

# I.T. RIGHT

**Information Technology Solutions that  
Work for Local Government**

5815 East Clark Rd Suite G  
Box 160  
48808 Bath  
United States

## QUOTE

Number ITRQ16073

Date Dec 19, 2019

### Sold To

**Marion Township**  
Bob Hanvey  
2877 W. Coon Lake Rd  
48843 Howell  
48843

**Phone** 517-546-1588  
**Fax** 517-546-6622

### Ship To

**Marion Township**  
Bob Hanvey  
2877 W. Coon Lake Rd  
48843 Howell  
48843

**Phone** 517-546-1588  
**Fax** 517-546-6622

### From The Desk Of



**mallen**  
855-487-4448  
mallen@itright.com

Here is the quote you requested.

Terms	P.O. Number	Ship Via
-------	-------------	----------

Line	Qty	Description	Unit Price	Ext. Price
1	1	Server Basic: Quad-Core Intel® Xeon® Processor E3-1220 v6 3.00GHz 8MB Cache (72W) Supermicro SNK-P0046A4 Heatsink Supermicro X11SSL-CF - uATX - Intel® C232 Chipset - 6x SATA/SAS - LSI 3008 12Gb/s SAS3 - Dual Intel® 1-Gigabit Ethernet (RJ45) SAMSUNG 16GB PC4-19200 2400MH Supermicro SuperChassis 733TQ-665B - Mid-Tower - 4 x 3.5" SAS/SATA - 665W 2 x 256GB Micron M1100 2.5" SATA 6.0Gb/s Solid State Drive LG 24x Super Multi DVD+/-RW with M-DISC (SATA) Microsoft Windows Server 2019 Standard (16-core) System Assembly and Testing 3 Year Advanced Parts Replacement Warranty	\$2,600.00	\$2,600.00
2	1	Samsung 16GB DDR4 SDRAM Memory Module - 16 GB (1 x 16 GB) - DDR4 SDRAM - 2133 MHz DDR4-2133/PC4-17000 - 1.20 V - ECC - Unbuffered - 288-pin - DIMM - Server RAM	\$250.00	\$250.00
3		(32gb total)		
4	2	4TB Sata	\$285.00	\$570.00
5	1	APC by Schneider Electric Smart-UPS C 1000VA LCD 120V with SmartConnect - External - 3 Hour Recharge - 9.20 Minute Stand-by - 120 V AC Input - 120 V AC Output - 8 x NEMA 5-15R	\$322.00	\$322.00

\* For orders over \$5000, payment for the hardware/software is required prior to processing the order.

Line	Qty	Description	Unit Price	Ext. Price
6	12	Labor	\$150.00	\$1,800.00
7		20% Discounted Labor		-\$360.00

\* For orders over \$5000, payment for the hardware/software is required prior to processing the order.

Please contact me if I can be of further assistance.

<b>SubTotal</b>	\$5,182.00
<b>Tax</b>	\$0.00
<b>Shipping</b>	\$0.00
<b>Total</b>	<b>\$5,182.00</b>

\* For orders over \$5000, payment for the hardware/software is required prior to processing the order.

# I.T. RIGHT

**Information Technology Solutions that  
Work for Local Government**

5815 East Clark Rd Suite G  
Box 160  
48808 Bath  
United States

## QUOTE

**Number** ITRQ16072  
**Date** Dec 19, 2019

### Sold To

**Marion Township**  
Bob Hanvey  
2877 W. Coon Lake Rd  
48843 Howell  
48843

**Phone** 517-546-1588  
**Fax** 517-546-6622

Here is the quote you requested.

### Ship To

**Marion Township**  
Bob Hanvey  
2877 W. Coon Lake Rd  
48843 Howell  
48843

**Phone** 517-546-1588  
**Fax** 517-546-6622

### From The Desk Of



**mallen**  
855-487-4448  
mallen@itright.com

Terms	P.O. Number	Ship Via
-------	-------------	----------

Line	Qty	Description	Unit Price	Ext. Price
1	12	PC Mid-range: - ASUS PRIME H310M-A - mATX - Intel H310 Chipset - 4x SATA3 6Gb/s - 1x M.2 - Six-Core Intel Core i5-9400 2.90GHz 9MB Cache - CRUCIAL 8GB PC4-19200 2400MHz - In Win Z589 - mATX Mini Tower - USB 3.0 - 350 Watt Power Supply - Black - Included Power Supply (Chassis must include power to select this option) - 250GB Crucial MX500 M.2 SATA 6.0Gb/s Solid State Drive - LG 24x Super Multi DVD+/-RW with M-DISC (SATA) - Integrated Video (Included with Motherboard) - Logitech Desktop MK120 Keyboard and Mouse - Microsoft Windows 10 Professional with Recovery Partition and DVD (DPK) (OA) - Three Year Warranty with Advanced Parts Replacement and RSL - Embed Serial # in BIOS via ASUS Tool	\$780.00	\$9,360.00
2	12	Office Home & Business 2019 Microsoft Corporation One-time purchase for 1 PC or Mac Classic 2019 versions of Word, Excel, PowerPoint, OneNote, and Outlook	\$249.00	\$2,988.00

\* For orders over \$5000, payment for the hardware/software is required prior to processing the order.

Line	Qty	Description	Unit Price	Ext. Price
* For orders over \$5000, payment for the hardware/software is required prior to processing the order.			<b>SubTotal</b>	\$12,348.00
Please contact me if I can be of further assistance.			<b>Tax</b>	\$0.00
			<b>Shipping</b>	\$0.00
			<b>Total</b>	<b>\$12,348.00</b>

\* For orders over \$5000, payment for the hardware/software is required prior to processing the order.



MEMO

To: Marion Township Board  
From: Bob Hanvey  
Subject: Intergovernmental agreement for Paul Marie Properties  
Date: January 9, 2020

The agreement we approved at the last meeting required some changes since the sewer line that will be used is not in Genoa Township jurisdiction as the result of the Act 425 agreement between the township and the City of Howell that transferred the property into the city. The sewer line remained in the control of the Genoa-Oceola Sewer and Water Authority.

We also decided to include the legal description, aerial photo, and provisions for dividing the property.

We need a resolution to approve the agreement and authorize the Supervisor and Clerk to sign it.

**AGREEMENT**

**PREAMBLE**

This Agreement (“Agreement”) is effective the \_\_\_\_ day of \_\_\_\_\_, 2020 by and between the Marion Township (“Marion Township”), a Michigan municipal corporation, with offices at 2877 W. Coon Lake Road, Howell MI 48843, Genoa-Oceola Sewer and Water Authority (“Authority”), a Michigan municipal corporation, with offices at 2911 Dorr Road, Brighton, MI 48116 and Paul Marie Properties, L.L.C. a Michigan Company, whose offices are located at 2000 N. Burkhart Road, Howell, MI 48855. The property benefitted by this agreement is located on Lucy Road in Marion Township, Tax ID code 4710-01-200-024 (the “Property”) a legal description and physical map, a copy of which is provided in Attachment A. The following recitals are incorporated into this Agreement.

**RECITALS**

- A. The Authority owns a public sewer system that services properties in Genoa and Oceola Townships.
- B. The Property is located in Marion Township.
- C. The Authority sewer main is located directly proximate to the Property.
- D. Paul Marie Properties desires to connect and purchase sanitary sewer from the Authority
- E. The Townships are authorized by Public Act 35 of 1951, as amended, and Public Act 107 of 1941, as amended, to enter into agreements to receive services from another municipality.
- F. The Authority and Marion Township agree that providing sanitary service to Paul Marie Properties is in best interest of all parties.

NOW, THEREFORE, in consideration of the promises and covenants of each other, the parties agree as follows:

1. Following purchase of capacity through the Authority, Paul Marie Properties shall pay for and construct a sanitary service under Lucy Road and connect in the vicinity of SNM-4783. Paul Marie Properties shall obtain necessary permits and deposit with the Authority inspection fees (for tapping into the Authority's sanitary main) of \$350.

2. Paul Marie Properties shall be billed sewer service on a quarterly basis through the water meter usage per the rates established by the Authority.

3. No failure or delay in the performance of this Agreement by either party shall be deemed to be a breach when such failure or delay is occasioned by or due to any act of God, strikes or lockouts, wars, riots, epidemics, explosions, sabotage, breakage, or accidents to machinery or lines of pipe, the binding order of any Court or governmental authority, or any other cause, whether of the kind herein enumerated, or otherwise not in control of the party claiming suspension, provided that no cause or contingency shall relieve Paul Marie Properties, L.L.C. of its obligation to make payment.

4. In the future, the property may be subdivided and additional sewer connections may be permitted upon approval of Marion Township, the Genoa-Oceola Sewer and Water Authority, and availability of sewer capacity to service the parcel(s).

5. This Agreement represents the entire agreement between the parties and supersedes all prior representations, negotiations or agreements, whether written or oral.

6. Paul Marie Properties shall pay the Authority Tap-In Fees in the Amount of \$7,200.

7. Paul Marie Properties shall be subject to the rules and regulations set forth in the Authority Sewer Use Ordinance.

8. This Agreement and the rights and liabilities hereunder accruing to and imposed upon the Authority may be assigned by the Authority to any other governmental entity authorized by law to perform services.

9. The provisions of this Agreement relating to the respective rights, duties, and obligations held by, Marion Township, Authority, and Paul Marie Properties, L.L.C. may not be amended without the written consent of all parties to this Agreement. This Agreement shall become binding on the parties and in full force and effect upon the approval by the respective Board of Trustees and signing thereof by the duly authorized officials of, Marion Township, the Authority and Paul Marie Properties, L.L.C.

10. This Agreement shall be binding upon all successor governmental units of Marion Township and Authority and any successors to Paul Marie Properties, L.L.C.

11. Should any provisions of this Agreement be found by a Court to be invalid for any reason, it shall be severed from the Agreement and the remaining provisions shall remain in full force and effect.

12. All notices shall be sent by overnight courier or certified mail, return receipt requested, to the addresses provided in the preamble to this Agreement and shall be deemed given when placed in the mail or with overnight courier.

The parties through their authorized representatives have executed this Agreement on the dates indicated below.

MARION TOWNSHIP

\_\_\_\_\_  
Robert Hanvey, Supervisor  
Dated: \_\_\_\_\_ 2020

\_\_\_\_\_  
Tammy Beal, Clerk  
Dated: \_\_\_\_\_ 2020

GENOA-OCEOLA SEWER AND WATER AUTHORITY

\_\_\_\_\_  
William Bamber, Chairman  
Dated: \_\_\_\_\_, 2020

\_\_\_\_\_  
Lance Schuhmacher, Secretary  
Dated: \_\_\_\_\_, 2020

Paul Marie Properties Construction, Inc.

\_\_\_\_\_  
Dated: \_\_\_\_\_, 2020

\_\_\_\_\_  
Dated: \_\_\_\_\_, 2020

ONCE RECORDED PLEASE RETURN TO:  
Genoa-Oceola Sewer and Water Authority  
2911 Dorr Road Brighton, MI 48116

**Attachment A**  
**Legal Description and Map of Paul Marie Properties and Proximate Location of Genoa-Oceola Authority**  
**Sewer System**

**Legal Description**

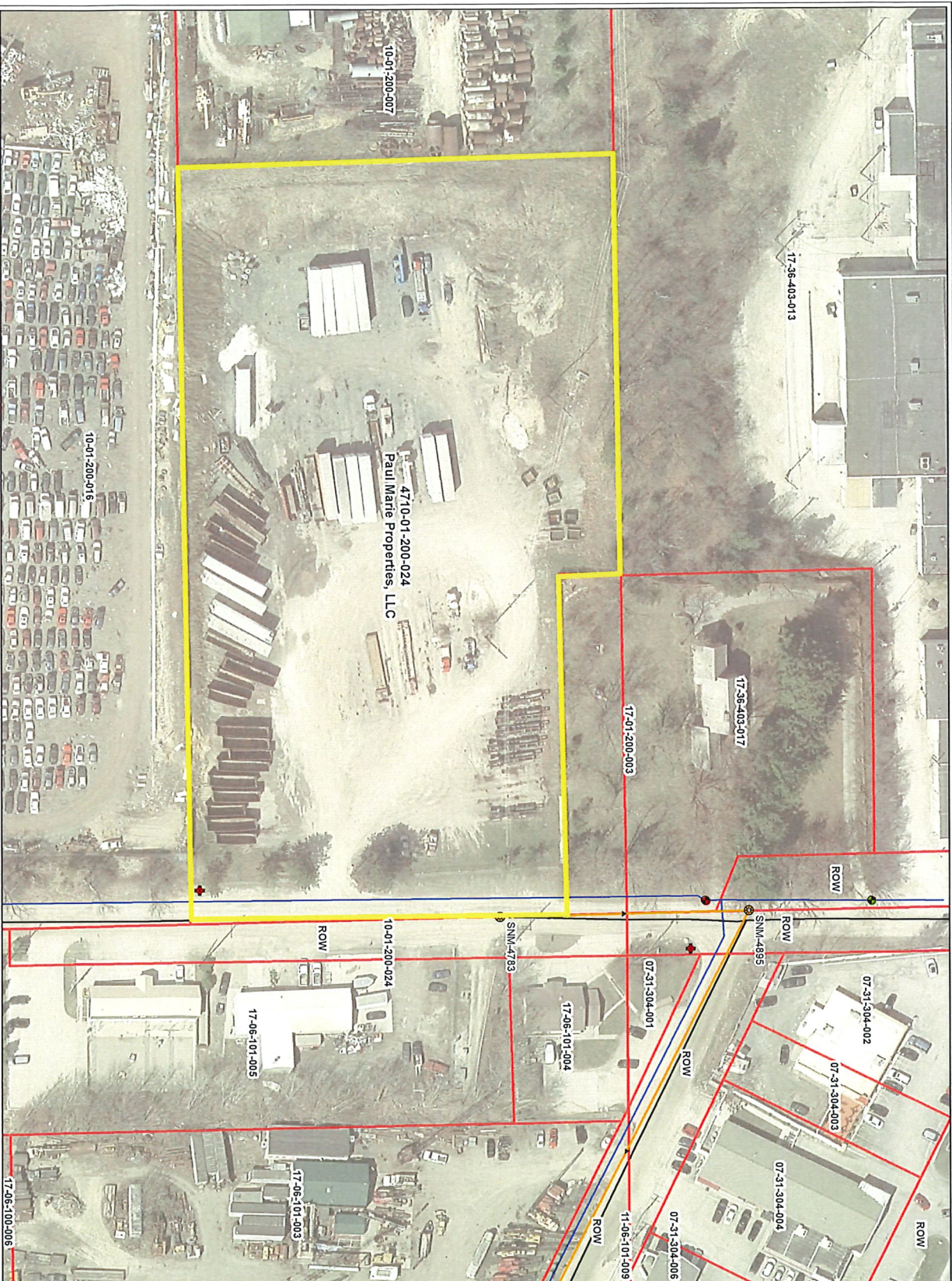
T2N R4E SEC 6 COM NE COR SEC 1, TH S00\*53'12"E 50 FT TO POB, TH CONT S00\*53'12"E 300 FT, TH S88\*54'47"W 605.98 FT, TH  
N00\*53'12"W 350 FT, TH N88\*59'32"E 334.77 FT, TH S0\*50'02"E 50 FT, TH N88\*48'56"E 271.26 FT TO POB. CONT. 4.55 AC M/L. SPLIT  
12/03 FR 0



