



**BOARD OF TRUSTEES**  
**Regular Meeting**  
**February 22, 2023**  
**7:00 p.m.**

1. CALL MEETING TO ORDER
2. PLEDGE OF ALLEGIANCE
3. ROLL CALL
4. APPROVAL OF AGENDA
5. PRESENTATIONS
6. PUBLIC HEARINGS
7. PUBLIC COMMENT: Restricted to three minutes regarding items on this agenda  
*Note: This is an opportunity for comments only, questions to the Board will not be answered at this time. For specific answers to questions, please call Township Hall (989-772-4600)*
8. CLOSED SESSION
9. REPORTS/BOARD COMMENTS
  - A. Current List of Boards and Commissions – Appointments as needed (see applications in packet)
  - B. February Monthly Activity Report (provided under separate cover)
  - C. Planning Commission, EDA, Sidewalks, and ZBA updates by Community and Economic Development Director
  - D. Board Member Reports
10. CONSENT AGENDA
  - A. Communications
  - B. Minutes – February 8, 2023 – Regular Meeting
  - C. Accounts Payable
  - D. Payroll
  - E. Meeting Pay
  - F. Fire Reports
  - G. Township and Isabella County Road Commission 2023 Brine Participation Contract

11. NEW BUSINESS

- A. Discussion/Action: (Smith) Gourdie Frasier Professional Services Proposal for Pump Station #5 Upgrades and Service Area Infiltration Study
- B. Discussion/Action: (Nanney) Introduction and First Reading of the Stormwater Management Ordinance
- C. Discussion/Action: (Nanney) CMU Pathway Connector Commitment of Funding
- D. Discussion/Action: (Stuhldreher) Policy Governance 2.2 Treatment of Staff
- E. Discussion/Action: (Stuhldreher) Policy Governance 3.2 Board Job Description

12. EXTENDED PUBLIC COMMENT: Restricted to 5 minutes regarding any issue

*Note: This is an opportunity for comments only, questions to the Board will not be answered at this time. For specific answers to questions, please call Township Hall (989-772-4600)*

13. MANAGER COMMENTS

14. FINAL BOARD MEMBER COMMENT

15. ADJOURNMENT

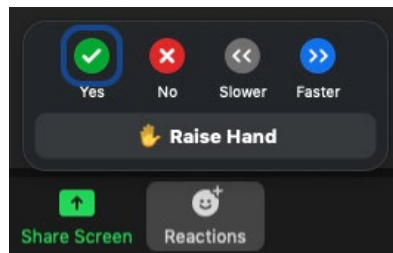
## Hybrid Meeting Instructions for the Charter Township of Union Board of Trustees Meeting

The public can view all Union Township meetings live by clicking on our [YouTube Channel](#). For those who would like to participate during public comment, you can do so via Zoom.

[Click here](#) to participate in the Zoom Meeting via computer or smart phone. (Meeting ID Enter “829 4309 7870” Password enter “300757”). Access to the electronic meeting will open at 6:50 p.m. and meeting will begin at 7:00 p.m.

Telephone conference call, dial (312-626-6799). Enter “829 4309 7870” and the “#” sign at the “Meeting ID” prompt, and then enter “300757” at the “Password” prompt. Lastly, re-enter the “#” sign again at the “Participant ID” prompt to join the meeting.

- All public comments for items on the agenda will be received during the Public Comment section of the Agenda and any issue not on the agenda will be received during the Extended Public Comment section of the Agenda.
- Computer/tablet/smartphone audience: To indicate you wish to make a public comment, please use the “Reactions” icon. **Next, click on the “Raise Hand” icon** near the bottom right corner of the screen.



- **To raise your hand for telephone dial-in participants, press \*9.** You will be called on by the last three digits of your phone number for comments, at which time you will be unmuted by the meeting moderator.
- Please state your name and address for the minutes and keep public comments concise.

You will be called upon once all in-person comments have been received, at which time you will be unmuted by the meeting moderator.

Persons with disabilities needing assistance should call the Township office at (989) 772-4600. Persons requiring speech or hearing assistance can contact the Township through the Michigan Relay Center at 711. A minimum of one (1) business day of advance notice will be necessary for accommodation.

## Board Expiration Dates

Planning Commission Board Members (9 Members) 3 year term			
#	F Name	L Name	Expiration Date
1-BOT Representative	James	Thering	11/20/2024
2-Chair	Phil	Squatrito	2/15/2026
3-Vice Chair	Ryan	Buckley	2/15/2025
4-Secretary	Doug	LaBelle II	2/15/2025
5 - Vice Secretary	Tera	Albrecht	2/15/2024
6	Stan	Shingles	2/15/2024
7	Paul	Gross	2/15/2025
8	Nivia	McDonald	2/15/2026
9	Jessica	Lapp	2/15/2026
Zoning Board of Appeals Members (5 Members, 2 Alternates) 3 year term			
#	F Name	L Name	Expiration Date
1- PC Rep	Ryan	Buckley	2/15/2025
2 -	Richard	Barz	12/31/2025
3 -	Liz	Presnell	12/31/2025
4 -	Brandon	LaBelle	12/31/2023
5 -	Eric	Loose	12/31/2024
Alt. #1	David	Coyne	12/31/2024
Alt #2 (BOT Representative)	Jeff	Brown	11/20/2024
Board of Review (3 Members) 2 year term			
#	F Name	L Name	Expiration Date
1	Doug	LaBelle II	12/31/2024
2	Sarvjit	Chowdhary	12/31/2024
3	Bryan	Neyer	12/31/2024
Alt #1	Randy	Golden	12/31/2024
Construction Board of Appeals (3 Members) 2 year term			
#	F Name	L Name	Expiration Date
1	Colin	Herren	12/31/2023
2	Joseph	Schafer	12/31/2023
3	Andy	Theisen	12/31/2023
Hannah's Bark Park Advisory Board (2 Members from Township) 2 year term			
1	Mark	Stuhldreher	12/31/2024
2	John	Dinse	12/31/2023
Chippewa River District Library Board 4 year term			
1	Ruth	Helwig	12/31/2023
2	Lynn	Laskowsky	12/31/2025



## Board Expiration Dates

EDA Board Members (9 Members) 4 year term			
#	F Name	L Name	Expiration Date
1-BOT Representative	Bryan	Mielke	11/20/2024
2	Thomas	Kequom	4/14/2023
3	James	Zalud	4/14/2023
4	Richard	Barz	2/13/2025
5	Robert	Bacon	1/13/2027
6	Marty	Figg	6/22/2026
7	Cheryl	Hunter	6/22/2023
8	Jeff	Sweet	2/13/2025
9	David	Coyne	3/26/2026
Mid Michigan Area Cable Consortium (2 Members)			
#	F Name	L Name	Expiration Date
1	Kim	Smith	12/31/2025
2	vacant seat		
Cultural and Recreational Commission (1 seat from Township) 3 year term			
#	F Name	L Name	Expiration Date
1	Robert	Sommerville	12/31/2025
Sidewalks and Pathways Prioritization Committee (2 year term -PC Appointments)			
#	F Name	L Name	Expiration Date
1 - BOT Representative	Kimberly	Rice	11/20/2024
2 - PC Representative	Stan	Shingles	2/15/2024
3 - Township Resident	Jeff	Siler	8/15/2023
4 - Township Resident	vacant seat		10/17/2022
5 - Member at large	Phil	Hertzler	8/15/2023
Mid Michigan Aquatic Recreational Authority (2 seat from Township) 3 year term			
#	F Name	L Name	Expiration Date
1-City of Mt. Pleasant	John	Zang	12/31/2023
2-City of Mt. Pleasant	Judith	Wagley	12/31/2022
1-Union Township	Stan	Shingles	12/31/2023
2-Union Township	Allison	Chiodini	12/31/2025
1-Mt. Pleasant Schools	Lisa	Diaz	12/31/2022
1-Member at Large	Mark	Stansberry	2/14/2025
2- Member at Large	Michael	Huenemann	2/14/2025

APPOINTMENT TO BOARDS & COMMISSIONS  
OF CHARTER TOWNSHIP OF UNION  
APPLICATION



Name: Jim Zalud Date: 1-17-23  
Address: 6422 S. Whiteville Rd, Mt. Pleasant  
Phone (home) 772-3249 (cell) 989-317-5121 (work) 772-5890  
Email: jzalud@isabella.com  
Occupation: CEO

Please select the board you are applying for:

- Zoning Board of Appeals      Must be a Union Township Resident
- Board of Review                      Must be a Union Township Resident
- Planning Commission                Must be a Union Township Resident
- EDA    Must meet one of the following qualifications:
  - Property owner in East or West DDA
  - Resident in Union Township

OTHER                      \*Specify Board: \_\_\_\_\_

Please state reason for interest in above board:  
Have served on DDA Board for 20+ years

Other information that you feel would be useful in your application review (i.e., past experience, past board membership, etc. A resume is encouraged with the application):

\_\_\_\_\_  
\_\_\_\_\_

Signature: Jim Zalud Date: 1-17-2023

APPOINTMENT TO BOARDS & COMMISSIONS  
OF CHARTER TOWNSHIP OF UNION  
APPLICATION



Name: Thomas Kequom Date: Dec 13, 2022

Address: 1908 Oakwood Dr

Phone (home) 989 772 4222 (cell) 989 330 3544 (work) 989 775 4070

Email: tkequom@sagchip.org

Occupation: Construction Manager

Please select the board you are applying for:

Zoning Board of Appeals Must be a Union Township Resident

Board of Review Must be a Union Township Resident

Planning Commission Must be a Union Township Resident

EDA Must meet one of the following qualifications:

Property owner in East or West DDA

Resident in Union Township

OTHER \*Specify Board: \_\_\_\_\_

Please state reason for interest in above board:

I have been on the EDA Boards, for 30 plus years.

Other information that you feel would be useful in your application review (i.e., past experience, past board membership, etc. A resume is encouraged with the application):

Capital Construction Management is my expertise.

Signature: Thomas Kequom Date: 1-17-23

**2023 CHARTER TOWNSHIP OF UNION**  
**Board of Trustees**  
**Regular Meeting Minutes**

A regular meeting of the Charter Township of Union Board of Trustees was held on February 8, 2023, at 7:00 p.m. at the Union Township Hall.

**Meeting was called to order at 7:08 p.m.**

**Roll Call**

Present:

Supervisor Mielke, Clerk Cody, Treasurer Rice, Trustee Bills, Trustee Brown, and Trustee Thering

**Approval of Agenda**

**Cody** moved **Brown** supported to approve the agenda with an addition to add item 11.C to discuss formation of a committee and to hire a firm to help with grants. **Vote: Ayes: 6 Nays: 0. Motion carried.**

**Presentation**

- a. Brian Smith, 2284 Sandstone Drive, applicant for the vacant Trustee seat, highlighted his experience working with local governments. Mr. Smith was available for questions from the Trustees.
  
- b. Tim Lannen, 1129 Meadow Drive, applicant for the vacant Trustee seat, joined remotely to speak on his background in education and work experiences as a Union Township Trustee and Firefighter/Medical First Responder for the City of Mt. Pleasant. Mr. Lannen was available for questions from the Trustees.

**Public Hearings**

**Public Comment**

Open: 8:10 p.m.

Ben Gunning, 2270 E. Broomfield Rd, had questions regarding items on the proposed 2022 Zoning Ordinances Amendments.

Bill Hauck, 1304 E. Baseline, spoke on behalf of Brian Smith to fill the vacant Trustee seat.

Don Schurr, 6768 S. Mission, commented on the process of selecting a candidate to fill the vacant Trustee seat.

Elise Bennett, 4075 Isabella, spoke in support of appointing Brian Smith to fill the vacant Trustee seat.

\*Board received an email correspondence from Ronda Haymaker in support of appointing Brian Smith to the vacant Trustee seat.

Closed: 8:22 p.m.

**\*8:22 p.m. – 8:27 p.m. the Board took a short recess.**

**Reports/Board Comments**

**A. Current List of Boards and Commissions – Appointments as needed.**

- 1. Appointment to fill unexpired Trustee vacancy with term ending 11/20/2024.**



**Cody** moved **Thering** supported to appoint Brian Smith to the vacant Trustee position to fill the unexpired Trustee vacancy with term ending 11/20/2024. **Roll Call Vote: Ayes: Cody, Rice, Bills, and Thering. Nays: Mielke and Brown. Motion carried.**

**\* 8:49 p.m. Treasurer Rice left the meeting.**

**2. Appointment to the Planning Commission for a 3-year term**

**Mielke** moved **Cody** supported to reappoint Phil Squattrito for a 3-year term to the Planning Commission with the term expiring 2/15/2026. **Vote: Ayes: 5. Nays: 0. Motion carried.**

**3. Appointment to the Planning Commission for a 3-year term**

**Mielke** moved **Bills** supported to reappoint Jessica Lapp for a 3-year term to the Planning Commission with the term expiring 2/15/2026. **Vote: Ayes: 5. Nays: 0. Motion carried.**

**4. Appointment to the Planning Commission for a 3-year term**

**Mielke** moved **Cody** supported to appoint Nivia McDonald for a 3-year term to the Planning Commission with the term expiring 2/15/2026. **Vote: Ayes: 5. Nays: 0. Motion carried.**

**B. Board Member Reports**

**Cody** – gave an update on the Isabella County Road Commission meeting held on February 2<sup>nd</sup>.

**Bills** – gave updates on the Isabella County Board of Commissioners meeting held January 17<sup>th</sup> and February 7<sup>th</sup>.

**Consent Agenda**

- A. Communications
- B. Minutes – January 25, 2023 – Regular Meeting
- C. Accounts Payable
- D. Payroll
- E. Meeting Pay
- F. Fire Reports
- G. Mission Creek Park Pathway Project Resolution of Intent

**Bills** moved **Cody** supported to approve the consent agenda as presented. **Roll Call Vote: Ayes: Mielke, Cody, Bills, Brown, and Thering. Nays: 0. Motion carried.**

**New Business**

**A. Discussion/Action: (Nanney) Second Reading and Adoption of the 2022 Zoning Ordinance Text Amendments**

**Cody** moved **Bills** supported to conduct a Second Reading of the proposed PTXT 22-01 Zoning Ordinance Amendments, and to adopt the amendatory ordinance as Ordinance No 23-02. **Roll Call Vote: Ayes: Mielke, Cody, Bills, Brown and Thering. Nays: 0. Motion carried.**

**B. Discussion/Action: (Smith) Drinking Water Revolving Fund and Clean Water Revolving Fund Project Plans – Gourdie Frasier Professional Services Proposals**

**Brown** moved **Cody** supported to approve the Contract for Professional Engineering Services between Gourdie Fraser and the Charter Township of Union in the amount of \$81,750.00 to complete the Clean Water State Revolving Fund (CWSRF) and Drinking Water Revolving Fund (DWRf) Project Plans, and authorize the Township Manager to sign the contracts. **Roll Call Vote: Ayes: Mielke, Cody, Bills, Brown and Thering. Nays: 0. Motion carried.**

**C. Introduction/Discussion: (Board of Trustees) Possibility of a Grant Committee/Consulting Company to aid in Grant Opportunities**

Discussion by the Board.