# Paul Marie Properties

MHOG Utilities

- Manholes
  - Odor Control
  - Pump Stations
  - Grinder-Pumps
  - Air Release
  - Flushing Connections
  - Sanitary Valves
  - Sanitary Wye
  - Grease Trap
  - Waste Water Treatment Plant
- Sewer Lead Lines**
- Gravity
  - Pressure
  - Gravity Main
  - Force Main
  - Hydrant
- Water Valves**
- Status
    - Could Not Find
    - Normally Closed
    - Normally Open
  - Booster Stations
  - Water Tower
  - Water Curb Stop Box
  - Fire Suppression
  - Hydrant Lead
  - Potable
  - Unknown
  - Water Main
  - Parcels
  - Roads



Source: Data provided by MHOG. MHOG does not warrant the accuracy of the spatial location of the mapped features within the Community and all use is strictly at the user's own risk.

Coordinate System: NAD 1983 NADN StatePlane Michigan South FIPS 5113 Feet/ft

Map Published: December 20, 2019

**MARION TOWNSHIP  
DEVELOPMENT STANDARDS  
AUGUST 2019**

**DRAFT**



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## GENERAL PLAN SUBMITTAL REQUIREMENTS AND PROCEDURES

### I. PURPOSE

- A. It is the purpose of this Section to specify standards and data requirements, which shall be followed in the preparation of the site plans. It is also the purpose of this Section to ensure that:
1. The proposed use will not be injurious to the surrounding neighborhood and protects the general health, safety, welfare, and character of the Township;
  2. Natural resources will be preserved to the maximum extent possible in the site design by developing in a manner which will not detrimentally affect or destroy natural features such as lakes, ponds, streams, wetlands, steep slopes, soils, ground water, and woodlands; and
  3. Landscaping, including grass, trees, shrubs, and other vegetation is provided to maintain and improve the aesthetic quality of the site and area.

### II. SITE PLAN PROCEDURE SUMMARY

- A. A site plan shall be reviewed by the Planning Commission, who shall then provide a recommendation of approval, approval with conditions, or denial, to the Township Board of Trustees. The Township Board of Trustees must approve or approve with conditions the final site plan prior to the establishment of any new land use, change of use, addition to an existing use, or the erection of any structure in any zoning district. Individual single-family structures erected within a single lot, parcel or building envelope shall not require site plan review.
1. The Township shall not issue a land balancing permit until the final site plan has been approved by the Township Board of Trustees and is in effect.
  2. No grading, removal of trees or other vegetation, landfilling, land balancing, or construction of improvements shall commence for any development that requires site plan approval until a final site plan is approved and is in effect, except as otherwise provided in these specifications.
- B. **Preliminary Site Plan**
1. **Application.** Any applicant may submit a request for preliminary site plan review by filing with the Zoning Administrator completed forms, payment of the review fee required herein, and three (3) copies of the plans or a PDF file. Upon review and approval by the Zoning Administrator, the Township Planner, the Township Engineer, and any other applicable agencies, nine (9) copies of the administratively approved preliminary site plan drawing(s) shall be submitted for distribution to the Township Planning Commission. Upon Planning Commission approval, an additional eight (8) copies of the plans shall be submitted for distribution to the Township Board of Trustees. Unless specifically directed by the Zoning Administrator, the Board of Trustees submittal shall be the same as the Planning Commission submittal and no changes shall be made to the plans. The Administrator shall transmit only administratively complete submittals of the preliminary site plan to the Planning Commission and Township Board. The purpose of such preliminary review is to confirm general compliance with Township standards as well as to suggest changes, if necessary, for final site plan approval
  2. **Combining Preliminary and Final Site Plans.** An applicant may, at the discretion of the Administrator and/or the Planning Commission, request to combine a preliminary and final site plan in one (1) application for approval. In such a situation, the portion of the review process concerning preliminary site plan application and review may be waived by the Planning Commission. The Planning Commission shall have the authority to require

submittal of a preliminary site plan separate from a final site plan where, in its opinion, the complexity and/or scale of the site for the proposed development to warrant.

3. **Pre-application meeting.** The applicant may request a pre-application meeting with the Planning Commission to discuss a proposed project. The item will be placed on an agenda of a regularly scheduled Planning Commission meeting. Site plan approval will not be given during a pre-application meeting discussion.
4. **Information Required.** Site plans shall consist of an overall plan for the entire development. Sheet size shall be at least 24" x 36" with plan view drawn to a scale of no greater than 1" = 50'. A preliminary site plan submitted for review shall contain all of the following information in a clear and legible format:

General Information

- a. Name of the proposed development
- b. Name, address, phone, fax number and/or email address of applicant(s), property owner(s), engineer(s), architect(s), and landscape architect(s). The property owner must provide written approval of all project representatives.
- c. A written narrative of the proposed use(s) of the property. For other than residential uses, including factors that potentially impact the proposed development may have on the surrounding area.
- d. One (1) presentation quality aerial photograph with adjacent property information and features including, though not limited to, the following: land use(s), property owner(s), sidwell number(s), location of adjacent buildings, driveways, streets, existing and proposed lot lines, building lines, structures, and parking areas on the parcel and within one hundred (100) feet of the site.
- e. Date of plan preparation, including revision dates.
- f. Complete legal description of the site.
- g. Professional seal of a registered architect, engineer, surveyor, landscape architect, or a planner.
- h. Vicinity map drawn at a scale of 1" = 2,000'.
- i. Dimensions and gross acreage of the site.
- j. Zoning classification of petitioner's parcel and all abutting parcels and demonstration of compliance with lot area, width, coverage, and setback requirements.
- k. Scale and north arrow on each plan sheet.
- l. Existing natural features and man-made features to be retained or removed.
- m. Adjacent property information and features including, though not limited to, the following: land use(s), property owner(s), sidwell number(s), zoning classification, location of adjacent buildings, driveways, streets.
- n. Existing and proposed lot lines, building lines, structures, parking areas, etc., on the parcel and within one hundred (100) feet of the site.
- o. Proposed construction phasing.
- p. Identification of variances that are be required.

Physical Features

- a. Location, size, and dimension of proposed buildings/structures, including floor area, finished floor elevation, number of floors, height, number and type of dwelling units (where applicable).
- b. Location of existing and proposed private and public roads and access drives, including general alignment, right-of-way or easement, surface type, and width.

- c. Location, size, and dimension of the following existing and proposed site features: water main, wells, detention and forebay basins, private utilities, utility poles, and public and private easements.
- d. Location, size, and dimension of existing and proposed storm sewer, culverts, ditches, and public and private storm sewer easements.
- e. Location, size, and dimension of existing and proposed sanitary sewer, septic fields, reserve septic fields, sewage disposal facilities, and public and private sanitary sewer easements.
- f. Location of all existing and proposed parking, including dimensions of spaces, maneuvering lanes, and surface type, where applicable.

Natural Features

- a. Soil characteristics of the parcel to at least the detail provided by the U.S. Soil Conservation Service, Soil Survey of Livingston County, Michigan.
- b. Existing topography with a maximum contour interval of two (2) feet for the site and beyond the site for a distance of one hundred (100) feet in all directions. Final grading plan, showing finished contours at a maximum interval of two (2) feet, correlated with existing contours so as to clearly indicate required cutting, filling, and grading.
- c. Location of existing wetlands, drainage courses, floodplains, and associated bodies of water, within one hundred (100) feet of the site, and their elevations.
- d. Location of existing woodlands delineated with symbolic lines tracing the spread of the outermost branches and shall be described as to the general sizes and kinds of trees contained.
- e. Location of natural resource features, including, but not limited to, woodlands and areas with slopes greater than eighteen percent (18%) incline.

Additional Requirements for Residential Developments

- a. Density calculation by type of unit.
- b. designation of units by type and number of units in each building.
- c. Amount, type, and location of common open space, including general and limited common elements within a site condominium, and any recreational amenities (i.e., playground equipment).

5. **Planning Commission Action.** The Planning Commission shall recommend to the Township Board of Trustees approval, approval with conditions, or denial of the preliminary site plan. If the preliminary site plan requires extensive revisions to meet Township requirements, the Planning Commission may recommend denial of the preliminary site plan. The Planning Commission shall set forth the reason for its action in the record of the meeting at which action is taken.
- a. The Planning Commission recommendation of the preliminary site plan shall be forwarded to the Township Board of Trustees for its review.
  - b. If the preliminary site plan is recommended for denial, the applicant may address all the conditions and submit the revised preliminary site plan to the Zoning Administrator for further action by the Planning Commission.
  - c. The Township Board of Trustees shall review the preliminary site plan and approve, approve with conditions, or deny the preliminary site plan.
  - d. If the Board of Trustees approves the preliminary site plan, the applicant may

submit a final site plan to the Zoning Administrator in accordance with the provisions herein.

- e. If the preliminary site plan is approved with conditions, the applicant shall address all the conditions during final site plan review.
  - f. If the preliminary site plan is denied by the Township Board, the applicant may submit an alternative preliminary site plan to the Zoning Administrator for review by the Planning Commission in accordance with the provisions herein.
6. **Effect of Approval.** Approval or approval with conditions of a preliminary site plan by the Township Board of Trustees shall indicate general acceptance of the use and the proposed layout of buildings, streets and drives, parking areas, other facilities, and overall character of the proposed development.
  7. **Expiration of Approval.** Approval of a preliminary site plan by the Board of Trustees shall be valid for a period of one (1) year from the date of approval and shall expire and be of no effect unless a completed application for a final site plan approval with all necessary supporting information is filed with the Zoning Administrator within that time period.

#### C. Final Site Plan

1. **Application.** For final site plan, the applicant shall submit to the Zoning Administrator three (3) copies of the plans or a PDF file. Upon review and approval by the Zoning Administrator, the Township Planner, the Township Engineer, and any other applicable agencies, nine (9) copies of the administratively approved preliminary site plan drawing(s) shall be submitted for distribution to the Township Planning Commission. Upon Planning Commission approval, an additional eight (8) copies of the plans shall be submitted for distribution to the Township Board of Trustees. Unless specifically directed by the Zoning Administrator, the Board of Trustees submittal shall be the same as the Planning Commission submittal and no changes shall be made to the plans. The Administrator shall transmit only administratively complete submittals of the preliminary site plan to the Planning Commission and Township Board.
2. **Information Required.** Site plans shall consist of an overall plan for the entire development. Sheet size shall be at least 24" x 36" with plan view drawn to a scale of no greater than 1" = 50'. A final site plan submitted for review and approval shall contain all of the information required for the preliminary site plan in addition to the following data presented in a clear and legible format.

##### Physical Features

- a. Location of existing and proposed centerline, edge of roadway, approach radii at intersections, and pavement cross-sections for public and/or private roads on site or abutting the site. Acceleration, deceleration, passing lanes, approaches, and curb and gutter shall also be shown.
- b. There is a proper relationship between major thoroughfares and proposed service drives, driveways, and parking areas. Proper access to all portions of the site and all sides of any structure is provided. All structures or groups of structures shall be so arranged as to permit emergency vehicle access by some practical means.
- c. Existing and proposed location, width, and approach radii of access drives, driveways, sidewalks, pathways, and curb and gutter. Pavement cross sections shall be provided for each.
- d. Existing and proposed off-street parking with calculation of the number of parking spaces required and provided.

- e. Location of existing storage tanks. This may include, but not be limited to, information on the following:
  - I. Chemical and fuel storage tanks and containers;
  - II. Water supply facilities;
  - III. Sanitary sewage disposal facilities;
  - IV. Storm water control facilities and structures; and
  - V. Location of all easements.
- f. Sites which include storage of hazardous materials or waste, fuels, salt, or chemicals will be designed to prevent spills and discharges of polluting materials to the surface of the ground, groundwater or nearby water bodies in accordance with County and State standards, where applicable.
- g. Location, size/dimension of existing and proposed fire hydrants, water service and fire suppression leads, and public and private water main easements. (All proposed water mains must meet the standards of the Marion, Howell, Oceola, Genoa (MHOG) Water Authority.)
- h. Grading and overflow route for proposed and existing detention and forebay basins and public and private drainage easements. Calculations shall be included and indicate that the detention and forebay areas meet the Livingston County Drain Commission standards.
- i. A note shall indicate the ultimate outlet for storm water runoff (County Drain, creek, or river).
- j. Location of all building structures with setback and yard dimensions.
- k. Dimensioned floor plans and typical elevation views for all buildings, where applicable.
- l. Proposed exterior lighting locations, typical detail, and illumination pattern.
- m. Location and description of all existing and proposed landscaping, berms, fencing, retaining walls, and quantity and size of all proposed landscaping.
- n. Trash receptacle pad location, area, method of screening, pavement type and cross-section.
- o. Location, area, depth, and method of screening of transformer pads, compressors, air conditioners, generators, refrigeration units, and similar equipment, where applicable.
- p. Entrance detail(s) including traffic control and monument sign locations and size.
- q. Designation of fire lanes.
- r. Proposed grading and how it shall tie into existing grading, and the limits of clearing and grading. Elevations shall be provided at, though not limited to: top of curb and/or edge of pavement, edge of walk/pathway, top and bottom of retaining wall, property corners, finished floor, storm structures, and detention and forebay high water.
- s. Location of existing and proposed ground, wall, or directional signs, and details of all proposed signs.
- t. Any other pertinent physical features.

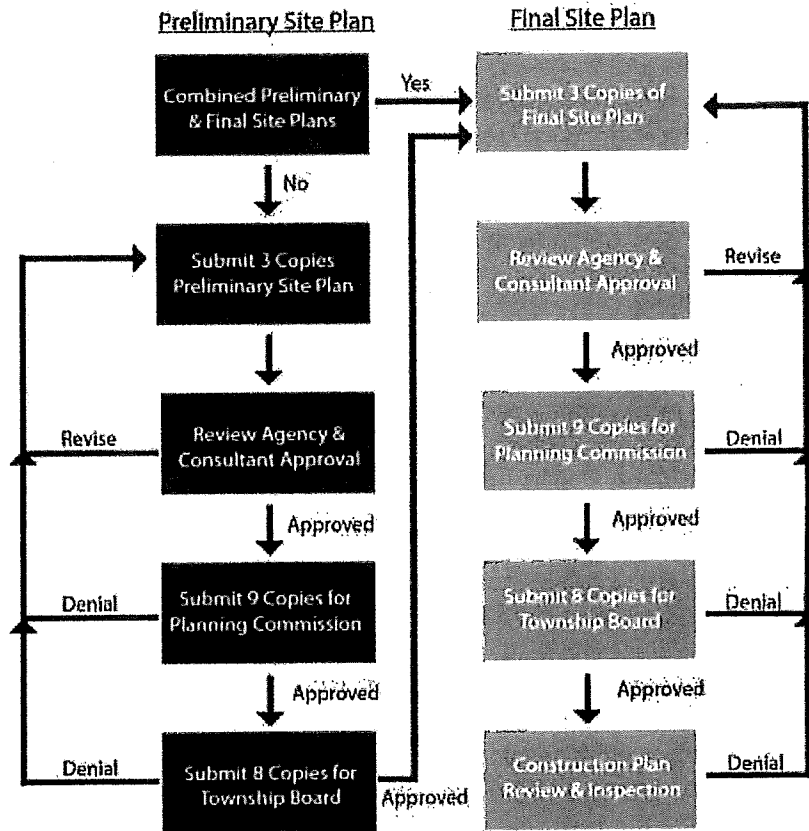
Additional Requirements for Commercial and Industrial Developments

- a. Loading/unloading areas.
- b. Total and useable floor area.
- c. Number of employees in peak usage.

3. **Standards for Review.** In reviewing the final site plan, the Planning Commission and Township Board shall determine whether the plan meets the following specification and standards:
  - a. The plan conforms to the approved preliminary site plan and with all Zoning Ordinance regulations.
  - b. All required information is provided.
  - c. The proposed use is in compliance with all Township Ordinances and any other applicable laws.
4. **Planning Commission Action.** The Planning Commission shall recommend to the Township Board of Trustees approval, approval with conditions, or denial of the final site plan. If the final site plan requires extensive revisions to meet Township requirements, the Planning Commission may recommend denial of the preliminary site plan. The Planning Commission shall set forth the reason for its action in the record of the meeting at which action is taken.
  - a. The Planning Commission recommendation of the final site plan shall be forwarded to the Township Board of Trustees for its review.
  - b. If the final site plan is recommended for denial, the applicant may address all the conditions and submit the revised final site plan to the Zoning Administrator for further action by the Planning Commission.
  - c. The Township Board of Trustees shall review the final site plan and approve, approve with conditions, or deny the final site plan.
  - d. If the preliminary site plan is denied by the Township Board, the applicant may submit an alternative final site plan to the Zoning Administrator for review by the Planning Commission in accordance with the provisions herein.
5. **Effect of Approval.** A recommendation of approval advances the final site plan to the Township Board of Trustees for its review and action. Upon approval of a final site plan by the Township Board of Trustees, the applicant may apply for a land use permit for **land balancing ONLY** in accordance with the terms of the approved final site plan and any other Township requirements. Land use permits for building shall only be issued after construction plan approval.
6. **Expiration of Approval.** Approval of a final site plan shall expire and be of no effect one (1) year following the date of approval unless construction has begun on the property in conformance with the approved final site plan.
7. **Conformity to Approved Site Plans.** Property, which is the subject of an approved final site plan, must be developed in strict compliance with the approved final site plan and any amendments thereto which have been approved by the Township Board of Trustees. If construction does not conform to the approved final site plan, the approval shall be revoked. Upon revocation of such approval, all construction activities shall immediately cease upon the site, other than actions taken to correct the violation. For residential developments, no land use permit for dwellings shall be issued until the first course of blacktop, by development phase if applicable, and landscaping has been installed. The required landscaping shall include, but not be limited to, greenbelts, entrance(s), detention/retention basins, and buffers as shown on the approved final site plan.
8. **Amendment of Approved Site Plan.** The Zoning Administrator shall have the authority to determine if a proposed change requires an amendment to an approved final site plan. The Zoning Administrator may approve minor changes in an approved final site plan, provided that a revised final site plan drawing(s) be submitted showing such minor changes, for purposes of record. An approved final site plan may be amended upon re-

application including any fees required and in accordance with the procedure herein for a final site plan.

- D. **Construction Plan Review** Following approval of the final site plan by the Township Board of Trustees, the applicant shall submit to the Zoning Administrator two (2) copies of construction plans as well as any other data and exhibits hereinafter required. The construction plans shall be consistent with the approved final site plan but shall provide greater detail in accordance with these standards. Approval of the construction plans by appropriate authorities is required prior to beginning construction.
- E. **Construction Observation** Marion Township or its designated representative will provide observation on all proposed public utilities and improvements, as well as limited construction observation of private improvements. The requirements for construction observation and final project closure shall be in accordance with these standards, as amended.





### III. CONSTRUCTION PLAN SUBMITTAL PROCEDURES

- A. Following approval of the preliminary and final site plans by the Township, the applicant shall submit to the Zoning Administrator two (2) copies of construction plans as well as any other data and exhibits hereinafter required, the review fee, and a completed application form. After the initial submittal, subsequent revisions can be sent directly to the Township Engineer.
- B. The construction plans shall address the same concerns as the final site plan but shall include much greater detail in accordance with the adopted Marion Township Engineering Standards. Approval of the construction plans is required prior to beginning construction.
- C. As part of the review process, the Township Engineer may contact the Township, the DPW, Fire Department, or other regulatory agencies for comments and feedback. If other agencies (MDOT, MDEQ, LCRC, LCDC, etc.) have not completed their reviews, the Township Engineer may request that their comments be supplied to the Township Engineer prior to final approvals. In general, the following agencies shall have review authority over the type of improvement:
  - 1. Marion Township
    - a. Sanitary sewer and appurtenances
    - b. Public and Private water distribution system and appurtenances
    - c. Private storm sewer and appurtenances
    - d. Stormwater management (detention, retention, etc.)
    - e. Private roads and paved areas
    - f. Pathways and sidewalks
    - g. Grading and restoration
    - h. Any other improvements not regulated by another agency
  - 2. Livingston County Road Commission (LCRC)
    - a. Public roads, streets, and right-of-ways
  - 3. Livingston County Drain Commissioner (LCDC)
    - a. Public storm sewer and appurtenances
    - b. Stormwater management (detention, retention, etc.)
    - c. Soil Erosion Control
  - 4. Livingston County Department of Public Health
    - a. Private septic fields
    - b. Private water wells
  - 5. Marion Howell Oceola Genoa Water Authority (MHOG)
    - a. Public water distribution system and appurtenances
- D. When plans are complete and ready for approval the Township Engineer will request additional sets of plans be submitted for distribution to MDEQ for sanitary sewer permitting (see item 7 in this section).
- E. The applicant shall be responsible for submitting directly to the LCRC, LCDC, MHOG, and other separate regulatory agencies (MDOT, MDEQ for wetland permitting, etc.). Any such approvals shall be forwarded to the Township Zoning Administrator and the Township Engineer prior to beginning construction.
- F. All public improvement plans submitted for permits must carry the seal and signature of the Design Engineer. Note that the amount and type of sanitary and/or water main pipe must be summarized on the cover sheet when MDEQ permitting is required.
- G. Sanitary sewer plans along with a completed MDEQ Sanitary Sewer Permit Application Part 41, shall be provided to the Township Engineer. The Township engineer will have the Township execute the permit application and then forward the application and plans to the MDEQ for

permitting.

- H. Modification of Plan During Construction. All improvements shall conform to the final site plan. It shall be the responsibility of the applicant to notify the Zoning Administrator of any such changes prior to such change being made. Any changes which result in a material alteration of the approved final site plan shall require resubmittal of a site plan, which shows the proposed changes, to the Planning Commission including any fees determined by the township Board of Trustees. The Planning commission or Township Board of Trustees may require the applicant to correct the changes so as to conform to the approved final site plan.
- I. Phasing of Development. The applicant may, at their discretion, divide the proposed development into two (2) or more phases. In such case, the preliminary site plan shall cover the entire property involved and shall clearly indicate the location, size, and character of each phase. A site plan for each phase shall be submitted in accordance with the procedure herein for a final site plan including any fees required.
- J. Appeals. No decision or condition related to a construction plan approval shall be taken to the Zoning Board of Appeals
- K. Fees. The Marion Township Board shall establish by resolution a fee schedule to defray costs, which may include but not be limited to inspection, plan review, administration, and enforcement of this section. Before final approval, any costs incurred by the Township shall be paid by the applicant. The applicant may also be required to post a cash Escrow Account according to Section 4.07 of the Marion Township Zoning Ordinance.

#### IV. INSURANCE

- A. Prior to construction, the Contractor shall procure and maintain, during the term of the project, public liability and property damage insurance with a responsible insurance company which meets the approval of Marion Township, in such amounts as will be adequate to protect the public, Marion Township interests, and shall not be less than the limits set forth herein.

Type of Insurance:

- 1. Workmen's Compensation Insurance and Employer's Liability Limit: As required by laws of State of Michigan

Public Liability & Property Damage:

Bodily Injury:	Each Occurrence:	\$1,000,000
	Aggregate:	\$2,000,000
Property Damage:	Each Occurrence:	\$1,000,000
	Aggregate:	\$2,000,000

Owner's and Contractor's Protective Liability & Property Damage:

Bodily Injury:	Each Occurrence:	\$1,000,000
	Aggregate:	\$2,000,000
Property Damage:	Each Occurrence:	\$1,000,000
	Aggregate:	\$2,000,000

Motor Vehicle (including Owner, Hired and Non-Owned Vehicles):

Bodily Injury:	Each Occurrence:	\$1,000,000
Property Damage:	Each Occurrence:	\$1,000,000
Combined Single Limit:		\$2,000,000

- B. Policies shall be made available to Marion Township and the Township Engineer for examination as to their validity and any undesirable exclusions deemed improper by legal opinion rendered to the Township regarding same. Underground construction, where applicable, shall be specified in

the coverage. Certificates of coverage signed by the insurance carriers shall include a guarantee that 30 days written notice shall be given by the insurance carrier to Marion Township prior to cancellation of, or any change in the respective policies. In the event that the insurance is canceled, operations shall cease prior to the cancellation date and shall not resume until evidence is provided that proper insurance is again in effect. Additional Named Insured under Owners and Contractors Protective Public Liability and Property Damage Insurance shall include Marion Township, the Township Engineer (specifically by name) and members of staff, employees and agents for the Township.

- C. The name of the proposed development must be included on the insurance documents.

## V. CONSTRUCTION OBSERVATION PROCEDURES

Marion Township or their designated representative will provide observation on all proposed public utilities and improvements, as well as limited construction observation of private improvements. Any facilities installed without Township provided observation may not be accepted by the Township, and therefore may be required to be re-installed. The requirements and procedures for Construction Observation and final project closure shall be as follows.

### A. Pre-Construction Meeting

1. Upon construction plan approval and receipt of all permits, but prior to commencing construction, a Pre-construction meeting shall be held. The Developer or the Developer's Authorized Representative shall contact the Township Engineer to schedule the Pre-construction meeting.
  2. Attendees shall include: Township representatives, Township Engineer, Developer or Developer's Authorized Representative, Design Engineer, Underground and Paving Contractors and any interested regulatory agency.
  3. At the Pre-construction meeting, the following information shall be provided:
    - a. Proof of insurance naming Marion Township and its Engineer as additionally insured.
    - b. All permits from other agencies (MDOT, MDEQ, LCRC, etc.).
    - c. Approximate schedule for construction.
  4. Prior to the Pre-construction meeting, the contractor shall provide the inspection escrow to the Township. Proof of payment should be forwarded to the Township Engineer. The final approval letter from the Township Engineer will detail the amounts and basis of the escrow based upon industry standard production rates.
    - a. Unused observation and administration escrow funds will be eligible for return as described in the final approval letter.
    - b. The Township Engineer shall monitor the observation escrow and may require additional deposits. This shall be dependent on the contractor's rate of progress and the difficulty in completing the project.
    - c. Failure to keep the observation escrow current may result in withholding construction observation, and therefore possibly delaying construction.
- B. Initially and/or after a significant delay in construction, the Township Engineer shall have a minimum 72 hour's notice (not including weekends or holidays) prior to the start of any construction requiring observation.
- C. The Township's Engineer shall observe all public and private improvements according to the following criteria. The criteria may be adjusted for large or phased developments, at the discretion of the Township. The Township's Engineer may inspect all other operations requested by the Township.