**EXTENDED PUBLIC COMMENT: RESTRICTED TO 5 MINUTES REGARDING ANY ISSUE**

Open: 9:23 p.m.

Ben Gunning, 2270 E. Broomfield Rd., appreciates the deliberation regarding the open Trustee seat. Commented on hiring a firm to assist with a social media page.

Don Schurr, 6768 S. Mission, appreciates the discussion and rationale behind the Board appointment. Commented on the Master Plan and the need for a wish list.

Brian Smith, 2284 Sandstone Dr., thanked the Board for their decision.

Closed: 9:31 p.m.

**MANAGER COMMENTS**

- Attended a Reconstruction meeting for MDOT reconstruction project along M-20 and East Pickard Rd. The anticipated start date for the project is March 6<sup>th</sup>. MDOT is holding a public open house at their Mt. Pleasant office located at 1212 Corporate Drive, February 27<sup>th</sup> from 4:00 p.m. – 6:00 p.m.

**FINAL BOARD MEMBER COMMENTS**

Brown – appreciates the conversations and the respect at tonight’s meeting. Welcomed Mr. Smith to the Board.

Bills – Echoed Trustee Brown’s comment. Congratulations to Mr. Smith. Announced she will be on vacation for the February 22<sup>nd</sup> meeting.

Thering – Appreciates the different opinions. Thanked the applicants.

Cody – Congratulations to Mr. Smith. Responded to Mr. Gunning’s comment during Extended Public Comment regarding social media.

Mielke – Agree with comments regarding social media and is aware of the need to be creative in reaching the community. Informed the public of the technical difficulties due to a power outage earlier in the day. Appreciated the Board’s respect, decorum and willingness to listen to each other.

**ADJOURNMENT**

**Brown** moved **Bills** supported to adjourn the meeting at 9:40 p.m. **Vote: Ayes: 5 Nays: 0. Motion carried.**

**APPROVED BY:**

\_\_\_\_\_  
**Lisa Cody, Clerk**

\_\_\_\_\_  
**Bryan Mielke, Supervisor**

*(Recorded by Tera Green)*

DRAFT

Check Date	Bank	Check	Vendor	Vendor Name	Description	Amount
Bank 101 POOLED CHECKING						
02/10/2023	101	590 (E)	00146	CONSUMERS ENERGY	48858 LED LIGHT RD 2010 S LINCOLN RD L4 LIGHT STREET LIGHTS 5228 S ISABELLA RD 1933 S ISABELLLA RD 5144 BUDD ST 5142 BUDD ST 1660 BELMONT DR 5525 E REMUS RD 5537 E BROADWAY RD 2270 NORTHWAY DR 2055 ENTERPRISE DR TEMP 900 MULBERRY LN 5240 E BROOMFIELD RD	247.95 65.77 1,837.43 8,078.60 827.14 31.15 291.00 128.16 71.46 437.22 33.94 252.70 60.52 1,143.36
						13,506.40
02/22/2023	101	24368	01703	AMAZON CAPITAL SERVICES Void Reason: CHECK STOCK ERROR	CARBON METER-RENTAL/BLDG INSPECTIONS	96.00 V
				Void Reason: CHECK STOCK ERROR	POLICY GOVERNANCE BOOK-FINANCE DIRCTR	33.94 V
				Void Reason: CHECK STOCK ERROR	POSTER HANGERS, TAPE, POST-ITS, TAB INSE	86.28 V
						216.22
02/22/2023	101	24369	01529	AWWA	ANNUAL MEMBERSHIP 2023	87.00
02/22/2023	101	24370	01836	JOHN BARKER	RETURNED SEC DEP-JAMESON HALL	250.00
02/22/2023	101	24371	01240	BRAUN KENDRICK FINKBEINER PLC	ZALUD LITIGATION-DEC 2022 CONCERNED CITIZENS-DEC 2022 GENERAL LEGAL FEES-DEC 2023	2,660.36 135.00 2,970.00
						5,765.36
02/22/2023	101	24372	00095	C & C ENTERPRISES, INC.	CLOTHING ALLOWANCE-AMY PEAK	17.96
02/22/2023	101	24373	01528	CENTRAL MICHIGAN SURVEYING & DEV	BD PAYMENT REFUND-OVERPAYMENT	425.00
02/22/2023	101	24374	00155	COYNE OIL CORPORATION	FUEL IN TOWNSHIP VEHICLES-JAN 2023	1,079.80
02/22/2023	101	24375	01242	CULLIGAN WATER	COOLER RENT 2/1-2/28/2023-ISABELLA	47.36
02/22/2023	101	24376	01171	DBI BUSINESS INTERIORS	STAMP PAD FRONT COUNTER PENS TAPE DISPENSER - ADMIN BATTERIES - TWP HALL REPLACEMENT INK FOR STAMPER COPY PAPER FOR WTR/SWR SCREEN CLEANER KIT	4.04 5.95 3.99 71.94 11.16 89.98 16.79
						203.85
02/22/2023	101	24377	01835	DETECTION INSTRUMENTS CORPORATION	SAMPLING SENSOR&CALIBRATION	626.08
02/22/2023	101	24378	00098	ELECTION SOURCE	FULL SERVICE TESTING FOR ICP	1,835.00
02/22/2023	101	24379	00201	ELHORN ENGINEERING COMPANY	BULK CHLORINE/LIQUID AQUADENE	3,853.00
02/22/2023	101	24380	01426	ENVIRONMENTAL RESOURCE ASSOCIATES	LAB FEES - DRINKING WATER	422.06
02/22/2023	101	24381	01353	EVOQUA WATER TECHNOLOGIES LLC	BIOXIDE BIOXIDE	11,200.96 10,141.64
						21,342.60

Check Date	Bank	Check	Vendor	Vendor Name	Description	Amount
						21,342.60
02/22/2023	101	24382	00231	FOUR SEASON'S EXTERMINATING	TWP HALL INSP/TREATMNT-FEB 2023	40.00
02/22/2023	101	24383	00249	GILL-ROY'S HARDWARE	MASKING TAPE	4.39
02/22/2023	101	24384	00261	GRAINGER	MOISTURE METER-BLDG/RENTAL DEPT RED LED LAMP MODULE, 22MM WHITE LED LAMP MODULE, 22MM	158.63 243.72 324.95
						<u>727.30</u>
02/22/2023	101	24385	01746	TERA GREEN	MILEAGE TO THE BANK-JAN 2023	40.09
02/22/2023	101	24386	01300	LINDSAY SOFT WATER	TWP HALL SALT DELIVERY	12.00
02/22/2023	101	24387	00001	M T A	BOOK FOR NEW TRUSTEES	114.00
02/22/2023	101	24388	00753	MICHIGAN ASSESSORS ASSOCIATION	ASSESSORS JOB POSTING ONLINE	300.00
02/22/2023	101	24389	00142	MICHIGAN OFFICE SOLUTIONS	PRINTER/COPIER SERV AGRMNT-FEB 2023	1,052.01
02/22/2023	101	24390	00437	MIDDLE MICHIGAN DEVELOPMENT CORP	2023 ANNUAL CLIENT FEE	10,000.00
02/22/2023	101	24391	00494	NORTH CENTRAL LABORATORIES	TESTING SUPPLIES - PHOSPHORUS	426.95
02/22/2023	101	24392	01273	PRO-SEAL SERVICE GROUP	ROYAL PURPLE SYNFFILM GT 220	1,203.24
02/22/2023	101	24393	01595	ROMANOW BUILDING SERVICES	JANITORIAL SERVICES@TWP HALL-JAN 2023 JANITORIAL SERVICES@WWTP-JAN 2023 JANITORIAL SERVICES@WTR PLANT-JAN 2023	527.14 316.29 316.29
						<u>1,159.72</u>
02/22/2023	101	24394	00601	KIMBERLY SMITH	MILEAGE REIMBURSEMENT	252.42
02/22/2023	101	24395	00618	MICHIGAN DEPARTMENT OF TREASURY	ASSESSING TRAINING-BLDG DEPT CLERK	150.00
02/22/2023	101	24396	00618	MICHIGAN DEPARTMENT OF TREASURY	ASSESSING TRAINING-ADMIN ASSISTANT	150.00
02/22/2023	101	24397	01542	STERICYCLE, INC.	PAPER SHREDDING - JAN 2023	77.22
02/22/2023	101	24398	00629	STU'S ELECTRIC MOTOR	AERATOR #2 MOTOR REPAIR	1,127.52
02/22/2023	101	24399	01654	TRACE ANALYTICAL LABORATORIES, INC.	SAMPLE HANDLING, STORAGE & DISPOSAL SAMPLE HANDLING, STORAGE & DISPOSAL	274.00 28.00
						<u>302.00</u>
02/22/2023	101	24400	01257	JOSH WALDRON	CLOTHING REIMBURSEMENT	100.00
02/22/2023	101	24401	00723	WINN TELECOM	PHONE SERVICE 2/1/23 - 2/28/23	415.11
02/22/2023	101	24402	01246	WOLVERINE POWER SYSTEMS	ANNUAL GENERATOR MAINT-LIFT STN 2 ANNUAL GENERATOR MAINT-LIFT STN 14 ANNUAL GENERATOR MAINT-LIFT STN 7	390.00 400.00 390.00
						<u>1,180.00</u>
02/22/2023	101	24403	01703	AMAZON CAPITAL SERVICES	CARBON METER-RENTAL/BLDG INSPECTIONS POLICY GOVERNANCE BOOK-FINANCE DIRCTR POSTER HANGERS, TAPE, POST-ITS, TAB INSE	96.00 33.94 86.28
						<u>216.22</u>
<b>101 TOTALS:</b>						
Total of 37 Checks:						68,727.88
Less 1 Void Checks:						<u>216.22</u>
Total of 36 Disbursements:						<u>68,511.66</u>

<b>Charter Township of Union</b> <b>Payroll</b>
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**CHECK DATE: February 16, 2023**

**PPE: February 11, 2023**

**NOTE: PAYROLL TRANSFER NEEDED**

General Fund	\$	34,176.75
Fire Fund		
EDDA		
WDDA		
Sewer Fund		34,574.87
Water Fund		27,255.61
<b>Total To Transfer from Pooled Savings</b>	<b>\$</b>	<b>96,007.23</b>

**NOTE: CHECK TOTAL FOR TRANSFER**

BS&A Gross Payroll	\$	64,223.55
Employer Share Medicare		887.85
Employer Share SS		3,796.21
SUI		145.38
Pension-Employer Portion		5,368.90
Workers' Comp		428.96
Life/LTD		-
Dental		1,265.96
Health Care		22,208.80
Vision		-
Vision Contribution		-
Health Care Contribution		(2,412.28)
Flex Administrators		40.00
Cobra/Flex Administration		53.90
PCORI Fee		-
<b>Total Transfer to Payroll Checking</b>	<b>\$</b>	<b>96,007.23</b>



# Union Township Report

Date: Tuesday, February 7, 2023



Alarm Date between 2023-01-29 and 2023-02-04

District	NFIRS Number	Alarm Date	Incident Type Code	Incident Type	Apparatus Name	Personnel Count	Alarms
<b>Union Township</b>	<b>0000072</b>						
		1/29/2023 4:50:10 AM	412	Gas leak (natural gas or LPG)	ENG 33	2	1
						<b>Total Responding 2</b>	
<b>Union Township</b>	<b>0000079</b>						
		1/31/2023 10:40:28 AM	561	Unauthorized burning	ENG 33	3	1
						<b>Total Responding 3</b>	
<b>Union Township</b>	<b>0000080</b>						
		2/2/2023 2:35:19 PM	744	Detector activation, no fire - unintentional	ENG 33	3	1
						<b>Total Responding 3</b>	

<b>Union Township</b>	<b>0000085</b>						
		2/3/2023 3:38:14 PM	322	Motor vehicle accident with injuries	ENG 33	2	4
		2/3/2023 3:38:14 PM	322	Motor vehicle accident with injuries	CHIEF	1	4
		2/3/2023 3:38:14 PM	322	Motor vehicle accident with injuries	C 31	0	4
		2/3/2023 3:38:14 PM	322	Motor vehicle accident with injuries	Rescue 31	1	4
		2/3/2023 3:38:14 PM	322	Motor vehicle accident with injuries	POV	7	4
						<b>Total Responding 11</b>	
	<b>Total Runs</b> 4					<b>Total Responding 19</b>	

**Note: Alarms**

1=Duty Crew

2=Paged Off Duty Full-time

3=Paged Paid-on-Call Firefighters

4=Paged All





# Union Township Report

Date: Tuesday, February 14, 2023



Alarm Date between 2023-02-05 and 2023-02-11

District	NFIRS Number	Alarm Date	Incident Type Code	Incident Type	Apparatus Name	Personnel Count	Alarms
<b>Union Township</b>	<b>0000087</b>						
		2/5/2023 12:54:13 AM	311	Medical assist, assist EMS crew	ENG 33	2	1
						<b>Total Responding 2</b>	
<b>Union Township</b>	<b>0000088</b>						
		2/5/2023 8:57:58 AM	744	Detector activation, no fire - unintentional	ENG 33	3	1
						<b>Total Responding 3</b>	
<b>Union Township</b>	<b>0000089</b>						
		2/5/2023 6:05:26 PM	444	Power line down	ENG 33	3	1
						<b>Total Responding 3</b>	

<b>Union Township</b>	<b>0000090</b>						
		2/6/2023 8:04:25 AM	700	False alarm or false call, other	ENG 33	2	1
						<b>Total Responding 2</b>	
<b>Union Township</b>	<b>0000092</b>						
		2/6/2023 5:53:25 PM	745	Alarm system activation, no fire - unintentional	ENG 33	2	1
						<b>Total Responding 2</b>	
<b>Union Township</b>	<b>0000094</b>						
		2/7/2023 12:06:37 PM	311	Medical assist, assist EMS crew	ENG 33	2	1
		2/7/2023 12:06:37 PM	311	Medical assist, assist EMS crew	SQ 31	1	1
						<b>Total Responding 3</b>	
<b>Union Township</b>	<b>0000095</b>						

		2/7/2023 8:58:18 PM	731	Sprinkler activation due to malfunction	ENG 33	3	1
						<b>Total Responding 3</b>	
<b>Union Township</b>	<b>0000096</b>						
		2/8/2023 12:47:05 AM	424	Carbon monoxide incident	ENG 33	3	1
						<b>Total Responding 3</b>	
<b>Union Township</b>	<b>0000100</b>						
		2/9/2023 4:03:41 PM	111	Building fire	POV	6	4
		2/9/2023 4:03:41 PM	111	Building fire	Rescue 31	1	4
		2/9/2023 4:03:41 PM	111	Building fire	T 31	1	4
		2/9/2023 4:03:41 PM	111	Building fire	ENG 33	2	4
		2/9/2023 4:03:41 PM	111	Building fire	CHIEF	1	4
						<b>Total Responding 11</b>	

	<b>Total Runs</b> 9					<b>Total Responding</b> 32
--	------------------------	--	--	--	--	----------------------------

**Note: Alarms**

**1=Duty Crew**

**2=Paged Off Duty Full-time**

**3=Paged Paid-on-Call Firefighters**

**4=Paged All**



# REQUEST FOR TOWNSHIP BOARD ACTION

<b>To:</b> Mark Stuhldreher, Township Manager	<b>DATE:</b> February 13, 2023
<b>FROM:</b> Kim Smith, Public Service Director	<b>DATE FOR BOARD CONSIDERATION:</b> February 22, 2023
<b>ACTION REQUESTED:</b> Consideration to approve the 2023 Township Brine Participation Contract with the Isabella County Road Commission (ICRC) for the application of brine in the amount of \$22,198.90 and authorize the Township Manager to sign said contract.	