1. Tree removal and site clearing – Representatives of the Township, the Township’s Engineer, the Developer or Developer’s Authorized Representative, the Design Engineer, and the Developer’s Contractor will meet prior to beginning any site work. The meeting will take place on site after the removal/clearing limits have been marked or staked, with the purpose being to verify general compliance with the approved plans. The proposed clearing limits must be clearly marked on the site prior to the meeting.
  2. Mass grading – The Township or the Township’s Engineer will not review the site grading for compliance with the plans unless specifically directed by the Township. Responsibility for adhering to the approved grading plan shall fall upon the developer or their engineer/surveyor. Any irregularities observed while out performing other inspections will be brought to the Township’s and developer’s attention. A grading certificate as described under project acceptance requirements shall be required.
  3. Soil erosion control - All inspections related to soil erosion control will be handled by the permitting agency, LCDC. Any problems observed by the Township’s engineer while on site performing other inspections will be brought to the Township’s, LCDC’s, and the developer’s attention.
  4. Water system improvements – Full time inspection will be provided by MHOG or their representatives as outlined in their approvals and permits.
  5. Sanitary system improvements – Full time inspection will be provided by the Township’s Engineer.
  6. Storm system improvements (private sewers) – The Township’s Engineer will perform a maximum of two (2) inspections during the storm sewer installation to verify general compliance with the plans and specifications. The developer shall be responsible for certifying the storm system prior to project acceptance. Copies of testing reports and all certifications shall be provided to the Township.
  7. Storm system improvements (public sewers) – All inspections related to public storm sewers will be handled by the permitting agency, LCDC, or the Township Engineer. Any problems observed by the Township’s Engineer while on site performing other inspections will be brought to the Township’s, LCDC’s, and the developer’s attention.
  8. Private road improvements – The Township’s Engineer will perform inspections at critical junctions of the road construction process. Critical junctions will be defined as:
    - a. Witnessing the proof-roll of the sub-grade (Permit to place sub-base)
    - b. Verification of sub-base construction (Permit to place base)
    - c. Verification of base construction (Permit to place pavement material)
    - d. Two (2) inspections during the placing of the asphalt or concrete pavement to verify general compliance with the plans and specifications.  
The developer shall be responsible for certifying the road system prior to project acceptance. Copies of testing reports and all certifications shall be provided to the Township.
  9. Public road improvements - All inspections related to public road improvements will be handled by the permitting agency, LCDC. Any problems observed by the Township’s Engineer while on site performing other inspections will be brought to the Township’s, LCDC’s, and the developer’s attention.
- D. Acceptance of final project:
1. The Township Engineer will generate a preliminary punch list. Once the items have been addressed, the Township and the Township’s Engineer will conduct a final site inspection.
  2. All punch list items must be addressed.
  3. All fees and escrows must be paid in full.

4. A Maintenance and Guarantee bond should be provided to the Township. The bond should be 50% of the engineer's estimate for public improvements. The Township will keep the bond for two years from the date of acceptance.
5. Record drawings and related documents must be provided to the Township:
  - a. Upon acceptance of field improvements, the Developer's Engineer will be provided with a copy of the Inspector's Daily Reports (IDR), any applicable lead reports, and a blank "Record Drawing Requirement Checklist" in order to provide record drawings to the Township's Engineer for review and approval.
  - b. A grading certificate will be required at this time. This form (provided by the Township's Engineer with IDR's) will also need to be signed and sealed by the Developer's Engineer and then submitted to the Township's Engineer along with the record drawings.
  - c. Easements for public utilities based on "As-Built" conditions requires a sketch and legal description to be submitted by the Developer's Engineer to the Township's Engineer for review and approval along with the record drawings. Once easements documents are approved, the Township's Engineer will mail the Developer/Township the easements to be recorded with the County Register of Deeds. Once the easements are recorded with liber and page number, recorded copies will need to be forwarded to the Township and the Township's Engineer.
  - d. Once the record drawings are approved by the Township's Engineer, the Developer's Engineer will be instructed as to what is required for final distribution (i.e. blueprints, mylars, CD-ROM or possibly micro-film.)

## CONSTRUCTION PLAN REQUIREMENTS

The following is a list of requirements that shall be used to assist in Construction Drawing and Record Drawing preparation. Items or criteria not specifically on this list or contained within the Marion Township Zoning Ordinance shall be subject to Township approval, based solely on the Township's discretion as to appropriate standards, regulations, or local impact.

### I. PLAN REQUIREMENTS

#### A. GENERAL

1. Plan paper shall be 24" x 36"
2. Plan scale shall be a maximum horizontal scale of 1":50' and vertical scale of 1":5'.
3. Plan cover sheet shall include the following; project name, name of Marion Township, Livingston County, Michigan, proprietor's, engineer's, architect's and landscape architect's name, address, phone and fax number, a location map (1" = 2000' scale) with north arrow, property Sidwell number(s), agency approvals required, plan sheet index, and professional architect's or engineer's seal.
4. A title block shall be present on each plan sheet.
5. The legal description for the property shall be included, must also be represented by bearing angles and distances in plan view, and shall have a ratio of closure no greater than 1 part in 5000.
6. Zoning information including zoning designation, land use, minimum lot area, frontage, and setbacks; and maximum lot coverage and building height requirements for the site's zoning designation.
7. A topographic survey plan sheet shall be included; additional requirements are outlined in Section II, Topographical Survey, of this document.
8. A general area plan shall be included at 1"=100' or 1"=200' when size of the site prohibits a single sheet. The general plan shall show existing and proposed roadways, site location and dimensions, utilities, building structures, landscaping, and topography.
9. A landscaping plan with tree survey information shall be included.
10. Location of wetlands, drainage courses, and floodplain areas.
11. On and offsite permanent and temporary easements shall be shown on the plans.
12. Private and public roadways, road right-of-way, and road easements shall be shown on the plans.
13. Dimensions for existing and proposed road right-of-way and/or easements, roadways, parking areas, driveways, sidewalks, and pathways shall be shown on the plans and shall be in accordance with the Marion Township Zoning Ordinance and the requirements outlined herein.

### II. TOPOGRAPHICAL SURVEY

#### A. GENERAL

1. A complete topographical survey is required for all sites. Existing offsite elevations must be given at a minimum of 100' abutting the entire perimeter of the site. Onsite contours are required to establish the existing site drainage. Contours shall be at the following spacing:
  - a. 1-foot contours if scale of plan is less than or equal to 1"=50'
  - b. 2-foot contours if scale of plan is greater than 1"=50'

2. A minimum of two (2) benchmarks based on NAD83 or NGVD88 must be included. The datum shall be clearly referenced.
3. Property lines shall be indicated by bearing and distance.
4. All existing conditions shall be shown, including but not limited to the following items (location and elevation):
  - a. All utilities including sanitary, water main, gas, telephone, cable, and electrical (including rim and invert elevations).
  - b. Along property lines.
  - c. The building finished floor.
  - d. Sidewalks and pathways.
  - e. Retaining walls.
  - f. Finished grades of all adjacent buildings.
  - g. All easements.
  - h. 100-year flood plain.
  - i. Existing drainage courses and wetlands.
  - j. Upstream and downstream culverts.
  - k. Adjoining road right-of-way.
5. Road Topography shall extend across the entire site with grades shown on both sides of the street for:
  - a. Property line.
  - b. Ditch centerline and top of bank.
  - c. Edge of shoulder.
  - d. Edge of pavement or top of curb.
  - e. Crown or centerline.

### III. UTILITIES (GENERAL)

#### A. GENERAL

1. The location, size, and type of pipe of all existing and proposed utilities shall be shown in plan view.
2. Proposed sanitary shall extend across the property frontage(s) or to a property line, as directed by the Township.
3. No new utilities shall be placed below or within a 1:1 influence of a building footprint. The limits of all removals and/or abandonments shall be shown on the plans. The following criteria shall apply for all existing utilities within the influence of a building foundation:
  - a. Utilities within five (5) or less below a footing shall be removed.
  - b. Utilities greater than five (5) feet below a footing shall be grouted full using a standpipe to prevent air voids.
  - c. Utilities that are to be abandoned and are not within the influence of a footing shall be bulkhead unless the utility is determined to be a hazard, nuisance or potential maintenance problem by the Township.
4. A minimum ten (10) feet wide horizontal separation shall be required between water main and sewers.
5. No water main or sanitary sewer shall be within five (5) feet (measured horizontally) from the high-water elevation of a detention, retention, and/or forebay basin.
6. All utility crossings, including sanitary sewer leads, shall specify top and bottom of pipe elevations in both plan and profile view. An 18" minimum vertical clearance between water main and storm or sanitary sewer is required.

7. A casing pipe shall be provided when utilities must cross retaining walls or when a bore is proposed under a roadway. The casing pipe must extend beyond the angle of repose of the retaining wall or roadway. The size, length and invert of the casing pipe shall be indicated. All bores under roadways shall meet the requirements of the Livingston County Road Commission Requirements.

#### IV. WATER MAIN

##### A. GENERAL

1. The location, size, length and type of existing and proposed water main, water service leads, and water main appurtenances such as, though not limited to; valves, hydrants, vertical and horizontal bends, and tees shall be shown in plan view. All water main, including appurtenances shall meet the Marion Howell Ocala Genoa Sewage and Water Authority standards and the Howell Fire Department standards.

#### V. SEWERS (SANITARY/STORM)

##### A. GENERAL

1. The following must be shown in plan view for sanitary and storm sewer:
  - a. Length, size, type, class, and slope of pipe between structures.
  - b. Top of casing elevation at structures.
  - c. Easement width (20' minimum for sanitary sewer, 12' minimum for storm sewer).
  - d. Progressive numbering system for all structures.
2. The following must be shown in profile view for sanitary and storm sewer:
  - a. Length, size, type, class, and slope of pipe between structures.
  - b. Size and type of structure.
  - c. Top of casing and sewer invert elevations at structures.
  - d. Existing and proposed ground elevations.
  - e. Hydraulic grade line (storm sewer only).
  - f. Utility crossings, including top and bottom of pipe elevations.
  - g. Special backfill areas under or within pavement areas.
  - h. Progressive numbering system for all structures.
3. Storm and sanitary sewer size, grade, and structure spacing table

	Std Grade	Min Grade	Max Grade	Std Grade	Max Grade		
Size	(%)	(%)	(%)	(ft)	(ft)		
10" *	0.60	0.30	6.2	300	350		
12" **	0.40	0.22	6.0	300	350		
15"	0.24	0.16	3.6	300	350		
18"	0.18	0.12	2.8	300	400		
21" & greater		0.14		0.10	2.2	300	400
*	minimum allowable sanitary sewer size is 10"						
**	minimum allowable storm sewer size is 12"						

4. All pipe connections at structures shall be separated by a minimum of one (1) foot between pipe walls and 40% of the structure circumference must remain intact. The design engineer shall provide details for all structures with multiple pipe connections not meeting the requirements below:



<u>Structure Diameter</u>	<u>Max. Pipe Size for Straight – Through Installation</u>	<u>Max. Pipe Size For Right Angle Installation</u>
48"	24"	18"
60"	36"	24"
72"	42"	36"
96"	60"	42"

5. Where Manning's equation is used to compute flow, a minimum value for "n", roughness coefficient shall be as follows:
  - a. Sewers = 0.013
  - b. Culverts = 0.025
  - c. Open Channel = 0.035

## VI. SANITARY SEWER

### A. GENERAL

1. A minimum 20' wide easement is required for all public sanitary sewer. Wider easements will be required for deeper sewer to maintain a 1:1 excavated side slope within the easement. The sanitary sewer shall be centered within the public easement.
2. Prior to acceptance of the sewer, the developer or contractor shall provide a videotape or approved digital image file of the sewer (with flows) to the Township. The video shall be taken no less than 30 days after installation.
3. The Township Engineer will inspect all sanitary taps into existing Township structures.
4. Lift stations will not be permitted unless there is no other alternative for sewer service. If a lift station is required, the Design Engineer shall provide the Township with all design details and calculations, which shall be in accordance to all current local, County and State requirements.
5. The testing requirements are as follows:
  - a. The contractor shall conduct a sanitary air test with the Township Engineer witnessing. Air tests shall comply with current testing standards and requirements. Air testing should not be used if the groundwater level is 2 feet or more above the top-of-pipe at the upstream end (reference ASTM F1417) if the air pressure required is for testing is greater than a psi-gauge.
  - b. A sanitary infiltration test shall comply with current standards and is required when the water table is 7' or higher than the invert elevation.

### B. DESIGN CRITERIA

1. A quantity list and design data (on the cover sheet or first sheet of the plans) shall be provided and be in accordance with the current 10 States Standards.
2. The maximum depth to the invert of any sanitary sewer pipe shall not exceed 80% of the manufacturer's recommendation.
3. When there is a change in direction in a sewer at a manhole, an allowance of 0.10 feet in grade shall be made for a loss of head through the manhole.
4. Whenever there is a change in pipe size, the inverts of both sewers shall be set at a grade so that both sewers maintain the same energy gradient.
5. Siphons shall only be allowed when specifically approved by the Township and Township Engineer.
6. A minimum cover of 4' is required over all sanitary sewers, including leads.

7. The building lead location, size, type, and slope (minimum 6" diameter, SDR 23.5, and 1%) shall be provided. In order to verify the slope of the lead, invert elevations shall be provided at the finished grade of the building and at the connection to the mainline sanitary sewer. The 6" lead shall extend all the way to the building.
8. All sewer leads in high groundwater areas to be installed according to the township standard lead detail.
9. In sanitary sewers where construction of building leads to the property line is not required, a wye branch (tees not allowed) shall be installed for each lot or potential building site.
10. Leads shall not be connected to manholes unless specifically approved by the Township for connection to the last manhole or connection to deep sewer. A drop connection will be required at connections to manholes.