Current Action  Emergency

Funds Budgeted: If Yes  Account # 101-441-801.000 No  N/A

Finance Approval \_\_\_\_\_

### BACKGROUND INFORMATION

As part of the annual road maintenance program, the Township and the ICRC partner to apply brine to 19.99 miles of gravel roads located within Union Township. Brine is applied to gravel roads to reduce dust generated by fast-moving traffic, enhance the stability of gravel roads, and prolong the life of aggregate applications.

The ICRC and the Township split the cost for this maintenance. The aggregate cost share for 2023 is 93.01% Township and 6.99% ICRC. The per gallon cost of Calcium Chloride (brine) increased from .1780 in 2022 to .1990 in 2023.

### SCOPE OF SERVICES

This contract provides for (3) three applications of Michigan Chloride at 2,000 gallons per mile during the year.

### JUSTIFICATION

The approval of these contracts will reduce the amount of dust being generated during dry months and continue to improve the condition of roads throughout the Township.

### PROJECT IMPROVEMENTS

The following Board of Trustees goals are addressed with these appointments (From Policy 1.0: Global End)

- Community well-being and common good
- Prosperity through economic diversity, cultural diversity, and social diversity
- Safety
- Health
- Natural Environment

**COSTS**

The cost share for this contract is as follows:

Union Township	\$22,198.90
ICRC	\$1,669.17
Total	\$23,868.06

The FY2023 budget has funds in the amount of \$24,000.00 allocated for brine.

**PROJECT TIME TABLE**

The application of brine will occur in 2023, at the discretion of the Isabella County Road Commission.

**RESOLUTION**

It is resolved that the 2023 Township Brine Participation Contract with the Isabella County Road Commission (ICRC) in the amount of \$22,198.90 is approved and the Manager is authorized to sign on behalf of the Township.

Moved by \_\_\_\_\_ Seconded by \_\_\_\_\_

Yes:  
No:  
Absent:

# TOWNSHIP BRINE PARTICIPATION CONTRACT

**This Agreement** is made and entered into by and between the Board of County Road Commissioners for the County of Isabella, hereinafter referred to as the "Road Commission" and **Union Township**, hereinafter referred to as the "**Township**", for the following improvements:

<b>Project No. 497 – 014 - 321416</b>	<b>Total Gravel Miles: 19.99</b>
Three Applications of Michigan Chloride at 2000 gallons per mile	
<b>TOTAL COST</b>	\$ 23,868.06
Less I.C.R.C. Share	<u>-1,669.17</u>
<b>TOWNSHIP SHARE</b>	<u>\$ 22,198.90</u>
<b>Return Contract by March 21, 2023</b>	

The Township agrees to pay the Road Commission for stated services after each application has been completed and an invoice has been furnished by the Road Commission. Payment is due upon receipt of invoice. The Road Commission is hereby authorized to add to the unpaid balance a service charge of one (1%) per month on the unpaid balance of any and all said sums remaining unpaid after thirty (30) days.

The undersigned Township officials, by executing this agreement, certify they are authorized to enter into this agreement on behalf of the Township.

## UNION TOWNSHIP

## ISABELLA COUNTY ROAD COMMISSION

By: \_\_\_\_\_  
Supervisor

By: \_\_\_\_\_  
Manager

By: \_\_\_\_\_  
Clerk

By: \_\_\_\_\_  
Board Secretary

Board Approval on: \_\_\_\_\_

Board Approval on: \_\_\_\_\_

**To:** Mark Stuhldreher - Township Manager      **DATE:** February 13, 2023  
**FROM:** Kim Smith – Public Services Director      **DATE FOR BOARD CONSIDERATION:** February 22, 2023  
**ACTION REQUESTED:** Approval of Engineering & Construction Services Contract with Gourdie Fraser for the upgrade of Pump Station #5 located on Concourse Drive and Service Area Infiltration Study in the amount of \$69,500.00, and authorize the Township Manager to sign the contract.

Current Action       Emergency

Funds Budgeted: If Yes  Account # \_\_\_\_\_ No  N/A

Finance Approval \_\_\_\_\_

**Background Information**

Pump Station #5 is located on Concourse Drive with the corresponding collection system service area located along Concourse Drive, Meadowlark Lane, Crawford Road south of Broomfield Road, and Billbrael Drive. The pump station and corresponding infrastructure were installed in the late 1970's and early 1980s'. Televising of the sanitary sewer mains and manhole lining have been completed in recent years as part of the Townships' routine maintenance program. During the televising the overall sanitary sewer pipe conditions were found to be in good condition and the manholes have been rehabilitated. After the completion of this maintenance work the pump station still experiences high flows during rainfall events and significant winter thaw events. In an effort to be proactive and to continue our system maintenance program the Township included pump station upgrades and collection system investigation in the Sanitary Sewer Capital Improvements Plan for 2023.

The project includes the following general work items:

**Pump Station #5 Upgrades**

- Upgrades to the Wet Well including access, waterproofing and transducer replacement
- Upgrades to the dry pit including piping, valve and flowmeter replacement
- Upgrades to the Electrical / SCADA control Panel replacement
- Pump Removal / Replacement including Variable Frequency Drives
- Capacity upgrade from existing capacity of 150 gallons per minute (gpm) to 350 gallons per minute (gpm) for future service area growth

**Collection System Investigation**

- Completion of smoke and/or dye testing to identify locations of illegal connections through footing drain connections, sump pump connections, roof drain connections, and storm sewer connections as defined in Ordinance Number 1980-1, Article IV, Section 4.11.



In accordance with our continuing “Standard Terms and Conditions” agreement Gourdie Fraser, the Township’s Engineer of Record, has submitted a proposal for completing the design, bidding, and construction observation services portion of the project.

Below are the estimated expenditures anticipated for this project.

	<b>Estimated Cost</b>
Engineering, Bidding, and Construction Services	\$69,500
Estimated Construction Cost	\$436,000
20% Contingency	\$87,200
<b>Estimated Total Project Cost</b>	<b>\$592,700</b>

### **Scope of Services**

#### **Design Services**

- Preliminary Design
- Collection System Investigation (smoke/dye testing)
- Final Design

#### **Construction Services**

- Bidding Services
- Construction Administration
- Construction Observation
- Project Closeout and Start-up

### **Justification**

Completion of this project will directly benefit the users in the Pump Station #5 Service District and the overall township sewer system by increasing the station’s capacity, performance, and reliability through the replacement of aging station components and identifying infiltration and illegal connections in the pump station #5 sanitary sewer collection system service area.

## Project Improvements

Board of Trustees goals addressed by this agreement (From Policy 1.0: Global End).

1. Community well-being and common good

### Costs

<b>Design Services</b>	
Preliminary Design	\$18,250
Final Design	\$20,500
<b>Construction Services</b>	
Bidding Services	\$3,500
Construction Administration	\$14,250
Construction Inspection	\$9,500
Closeout & Start Up Services	\$3,500
<b>Total</b>	<b>\$69,500</b>

### Project Funding

The funding for this project is included in the FY2023 Sanitary Sewer Fund Budget, General Ledger Number 590-536-973.000.

### Project Time Table

<b>Design Services</b>	Within 75 days of authorization to proceed
<b>Construction Services</b>	Dependent on permitting and contractor operations – closeout within 30 days of construction completion
<b>Project Completion</b>	Project anticipated to be bid in Fall of 2023 – Construction anticipated to begin in Spring of 2024 (dependent on availability of equipment)

### Resolution

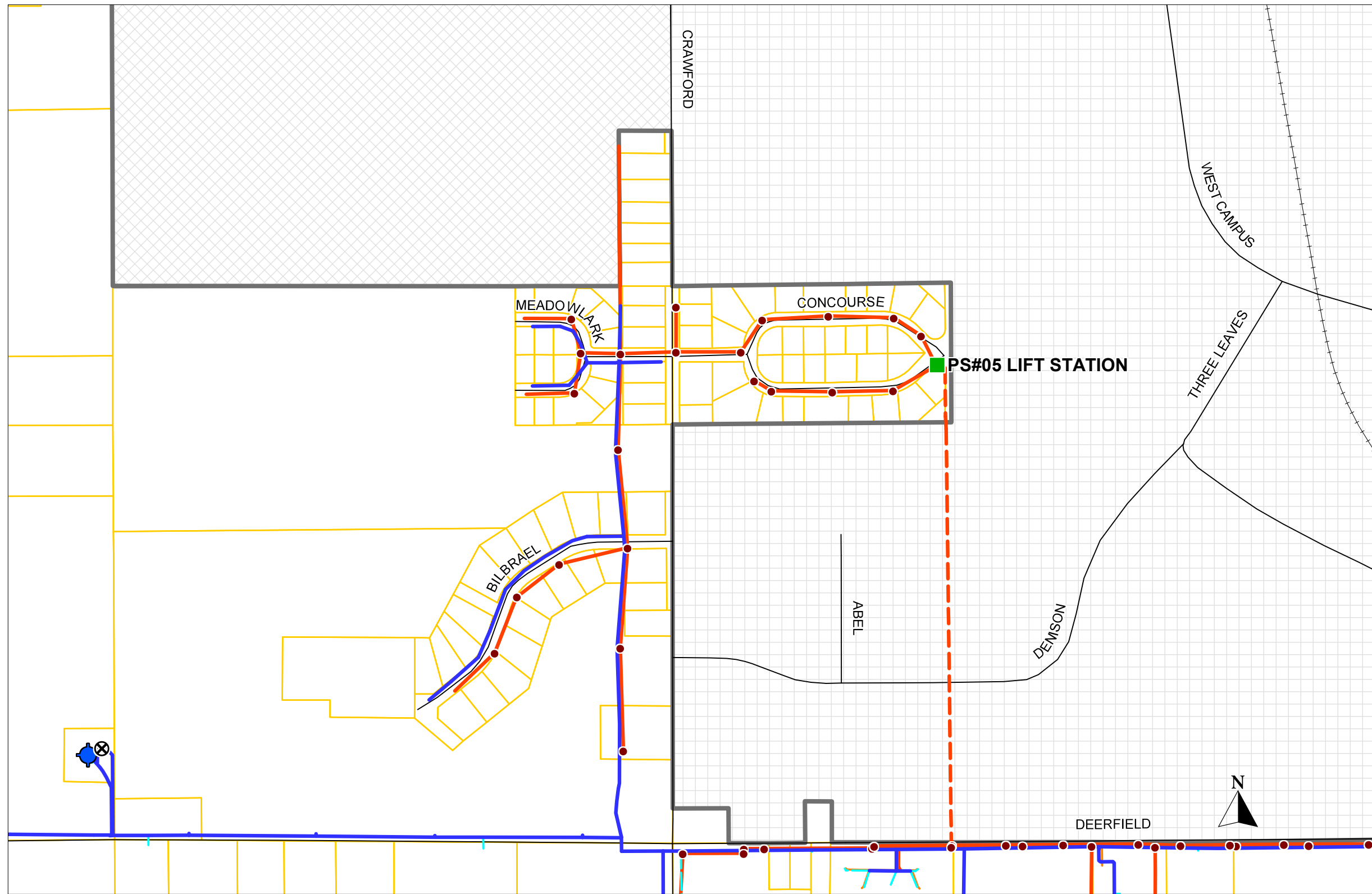
Approval of the Engineering & Construction Services Contract with Gourdie Fraser for the upgrade of Pump Station #5 located on Concourse Drive and Service Area Infiltration Study in the amount of \$69,500.00, and authorize the Township Manager to sign the contract.

Resolved by \_\_\_\_\_ Seconded by \_\_\_\_\_



















Yes:  
No:  
Absent:

# Union Township Sanitary Sewer Pump Station #5 Service Area

Map Date: February 15, 2023  
Union Township Mapping & GIS



**Utilities Legend**

-  Sewer Valve
-  Sewer Air Valve
-  Manhole
-  Lift Station / Pump Station
-  Sewer Lead
-  Water Curbstop Box
-  Hydrant
-  Pressure Reducing Valve
-  Water Tank or Tower
-  Water Valve
-  Production Well
-  Water Main
-  Water Lateral
-  Sewer Gravity Main
-  Sewer Force Main
-  Sewer Lateral
-  Railroad
-  Township Parcel

**FOR REFERENCE ONLY**



January 20, 2023

Ms. Kim Smith  
Department of Public Services  
Charter Township of Union  
5228 South Isabella Road  
Mt. Pleasant, MI 48858

RE: Sanitary Sewer Pump Station #5 Upgrades & Collection System Investigation  
3248 Concourse Drive  
GFA Proposal No. 22-053

Dear Ms. Smith:

Thank you for the opportunity to submit this proposal to provide design, permitting, bidding and construction oversight services for the upgrades at Pump Station #5 and Collection System Investigation. This proposal letter presents our scope of services, fee, time schedule, and "Standard Terms and Conditions." Should you have any questions regarding the information contained herein please do not hesitate to contact me.

## **Part A Scope of Services**

### **A.1 Project Need**

The pump station #5 service area is comprised of 8-inch gravity sewer that capture predominately residential flows that are located along Concourse Drive, Meadowlark Lane and Billbrael Lane. The infrastructure was installed in early 1980s' which is consistent with the age of the dwellings. Televising has been completed in recent years as part of the Townships' routine maintenance with any repairs noted corrected but overall pipe conditions were found to be in good condition. The pump station itself experiences high flows typically during rainfall events and based on the pattern and magnitude of flows there is a definite response and increase in sanitary sewer flows during significant rain events.

This project is presented in two (2) phases to address two (2) areas of need:

- (a) Pump Station #5 Upgrades: The existing station has been in operation since 1976 with some of the infrastructure at or near its' life expectancy and in need of upgrades. The station has a rated capacity of 150 gallons per minute (gpm) and is proposed to be upgraded to 350 gpm to account for future growth.
- (b) Collection System Investigation: Based upon past research there is concern that storm water inflow is occurring through illegal connections: footing drain connections, sump connections, roof drain connections, storm sewer connections, etc. However to confirm, additional investigation is required to detect these connections. Methods include smoke and dye testing.



## **A.2 Project Location / Identification**

This portion of the project involves the following general work items:

### **Pump Station #5 Upgrades**

- Upgrades to the Wet Well including access, waterproofing and transducer replacement
- Upgrades to the dry pit including piping, valve and flowmeter replacement
- Upgrades to the Electrical / SCADA control Panel replacement
- Pump Removal / Replacement including Variable Frequency Drives

### **Collection System Investigation**

- Smoke and/or Dye Testing to identify locations of illegal connections

Refer to attached Cost Estimate for additional information.