C. DROP CONNECTIONS

1. External drop connections are required when there is an 18" vertical difference between inverts on the outlet and inlet pipes and shall be constructed according to the Standard Details.
2. The Township must approve internal drop connections. The connection shall be based on field conditions and in accordance with standard details.

VII. STORM SEWER

A. GENERAL

1. A drainage area map shall be provided. The drainage area map shall show the storm sewer system, sub-area boundaries and acreage contributing to each storm structure, and impervious (C-factor) for each sub area.
2. Storm water shall not be diverted onto adjoining properties nor shall storm water flow be impeded from its existing drainage path due to a proposed development. Detention may be required to meet County discharge rate requirements. See the Detention/Retention section of this document for requirements.
3. Storm water discharge shall be per the Livingston County Drain Commissioner's requirements or the Livingston County Road Commission's requirements if discharging into the road right-of-way. At no time shall storm water discharge exceed a rate of 0.2 cfs/acre.
4. The location, size, type of pipe, and length of all culverts shall be shown on the plans. Culvert requirements are further outlined in the design criteria of this section.
5. The location, length and cross-section of all ditches shall be shown the plans. The cross-sectional ditch requirements are further outlined in the design criteria of this section.
6. Roof drainage and sump pump leads may be directed overland or connected to a storm sewer system. If connecting to a storm sewer system, the connection shall be made at a storm structure unless otherwise approved by the Township Engineer. If approved, a tap to an existing 12" concrete storm sewer may be made with a Fernco EZ Tap and a tap to a larger concrete storm sewer pipe with a KOR-N-TEE. The location, size, type and slope of the leads shall be included on the plans.
7. The owner/developer shall be responsible for cleaning and maintaining all storm sewer, storm structures, sediment forebays, filter berms, detention basins, and detention basin outlets. These storm water management systems shall be cleaned once all buildings within the development are complete. A note indicating this, as well as a description of the mechanism for which the owner/developer plans to establish in order to provide for long term maintenance, should be included on the plans.

B. DESIGN CRITERIA

1. Enclosed storm sewer design calculations shall be submitted using the Rational Method,  $Q = CIA$ . The following shall be considered:
  - a. 10-year storm,  $I = 175/(T+25)$  with initial  $T=15$  minutes. Time (T) shall be based on the actual time of flow from the most distant point of flow measurement.
  - b. Typical surface runoff coefficients shall be:

Surface	C
Pavement (Asphalt, Concrete, Brick)	0.90
Roofs	0.90
Open Water	1.00
Aggregate	0.65
Greenbelt (Lawns, Vegetation)	0.20

Note: Surface area of detention, retention, and forebay areas shall be considered open water unless a naturally vegetative basin is provided.

2. Velocity: Minimum = 2.0 ft/s; Maximum = 10.0 ft/s. Velocities exceeding 5.0 ft/s will require erosion protection as directed by the Township Engineer.
3. Manning's formula shall be used to calculate pipes flowing full to verify the capacity of the storm sewer system:  $Q = (1.49/n) AR^2/3S^{1/2}$
4. The storm sewer system shall be designed, if possible, so that the hydraulic grade line (HGL) is within the pipe. When discharging storm sewer into an existing or proposed detention basin, the 10-year storm elevation or bankfull elevation shall be considered when calculating the HGL of the proposed system. When discharging into an existing storm sewer system, the HGL must be calculated from the outlet of the existing system.
5. Sewer and structure requirements
  - a. All storm sewer shall be in accordance with Section V., Sewers (Sanitary/Storm).
  - b. The minimum size storm sewer shall be 12" diameter.
  - c. The Township Engineer must approve direct taps for storm sewer. Direct taps shall only be permitted if the storm sewer that is to be tapped is significantly larger than the tapping pipe. A KOR-N-Seal boot connection shall be required for allowable taps. A detail shall be included on the plans.
  - d. The sump leads and roof drain leads connecting to a storm sewer system shall be a minimum of 4" diameter and shall be SDR 35, non-perforated, solid wall, PVC pipe.
  - e. Storm sewer, unless otherwise approved by the Township Engineer, shall be reinforced concrete pipe (RCP) and shall meet the following requirements:
    - I. Class IV for a depth up to 14 feet
    - II. Class V for depth 14 feet to 24 feet
    - III. Class III may be allowed in greenbelt areas for a depth up to 14 feet. At no time shall Class III be allowed under or within the influence of pavement areas  
All RCP shall meet ASTM C76 requirements
  - f. RCP elliptical storm sewer may be allowed and must be approved by the Township Engineer. Elliptical storm sewer shall meet ASTM C507 requirements.
  - g. Plastic storm sewer pipe may be allowed in greenbelt areas only and must be approved the Township Engineer. The following requirements shall apply:
    - I. Maximum 18" diameter

- II. Smooth interior
  - III. PVC pipe shall meet ASTM F949 requirements
  - IV. HDPE pipe shall meet ASTM M294 requirements
- h. End sections shall be RCP, with a bar grate and 8" to 15" rip rap at the outlet.
  - i. Manholes and catch basins shall be a minimum of 48" diameter. A detail of a typical manhole and catch basin shall be included on the plans. The type of casting for each structure shall be indicated in either plan or profile view and on the detail.
  - j. Inlets shall be a minimum of 24" diameter. Inlets shall only be permitted at a structure that is the first (upstream) structure in a series and 12" diameter pipe serves as the discharge. The next downstream structure must have a sump.
  - k. A minimum cover of 2'-6" is required. MDOT "lowhead" or "flat top" structures are required instead of a cone/corbel section if there is less than 4' of cover over the pipe. Both plan and profile shall specify "low head" where necessary. A detail of the "lowhead" structure should be included on the plans.
  - l. A two (2) foot sump is required for any structure receiving surface runoff, with the exception of inlet structures.
  - m. All storm sewer shall be premium joint (rubber gasket). A note indicating this shall be included on the plans.
  - n. Trench drains shall only be permitted within truck wells. A trench drain detail shall be included in the plans.
  - o. All storm water runoff within a truck well or discharging into a wetland shall be pre-treated with an oil and gas separator. A detail of the treatment structure, including the type and model number, shall be included on the plans.
6. Culvert calculations shall be submitted for inlet headwater control or outlet tailwater control with proper "K" factors used to determine culvert sizes. All culverts shall be sized for a 10-year storm event.
  7. Culvert requirements
    - a. The minimum size culvert shall be 12" diameter
    - b. Culverts 48" diameter and greater shall require sloped paving at the inlet. Headwalls shall not be permitted.
    - c. Culverts shall be either corrugated metal pipe (CMP) or reinforced concrete pipe (RCP) and shall meet the following requirements:
      - i. 12" – 24" CMP shall be 16 gauge
      - 30" – 36" CMP shall be 14 gauge
      - 42" – 54" CMP shall be 12 gauge
      - 60" – 72" CMP shall be 10 gauge
 All RCP shall be a minimum of Class IV
  8. Open ditch calculations shall be submitted and shall be sized for a 10- year storm event using Manning's formula:  $Q = (1.49/n) AR^2/3S^{1/2}$ . A one (1) foot freeboard shall be required.
  9. Open ditch requirements:
    - a. Minimum flat bottom width: 2'
    - b. Minimum flat bottom depth: 2' (measured from shoulder hinge point).
    - c. Transverse slopes: 1.0% - 5.0%; ditch slopes exceeding 3% shall be sodded to a point one (1) foot above the ditch flow line.
    - d. Maximum side slopes 3:1
    - e. Culverts sized for a 10-year storm elevation

- f. Flow through an open ditch system shall not exceed eight (8) cfs
- g. No more than six (6) acres of tributary area may be conveyed through an open ditch system. An enclosed storm sewer system is required for all tributary areas exceeding six (6) acres.
- H. A ditch cross-section, which clearly indicates the dimensions outlined above shall be included on the plans.

## VIII. DETENTION/RETENTION

### A. GENERAL

1. The location of the detention, standpipe riser structure, retention, forebay, forebay filter berms, and rain garden areas shall be shown in plan view. Storm water management systems proposed under the jurisdiction of the Drain Commissioner shall be located on common-owned property, not on privately owned lots.
2. Detention must accommodate all onsite drainage and any runoff entering the site from neighboring properties.
3. The Livingston County Drainage District for which the site discharges should be indicated on the plans. Discharge rates shall not exceed 0.2 cfs/acre. More restrictive discharge rates may be required based on site conditions and the drainage district for which the site discharges. The Township Engineer and/or the Livingston County Drain Commissioner shall determine if a more restrictive discharge rate is required.
4. Detention basins shall be wet basins or storm water marsh systems. Dry basins, providing extended storage, will be accepted when the development site's physical characteristics or other local circumstances make the use of a wet basin infeasible.
5. Storm water management system incorporating pumps shall not be permitted in developments with multiple owners. Variances from this requirement will only be considered if a demonstration that no other alternative is feasible is provided on the plans.
6. The use of underground detention/retention is not allowed without Township approval.

### B. DETENTION/RETENTION/FOREBAY DESIGN

1. Calculations for sizing the detention basin shall be submitted and included on the plans. All detention basin sizing shall be per the Drain Commissioner's "Simple Method of Detention Basin Design" for a 100-year storm event and have a minimum freeboard of one (1) foot. Drainage calculations shall include the following:
  - a. Tributary area in acres.
  - b. C-factor
  - c. Discharge rate
  - d. Volume of storage required
  - e. Volume of storage provided
  - f. Volume of the permanent wet area, which shall be based on the following equation:
 
$$2.5 * 0.5 \text{ inch} * \text{runoff coefficient} * \text{site drainage area (cf)}$$
  - g. Bankfull elevation. This volume shall be based on a 1.5-year, 24-hour storm event and the following equation:
 
$$5160 * \text{tributary area acreage} * \text{C-factor}$$
  - h. The bankfull volume shall be stored not less than 24-hours and not more than 40 hours.
  - i. First flush elevation. This volume represents the first 0.5 inch of runoff and shall be calculated using the following equation:

1815 \* tributary area acreage \* C-factor

- j. Standpipe-type riser structures are required for all detention basins. The size of the riser pipe and calculations showing the size and number of infiltration holes within the riser pipe shall be included. Riser pipes shall be a minimum of 36" diameter for a height up to four (4) feet and a minimum of 48" diameter for a height exceeding four (4) feet. Infiltration holes shall be set at the bottom of the riser pipe and at the first flush and bankfull elevations. A standpipe detail shall be included on the plans.
  - k. Hoods or trash racks shall be installed on the riser to prevent clogging. Grate openings shall be a maximum of three inches.
  - l. Orifice plates are discouraged. Where an orifice plate is to be used in the standpipe to control discharge, it will have a minimum diameter of four inches.
  - m. The riser shall be placed near the pond embankment to provide for ready maintenance access.
  - n. Riser pipes will be constructed with concrete bottom.
  - o. Outlet pipe size. The outlet pipe shall be sized for a 10-year storm event.
2. A marsh fringe shall be established near the inlet or forebay and shall surround a minimum of 50% of the basin's perimeter. The location of this area shall be shown on the plans.
3. If connecting into an existing detention basin, calculations showing the total volume of the existing basin, the C-factor used to size the existing basin, the amount of storage volume dedicated for the site and the amount of storage volume required for the site.
4. Calculations for sizing a retention basin shall be submitted and included on the plans. Retention basins shall be sized to accommodate two consecutive 100- year storm events and shall be capable of storing two (2) inches of runoff from the entire tributary area. A minimum three (3) foot freeboard shall be required. Calculations shall include all requirements for detention basins shown in sections a-e above.
5. Calculations for sizing the sediment forebay(s) shall be included on the plans. The capacity of the forebay shall be equivalent to 5% of the 100-year storm volume based on the area tributary to the inlet. Forebays shall be separated from the detention basin using either gabions or compacted earthen filter berms. A detail of the separation method shall be included on the plans. Direct maintenance access to the forebay for heavy equipment will be provided.
6. Basin side slopes, regardless of the type shall be no flatter than 20:1 and no steeper than 3:1. Slopes steeper than 5:1 must have a four (4) foot high chain link fence with a twelve (12) foot wide access gate. The fence shall completely surround the basin.
7. Anti-seep collars should be installed on any piping passing through the sides or bottom of the basin to prevent leakage through the embankment.
8. All basins will have provisions for a defined emergency spillway, routed so that it can be picked up by the main outflow channel while not discharging directly over the outlet pipe. The emergency spillway will be set at an elevation six inches above the design high water elevation.
9. Adequate maintenance access from public or private right-of-way to the basin will be reserved. The access will be on a slope of 5:1 or less, stabilized to withstand the passage of heavy equipment, and will provide direct access to both the forebay and the riser/outlet.
10. The placement of retention/detention basins within a floodplain of a stream, creek, or lake is prohibited.

### C. PERMANENT RETENTION PONDS

1. Freeboard: Retention Basins shall provide three feet of freeboard.
2. Storage Volume  
Retention basins will be capable of storing two inches of runoff from the entire tributary area, contingent upon the following:
  - a. An overflow assessment will be required. The assessment should include descriptions of the surrounding areas, including nearby homes, which would be impacted in the event of an overflow.
  - b. The proprietor must submit a soil boring log taken within the basin bottom area to a depth of 25 feet below existing ground or 20 feet below proposed basin bottom elevation. The Drain Commissioner reserves the right to require additional storage up to that required by two consecutive 100-year storm events based on the results of soils data or the overflow assessment. If such additional storage is required, freeboard requirements may be reduced at the discretion of the Drain Commissioner.

### D. RAIN GARDEN

1. Located a minimum distance of 10' from any building structure or parking area.
2. Maximum contributing acreage shall be five (5) acres. Contributing acreage of one (1) acre or less is preferred.
3. The size of the rain garden shall be indicated on the plans. Sizing shall be based on contributing drainage area, amount of imperviousness, and soil type. The calculations using following formula shall be included on the plans:  
$$A = \text{Drainage area} * 5\% * R_v \quad R_v = 0.05 + (\% \text{ impervious})$$
4. A cross-section of the rain garden shall be included on the plans and shall meet the following requirements:
  - a. Soil mixes shall consist of 50%-60% sand, 20%-30% topsoil and 20%-30% compost.
  - b. Water depth shall be based on the ground slope of the surrounding area.  
Depth = 4" – 5" for slopes 4%  
Depth = 6" – 7" for slopes 5%-7%  
Depth = 8" for slopes 8% - 12%  
Water depth shall not exceed 8" and ground slopes should not exceed 12% within 30 feet from the rain garden.
  - c. A minimum 4" mulch layer shall be placed between the water storage area and planting soil bed. The mulch specified shall be appropriate for water quality gardens. Coarse, fibrous, shredded wood chip mulch is preferred.
  - d. (If necessary) Type and size of underdrain shall be specified. All underdrain shall be surrounded by pea gravel with 12" minimum layer of class II sand.
  - e. Water depth shall be based on the ground slope of the surrounding area.
5. The number and type of plants should be included. The plants shall be water tolerant and the one (1) plant for every square foot of rain garden area is required.

### E. GENERAL REQUIREMENTS

1. All runoff generated by proposed impervious surfaces, unless otherwise permitted by the Drain Commissioner, must be conveyed into a stormwater storage facility for water quality treatment and detention/retention prior to being discharged from the site.
2. Public safety will be a paramount consideration in stormwater system and pond design. Providing safe retention/detention is the proprietor's responsibility. Pond designs will incorporate gradual side slopes, topsoiling, seeding and mulching, plantings per

landscape plan if one is required, and safety shelves. Where further safety measures are required, the proprietor is expected to include them within the proposed development plans.

#### F. DETENTION REQUIREMENTS

1. The volume and storage provided for controlling the "bankfull" flood will be equal to or in excess of the total rain from a 1.5-year, 24-hour storm. This storage volume is slightly increased from  $C_p v$ , the channel protection storage volume, as used in Appendix H. This can be determined by:

$8160 \times \text{acreage} \times \text{the relative imperviousness factor } C = \text{cubic feet}$

The release rate from the "bankfull" storage volume will be such that this volume will be stored not less than 24 or more than 40 hours.

2. The "first flush" of runoff is defined as the first 0.5 inch of runoff over the entire site. The majority of this volume will be captured in the sediment forebay, with the residual volume detained for a minimum of 24 hours. The volume of the first flush can be determined by:

$1815 \times \text{acreage} \times \text{the relative imperviousness factor } C = \text{cubic feet}$

3. Basin Inlet/Outlet Design

- a. Engineered velocity dissipation measures based on discharge flow rates and velocities will be incorporated into basin designs to minimize erosion at inlets and outlets, to minimize the re-suspension of pollutants, and to create sheet flow conditions where feasible.
- b. To the extent feasible, the distance between inlets and outlets will be maximized. The length and depth of the flow path across basins and marsh systems can be maximized by:
  - I. increasing the length-to-width ratio of the entire design.
  - II. increasing the dry weather flow path within the system to attain maximum sinuosity. If possible, inlets and outlets should be offset at opposite longitudinal ends of the basin.
- c. The outlet will be well protected from clogging.
- d. Riser Design
  - I. The use of a perforated standpipe-type riser structure to assure an appropriate detention time for all storm events is required.
  - II. Orifices used to maintain a permanent pool level should withdraw water at least one foot below the surface of the water.

#### IX. FLOOD PLAIN DEVELOPMENT

- A. An MDEQ permit is required for work within the floodplain.
- B. An equivalent volume of excavation must compensate for all fill within floodplain in order to maintain water storage volume.
- C. In certain instances, the 100-year flood plain boundary must be shown on the plans.
- D. Where available, the community flood insurance study shall be used.

#### X. SITE GRADING

##### A. GENERAL

1. Sufficient proposed grades must be indicated to ensure the following:
  - a. Drainage is adequately discharged offsite with proper detention or retention.
  - b. No upstream drainage is restricted.
  - c. Paving slopes are adequate.



- d. The site generally drains without standing water.
  - e. Site grading merges with grading on neighboring sites.
  - f. Sight lines are not obstructed.
- B. The finished grade elevation for all proposed and existing buildings on site or on neighborhood properties must be provided.
  - C. The maximum slope to an abutting property line is 1:4.
  - D. A slope of 1:3 may be approved based on township review. a slope of 1:3 shall be restored using an approved "erosion blanket". this shall be identified on the plans.
  - E. Grading plans shall take into account the natural features of the land as much as possible.
  - F. A grading easement from an adjacent property owner will be required for any offsite grading and for any retaining wall footing or where it appears that "normal" (1 on 1 side slope) excavation to the bottom of the footing encroaches the adjacent property.
  - G. No filling will be allowed within the flood plain of a river, stream, creek, or lake unless under the terms of a permit granted by the mdeq.

## XI. RETAINING WALLS

### A. GENERAL

- 1. Walls separating a grade differential of more than 2' are considered a retaining wall and require a structural engineering design and review. The Design Engineer must supply a cross-sectional detail on the plans and computations (sealed by a registered engineer) with the plan submittal. The cost of all retaining walls must be included in the engineering cost estimate.
- B. Top and bottom of wall elevations and dimensions above and below grade and from the property line shall be shown on the plans.
  - C. The face of a retaining wall shall be a minimum of 2' from the property line.
  - D. Edge drain shall be provided along the base of all retaining walls. edge drain shall be a minimum of 6" diameter. the type of pipe should be included in the cross-sectional detail.
  - E. The developer shall provide appropriate material testing at his/her cost during construction.
  - F. Protective railing is required for all walls within 2' of parking, driving, pedestrian walkways and/or when the height of the wall is 30" or greater.
  - G. The design engineer shall execute and submit a retaining wall certification form. see page 31.
  - H. Type of walls allowed, specifications, and inspection items
    - 1. Concrete Walls
      - a. Formwork dimensions for the base (inspection only)
      - b. Steel size, quantity, spacing, overlap (2" minimum clearance for reinforcing steel from any formwork.
      - c. Box-outs, keyways, weep holes, footing drain and any other plan details.
      - d. No vibration of concrete occurs inside the form during placement (inspection only).
      - e. Concrete cylinders, slump, air entrainment tests performed by developer's testing firm are acceptable (inspection only).
      - f. Concrete mix shall not be over watered at the job site (inspection only).
      - g. Copies of the delivery tickets are obtained (inspection only).
    - 2. Pre-cast walls
      - a. Certification shall be obtained from the manufacturer (inspection only).
      - b. Wall base placement, material, size, thickness, and compaction.
      - c. Embedment and batter are per the manufacturer's recommendations.
    - 3. Wood Walls

- a. Certificates of treatment level for wood materials.
  - b. Connection details and fasteners (i.e. nails, bolts, etc.)
  - c. Proper length and embedment of "dead men".
4. Boulder Walls
- a. Maximum height: 4 feet.
  - b. Boulder size shall range from 24" to 30" and embedment shall be a minimum of 8" into the ground.

Date: \_\_\_\_\_

XXXXX

XXXXX

XXXXX

XXXXX

Regarding: Retaining Wall Review for: \_\_\_\_\_  
S.T.P.C.#: \_\_\_\_\_  
Sidwell#: \_\_\_\_\_

Design Engineer and Firm Name: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Owner: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

A retaining wall(s) is proposed for the above referenced site. The wall(s) was designed to applicable standards, and all necessary loads (including vehicular surcharge) have been incorporated into the design. In addition, the wall meets minimum factors of safety against both overturning and sliding.

A retaining wall detail has been incorporated into the drawings and has been submitted for review.

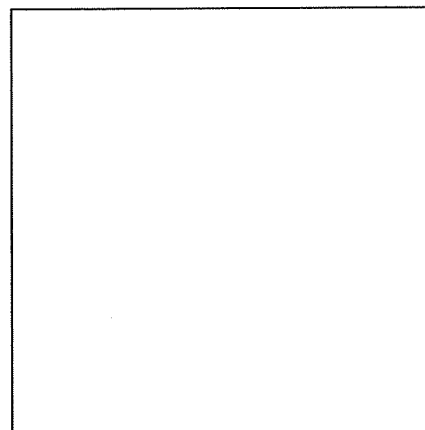
Sincerely,

Seal

\_\_\_\_\_  
Printed Name of Professional Engineer

\_\_\_\_\_  
Signature

cc: Philip Westmoreland, P.E., Spicer Group, Inc.,  
125 Helle Blvd., Ste. 2  
Dundee, MI 48131



## XII. PAVING AND ROADS

- A. All public roads shall meet the requirements of the Livingston County Road Commission and the Marion Township Zoning Ordinance.
- B. All private roads shall meet the requirements of the Marion Township Ordinances and the standards outlined within the private road sections below.
- C. All facets of the intersection of two or more roads, public or private, where at least one (1) of the roads is a public road, shall meet the then current requirements of the Livingston County Road Commission.
- D. The type of surface proposed for roadways, parking areas, driveways, sidewalks, pathways, loading zones, and dumpster pads shall be shown on the plans and shall be in accordance with the requirements outlined herein.
- E. All applicable pavement and/or gravel cross-sections shall be included on the plans for roadways, parking areas, driveways, sidewalks, pathways, and dumpster pads. Curb and gutter cross-sections shall be included on the plans, if applicable.
- F. Private roads shall be limited to serving no more than thirty (30) single-family dwelling units on a single access and seventy-five (75) with more than one point of access. Any dwelling unit whose only means of ingress or egress is via the private road shall be considered in the number of dwelling units allowed. If private roads are an extension of a dead-end public road, the number of dwelling units along the public road shall be considered in the number of dwelling units allowed. This limit shall apply to any type of roadway surface, gravel or pavement.
- G. Private roads with only one connection to a county road, state highway, or another approved private road shall not be longer than two thousand (2000) feet.
- H. Dead end roads shall terminate with a cul-de-sac, unless site conditions necessitate the use of another configuration. The Township must approve any alternate configuration.
- I. All cul-de-sacs or turnarounds shall terminate at the property line except when precluded by a natural barrier or when the cul-de-sac terminates at the last available building envelope, lot, or parcel within the development and that building envelope, lot, or parcel fronts upon the cul-de-sac.
- J. Frontage measurements along a cul-de-sac shall be measured tangent to the front setback line and at right angles to the side lot lines.
- K. Not more than four (4) principal buildings or lots shall have frontage on a cul-de-sac. any lot located on a cul-de-sac shall have its side lot lines designed to be radial to the front property line or right-of-way line on either public or private roads, except where such lot lines would create unusual, inconvenient, or irregular lot shapes.
- L. **PRE-EXISTING OR NEW PRIVATE ROADS SERVING 2-5 DWELLING UNITS**
  - 1. Any road serving between 2 and 5 dwelling units shall be considered a private road and shall be referred to as a Minor Private Road.
  - 2. Minor Private Roads should generally conform to the following criteria. Additional requirements are set forth in Marion Township General Ordinance for Private Roads No. 07-03.
  - 3. Requirements for Minor Private Roads will be on a case-by-case basis. The requirements set forth herein are general guidelines to ensure public health, safety and welfare, and may be adjusted by the township as necessary based on site conditions.
  - 4. Submission requirements shall be sufficient to determine the nature and extent of the existing conditions and any proposed improvements. The extent of the information provided shall be at the discretion of the Township, Township Engineer, and Township Planner.
  - 5. Right-of-way or easements should have sufficient width to encompass the entire cross

- section of the road, including any ditches or drainage systems.
6. Roadway width should be sixteen (16) feet whether paved or gravel. A one (1) foot grass shoulder should be provided on both sides of the road.
  7. Roadway cross section should generally conform to the following:
    - a. Gravel road:
      - I. Six (6) inches MDOT 22A aggregate placed in two (2) courses.
    - b. Paved road:
      - I. Four (4) inches bituminous surface placed in two (2) courses. No course or lift shall exceed 2" in depth.
      - II. Eight (8) inches of aggregate base, MDOT 21AA Limestone.
  8. All roadways should be sufficiently crowned for drainage.
  9. Vertical alignment should generally conform to the following guidelines:
    - a. Site distances at all intersections (public roads or private roads) should be verified and shall meet the requirements of the Livingston County Road Commission.
    - b. Roadway grades should be minimized and provide safe emergency vehicle access.
  10. A system to adequately collect and discharge tributary roadway runoff is required. Either open ditch or enclosed storm sewer systems are acceptable and shall be sized reasonably for the anticipated run-off. Generally, a 10- year storm event shall be used to determine run-off.

**M. PRE-EXISTING, NON-CONFORMING PRIVATE ROADS SERVING MORE THAN 5 DWELLING UNITS**

1. Pre-existing, non-conforming private roads should generally conform to the following criteria. Additional requirements are set forth in Marion Township General Ordinance for Private Roads No. 07-03.
2. Requirements for pre-existing, non-conforming private roads will be on a case-by-case basis. The requirements set forth herein are general guidelines to ensure public health, safety and welfare, and may be adjusted by the township as necessary based on site conditions.
3. Submission requirements shall be sufficient to determine the nature and extent of the existing conditions and any proposed improvements. The extent of the information provided shall be at the discretion of the Township, Township Engineer and Township Planner. In general:
  - c. Minor changes in the physical characteristics of the road will require a sketch of the proposed improvements. The sketch shall be legible and clearly identify all improvements. The sketch should utilize current aerial information but do not need to be to scale. Aerial information is available at the Livingston County GIS Management Department, 304 E. Grand River Ave., Suite 101, Howell, MI 48843.
  - d. Major changes in the physical characteristics of the road will require detailed plans. The level of detail shall meet the requirements of a full, complete construction plan submittal.
4. Right-of-way or easements should have sufficient width to encompass the entire cross section of the road, including any ditches or drainage systems. Depending on the location of the private road easement in relation to adjacent parcels, a landscape buffer as provided in the Township Zoning Ordinance may be required by the Township to reduce the impact of the private road upon existing abutting parcels.
5. Roadway width should generally meet the following requirements:
  - a. Gravel road: twenty-two (22) feet edge of gravel to edge of gravel.