## **A.3 Description of Basic Services of Engineer:**

### **Preliminary Design Phase**

During the Preliminary Design, Engineer shall:

#### **Pump Station #5**

1. Perform topographic survey of the existing project limits and prepare base maps using existing information and update as necessary.
2. Pressure testing/hydraulic model review to determine, pressures, setting and operation of proposed pumps to ensure compatibility
3. Prepare preliminary plans (60%) that will indicate the general scope of work such as:
  - i. Pump Station Existing and Proposed Site Plan
  - ii. Pump Station layouts including mechanical, electrical and instrumentation
  - iii. Coordination with Township SCADA integrator regarding operations and costs
4. Prepare preliminary contract documents and technical specifications.
5. Prepare preliminary contract bid documents and technical specifications. Update OPCC
6. Contact the following agencies/utility companies to determine the location of their utility lines within the project area.
  - a. Consumers Energy
  - b. AT&T
  - c. DTE
  - d. Charter Communications
7. QA-QC.

#### **Collection System Investigation**

1. Perform site inspections of the existing project limits to identify the critical manholes and prepare base maps using existing information and update as necessary.
2. Prepare preliminary plans and specifications (60%) that will indicate the general scope of work such as:



- iv. Site Plan
  - v. Testing methods
3. Prepare Request for Proposal
  4. Prepare preliminary contract bid documents and technical specifications. Update OPCC
  5. QA-QC.
  6. Coordination with property owners and notifications

### **Final Design Phase -**

During the Final Design, Engineer shall:

1. Prepare final Design plans for upgrades to Pump Station #5.
2. Prepare final specifications, bidding sheets and contract documents so that the plans and specifications are ready for bidding.
3. Review plans with the Union Township Department of Public works.
4. Prepare permit applications and submit final plans and specifications to the following agencies (permit fees for by Union Township), as applicable.
  - a. EGLE, Part 41
5. QA-QC.

### **Construction Services (including bidding, administration, inspection and closeout)**

#### **Bidding Phase**

During the Bidding, Engineer shall:

1. Reproduce sets of plans, specifications, and bid documents.
2. Place advertisement in newspaper, trade magazines, and MITA (Michigan Infrastructure & Transportation Association) (advertising costs to be paid for by the Township).
3. Mail bid packages to contractors.
4. Assist Owner with soliciting bids from construction contractors.
5. Answer questions from prospective bidders.
6. Issue addenda, as required, during the bidding phase.
7. Conduct bid opening.  
Review bid proposals and make recommendations regarding award of contract.
8. Prepare documents for award of contract and construction Agreement.



### **Construction Administration**

1. Organize and administer a pre-construction conference and prepare meeting minutes.
2. Review shop drawings submitted by the Contractor.
3. Make periodic visits by the engineer to the site (at least weekly) to monitor the general progress of the work, keep abreast of any problems and endeavor to resolve any disputes which may arise.
4. Review change order documents as required.
5. Review Contractor's payment requests and approve periodic estimates for partial payment each month.
6. Provide four (4) sets of plans and specifications to Contractor for construction.
7. Address resident concerns as they may arise.

### **Construction Observation**

1. Review materials directly related to the project upon delivery to the site.
2. Videotape construction area prior to construction.
3. Review restoration and clean-up operations.
4. Perform materials testing as required.
5. Provide As Needed Construction Oversight including witness of construction installation for all piping and structures including preparation of daily log of construction activities.
6. Review and verification of Contractors' requested quantities for payment.
7. Keep records of as-constructed measurements.
8. Coordinate and attend startup of pump including SCADA programming

### **Project Closeout and Start-Up**

1. Certify to the owner and agencies that construction was completed in accordance with approved plans and specifications.
2. Review and transmit to the Owner the following documents from the Contractor:
  - a. One-Year Maintenance bond.
  - b. Letter of Guarantee.
  - c. Affidavit of Completion.
  - d. Waiver of Lien.
3. Transmit the following documents to the Owner:
  - a. Record Drawings of the newly constructed Project.

#### **A.4 Period of Service:**

##### **Part A. Time of Completion**

This portion of the project will be completed in a timely manner and as rapidly as the Township approval process permits. We anticipate completing the design work within 75 days of authorization to proceed.

##### **Part B. Time of Completion**



Construction services will be performed in a timely manner consistent with the contractor's operations and upon receipt of permits. Closeout will occur within 30 days of construction completion.

**Part B Fee for Service**

**B.1 Fee For Services**

Method of Payment for Services and Expenses of Engineer:

The Engineer will be paid the following lump sum fees for the Basic Services as indicated in Part A

**Part A. Design, Services**

Preliminary Design	\$18,250.00
Final Design	\$20,500.00

**Part B. Construction Services**

Bidding	\$3,500.00
Construction Administration	\$14,250.00
Construction Inspection	\$9,500.00
Closeout / Startup	\$3,500.00

TOTAL: \$69,500.00

Changes, modifications, or additions to the Basic Services will be performed at the normal hourly rates for the personnel involved or at a negotiated fee.

Billings will be made once a month as the work progresses.

**B.2 Additional Information**

The following items are not reimbursable expenses and included in the Total Lump Sum Price.

- Photocopies    Prints    Mylars/Vellums    Travel Expenses

**Contract Terms and Conditions**

Exhibit 1 (attached), "Standard Terms and Conditions," dated September 2017 is incorporated into this proposal by reference.

**Acceptance**

If this proposal is acceptable to you, please sign where indicated below, initial page 2 of Exhibit 1 "Standard Terms and Conditions" and return a copy, of both, to my attention. Receipt of this signed proposal will serve as our authorization to proceed. Thank you for giving us the opportunity to be of service. We look forward to working with you in the very near future on this project.

**GFA**

**Name**





CONSULTANT

CLIENT/OWNER

_____	(Signature)	_____
Jennifer Hodges	(Name)	Mark Stuhldreher
_____	(Title)	_____
Sr. Project Engineer	(Title)	Manager
_____	(Date)	Charter Township of Union
_____	(Date)	2010 South Lincoln Rd., Mt. Pleasant, MI
_____	(Date)	48858
_____	(Date)	_____
231-946-5874	(Phone No)	_____
_____	(Phone No)	_____
jennifer@gfa.tc	(Email)	989-772-4600
_____	(Email)	_____

Attachments: Exhibit 1 – Standard Terms and Conditions  
Exhibit 2 – 2023 Billing Rates

**OPINION OF PROBABLE CONSTRUCTION COST**

CHARTER TOWNSHIP OF UNION  
SANITARY SEWER PUMP STATION #5 REHABILITATION (REHAB DRYPIT / WETWELL)  
GFA PROJECT NO. 22-053  
Updated 1/18/2023

No.	Item	Estimated Quantity	Unit	Unit Price	Item Cost
<b>Pump Station #5 Upgrades</b>					
1	Mobilization	1	LS	\$ 15,000.00	\$ 15,000.00
2	Drypit Pumps & Motors rated at 350 GPM, Typical of 2 (including removal / installation and spare), 20 Hp	2	EA	\$47,500.00	\$95,000.00
3	Drypit - Valve and Flowmeter (including removal / installation)	1	LS	\$75,000.00	\$75,000.00
4	Instrumentation - Floats and Transducer (including removal / installation)	1	LS	\$25,000.00	\$25,000.00
5	Wetwell Improvements (Waterproofing & Safety Landing Removal)	1	LS	\$20,000.00	\$20,000.00
6	OnSite Electrical Improvements (including removal / installation equipment, wiring/ conduit)	1	LS	\$80,000.00	\$80,000.00
7	New Control Panel above Ground including (VFDs, Transfer Switch, Flow Meter Readout Display Relocation)	1	LS	\$68,500.00	\$68,500.00
8	SCADA Panel Upgrades / Programming (by Perceptive Controls)	1	LS	\$22,500.00	\$22,500.00
9	Well Abandonment	1	LS	\$5,000.00	\$5,000.00
10	Bypass Pumping and site Restoration	1	LS	\$35,000.00	\$35,000.00
<b>Collection System Investigation</b>					
1	Smoke / Dye Testing	1	LS	\$10,000.00	\$10,000.00
<b>ESTIMATED CONSTRUCTION COST</b>					<b>\$436,000.00</b>
<b>20% CONTINGENCY</b>					<b>\$87,200.00</b>
<b>ENGINEERING, ADMINISTRATIONS, CONSTRUCTION SERVICES</b>					<b>\$69,500.00</b>
<b>TOTAL ESTIMATED CONSTRUCTION COST</b>					<b>\$592,700.00</b>

- These costs are based on preliminary information. The actual site conditions may result in variations of unit prices or items.
- Costs for financing, land, right-of-way, easement acquisition, and permit fees are not included in this cost estimate.
- This cost estimate is approximate. Pricing for each item is based upon quotes obtained from equipment manufacturers with 6% sales tax and 60% installation fee added. Actual construction bids may vary significantly from this statement of probable costs due to timing of construction, changed conditions, labor rate changes, or other factors beyond the control of Gourdie-Fraser.
- It is presumed the existing condition of the bypass manhole are adequate as upgrades to piping were completed in 2019
- Assumes electrical service is adequate to service station and no upgrades are needed per comments from Consumers. Presumed to be 200 phase. Existing pumps are 15 Hp and replaced with 20 Hp



# REQUEST FOR TOWNSHIP BOARD ACTION

<b>To:</b> Board of Trustees	<b>DATE:</b> February 10, 2023
<b>FROM:</b> Mark Stuhldreher, Township Manager	<b>DATE FOR BOARD CONSIDERATION:</b> 2/22/2023
<b>ACTION REQUESTED:</b> To introduce and conduct a First Reading for the updated Stormwater Management Ordinance, which would repeal and replace Ordinance No. 1992-9.	

Current Action   X        Emergency           

Funds Budgeted: If Yes   X        Account # 101-701-801.000      No                 N/A           

Finance Approval   MDS  

### BACKGROUND INFORMATION

Rainfall or snow melt should naturally flow unrestricted over the surface of the land, including farm fields, roads, parking lots, yards, etc., from higher to lower elevations. This stormwater flows across lot and municipal boundaries into ditches and storm drains, and eventually through county drains and rivers into the Great Lakes. As a general rule, landowners cannot artificially concentrate or increase the velocity of stormwater runoff from their land, and cannot dam up a watercourse or otherwise force natural stormwater flows to back up and to flood other land holdings.

Drainage was vital to settlement in Michigan since much of the Lower Peninsula was once dominated by swamps, posing potential health risks and making the land unfavorable for farming. A drainage act was one of the first laws passed after Michigan became a state in 1837. As noted in [Stormwater Paradigms](#), an article by Andrew J. Reese, P.E., LEED-AP, the focus and intent of stormwater management and drainage regulations have evolved over time from “run it in ditches” (1800s) and “run it in pipes” (1900s – 1940s) to more recent flood control efforts and today’s broader ecological and watershed-based approaches.

#### **Intent of local stormwater regulations.**

Proper stormwater management is essential to protecting the public health, safety, and welfare. It can reduce the severity and extent of flooding, minimize potential for water-borne illness or pollution, and reduce flooding impacts on farmland, businesses, homes, and residents. Application of local stormwater management standards to new or expanded development projects minimizes potential for adverse impacts due to increased stormwater runoff rates and volumes from buildings, parking lots, and other impervious surfaces, and can help protect the Chippewa River and public infrastructure from erosion-related damage and non-point source pollution.

#### **Stormwater management as a regional issue.**

Responsibility for regulation of stormwater management and drainage in Isabella County is divided. The Township regulates stormwater management from land within its jurisdiction, in conjunction with county and state agencies with jurisdiction. The City of Mt. Pleasant regulates stormwater management from land within its jurisdiction. It also owns most of the underground storm drains and infrastructure within its jurisdiction.

The Isabella County Drain Commissioner has authority over county drains and established drainage districts in the Township. The Michigan Department of Transportation (MDOT) and the Isabella County Road Commission have authority over stormwater management and drainage within and adjacent to their rights-of-way. The Saginaw Chippewa Indian Tribe has primary jurisdiction on land held in trust by the U.S. Government, where ownership is limited to tribal members.

The Township's current Stormwater Management Ordinance was adopted in 1992. About a decade ago, the Township, City of Mt. Pleasant, Chippewa Township, and Isabella County worked in collaboration to develop a new model ordinance format for stormwater management. The ordinance language, with some adjustments, was subsequently adopted in 2014 and 2015 by the City and the County.

Although the Township did not adopt the model ordinance, collaboration continued between the Township and County. The County Drain Commissioner's office provided stormwater management reviews and approvals for new development projects under the Township's 1992 ordinance until the end of last year when staff retirements at the County necessitated a change. These reviews are now conducted in-house by the Township's engineering consultants at Gourdie-Fraser.

In 2019, the Township also began a collaboration with the City, County, Central Michigan University, MDOT, and the Saginaw Chippewa Indian Tribe to develop a Multi-Jurisdictional Storm Water Master Plan for the greater Mt. Pleasant area (defined to generally be bounded by River Road to the north, Deerfield Road to the south, Lincoln Road to the west, and US-127 to the east). The City served as the lead agency, with plan preparation by engineering consultants at Fleis & VandenBrink.

The goal of developing this multi-jurisdictional plan was to define a unified, collaborative approach to stormwater management issues for the Mt. Pleasant, Michigan area; the need for which was envisioned following the severe flooding in the area that was experienced in June 2017 (in addition to other historic flooding events). The plan was finalized in 2021.

### **Scope of the proposed Stormwater Management Ordinance**

The Township's engineering consultants at Gourdie-Fraser facilitated development of an initial draft document, which was reviewed by the Township Attorney and the directors of the Township's Public Services and Community and Economic Development departments. Additional revisions as recommended by these reviewers have been incorporated into proposed Ordinance document presented for an Introduction and First Reading.

The proposed Stormwater Management Ordinance includes necessary revisions to ensure consistency with current stormwater management practices and compatibility with regional stormwater management plans. The proposed Ordinance also includes updated definitions, removal of outdated references, and revisions needed for consistency with state laws and Michigan case law related to stormwater management, drainage, and the environment. If adopted, this proposed Ordinance would replace the current Stormwater Management Ordinance No. 1992-9 in its entirety.

### **SCOPE OF SERVICES**

Introduction and First Reading of the updated Stormwater Management Ordinance.

**JUSTIFICATIONS**

The proposed updates to the Stormwater Management Ordinance are necessary to address technical issues and outdated provisions, and to ensure consistency with state laws and Michigan case law related to stormwater management, drainage, and the environment.

**GOALS ADDRESSED**

Board of Trustees goals addressed by this Ordinance (From Policy 1.0: Global End):

- 1. Community well-being and common good**
- 3. Safety**
- 3. Natural Environment**

Updating the Township’s Stormwater Management Ordinance will help to support a sustainable community through the most effective use of Township resources (1.0), to ensure fair and nondiscriminatory code enforcement (1.1.1.2), to reduce potential impacts from heavy rain and other flooding events and enable residents and businesses to enjoy a safe environment (1.3), to protect the natural environment and help people have optimum access to and enjoy a clean Chippewa River. (1.5.2)

**COSTS**

Funding for assistance from the Township Engineer (Gourdie-Fraser) to review the current Ordinance No. 1992-9 and prepare necessary updates to the Township’s stormwater management regulations were included in the adopted FY2022 budget. All work by the Township Engineer has been completed in accordance with initial cost estimates and the adopted budget.

**TIMETABLE**

After a Second Reading and adoption by the Board of Trustees, the new Ordinance would take effect immediately following publication of the required notice of adoption.

**RESOLUTION**

To introduce and conduct a First Reading for the updated Stormwater Management Ordinance, which would repeal and replace Ordinance No. 1992-9.

Resolved by \_\_\_\_\_ Seconded by \_\_\_\_\_

Yes:  
No:  
Absent:

**CHARTER TOWNSHIP OF UNION  
ISABELLA COUNTY, MICHIGAN**

**STORMWATER MANAGEMENT ORDINANCE NO. \_\_\_\_\_**

[An ordinance adopted under provisions of the Charter Township Act (Public Act 359 of 1947, as amended, being MCL 42.1 – MCL 42.34) and Section 192 of the Land Division Act (Public Act 288 of 1967, as amended, being MCL 560.101 et seq.) to protect the general health, safety, and welfare by reducing hazards to public health and safety and the potential for economic losses to individuals and the community at large caused by excessive stormwater runoff; to enhance broader social and economic objectives; to protect, conserve, and promote the orderly development of land and water resources; and to provide for severability, repeal, publication, and an effective date.]

**CHARTER TOWNSHIP OF UNION, ISABELLA COUNTY, MICHIGAN HEREBY ORDAINS:**

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## **ARTICLE 1 PURPOSE, FINDINGS, AND EFFECTIVE DATE**

### **Section 1.1 TITLE**

This Ordinance shall be known and may be cited as the Stormwater Management Ordinance No. \_\_\_\_\_, and shall be referred to herein as “this Ordinance.”

### **Section 1.2 STATEMENT OF FINDINGS**

The Township Board of Trustees finds that:

- (A) Inadequate management of surface water runoff resulting from new development can overtax the carrying capacity of storm sewers, roadside ditches, County Drains, and the Chippewa River.
- (B) Stormwater management regulations are necessary to protect the general health, safety, and welfare, to protect water quality in the Chippewa River watershed, and to preserve the resources, infrastructure, and the environment of the Township and downstream communities.
- (C) Uncontrolled surface water drainage and development of land without reasonable provisions for stormwater management will cause serious adverse impacts for the community, including:
  - (1) Stormwater runoff carries pollutants into receiving waterbodies, degrading water quality.
  - (2) The increase in nutrients, such as phosphorus and nitrogen, accelerates eutrophication of receiving waters, adversely affecting flora and fauna.
  - (3) Uncontrolled or improperly channeled surface water runoff increases water velocity, soil erosion, and sedimentation within the Chippewa River watershed.
  - (4) Siltation of waterbodies resulting from increased erosion decreases their capacity to hold and transport water, interferes with navigation, and harms flora and fauna.
  - (5) Increasing the amount of impervious surfaces on a site without adequate provisions for managing surface water runoff can increase the volume and rate of stormwater runoff and decrease groundwater recharge by inhibiting on-site percolation into the soil.
  - (6) Improperly managed stormwater runoff can increase the incidence of flooding and the intensity and height of flooding that occurs, endangering property and human life.
  - (7) Improperly managed stormwater runoff has the potential to disrupt and degrade aquatic environments and disrupt biological productivity in the Chippewa River watershed.

### **Section 1.3 PURPOSE AND INTENT**

- (A) The purpose of this Ordinance is to reduce the hazards to public health and safety caused by excessive stormwater runoff; to reduce potential for economic losses to individuals and the community at large; to enhance broader social and economic objectives; and to protect, conserve, and promote the orderly development of land and water resources.
- (B) The further purpose of this Ordinance shall be to:
  - (1) Protect the public health, safety, and welfare by requiring certain stormwater management improvements as part of new, expanded, or modified development projects.
  - (2) Promote the most efficient and beneficial uses of land and water resources.
  - (3) Assure that stormwater runoff from new and expanded development activity is controlled so that water quality is protected, siltation is minimized, and flooding problems are avoided.
  - (4) Provide for cost-effective and functionally effective stormwater management and to reduce the need for future remedial projects.



- (5) Protect and utilize the natural drainage system for conveying and receiving stormwater runoff in an environmentally appropriate manner.
  - (6) Encourage multiple-purpose stormwater management that enhances the environmental character of the Township.
  - (7) Recognize the private responsibility of incorporating stormwater management systems into the early stages of site planning and design.
  - (8) Allow wetlands to be used for stormwater detention in selected locations, while ensuring that the natural functions and the quality of wetlands throughout the Township are protected to the maximum feasible extent.
  - (9) Allow for off-site or regional stormwater management solutions under specified conditions.
  - (10) Ensure that all stormwater conveyance and detention facilities will be properly maintained.
  - (11) Provide penalties for violation of the provisions of this Ordinance.
- (C) It is the intent of this Ordinance to be fully consistent with the requirements of the Natural Resources and Environmental Protection Act (Public Act 451 of 1994, as amended, being MCL324.101 et seq.), and for consistency across jurisdictional boundaries within the Chippewa River watershed to generally align the Township’s stormwater management standards with the adopted Isabella County Drain Commissioner standards and the 2021 Multijurisdictional Stormwater Master Plan as adopted by City of Mt. Pleasant.
- (D) It is the further intent of this Ordinance to provide clear standards for the Township to review stormwater applications, to require new developments and certain redevelopment activities to conform to current stormwater management standards, to ensure that stormwater management facilities are constructed to approved plans, and to establish standards for ongoing maintenance of approved and constructed stormwater management improvements.

**Section 1.4 COMPATIBILITY WITH OTHER PERMIT AND ORDINANCE REQUIREMENTS**

Permits and approvals issued pursuant to this Ordinance do not relieve the applicant of the responsibility to secure required permits or approvals for activities regulated by any other applicable code, rule, act, or ordinance. If more stringent requirements concerning regulation of stormwater or erosion and sedimentation control are contained in the other code, rule, act, or ordinance, the more stringent regulation shall apply.

**Section 1.5 SEVERABILITY**

The provisions, sections, sentences and phrases of this Ordinance are declared to be severable and if any such portion is declared unconstitutional or invalid for any reason by a court of competent jurisdiction, such finding shall in no way affect or invalidate the remainder of this Ordinance.

**Section 1.6 REPEAL**

All ordinances or parts thereof in conflict with this Ordinance, including the Union Township Stormwater Management Ordinance No. 1992-9, are hereby repealed, except that this Ordinance shall not repeal any provision in the Township’s Zoning Ordinance, Subdivision Control Ordinance, Land Division Ordinance, or Construction Codes Ordinance.

**Section 1.7 PUBLICATION**

The Clerk for the Township shall cause this Ordinance to be published in the manner required by law.

**Draft Date: February 10, 2023**

**Section 1.8 EFFECTIVE DATE**

This Ordinance was approved and adopted by the Township Board of Trustees, Isabella County, Michigan, on \_\_\_\_\_, 202\_\_ after a first reading by the Township Board of Trustees on \_\_\_\_\_, 202\_\_ and publication of a notice of the first reading and the date, time, and place of the second reading in accordance with the Charter Township Act (Public Act 359 of 1947, as amended, being MCL 42.1 – MCL 42.34). This Ordinance shall become effective on \_\_\_\_\_, 202\_\_ following publication of a summary of the Ordinance and notice of adoption in a newspaper of general circulation in the Township.

## **ARTICLE 2 REGULATED ACTIVITIES**

### **Section 2.1 REGULATED ACTIVITIES**

The following shall be regulated activities and require a Stormwater Management Permit from the Township, unless exempt pursuant to Section 2.2 or as otherwise provided for in this Ordinance:

- (A) Farm-based tourism and entertainment activities (agri-tourism), public stables, permanent auction facilities, and religious institutions as allowed in the Agricultural (AG) District per Section 3 of the Township Zoning Ordinance.
- (B) Multiple-family residential buildings and uses, independent or dependent senior housing, assisted living facilities, nursing homes; homes for the aged, and religious institutions as allowed in the Residential Districts per Section 3 of the Township Zoning Ordinance.
- (C) Establishment of any multiple-family, including mobile home park, mixed use or non-residential development.
- (D) Expansion of an existing multiple-family, mixed use or non-residential principal building exceeding ten percent (10%) of the existing gross floor area.
- (E) All land uses allowed in the Business Districts (B-4, B-5, B-7, OS), Industrial Districts (I-1, I-2) and Planned Unit Development District (PUD) per Section 3 of the Township Zoning Ordinance.
- (F) Construction or expansion of buildings, equipment storage yards, and associated above-ground site improvements occupied by or intended for occupancy by essential services as defined in the Township Zoning Ordinance.
- (G) Establishment of any subdivision plat in accordance with the Land Division Act and the Township's Subdivision Ordinance.
- (H) Establishment or alteration of any condominium development in accordance with the Condominium Act and Section 5.1 of the Township Zoning Ordinance.
- (I) Expansion of any multiple-family, mixed use or non-residential off-street parking facility exceeding 2,750 square feet.
- (J) Construction, extension or alteration of a private road that is located outside of a subdivision plat.
- (K) Earthwork involving a parcel of one-half (0.5) or more acres for construction of new impervious surfaces (driveways, parking lots, etc.), or for construction of new buildings or additions to existing buildings.
- (L) Diversion or piping of any natural or manmade stream channel.
- (M) Installation of stormwater management systems or appurtenances thereto.

### **Section 2.2 EXEMPTIONS**

- (A) The following development activities shall be provided a limited exemption from provisions of this Ordinance, as follows:
  - (1) Use of land for gardening for home consumption.
  - (2) Farming and agricultural operations.
  - (3) Land disturbance associated with existing single- and two-family dwellings.

- (4) Construction of, addition to, or alteration of one (1) single-family dwelling or one (1) two-family residential building and customary accessory structures on a single lot of record.
  - (5) Any maintenance, alteration, use, or improvement to an existing structure not changing or affecting quality, rate, volume, or location of surface water discharge.
  - (6) The division of land subject to the Township's Land Division Ordinance or Subdivision Control Ordinance.
  - (7) Redevelopment of or alterations to existing multiple-family, commercial, or industrial sites with previously-approved stormwater management facilities on record with the Township, subject to verification by the Township Engineer that the existing facilities have sufficient capacity to support the redevelopment or alterations as proposed. Applicant shall indicate the size and scope of the changes of the site which contribute to the existing stormwater facilities.
  - (8) Logging operations that are operating under an approved Isabella County erosion and sedimentation control plan.
- (B) The Township Engineer may also recommend and the Community and Economic Development Director may grant written exceptions from any requirements of this Ordinance using the following criteria:
- (1) There are special circumstances applicable to the subject property or its intended use.
  - (2) The granting of an exception will not:
    - (a) Significantly increase or decrease the rate or volume of surface water runoff.
    - (b) Have a significant adverse impact on a wetland, watercourse, or water body.
    - (c) Significantly contribute to the degradation of water quality.
    - (d) Otherwise significantly impair attainment of the objectives of this Ordinance.
  - (3) The following types of development shall not be eligible to receive an exemption:
    - (a) Industrial or commercial facilities
    - (b) Platted subdivisions or site condominiums
    - (c) Impervious surfaces greater than 10,000 square feet.
- (C) Exempted activities may be required to provide a simplified stormwater management plan that would identify stormwater facilities and how stormwater would be managed on site and the expected off-site impact. Simplified plans may utilize creative and innovative stormwater management techniques, such as:
- (1) Swales in back-lot areas
  - (2) Parking lot depressions
  - (3) Leaching basins and underground storage
  - (4) Gravel berms
  - (5) Gravel underlayment

### **Section 2.3 OFF-SITE STORMWATER MANAGEMENT ALLOWED**

The use of off-site stormwater conveyance, infiltration, or off-site regional detention facilities may be proposed to satisfy the requirements of this Ordinance in lieu of or as a supplement to on-site stormwater detention. Off-site stormwater management facilities may be shared with other landowners, and shall be subject to all applicable requirements of this Ordinance.

## **ARTICLE 3**

### **STORMWATER MANAGEMENT PERMIT REQUIREMENTS**

#### **Section 3.1 PERMIT REQUIREMENTS**

For purposes of this Ordinance, a Stormwater Management (SWM) Permit for regulated activities as identified in Section 2.1 is required before any earth changes commence. The SWM Permit requirements are independent of any other regulations governing the proposed earth change or development activity that may require additional permitting through other enforcing agencies. The granting of a SWM Permit shall authorize only such earth changes for which the permit has been issued, and shall not be deemed to approve a development as a whole or any land use activities.

#### **Section 3.2 PERMIT APPLICATION SUBMITTAL**

- (A) An application for a SWM Permit shall be submitted on the form provided by the Township, signed by the landowner or duly authorized agent, and shall include a description of the stormwater management controls and the development activity, a stormwater management plan, prepared in accordance with Article 4 (Stormwater Plan and Technical Design Standards), and the appropriate permit and review fee or escrow deposit.
- (B) Applications that are found by the Township Engineer to be incomplete or inaccurate shall be returned to the applicant and noted as incomplete, additional information required.
- (C) The Township Engineer may request additional plan details or supporting documentation determined to be necessary for verification of compliance with this Ordinance.
- (D) Permit approval shall be required prior to the initiation of any work activity. Any unauthorized work shall be considered a violation of this Ordinance subject to the enforcement and penalty provisions of this Ordinance. Soil test borings including those utilizing reasonable backhoe test excavation, vegetative cutting for land surveys, percolation tests, and normal maintenance shall not be considered a start of work under this Ordinance.

#### **Section 3.3 SEQUENTIAL APPLICATIONS**

For development proposals that are so large or complex that a stormwater management plan encompassing all phases of the project cannot reasonably be prepared prior to initial groundbreaking, an application for a sequential SWM Permit based on successive major incremental earth change activities shall be allowed as an option. The Township Engineer shall only consider written requests for sequential applications as follows:

- (A) Approval of sequential applications shall take place in two phases. First, the overall conceptual plan for the entire development shall be submitted for review and approval. Second, detailed plans for each phase of the total project shall be submitted for review and approval.
- (B) All permits processed and issued for phases of a project shall be clearly defined as to the nature and extent of work covered for that phase. Each phase of the project shall be reviewed and permitted individually prior to construction.
- (C) A phase shall not be dependent upon subsequent phases for long-term functionality or purpose.

#### **Section 3.4 PERMIT APPLICATION REVIEW PERIOD**

An application for a SWM Permit shall be acted upon within ten (10) business days of notification by the

Township Engineer to the Community and Economic Development Director that a SWM Permit application submittal is complete and accurate.