- b. Paved road:
      - I. Shoulder (with or without ditch): twenty-two (22) feet edge of pavement to edge of pavement, with a one (1) foot wide gravel shoulder on either side of pavement edge.
      - II. Curb and gutter: a minimum of twenty-five (25) feet back of curb to back of curb, with a minimum lane width of eleven (11) feet. Either a 2-½ foot wide curb and gutter or a 1-½ foot wide curb and gutter are acceptable.
- 6. Roadway cross sections should generally conform to the following:
  - a. Existing or alternate cross sections may be considered if the alternate section has been demonstrated to have equivalency to the required section via the AASHTO Guide for the Design of Pavement Structures. Geotechnical analysis may be required by the Township Engineer.
  - b. Gravel road:
    - II. Six (6) inches MDOT 22A aggregate placed in two (2) courses. Six (6) inch sand sub-base, meeting MDOT Class II requirements.
  - c. Paved road:
    - III. Four (4) inches bituminous surface placed in two (2) courses. No course or lift shall exceed 2" in depth. Eight (8) inches of aggregate base, MDOT 21AA Limestone.
  - d. Shoulder sections shall match the section for the road.
- 7. Vertical alignment should generally conform to the following guidelines:
  - a. Site distances at all intersections (public roads or private roads) should be verified and shall meet the requirements of the Livingston County Road Commission.
  - b. The roadway grade within one hundred (100) feet of an intersection should generally not exceed a slope of three (3) percent regardless of surface type.
    - i. Gravel Surface:
      - 1. Minimum: one (1) percent.
      - 2. Maximum: five (5) percent.
    - ii. Paved surface:
      - 1. Minimum: 0.5 percent.
      - 2. Maximum: six (6) percent.
- 8. All roadways, regardless of surface type, should have a sufficient crown to adequately drain runoff from the roadway.
- 9. Drainage should conform to the following requirements:
  - a. A system to adequately collect and discharge tributary roadway runoff is required. Either open ditch or enclosed storm sewer systems are acceptable and shall be sized reasonably for the anticipated run-off. Generally, a 10- year storm event shall be used to determine run-off.
  - b. All paved roads with curb and gutter shall have an enclosed storm sewer system, unless otherwise approved by the Township.
  - c. Drainage ditches and swales shall meet the following:
    - a. Minimum flat bottom depth of one (1) foot, measured from shoulder hinge point.
    - b. Longitudinal slope shall generally follow the slope of the road. The slope design shall minimize soil erosion. Slopes shall generally be between one (1) percent and five (5) percent. Maximum front slope is 1:3, and the maximum back slope is 1:2.

- d. Culverts should be sized for a 10-year storm elevation and their invert set at the ditch flow-line. Culverts shall be clean and free of debris.
- 10. Roadway signage shall meet the requirements of the Livingston County Road Commission and the Michigan Department of Transportation's Manual of Uniform Traffic Control Devices.
- 11. Any pre-existing, non-conforming road that serves multi-family residential, commercial, or industrial uses shall meet the requirements for a new road according to the Township Engineering Standards. Any changes in the road will require the road be improved to meet the standards for a new road in its entirety.

**N. NEW PUBLIC AND PRIVATE ROADS**

- 1. New roads, whether public or private, shall meet the following criteria. Additional requirements are set forth in Article VI: General Provisions, Section 6.20 New Private Roads of the Township Zoning ordinance.
- 2. All roadways that are to be public shall meet the requirements of the Livingston County Road Commission. Approval and acceptance of the roads shall be granted by the Livingston County Road Commission.
- 3. All roadways that are to be private shall meet the requirements of the Livingston County Road Commission, the Marion Township Zoning Ordinance and the standards outlined below. If a conflict exists between the Road Commission and Township standards, the stricter requirements shall govern.
- 4. Right-of-way or easements shall have sufficient width to encompass the entire cross section of the road, including any ditches or drainage systems.
  - a. Depending on the location of the private road easement in relation to adjacent parcels, a landscape buffer as provided in the Township Zoning Ordinance may be required by the Township to reduce the impact of the private road upon existing abutting parcels.
  - b. Minimum road right-of-way or easement width shall meet the following:
    - i. All residential (single or multi-family) shall be sixty-six feet (66').
    - ii. Commercial, industrial and all other uses shall be eighty feet (80').
- 5. Roadway width shall meet the following requirements:
- 6. Gravel road:
  - a. Gravel road: thirty (30) feet edge of gravel to edge of gravel.
- 7. Paved road:
  - a. Residential streets without curb shall be a minimum of twenty-two (22) feet edge of pavement to edge of pavement, with a four (4) foot wide paved or gravel shoulder on either side of roadway edge.
  - b. Residential streets with curb and gutter: a minimum of twenty-seven (27) feet back of curb to back of curb, with a minimum lane width of twelve (12) feet. Either a 2-½ foot wide curb and gutter or a 1-½ foot wide curb and gutter are acceptable.
  - c. Commercial streets shall be a minimum of twenty-nine feet (29') back of curb to back of curb. Minimum lane with shall be twelve feet (12'). A 2-½ foot wide curb and gutter is required.
  - d. Industrial roads shall be a minimum of thirty-five feet (35') back of curb to back of curb. Minimum lane with shall be fifteen feet (15'). A 2-½ foot wide curb and gutter is required.

- e. In areas where on-street parking is allowed, the minimum width of the road shall be increased by 8'. Including the gutter pan in the width extension for parking is not permitted.
  - f. Roadway recovery areas, (clear zones) shall be a minimum of 7' for straight-line sections and inside diameter curves. A minimum of 15' is required for outside diameter curves. Recovery areas shall be considered the distance between a permanent structure and edge of gravel shoulder or back of curb.
8. Roadway cross sections shall conform to the following criteria. Alternate cross sections may be considered if the alternate section has been demonstrated to have equivalency to the required section via the AASHTO Guide for the Design of Pavement Structures. Geotechnical analysis may be required by the Township Engineer:
- a. Residential roads or streets shall have a minimum of four (4) inches bituminous surface placed in two (2) courses (no course or lift shall exceed 2" in depth), with eight (8) inches of aggregate base (MDOT 21AA limestone), Gravel roads, if permitted by the Township, shall consist of a minimum of eight (8) inches of aggregate base (MDOT 22A) and six (6) inches of sand sub-base meeting the requirements of MDOT Class II.
  - b. Commercial streets shall have a minimum four (4) inches of bituminous surface placed in two (2) courses (no course or lift shall exceed 2" in depth), with eight (8) inches of aggregate base (MDOT 21AA limestone), and six (6) inches of sand sub-base meeting the requirements of MDOT Class II. An open graded drainage course may be substituted for sand sub-base.
  - c. Industrial streets shall have a minimum of nine (9) inches of non-reinforced concrete pavement, four (4) inches of aggregate base (MDOT 21AA limestone), and four (4) inches of sand sub-base meeting the requirements of MDOT Class II.
  - d. Shoulder pavement sections shall match the section of the road.
  - e. The pavement shall have transverse slope (crown) of 2% each way of the pavement center-line. Superelevated sections are prohibited in any development having a proposed operating speed of less than fifty-five (55) miles per hour. Where the design speed for a proposed street or road is less than fifty-five (55) mph and super elevation would otherwise be required as determined in the latest edition of the AASHTO Policy on Geometric Design for Streets and Highways, the horizontal curve shall be designed with a radius long enough to counter the need for superelevation.
  - f. Edge drain is required on all streets with curb and gutter. The trench must be filled with pea stone to the level of the base material, and the entire trench wrapped with geotextile fabric.
  - g. Proposed sections utilizing an open ditch section shall have a ditch depth of not less than two (2) feet relative to the shoulder hinge point and two (2) feet wide rounded at the bottom. The depth shall be increased if warranted by drainage discharge calculations.
  - h. The maximum slope within the proposed right-of-way shall be 1:4 (rise/distance). The use of slopes steeper than 1:4 outside of the proposed right-of-way draining toward the roadway should be avoided.
  - i. Driveway slopes or lot access areas shall have a slope not greater than 1:10 within the right-of-way. Only one drive approach is allowed per single-family dwelling unit. Driveways beyond the right-of-way shall generally not exceed 12% slope without significant topographical limitations.



- j. Pavement sections for residential driveways shall meet the following:
      - i. Gravel – six (6) inches of MDOT 21AA limestone or MDOT 22A.
      - ii. Asphalt – three (3) inches of bituminous surface over six (6) inches of MDOT 21AA limestone.
      - iii. Concrete – six (6) inches of concrete over four (4) inches of MDOT Class II.
    - k. Pavement sections for commercial or industrial driveways shall meet the following:
      - i. Gravel drives will not be permitted.
      - ii. Asphalt – four (4) inches of bituminous surface over eight (8) inches of MDOT 21AA limestone. For development with significant truck traffic, asphalt approaches will not be permitted.
      - iii. Concrete – eight (8) inches of concrete over four (4) inches of MDOT Class II.
- 9. Horizontal alignment shall conform to the following guidelines. All horizontal alignment and intersection design shall follow the latest edition of the AASHTO Policy on Geometric Design for Streets and Highways. The design speed shall be thirty-five (35) mph for interior subdivision streets unless otherwise directed by the Township or Road Commission.
  - a. Minimum center-line radius for a horizontal curve shall be 230 feet.
  - b. Minimum cul-de-sac radius at the outside edge of the pavement shall be fifty (50) feet, not including any curb.
  - c. The fillet radius from cul-de-sac to tangent sections shall be a minimum of fifty (50) feet.
  - d. Intersection radii shall be a minimum of thirty-five (35) feet for residential streets and a minimum of forty-five (45) feet for commercial and industrial streets.
  - e. Intersection shall be at right angles and shall be designed such that the first sixty-five (65) feet in any direction shall be straight line sections.
  - f. Boulevard intersections or entrances shall have concrete curb and gutter around the island.
  - g. MDOT Detail M openings shall be used for all commercial or industrial drives or approaches. All commercial or industrial approaches shall be curbed regardless of the road cross section.
  - h. Commercial and industrial drive approaches shall have a minimum forty-five(45) foot radius.
  - i. Drive approaches shall be contained within the property lines, including radii and any acceleration/deceleration tapers, if required.
  - j. Drive approaches shall be a minimum of 125' from any intersection, measured from the centerline of the drive approach to centerline of the road.
- 10. Vertical alignment shall conform to the following guidelines. All vertical alignment design shall follow the latest edition of the AASHTO Policy on Geometric Design for Streets and Highways. The design speed shall be thirty-five (35) mph for interior subdivision streets unless otherwise directed by the Township or Road Commission.
  - a. The percent of grade on a road with an open ditch cross section shall be no less than 1.0% or more than 5.0% where ditch grades are centerline dependent.

- b. The percent of grade on a road with a curb and gutter cross section shall be no less than 0.50% or more than 6.0%.
  - c. A vertical curve shall be required where the algebraic difference in slopes of the tangent sections exceeds 1.0%. The minimum length of the vertical curve shall be 100'.
  - d. Road grades within 100' of an intersection shall not exceed a slope of three (3) percent regardless of the surface type.
11. A drainage system to adequately collect and discharge tributary roadway runoff is required. Either an open ditch or enclosed storm sewer system per the Township requirements is acceptable.
- a. All paved roads with curb and gutter shall have an enclosed storm sewer system unless otherwise approved by the Township.
  - b. The maximum allowable storm water runoff tributary area conveyed overland in drainage ditches shall be no more than six (6) acres. When the tributary area is more than six (6) acres or the amount of flow in the ditch exceeds 8.0 cfs, an enclosed storm sewer system and curb and gutter will be required.
  - c. The percent of grade in an open ditch shall not be less than 1.0% or greater than 5.0%
  - d. Any open ditch that exceeds 3.0% shall have a sodded ditch bottom. Sod in these areas shall extend from the ditch bottom up either side of the ditch to a point one foot above the flow line of the ditch.
12. Roadway signage shall meet the requirements of the Livingston County Road Commission and the Michigan Department of Transportation's Manual of Uniform Traffic Control Devices.

### **XIII. PARKING LOT REQUIREMENTS**

- A. A striping and traffic control plan for parking areas shall be included. The location of all traffic control, regulatory, street, and subdivision signs shall be shown on the plans.
- B. Minimum drive widths and parking dimensions shall be in accordance with the Marion Township Zoning Ordinance.
- C. Concrete curb and gutter shall be provided for the perimeter of the parking area and for all island areas within the parking area.
- D. Minimum drive widths and parking dimensions shall be in accordance with the Marion Township Zoning Ordinance.
- E. Private Developments
  - 1. Loading zones and dumpster pads: 8" concrete on 6" 21 AA limestone aggregate.
  - 2. Minimum drive widths and parking dimensions shall be in accordance with the Marion Township Zoning Ordinance.

### **XIV. PATHWAYS AND SIDEWALKS**

- A. Sidewalks shall be located in the right of way and one (1) foot from the ultimate right-of-way line.

- B. The sidewalk will be five (5) feet wide constructed of four (4) inches of concrete on compacted well-draining subgrade. The walk must be continued through driveway sections where it will be increased in thickness to eight (8) inches on major thoroughfares and collector roads and six (6) inches in all other instances. Curbs must be tapered to meet the walk.
- C. Proposed grades must be shown along the property line, driveways, and intermittent locations along the length of the walk.
- D. Any structures, hydrants, poles, etc., which are existing along the alignment of the walk, must be adjusted or relocated at the expense and coordination of the developer.
- E. All sidewalk construction will be according to public Act No. 8, 1973, the new MDOT standards for ADA ramps with detectable warning domes.