**Section 3.5 PERMIT APPROVAL OR DENIAL**

- (A) Upon determination by the Township Engineer that the SWM Permit application and associated stormwater management plans comply with all applicable requirements of this Ordinance, a SWM Permit shall be issued specifying the work approved, along with any supplemental conditions. If the permit application or stormwater management plans do not comply with these requirements, the applicant shall be directed to modify the permit request or the permit shall be denied by the Township Engineer. When necessary, the Township Engineer may request additional information from the applicant upon which to base the permit decision.
- (B) The Township Engineer shall notify the applicant in writing if the application is denied, citing the reasons for the denial.
- (C) The Township Engineer shall notify the Community and Economic Development Director after a permit decision has been made.

**Section 3.6 PERMIT EXPIRATION , REVOCATION, OR SUSPENSION**

- (A) SWM Permits shall terminate automatically upon completion of the project or 365 calendar days from the date of issuance, whichever occurs first.
- (B) The applicant may request an extension of up to an additional 365 calendar days, which shall be reviewed and shall be granted by the Township Engineer upon determination of good cause for the extension and that the SWM regulations governing the proposed development and conditions on the site have not changed since the date the SWM Permit was first approved.
- (C) A SWM Permit issued by the Township Engineer under this Ordinance may be revoked or suspended, subject to the provisions of Article 5 (Administration and Enforcement), for any of the following causes:
  - (1) A violation of a condition of the permit.
  - (2) Obtaining a permit by misrepresentation or failure to fully disclose relevant facts in the application or stormwater management plan.
  - (3) A change in a condition that requires a temporary or permanent change in the activity.
  - (4) Noncompliance with or failure to implement any provision of the permit,
  - (5) A violation of any provision of this Ordinance or any other applicable law, ordinance, rule, or regulation relating to the project.
  - (6) The creation of any condition or the commission of any act during construction or development that constitutes or creates a hazard or nuisance or that endangers the life or property of others.
- (D) A suspended permit shall be reinstated by the Township when:
  - (1) The Township has inspected and approved the corrections to the stormwater management control measure(s) or the elimination of the hazard or nuisance; or
  - (2) The Township is satisfied that the violation of the Ordinance, law, or rule and regulation has been corrected.
- (E) A permit that has been revoked by the Township cannot be reinstated. The applicant may apply for a new permit under the procedures outlined in this Ordinance.

### **Section 3.7 REVISIONS TO AN APPROVED PERMIT**

Revisions to an approved SWM Permit, permit condition, or approved stormwater management plan shall first be approved by the Township Engineer, subject to the following:

- (A) Requests for revisions shall be submitted to and approved by the Township Engineer in writing before becoming effective, unless approved by the Township Engineer on-site. If a change is approved on-site, the following actions shall be required subsequent to the on-site approval:
  - (1) The permit holder shall provide updated sealed drawings, calculations, or other documentation to reflect the on-site-approved revisions within ten (10) business days of the on-site approval.
  - (2) The Township Engineer shall provide the permit holder with written verification of acceptance or denial of the updated sealed drawings, calculations, or other documentation within ten (10) business days of the on-site approval.
- (B) The Township may require submittal of a new fee/escrow deposit for review of the revisions.

### **Section 3.8 PENALTIES FOR INITIATING EARTH CHANGE ACTIVITIES WITHOUT A PERMIT**

Any earth change activity, subject to regulation under this Ordinance, which has commenced without a valid SWM Permit, or is not proceeding in accordance with an issued SWM Permit, or is in violation of an SWM Permit condition, shall be considered a violation of this Ordinance subject to the enforcement and penalty provisions of this Ordinance.

### **Section 3.9 CONSTRUCTION CERTIFICATION**

- (A) A certification letter shall be submitted to the Township Engineer by a professional engineer registered in Michigan after the stormwater management facilities have been installed to affirm that construction has been completed in accordance with the approved stormwater management plan. The certification shall be accompanied by sealed record drawings of the as-completed stormwater management improvements.
- (B) The Township Engineer shall issue a letter of compliance to the SWM Permit holder after the following has occurred:
  - (1) Receipt and acceptance of the certification letter and sealed record drawings of the as-completed improvements.
  - (2) Verification that the site is completely stabilized and in compliance with all applicable requirements of this Ordinance.

## **ARTICLE 4**

### **STORMWATER PLAN AND TECHNICAL DESIGN STANDARDS**

#### **Section 4.1 GENERAL PLAN REQUIREMENTS**

A stormwater management plan shall be prepared for any regulated earth change subject to requirements of this Ordinance. The plan shall be designed to effectively manage the runoff from the site to no more than the rate prior to development. The required stormwater management plan shall identify means for controlling the stormwater runoff release rate from the development and providing storage potential for the excess stormwater runoff, where applicable. Pretreatment shall be required if deemed necessary by the Township Engineer and shall be in accordance with provisions specified within this Ordinance.

#### **Section 4.2 PLAN CONTENT**

All computations, plans, and specifications related to the implementation of this Ordinance shall be prepared and sealed by a professional engineer registered in Michigan. The stormwater management plan shall contain but not be limited to the following information unless specifically excluded as unnecessary by determination of the Township Engineer. The plans shall be prepared at a standard engineer's scale of not more than 100 feet to the inch and shall at a minimum include the following:

- (A) Site Location Map
- (B) Existing Information:
  - (1) Legal descriptions
  - (2) Topographic information suitable to show property lines, drainage patterns and contributing watershed
  - (3) Existing land uses, site improvements, and vegetative cover
  - (4) Existing roads, utilities and associated easements that affect the site
  - (5) Existing features impacting the drainage of the site (i.e. management basins, culverts, ditches, storm sewer)
  - (6) Indicate upstream and downstream flow paths to and through the site
  - (7) Overlay existing soil types and boundaries from soil survey
  - (8) Indicate location of wetlands, lakes, streams and associated buffers
- (C) Proposed Information:
  - (1) Earth Changes to land surface and vegetative cover
  - (2) Proposed structures, roads, paved areas, and buildings
  - (3) Proposed underground utilities, sewers, and water lines
  - (4) Final contours at intervals of one (1) foot
  - (5) Location, size, and slope of proposed stormwater conveyance systems
  - (6) Indicate location of soil borings, test holes, and infiltration test locations
  - (7) Indicate presence of and depth to water table
  - (8) Location, size, inlet/outlet configuration of stormwater management facilities
  - (9) Pretreatment forebay/structure locations
  - (10) Areas of snow storage
  - (11) Description and location of all proposed temporary and permanent stormwater and soil erosion control facilities and measures
  - (12) Indicate watershed boundaries to each stormwater management facility



- (D) For each stormwater management facility also list the following:
  - (1) Applicable design criteria
  - (2) Contributing area and weighted runoff curve number
  - (3) Required and proposed management volumes
  - (4) Required and proposed release rate
  - (5) Design high water elevation and berm elevations
  - (6) Outlet control structure and emergency overflow details
- (E) Timing and sequencing of construction activities.
- (F) Maintenance program for stormwater facilities to identify ownership and fiscal responsibility for maintenance and operations during and after construction.
- (G) Stormwater management plans shall include all other calculations, details, and data necessary to verify compliance with the applicable requirements of this Ordinance.

### **Section 4.3 GENERAL STANDARDS**

Stormwater control and management conveyance, storage, infiltration measures, and facilities shall be designed to prevent flood hazards and water pollution related to stormwater runoff and soil erosion from the proposed development, and shall conform to the following general standards:

- (A) **Stormwater Management:** All regulated earth changes subject to review under the requirements of this Ordinance shall be designed, constructed, and maintained to provide for the retention/detention of stormwater runoff and to protect water quality.
- (B) **Natural Features:** Measures required for stormwater management shall take into consideration natural features, proximity of the site to lakes, streams, and wetlands, extent of impervious surfaces, potential for flooding, and the size of the site.
- (C) **Drainage Patterns:** Alterations to natural drainage patterns shall not create flooding down gradient or off-site, or water pollution for adjacent or downstream property owners. Stormwater from upstream and off-site locations shall be conveyed around or through the site or may be stored on site.
  - (1) There shall be no detrimental effect on the floodway or the floodplain elevation during the design storm event upstream or downstream of the proposed development area as a result of the proposed development. All required detention volumes shall be stored above the 100-year floodplain elevation.
  - (2) The drainage areas used for computation will be the total area of land on the subject property that flows to the site outlet. Extraneous flows from off-site upland areas shall be permitted to bypass or pass through the stormwater management system on the subject property. Bypass or pass-through devices shall be sized with sufficient capacity to receive the flow generated by a 10-year storm from upland areas. The applicant shall provide engineering calculations showing compliance with this Section as part of the permit process.
- (D) **Preferred Outlet Conveyance:** Unless otherwise approved, stormwater discharge shall be conveyed through swales and vegetated buffer strips so as to decrease runoff velocity, to allow for natural infiltration, to allow suspended sediment particles to settle, and to remove pollutants.
- (E) **Watercourses:** Watercourses shall not be dredged or cleared of vegetation or deepened, widened, straightened, stabilized, or otherwise altered without applicable permits or approvals from the State of Michigan and all other agencies with jurisdiction.

- (F) **Treatment Requirements:** Stormwater management improvements shall include adequate facilities to trap or contain discharge of runoff from any site that may contain oil, grease, toxic chemicals, or other polluting materials, subject to Township Engineer acceptance.
- (G) **Safety and Aesthetics:** Drainage systems shall be designed to protect public health and safety, and to be visually attractive in a manner consistent with Township ordinances.
- (H) **Operations and Maintenance:** All operation and maintenance plans and associated documentation shall be provided as required per Section 4.9 (Operation and Maintenance Requirements).

#### **Section 4.4 USE OF LOW IMPACT DEVELOPMENT (LID) METHODS ENCOURAGED**

All stormwater management improvement projects are encouraged to incorporate Low Impact Development (LID) methods to decrease stormwater impacts, consistent with accepted standards in the State of Michigan for both Nonstructural Best Management Practices (BMPs) and Structural BMPs, which are summarized below for reference:

- (A) **Nonstructural Best Management Practices** reduce stormwater impacts through limiting site disturbances, maintaining a more natural longer time of concentration, and preserving areas to naturally intercept and infiltrate stormwater.
  - (1) Configuring and clustering uses to limit site impacts and encourage green open spaces. This can provide a good fit to natural topography, avoid destruction of beneficial natural areas, and allow for better siting of stormwater management practices.
  - (2) Minimize soil compaction, total disturbed areas, and reduce impervious areas will reduce the increase in a project's runoff potential.
  - (3) Protect natural flow pathways, maintain existing vegetative cover, and incorporate use of natural drainage features such as swales and depressions.
- (B) **Structural Best Management Practices** consist of constructed conveyance, treatment, and management systems. A collective approach of BMPs that are decentralized and dispersed can better mimic the natural water cycle and limit the total rate and volume that would reach a typical end-of-pipe management facility and/or the flows that leave the site.

#### **Section 4.5 STORMWATER MANAGEMENT STANDARDS**

Stormwater management facilities that protect water quality and minimize flooding shall be required for all developments. Storage facilities may include but are not limited to detention basins, constructed wetlands, retention basins, infiltration trenches, underground management areas, swales with check dams, and other facilities. The following standards shall apply:

- (A) **Feasibility of the Site and Soils:** An evaluation of site feasibility and soil suitability for selection, siting, and sizing of the proposed stormwater management facilities shall be completed, which shall include:
  - (1) Certification of adequate downstream conveyance.
  - (2) Depth to known seasonal high-water table
  - (3) Infiltrative capacity of site soils
  - (4) Ability of the site to contain and to treat anticipated stormwater runoff both during and after construction.
- (B) **Management Volumes:** A stormwater facility shall, at a minimum, be designed to manage runoff

volume from storms up to a 24-hour duration, 25-year storm event, subject to the following:

- (1) All required volumes shall be stored above the 100-year floodplain elevation.
  - (2) Facility shall also be designed to manage up to two (2) 24-hour duration, 100-year storm events on-site when certified adequate downstream conveyance is not available.
- (C) **Allowable Release Rate:** Maximum release rate for detention systems, or allowable flow denoted as  $Q_a$ , shall not exceed the peak rate of 0.15 cubic feet per second per acre of contributing area. Where these standards cannot realistically be achieved, the applicant shall demonstrate that existing higher runoff rates meet the intent and spirit of this Ordinance. The peak runoff rate during a 25-year storm event from a developed or redevelopment site shall not exceed the allowable release rate. This rate is determined using the design impervious area.
- (D) **Overflow:** Overflow from basins and conveyance systems shall be designed to safely control and accommodate a secondary drainage system to direct runoff from storms greater than a 25-year and 24-hour frequency and duration up to a 100-year event.
- (1) Significant off-site watersheds shall be evaluated for a 10-year storm event peak runoff to pass through or around the site.
  - (2) Overflow conveyance spillways/structures shall be sized for a 100-year storm event peak runoff for the contributing area of the subject site.
- (E) **Water Quality:** All detention basins shall be designed to maximize the ability of the basin to hold and trap sediment. Water quality treatment shall be provided at a minimum volume, or Water Quality Volume denoted as WQV equal to one (1) inch over the contributing impervious area. The following types of basins are listed in order of Township preference, with infiltration basins being the most desirable, to satisfy the requirements of this Ordinance:
- (1) Infiltration facilities, provided that soils and groundwater conditions are suitable.
  - (2) Detention basins with a fixed minimum water elevation between runoff events (wet basins). Wet basins that serve to trap soil particles on site are preferable to dry basins.
  - (3) Detention basins that hold stormwater from the one (1) year storm event for more than 24 hours before completely draining to become a dry basin (extended detention).
  - (4) Filtration.
- (F) **Outlets:** Detention and retention basins shall be safely and adequately designed to control runoff. Retention and detention basins shall have an overflow system designed to safely control a 100-year frequency storm event. Basins shall be permanently stabilized to minimize erosion.
- (G) **Slopes:** The allowable slope for detention and retention basins with banks shall be no steeper than 3:1 (horizontal: vertical [H:V]).
- (H) **Discharge of Stormwater Runoff to Wetlands:**
- (1) Stormwater runoff discharged to wetlands shall be diffused to nonerosive velocities before it reaches the wetland.
  - (2) Wetlands may be used for stormwater detention if all of the following conditions are met:
    - (a) The wetland storage or detention area is set back at least 100 feet from the edge of any lake or stream.
    - (b) The wetland does not have significant wildlife habitat or ecological values that would

likely be impaired or destroyed.

- (c) The wetland has sufficient holding capacity for stormwater, based upon calculations prepared by the applicant and reviewed and approved by the Township.
- (d) Adequate on-site sediment control is provided to protect the natural functioning of the wetland.
- (e) All required permits and approvals from the State of Michigan and other agencies with jurisdiction are obtained, with documentation provided to the Township.

**(I) Infiltration and Retention Systems:**

- (1) An infiltration system is designed to promote percolation of stormwater into the ground. The system may be required to include an outlet or emergency spillway based on the adequacy of downstream conveyance systems.
- (2) A retention system is designed to completely retain stormwater runoff without a low flow outlet. The system may be required to include an emergency spillway based on the adequacy of downstream conveyance systems.

**(J) Infiltration Criteria:**

- (1) Infiltration systems will be required at all sites with soil permeability greater than one (1) inch per hour.
- (2) The bottom of the infiltration system shall be a minimum of four (4) feet above the highest known water table elevation.
- (3) The volume of the infiltration system shall be calculated by comparing the volume of runoff of the predeveloped site during a 24-hour duration two (2) year storm versus the volume of runoff from the developed site during a 24-hour duration 25-year storm.
- (4) If it is determined that discharge will cause downstream flooding or has inadequate means of conveyance, the infiltration system shall be designed to store the 100-year storm event runoff volume and manage back-to-back 100-year storm event runoff volumes on-site.
- (5) Certification that an adequate outlet for infiltration systems is available shall be provided by a licensed professional engineer, as accepted by the Township Engineer.
- (6) The design infiltration rate shall be listed on the plans.
- (7) The freeboard between the design high water level and top of berm shall be a minimum of one (1) foot.
- (8) The required and provided volumes and stage elevations shall be listed on the plans.

**(K) Retention Criteria:**

- (1) All retention systems shall be designed to store the 100-year storm event runoff volume and manage back-to-back 100-year storm event runoff volumes on-site.
- (2) The freeboard between the design high water level and top of berm shall be a minimum of one (1) foot.
- (3) The required and provided volumes and stage elevations shall be listed on the plans.

**(L) Volume Reduction Criteria.** Infiltration of runoff within the basin may be used to reduce the

required storage volume subject to the following provisions, subject to acceptance by the Township Engineer:

- (1) An infiltration test with a report shall be done within each proposed basin to a depth of five (5) feet below the bottom of the basin.
- (2) The infiltration test shall be conducted and report prepared in accordance with a standard test method for field measurement of the infiltration rate of soils, as accepted by the Township Engineer.
- (3) The maximum allowable infiltration rate used in the calculation for runoff storage shall be 0.5 times the actual measured infiltration rate.
- (4) The most restrictive soil lens shall be used in the infiltration calculation. The topsoil lens may be the most restrictive in sandy soils. If necessary, specify that only sandy topsoil is to be used in the basin bottom.
- (5) For basins without outlets the maximum water level shall be calculated without deduction for infiltration and shown on the plan where areas outside of the basin will be inundated with runoff. This is necessary to ensure buildings, roads, etc. will not be flooded during frozen soil conditions. The basin shall be sized using the allowable infiltration rate, but this second calculation shall be used for safety and flood control.
- (6) Maximum allowable deduction for the infiltration volume shall be based on a 24-hour period or the time of concentration, as was used in the total runoff volume calculation.

**(M) Underground Infiltration and Retention Systems:**

- (1) Underground infiltration or retention systems shall be allowed only when adequate space for an aboveground system is not available, as confirmed by the Township Engineer. The site grading shall provide for parking lot storage of excess runoff should the underground infiltration or retention system fail to function adequately.
- (2) Design infiltration rates for underground infiltration systems shall be supported by testing data and shall not exceed one (1) inch/hour.
- (3) The freeboard between the design high water level and top of berm shall be a minimum of one (1) foot.
- (4) The required and provided volumes and stage elevations shall be listed on the plans.
- (5) The infiltration basin shall be designed to drain completely within 72 hours. A maximum design infiltration rate of 0.5 times the infiltration rate determined by geotechnical investigation [not to exceed one (1) inch/hour for underground systems], or an infiltration rate of 0.52 inch/hour shall be used to estimate the maximum time to drain by the equation:

$$72 > \frac{12 D}{I}$$

- Where 72 = Maximum allowable drain time (hours)  
12 = Unit conversions – inches to feet  
D = Basin depth (feet)  
I = Design infiltration rate (inch/hour)

- (6) The contractor shall avoid compacting the soil in the infiltration or retention basin area during excavation and grading. Use of equipment with low earth pressure loading is required. The final two (2) feet of depth shall be removed by excavating to finished grade.

- (7) Snow storage in the infiltration or retention system shall not displace more than fifty percent (50%) of the available storage volume and shall not impede drainage through the system.

**(N) Detention Requirements:**

- (1) Proposed storm drainage detention facilities shall be designed to have capacity to detain, at minimum, the 25-year recurrence interval design storm runoff volume in excess of the allowable discharge from the site.
- (2) The maximum design storage elevation in a detention area shall be a minimum of one foot below the lowest ground elevation adjacent to the detention area and above the 100-year floodplain.
- (3) The design maximum storage elevation in a detention area shall not be less than 24 inches below the minimum finish floor elevation of the proposed structure(s) or existing facilities.
- (4) Stormwater management facilities shall be maintained in accordance with approved operation and maintenance plans and any maintenance agreement.
- (5) Designs of detention facilities shall incorporate safety features, particularly at inlets, outlets, on steep slopes, and at any attractive nuisances. These features may include, but not be limited to fencing, handrails, lighting, steps, grills, signs, and other protective or warning devices so as to restrict access. Liability for the detention facilities shall be the responsibility of the applicant, developer, and owner.
- (6) Side slopes and the bottom of detention basins shall be evenly covered with topsoil to a minimum depth of four (4) inches and seeded with appropriate groundcover plantings. Soil erosion control blankets shall be installed to protect slopes if adequate vegetation does not exist between September 1 and May 1 of the calendar year.
- (7) The side slopes and bottom of the basins shall be shaped with maximum slopes of 1:3 [one (1) vertical to three (3) horizontal] to allow mowing of these surfaces.
- (8) Detention basins shall be constructed with the top of banks a minimum of 10-feet horizontally from any pedestrian walkway (i.e., public and private sidewalks/bike paths).
- (9) Underground stormwater detention systems can be accepted, subject to the applicable requirements of this Ordinance and adequate provisions for stormwater cleaning structures at the inlets of these basins.

- (O) Discharge Restrictor Requirements.** Restrictors shall be required to regulate discharge up to the maximum release rate. The following orifice formula shall be used to properly size such restrictors. The minimum restrictor size shall be two (2) inches without use of a gravel filter or other means to prevent clogging.

$$a = \frac{Qa}{0.62 (64.4(h))^{\frac{1}{2}}}$$

a = area of orifice (square-feet)

Qa = Allowable Release Rate (cubic feet/second)

h = head differential from center of orifice to Hydraulic Grade Line of detention pond at maximum capacity (feet).

- (P) Sediment Forebays:** Sediment forebays or equivalent upstream treatment shall be used to provide energy dissipation and to trap and localize incoming sediment.

- (1) The forebay shall be a separate sump, which can be formed by grading, a compacted earthen

berm, or other suitable structure.

- (2) The capacity of the forebay shall be equivalent to 15% of the water quality volume (WQV). The length to width ratio shall be a minimum of 1.5:1 (L:W) and a maximum of 4:1.

**(Q) Treatment Forebay:** A treatment forebay or equivalent stormwater filter shall be used to treat stormwater runoff prior to an infiltration or retention system for all sites with a significant potential of exposing stormwater to oil, grease, toxic chemicals, or other polluting materials.

- (1) The treatment forebay shall be designed with adequate spill containment volume to store the first flush of pollutants typically found in urban stormwater runoff, and to capture slug pollutant loads from accidental spills of toxic materials.
- (2) The treatment forebay shall be a wet basin or approved structure with an impermeable bottom and sides to the design high water level.
- (3) Capacity for the water quality volume shall be provided above the normal water level.
- (4) The overflow structure from the treatment forebay shall be sized for the peak inflow from the design rainfall event.
- (5) The top-of-berm elevation between the treatment forebay and the infiltration basin shall be a minimum of one (1) foot below the outer berm elevation.
- (6) The treatment forebay shall have a minimum one (1) foot-deep sump below the inlet pipe for sediment accumulation.
- (7) The outlet structure from the treatment forebay shall be designed to draw water from the central portion of the water column within the forebay to trap floatables and contain sediments. The top of the inlet structure shall be located a minimum of one (1) foot below the normal water level, and the invert shall be a minimum of 1.5 feet above the bottom of the treatment forebay.
- (8) Premanufactured systems for oil/water separation and sedimentation can be used as treatment forebays for sites of less than five (5) acres of paved surface. The premanufactured treatment systems shall be sized in accordance with manufacturer's recommendations.
- (9) A treatment forebay shall be required for retention and infiltration facilities, and facilities with five (5) acres or greater of contributing impervious area.

#### **Section 4.6 STORMWATER CONVEYANCE STANDARDS**

##### **(A) Culverts and Bridges:**

- (1) **Sizing:**
  - (a) Crossings shall meet the requirements of the Floodplain Control Section (Part 31) of Act 451, where applicable.
  - (b) Bridges shall be designed to provide a one (1) foot minimum freeboard to the underside (low chord) of the bridge for a 100-year flood. Footings shall extend at least 4 feet below the bottom of the channel.
  - (c) Culverts not requiring a permit under Part 31 shall be designed for a minimum 10-year storm in the developed watershed with a maximum outlet velocity of eight (8) feet/second. A maximum of one (1) foot of inlet submergence may be permitted, if this

does not backup water out of the storm drain.

- (d) Sizing of culverts and bridges shall include consideration for entrance and exit losses, and tail water condition.
  - (e) Minimum diameter of a driveway culvert shall be 12 inches.
  - (f) Minimum diameter of a road crossing culvert shall be 15 inches or equivalent pipe arch.
- (2) **End Treatment.** Headwalls, wingwalls, and all other end treatments shall be designed to ensure the stability of the surrounding soil. MDOT, Isabella County Road Commission, or manufacturer's designs may be used, as accepted by the Township Engineer.
- (3) **Material.** Culverts may be reinforced concrete pipe, smooth interior wall polyethylene pipe, corrugated steel pipe, box culvert, or pipe arch in accordance with the current MDOT Standard Specifications.

**(B) Vegetated Swales:**

- (1) **Sizing:**
- (a) The minimum required discharge capacity shall be for a 10-year frequency rainfall event with 0.5 foot of freeboard to top of bank.
  - (b) Minimum bottom width for grassed waterways shall be one (1) foot or an equivalent parabolic section. Minimum bottom slope shall be 0.50%.
  - (c) Side slopes shall be no steeper than 3:1 (horizontal: vertical [H:V]).
- (2) **Layout:**
- (a) Outlets into the grassed waterway shall enter at an angle of 90 degrees or less with the direction of flow.
  - (b) A minimum clearance of four (4) feet is required between vegetated swale and ditch inverts and underground utilities unless special provisions are approved. In no case will less than two (2) feet of clearance be allowed.

**(C) Stormwater Piping Requirements:**

- (1) Proposed storm sewer shall be designed to have capacity to pass the 10-year design storm runoff rate and check on 25-year storm to ensure no adverse increase in water elevation of development property, or flooding of structures within the development.
- (2) All storm sewer materials shall comply with current MDOT construction standards.
- (3) Provide two (2) feet of minimum cover over the storm drainage system.
- (4) Provide 18-inch vertical separation from all other utilities, including sanitary sewers and water mains.
- (5) Provide 10-foot horizontal separation from other utilities.
- (6) Manholes/catch basins shall be placed at a maximum distance of 400 feet from any other manholes/catch basins for access/maintenance purposes.
- (7) Provide a sump discharge outlet for each individual lot in all developments. This outlet shall be a catch basin (minimum four (4) foot diameter) or provide a stormwater lead to each lot. Manufactured cored and booted wye leads, six (6) inch diameter minimum, to each lot are acceptable.
- (8) Minimum pipe grades shall produce a minimum scouring velocity of 2.5 feet/second when



pipe is flowing full without surcharging.

- (9) For storm drainage systems, any plastic pipe shall be either schedule 80 PVC, smooth walled HDPE, SDR 35, or equivalent as accepted by the Township Engineer. If pipe is perforated, a manufacturer's sock shall be used over the pipe.
- (10) Minimum pipe diameter for catch basin leads shall be 12 inches.
- (11) Minimum pipe size for storm sewer main shall be 12 inches.
- (12) Pipe shall be sized for a 10-year design storm runoff rate without surcharging.
- (13) Wherever pipes of different sizes come into a structure, the 8/10th flow lines shall match.
- (14) Catch basins shall have a minimum sump depth of 24 inches.

#### **Section 4.7 STANDARDS FOR OFF-SITE STORMWATER MANAGEMENT EASEMENTS**

- (A) If any portion of the stormwater management facilities will be located on property other than the property on which the stormwater will originate, then the owner of the property on which the stormwater will originate shall obtain a stormwater management easement from the owner of the property on which all or a portion of the stormwater management facilities will be located.
- (B) The stormwater management easement shall define the scope of the easement to include at a minimum the legal right of the owner of the property on which the stormwater will originate to access the property on which the stormwater management facilities will be located for the purpose of installing, inspecting, and maintaining the stormwater management facilities; shall run in perpetuity with the land benefitted by the easement, or until the stormwater management facilities are removed, whichever is sooner; and shall be recorded in the office of the Isabella County Register of Deeds.
- (C) A recorded copy of the stormwater management easement shall be filed with the Township Engineer prior to the issuance of a SWM Permit.
- (D) The recorded stormwater management easement shall not be revoked, terminated, reconveyed, or amended without the prior written authorization of the Township Engineer. Any such extinguished or revised stormwater management easement shall be recorded in the office of the Isabella County Register of Deeds, and a recorded copy shall be filed with the Township Engineer.

#### **Section 4.8 SOIL EROSION AND SEDIMENTATION CONTROL REQUIREMENTS**

- (A) Grassed waterway flow velocities shall be neither siltative nor erosive. The minimum velocity for vegetated channels shall be 1.5 feet/second. The maximum velocity shall be four (4) feet/second. Riprap protection or equivalent erosion control measures shall be used where the velocity exceeds four (4) feet/second, up to maximum allowable design velocity of eight (8) feet/second.
- (B) Where maximum velocities are exceeded due to channel slope, rock check dams or grade control structures shall be used to reduce overall flow velocities.
- (C) Erosion control blankets shall be used to protect bare channels.
- (D) Sediment resulting from accelerated soil erosion shall be removed from runoff water before it leaves the site of the development or earth change.
- (E) Surface water shall be discharged or conveyed around, though, or from the development or earth change area at a controlled release rate sufficient to prevent erosion.

- (F) If lakes, ponds, rivers, creeks, streams, or other watercourses and wetlands are located on or near the site, erosion control measures that trap sediment shall be encouraged and may be required if reasonably determined to be necessary by the Township Engineer to protect a watercourse or wetland.
- (G) The creation or retention of vegetated buffer strips shall be required along the edge of all lakes, ponds, creeks, streams, other watercourses, and wetlands when reasonably determined to be necessary by the Township Engineer to protect the watercourse.

#### **Section 4.9 OPERATION AND MAINTENANCE REQUIREMENTS**

**(A) Maintenance, Inspection, and Recordkeeping:**

All temporary and permanent stormwater management facilities shall be consistently maintained and inspected as necessary during the life of the facility to provide adequate protection against adverse impacts from stormwater runoff and to ensure the continued and proper operation of the facility for the protection of downstream properties. Maintenance records shall be kept by the property owner indicating the date and items inspected and maintained.