## XV. SOIL EROSION AND SEDIMENT CONTROL

### A. GENERAL

- 1. All proposed erosion control measures and sequence of soil erosion control measures shall be shown on the plans.
- B. Erosion control shall conform to Livingston County standard details, with a detail of each measure used shown on the plans.
- C. The smallest practical area of land should be exposed at any one time during development. "Practical area" shall be defined as the area in which temporary or permanent restoration can and will be performed within a reasonable period of time, as defined by the Township. When land is exposed during development, the exposure should be kept to the shortest possible period of time, as deemed by the Township.
- D. Temporary vegetation or mulching may be required to protect areas exposed during development, particularly if an unexpected erosion problem becomes evident. The developer will be required to assign this activity top priority upon notification by the Township. Failure to act after a second notification will be grounds for the Township to take necessary action to address the problem and charge the owner/developer accordingly.
- E. Sediment basins or temporary basin outlet standpipe filters shall be maintained during construction to ensure that sediment within runoff is not being discharged onto neighboring properties.
- F. Sediment basins prior to discharge into any wetland, stream, pond, etc., require 1 x 3 stone outlet filter at all low points/discharge points properly toed into silt fence.
- G. Permanent vegetation and structures/basins should be installed as soon as practical during development. This should be included in the Soil Erosion Control Sequence noted above.
- H. Wherever feasible, natural vegetation should be retained and protected.
- I. The development plan should be best fitted to the topography and soil so as to create the least erosion potential. The best earth balance may not be the best fit with respect to topography and natural vegetation.
- J. All new or existing (disrupted ditches) shall be sodded.
- K. Seed and mulch is not permitted on slopes greater than 1:4. "Excelsior" Mulch blanket, sod pegged per Township specifications, or approved equal will be required on such slopes.
- L. Erosion protection shall be provided in the public roadway for all drainage structures receiving road runoff to the low point.
- M. The developer shall clean all structures impacted during construction along with any other erosion control items prior to occupancy.

### N. SITES REQUIRING PERMITS

- 1. A permit is required for all earth moving activities as follows:
  - a. All projects that disturb one (1) or more acres.

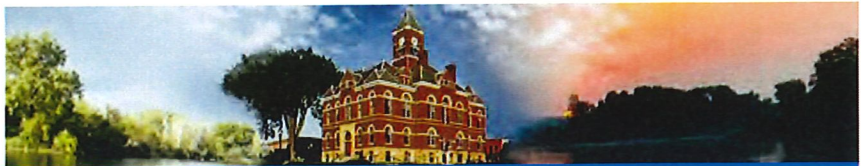
- b. All projects that occur within 500 feet of surface water and disturb more than 225 square feet.
  - c. Construction of new ponds or alterations to existing ponds.
  - d. All major projects as defined by Livingston County.
- O. INTENT OF PERMIT
  - 1. The intent of this requirement is to ensure that no silt or sediment enters the public stream or watercourses. This is accomplished through means of sediment basins, filters, diversions, etc.
- P. PLAN REQUIRED
  - 1. A soil erosion and sediment control plan is required for all sites that require a permit. This can be made a part of the plan documents. Itemized on this plan shall be step-by-step requirements for controlling erosion (sequence of construction). No work, including site clearing, will be allowed until approved soil erosion and sediment control measures are in place.
- Q. Accelerated erosion and sedimentation must be prevented during all phases of construction including:
  - 1. Initial site clearing.
  - 2. Utility construction.
  - 3. Building construction.
  - 4. Site paving.
  - 5. Final site approval.
- R. INSPECTION
  - 1. Inspection will be made periodically throughout construction on the maintenance and effectiveness of soil erosion control methods by designated consultants or personnel from Marion Township and Livingston County.
- S. If inspection reveals that the controls are not being implemented, a cease and desist order on all site construction may be issued.





## Liv.Co UPDATE

Monthly News from the  
Livingston County Commissioners



December 2019

### Livingston County Board of Commissioners



District 1 - Kate Lawrence

District 2 - William Green

District 3 - Wes Nakagiri

District 4 - Douglas G. Helzerman

District 5 - Donald S. Parker  
*(Board Chairman)*

District 6 - Robert J. Bezotte

District 7 - Carol S. Griffith

District 8 - Dennis L. Dolan  
*(Board Vice-Chairman)*

District 9 - Gary Childs

### Monthly Meetings

12/9/2019 - Full Board Meeting at  
7:30 PM

12/11/2019 - Personnel  
Committee at 8:30 AM

12/16/2019 - Infrastructure &  
Development & Public Safety  
at 7:30 PM

12/18/2019 - Finance Committee  
at 7:30 AM

12/23/2019 - Full Board Meeting  
at 7:30 PM

1/2/2020 - Full Board Meeting at  
7:30 PM

*"The mission of Livingston County is to be an effective and efficient steward in delivering quality services within the constraints of sound fiscal policy. Our priority is to provide mandated services which may be enhanced and supplemented to improve the quality of life for all who work, reside, and recreate in Livingston County."*

### The Board Adopts the 2020 Livingston County Budget

The Livingston County Board of Commissioners recently approved the 2020 General Fund Budget in the amount of \$51,531,388. The County was allocated 5.0 mills by the County Tax Allocation Board and on the 5th of June, 2019, the Livingston County Board of Commissioners approved the Headlee rolled back millage rate of 3.3073 to support the 2020 General Fund Operations; .2925 to support Ambulance and; .1127 to support Veterans Services. Pursuant to state statute, the 2020 Budget was filed with the County Clerk for public viewing on November 15th. Along with the 2020 Budget, projected revenues and expenditures for Internal Service Funds, and authorized position changes were approved. A total of 9.38 positions will be authorized as of January 1, 2020. Finally, transfers of funds from the Capital Improvement Fund to departments for approved projects were authorized.

### The Board Will Apply For Grant Funds To Assist Senior Nutrition

Community Outreach Services Corporation (COSC) has been operating the Meals On Wheels (MOW) program for the County since 1991, and is the sole provider of MOW for both Livingston and Western Oakland County. COSC currently operates out of Hartland Educational Support Service Center to administer, prepare, pack, and distribute the meals in the school's hallways. They have recently been informed that their space will be reduced, which will negatively impact the already over-capacity operation of the program. COSC has a need for a new permanent facility to operate the MOW program to the Livingston County community and has identified land in Hartland, Michigan to be owned by COSC for the operation of the MOW Program, and in the event of an emergency, to use the facility as a crisis center for food service. COSC has proposed a plan for the purchase of land and construction of a new facility for COSC to operate the MOW program and requires a financial commitment from Livingston County to be able to move forward with the project. The Board has authorized the County to apply for CDBG grant funds from Michigan Economic Development in the amount of \$1,000,000 for the purpose of constructing a new facility for COSC to administer MOW.

## Resolutions Passed by the Board of Commissioners & Appointments

- Significant changes in Federal rules and best practices have occurred since the last update of LETS' Drug and Alcohol policy, so the policy has been revised to remain in compliance. The Federal Transit Administration requires all transit systems to maintain a Drug and Alcohol Policy consistent with 49 CFR Part 655, as amended, as a condition of receiving Federal funding. The updated policy was distributed to all LETS employees and took effect on December 1st, 2019.
- Livingston County's current Medical Director is planning on retiring in early 2020. It has been determined that shared Medical Director services would be mutually beneficial for Washtenaw and Livingston County Health Departments. Expanding the responsibilities of Medical Director services to include both Livingston and Washtenaw Counties will result in a savings of overall expense for both counties, without sacrificing quality of service for either county. Livingston County is entering into an agreement to reimburse Washtenaw County our portion of the costs including salary and fringes.
- Resolution #2013-11-345 established the dog licensing fee structure for Livingston County, which included a \$20 late fee. The collection of this fee has been inconsistent over the years across the 18 local units and 2 county offices issuing dog licenses. The recent implementation of new licensing software in October 2018 included functionality that automatically assesses the late fee. This has added burden to our local unit Treasurers of enforcing a "County Policy" and upset several dog owners trying to comply with the law. Resolution #2013-11-345 has been amended to remove the dog licensing late fee from the County's fee structure.
- Resolution 2019-08-118 authorized entering into an agreement with Selectron Technologies to implement the Relay IVR upgrade and SelecTXT module to enhance the Building Inspection Department's customer service. An amendment was made to the original resolution correcting the initial upgrade cost and subsequent 5 year usage costs.
- The Courts have determined that adding and replacing cameras to the current system for additional video surveillance is a top priority. The Board authorized the purchase and installation of a camera system for the Judicial Center and Brighton Court from Identify, Inc. The project includes adding 21 cameras throughout the interior and exterior of the Judicial Center and 2 cameras in the Courtroom at Brighton District Court.
- Livingston County Central Dispatch, as a county-governed department operating as a 911 emergency dispatch center, is required per the E911 Service Plan to establish an Advocacy Oversight Board (AOB) with the purpose of providing input and advice as needed to the Central Dispatch Director on topics related to public-safety operations as they coincide with 911 policies and procedures. A committee was established by the AOB to review and update the existing AOB Bylaws. The Board has approved the revised AOB Bylaws and authorized the Bylaws to be implemented.
- The Board has appointed David Feldpausch as the new Livingston County EMS Director. This appointment came after the top two candidates were interviewed by the Acting County Administrator, the Sheriff, The County Public Health Officer, the Hartland/Deerfield Fire Chief, and the Human Resources Director.



**Carlisle | Wortman**  
ASSOCIATES, INC.

117 NORTH FIRST STREET SUITE 70 ANN ARBOR, MI 48104 734.662.2200 734.662.1935 FAX

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December 2019

Bob Hanvey, Supervisor  
**Marion Township**  
2877 West Coon Lake Road  
Howell, MI 48843

Dear Bob,

As we have completed thirty-third year of business, we are appreciative of the many fine communities we represent. We have been able to grow and prosper because of your support.

In 1997, we started a program of donating to local charities in place of sending holiday greetings to each of our clients. In a small way, we have tried to give something back to the communities we represent. Since we started this holiday program, we have distributed thousands of dollars to charities in Southeast Michigan.

It is unfortunate that there are still many people who suffer from hunger and homelessness. Therefore, our contributions to the charities on the attached list focus on these vital and important causes.

Best wishes to you for the New Year.

Sincerely,

Carlisle/Wortman Associates, Inc.  
Richard K. Carlisle, AICP, PCP  
President

Carlisle/Wortman Associates, Inc.  
Douglas J. Lewan, AICP, PCP  
Executive Vice President





**Carlisle | Wortman**  
ASSOCIATES, INC.

117 NORTH FIRST STREET SUITE 70 ANN ARBOR, MI 48104 734.662.2200 734.662.1935 FAX

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**Best Buddies Michigan Expansion** - *Best Buddies is an international organization whose mission is to create one-to-one friendships, integrated employment and leadership development for people with intellectual and developmental disabilities.*

*There are currently six college chapters in Michigan. With a state office, new chapters at the middle and high school and college levels will be increased. The highly successful Best Buddies Jobs program to Michigan which is desperately needed to provide integrated employment opportunities will also be added.*

[www.bestbuddies.org/find-programs/Michigan](http://www.bestbuddies.org/find-programs/Michigan)

**Friends of North Oakland County Veterans Treatment Court** - *The Friends of the North Oakland County Veterans Treatment Court (NOCVTC) is comprised of a group of Veterans and community volunteers with one very specific goal ... to assist the Veterans Treatment Court in helping struggling Veterans assimilate back into civilian life by removing obstacles that are preventing the Veteran to stay focused on a healthy life style.*

*The primary purpose of the Friends of the North Oakland County Veteran's Treatment Court (Friends) is to provide assistance and support to Veterans who need help accomplishing their Veteran's Court goals. These Veterans' lives have been intervened by the justice system because they have been convicted of one or more misdemeanors and are in need of taking positive steps towards improving their well-being. It is the "Friend's" belief that no-matter what the present circumstances of the Veteran are, they have the capacity to heal.*

[www.nocvtc.com](http://www.nocvtc.com)

**Cass Community Social Services (CCSS)** - *Founded in 2002, the Cass Community Social Services is a Detroit-based agency that works across the city in areas of concentrated poverty by providing programs for food, health, housing and jobs to the people of our community. CCSS was started as part of the Cass Community United Methodist Church. In addition to serving hundreds of meals, CCSS provides two weekly free medical clinics and day programs for 125 adults with developmental disabilities, and currently employs 80 adults in agency's Green Industries with marry jobs with sustainability.*

[www.casscommunity.org](http://www.casscommunity.org)

**Habitat for Humanity - Livingston & Washtenaw Counties** - Habitat for Humanity brings people together to build homes, communities and hope. Habitat Livingston and Monroe Counties homeowners help build their homes alongside volunteers and pay an affordable mortgage. With help, Habitat homeowners achieve the strength, stability and self-reliance they need to build a better life for themselves and their families.

Habitat has built more than **1,800,000 houses** around the world, providing more than **6,800,000 people** in more than **3,000 communities** with safe, decent, affordable shelter.

[www.livingstonhabitat.org](http://www.livingstonhabitat.org)

[www.h4h.org](http://www.h4h.org)

**Big Brothers/Big Sisters of Washtenaw County** - When kids have the influence of a caring adult, they are more likely to avoid risky behaviors and to focus on academics. Today's young people face a variety of challenges and being matched with a Big Brother or Big Sister can help them navigate these challenges and reach their potential.

The mission of Big Brothers Big Sisters of Washtenaw County is to provide children facing adversity with strong and enduring, professionally supported 1-to-1 relationships that change their lives for the better, forever.

[www.bbbswashtenaw.org](http://www.bbbswashtenaw.org)