**(B) Maintenance Requirements.** Where maintenance is required, it shall be performed in accordance with the following general provisions, as well as any specific conditions that may be included with the SWM Permit:

- (1) All stormwater management facilities shall be maintained in accordance with the SWM Permit conditions, maintenance agreement provisions, and all applicable requirements of this Ordinance.
- (2) The person(s) or organization(s) responsible for maintenance shall be designated in the stormwater management plan or the permit application submitted to the Township Engineer. Options may include:
  - (a) The owner(s) of the property.
  - (b) Property owners association or other designated qualified party as determined to be acceptable by the Township Engineer, if provisions for financing of necessary maintenance are included in the deed restrictions or other contractual agreements.
- (3) The Township Engineer is not required to accept the applicant's desired responsible party for maintenance purposes in any given situation. Natural features, proximity of site to lakes, streams and regulated wetlands, extent of impervious surfaces, size of the site and potential need for ongoing maintenance activities will be considered when making this decision, as well as the overall complexity of the stormwater management facilities. Where deemed necessary by the Township Engineer, third party maintenance may be required for the adequate protection of sensitive sites, or complex stormwater management facilities.
- (4) Upon determination and written notice from the Township that a stormwater management facility has not been properly maintained or is no longer functioning as designed, the property owner shall have 30 calendar days to complete necessary maintenance, or within 36-hours of notification of an emergency condition unless an identified threat to public health, safety, and welfare requires immediate action. If this maintenance is not completed as required, the Township may take all necessary legal actions to compel prompt completion of the required maintenance or to have any necessary maintenance completed at the owner's expense, unless other arrangements have been authorized as part of an executed maintenance agreement.

(C) **Operation and Maintenance Plans:** Stormwater management facility operation and maintenance plans may be required by the Township Engineer to be included with the SWM Permit application materials and plans. At a minimum, these plans shall include the following:

- (1) An annual maintenance budget, itemized by task. The financing mechanism shall also be described.
- (2) A listing of typical maintenance tasks and activities defined for each component of the stormwater management facility.
- (3) The party responsible for performing each maintenance activity.
- (4) A detailed description of the procedures for recordkeeping of maintenance operations and expenditures.
- (5) A schedule for implementation, and a period for corrective measures to be taken consistent with the requirements of this Ordinance. Language shall be included which states that if the property owner fails to act within the period specified, the Township may make arrangements to have a contractor perform the needed maintenance and assess the costs at the property owner's expense.
- (6) The plan shall specify that the property owner responsible for maintenance shall conduct routine maintenance inspections at least twice a year, in the spring and in the fall, and shall inspect all structural elements at least annually. Corrective action shall be completed within 30 calendar days of a regularly scheduled inspection or notification that action is required.
- (7) The plan shall also specify that emergency inspections shall be promptly conducted on an as-needed basis. Corrective action shall be completed within 36-hours of notification of the emergency condition unless an identified threat to public health, safety, and welfare requires immediate action.

(D) **Maintenance agreement:**

Adequate provision shall be made for stormwater management facility maintenance, subject to requirements of this Ordinance and a maintenance agreement which shall specify responsibilities for financing and for performing all necessary maintenance and emergency repairs in accordance with approved operation and maintenance plans and all applicable requirements of this Ordinance.

- (1) The maintenance agreement shall be executed by the property owner or owner's representative before final SWM Permit approval is granted. The agreement shall be included in any property deed restrictions or condominium master deed documents and shall be binding on all subsequent property owners.
- (2) The maintenance agreement shall include adequate provisions to authorize the Township access to inspect and, if necessary, to take corrective action should the owner fail to properly maintain the stormwater management facilities..
- (3) The approved and executed maintenance agreement and approved stormwater management plans shall be recorded by the property owner or owner's representative at the Isabella County Register of Deeds office, with a recorded copy provided to the Township Engineer for the Township's record.

## ARTICLE 5 ADMINISTRATION AND ENFORCEMENT

### SECTION 5.1 FEES, ESCROW DEPOSITS, AND PERFORMANCE GUARANTEES

- (A) **Fees and Escrow Deposits:** All fees and/or escrow deposits applicable under this Ordinance shall be specified in a fee schedule determined from time to time by Board of Trustees resolution, and shall be paid in full by the applicant to the Township at the time of application. The established amounts of such fees or escrow deposits shall be directly related to the actual costs of administering the SWM Permit program, including design review, site inspection, enforcement and permit administration.
- (B) **Performance Guarantees:** To ensure compliance with this Ordinance, the Community and Economic Development Director may, after recommendation from the Township Engineer, require that a performance guarantee be deposited with the Township to insure faithful completion of improvements, subject to the following:
- (1) **Form of the guarantee.** The performance guarantee shall be in the form of an insurance bond, an irrevocable bank letter of credit, or cash escrow. Any such performance guarantee shall not have an expiration date and shall include a provision that calls for notification of the Township if the bond, letter of credit or escrow is canceled. If the applicant posts a letter of credit, the credit shall require only that the Township present the bank with a sight draft and an affidavit signed by the Township Manager attesting to the Township's right to draw funds under the letter of credit. If the applicant posts a cash escrow, the escrow instructions shall provide that the escrow agent shall have a legal duty to deliver the funds to the Township whenever the Township presents to the agent an affidavit signed by the Township Manager attesting to the Township's right to receive funds whether or not the applicant protests that right.
  - (2) **When Required.** The performance guarantee shall be submitted at the time of issuance of the SWM Permit authorizing the activity or project. If appropriate based on the type of performance guarantee submitted, the Township shall deposit the funds in an account in a financial institution with which the Township regularly conducts business.
  - (3) **Amount.** The amount of the performance guarantee shall be sufficient to cover the estimated cost of the improvements for which the performance guarantee is required. The applicant shall provide an itemized schedule of estimated costs to complete all such improvements. The exact amount of the performance guarantee shall be determined by the Community and Economic Development Director, after recommendation from the Township Engineer.
  - (4) **Return of Performance Guarantee.** The entire performance guarantee shall be returned to the applicant following inspection by the Township Engineer and a determination that the required improvements have been completed satisfactorily. The performance guarantee may be released to the applicant in proportion to the work completed on various elements, provided that a minimum of ten percent (10%) shall be held back on each element until satisfactory completion of the entire project.
  - (5) **Retainage for Establishment of Groundcover Plantings.** An amount not less than ten percent (10%) of the total performance guarantee may be retained for a period of at least one year after installation of groundcover plant materials or seeding to ensure establishment

and healthy growth to minimize soil erosion. This amount shall be released to the applicant following inspection by the Township Engineer and a determination that the groundcover plantings are fully established and healthy.

- (6) **Unsatisfactory Completion of Improvements.** Whenever required improvements are not installed or maintained within the time stipulated or in accordance with the standards set forth in this Ordinance, the Township may complete the necessary improvements itself or by contract, and may assess all costs of completing required improvements against the performance guarantee. Prior to completing required improvements, the Township shall notify the owner, applicant, or other firm or individual responsible for completion of the required improvements.

## **SECTION 5.2 INSPECTIONS**

- (A) The Township Engineer shall have the right to conduct on-site inspections of the stormwater management facilities to verify compliance with the requirements of this Ordinance, including that maintenance is being performed as required by this Ordinance. Any such inspections may take place before, during, and after any earth change activity has occurred for which a permit has been issued. Submission of an application for a permit under this Ordinance shall be deemed as providing written consent for the Township Engineer to conduct on-site inspections of the stormwater management facilities. The Township Engineer shall exercise this right to inspect by written consent of the person having the right to possession of the property, or by administrative search warrant issued by a court of competent jurisdiction.
- (B) If upon inspection, existing site conditions are found not to be as stated in the SWM Permit or approved stormwater management plan, the SWM Permit may be revoked. No earth disrupting work shall be undertaken or continued, except preventative stormwater measures as authorized by the Township Engineer, until revised plans have been submitted and a valid SWM Permit issued.
- (C) For the purpose of this Ordinance, the Township Engineer or other duly authorized Township ordinance enforcement official may enter, at all reasonable times, in or upon any private or public property for the purpose of inspecting or investigating the condition and practices that may be a violation of this Ordinance. A written notice shall be sent to a person, firm, or corporation who is deemed to be in violation.

## **SECTION 5.3 VIOLATIONS AND PENALTIES.**

Any person, firm, corporation, or agent, or any employee, contractor, or subcontractor of same, who fails to comply with any of the provisions of this Ordinance, or who impedes or interferes with the enforcement of this Ordinance, shall be deemed in violation of this Ordinance and shall be subject to the following:

- (A) **Public nuisance.** Violations of any provision of this Ordinance are hereby declared to be a nuisance per se and shall be subject to abatement or other action by a court of appropriate jurisdiction.
- (B) **Violators.** Each owner or other person who commits, participates in, assists in, or maintains any violation of the Ordinance may be held responsible for a separate offense and may be subject to the penalties provided in this Section. The cost of prosecution shall also be assessed against each violator. The imposition of any penalty shall not exempt the offense from compliance with the requirement of this Ordinance.
- (C) **Enforcement.** Anyone may report apparent violations of this Ordinance to the Township Manager, Community and Economic Development Director, Township Engineer, or other

designated Township ordinance enforcement official. All violations shall be addressed by following the procedures outlined in the Township’s Municipal Ordinance Violation Bureau Ordinance. Each day such violation continues shall be considered a separate offense. Nothing herein contained shall prevent the Township from taking such other lawful action as is necessary to prevent or remedy any violation.

- (D) **Municipal civil infraction.** Any person who violates or permits the violation of this Ordinance shall be responsible for a municipal civil infraction and shall be subject to a fine not to exceed the limits specified in the Township’s Municipal Ordinance Violation Bureau Ordinance. Proceedings for the municipal civil infraction shall proceed as provided in that ordinance.
  - (1) The imposition of a municipal civil infraction fine for any violation shall not excuse the violation or permit it to continue.
  - (2) A person who violates or permits the violation of this Ordinance shall also be subject to additional sanctions, remedies, injunctions, judicial orders, penalties, enforcement costs and expenses as provided for under Chapter 87 of the Revised Judicature Code, being MCL §600.8701, et. seq., as amended. Each day a violation of this Ordinance continues to exist constitutes a separate violation.
- (E) **Other remedies.** The rights and remedies set forth above shall not preclude the use of other remedies provided by law, including any additional rights of the Township to initiate proceedings in an appropriate court of law to restrain or prevent any noncompliance with any provisions of this Ordinance, or to correct, remedy or abate such non-compliance.
- (F) **Rights and remedies preserved.** Any failure or omission to enforce provisions of this Ordinance or to prosecute a violation of this Ordinance shall not constitute a waiver of any rights and remedies provided by this Ordinance or by law, and shall not constitute a waiver nor prevent any further prosecution of violations of this Ordinance.

#### **SECTION 5.4 STOP WORK ORDERS**

If necessary to assure compliance with the permit requirements, standards, and other provisions of this Ordinance or to protect public health, safety, welfare, or natural resources, the Township Engineer may issue a stop work order for the purpose of preventing uncontrolled stormwater, or other conditions posing imminent and substantial danger to public health, safety, welfare or natural resources. The stop work order, when issued, shall require all specified activities to be stopped immediately. The order shall describe the specific alleged violation and the steps deemed necessary to bring the project back into compliance.

#### **SECTION 5.5 EMERGENCY ACTION**

Where necessary to protect public safety or water resources, including lakes, streams, regulated wetlands, and other receiving bodies of water, the Township, through a Circuit Court abatement proceeding, may seek a temporary restraining order or preliminary injunction from the court authorizing entry onto private property for the purpose of initiating emergency action to abate imminent and substantial danger and risk. Except as otherwise provided through maintenance agreements, the property owner shall reimburse the Township for all expenses incurred as a result of the emergency action, including but are not limited to reasonable attorney’s fees, administrative costs, inspection fees, and the costs of any remedial action taken to abate the emergency condition.

## **SECTION 5.6 APPEALS**

It shall be the duty of the Community and Economic Development Director to consider appeals from any determination or order made or issued by the Township Engineer in connection with the enforcement of this Ordinance.

- (A) Any person aggrieved by any determination or order made or issued by the Township Engineer in connection with the enforcement of this Ordinance may file a written appeal with the Community and Economic Development Director setting forth their name, address, phone number, and email address and including a written statement of the grounds for the appeal.
- (B) No fee is required for this appeal.
- (C) Any determination or order subject to an appeal shall be stayed until a disposition of the appeal is made by the Community and Economic Development Director, unless such a stay is determined by the Community and Economic Development Director to create or exacerbate a public health or safety issue.
- (D) For any appeal, the Community and Economic Development Director may sustain, modify, or withdraw the determination or order as determined necessary consistent with the purpose and intent of this Ordinance. The Director may postpone action on a matter under review to a date certain for the purpose of requesting additional information or to seek legal or other expert counsel prior to taking final action on the appeal.
- (E) Within ten (10) business days after final action on the appeal, the Community and Economic Development Director shall prepare and send a written record of the final action to the appellant and to the Township Engineer. Any appeal of the Community and Economic Development Director's final action shall be made to the Isabella County Circuit Court within 30 calendar days of the date that the written record of the final action is sent to the appellant.

## ARTICLE 6 DEFINITIONS

This Article sets forth the definitions of certain terms used within the Ordinance which have a meaning specific to the interpretation of the text of the Ordinance. Any word not defined herein shall first be interpreted as defined within Act 451, and where not defined there, shall be interpreted within its common and approved usage:

**ACT 451.** The Natural Resources and Environmental Protection Act, Michigan Public Act 451, of 1994, as amended (being MCL 324.101 et seq.).

**ALLOWABLE DISCHARGE.** The restricted discharge from a site after development or redevelopment as calculated in accordance with this Ordinance.

**APPLICANT.** The landowner or authorized agent for the property upon which is regulated earth change is proposed and who has submitted an application for a Stormwater Management (SWM) Permit.

**CLEAN WATER ACT.** The Federal Water Pollution Control Act, 33 USC §§ 1251 et seq., as amended, and the applicable regulations promulgated thereunder.

**COMMUNITY AND ECONOMIC DEVELOPMENT DIRECTOR.** The individual, firm, or employee designated by the Township Manager to oversee and manage the work of the Township's Community and Economic Development Department.

**CONDUIT.** Any channel, pipe, sewer or culvert used for the conveyance or movement of water whether open or closed.

**CONTROL ELEVATION.** Contour lines and points of predetermined elevation used to denote a detention storm area on a plat or site drawing.

**COUNTY DRAIN.** Drains established or constructed pursuant to the Michigan Drain Code.

**DETENTION FACILITY.** A facility constructed or modified to restrict the flow of stormwater to a prescribed maximum rate and to concurrently detain the excess waters that accumulate behind the outlet.

**DETENTION STORAGE.** The temporary detaining or storage of stormwater in storage basin, on rooftops, in streets, parking lots, school yards, parks, open space, or other areas under predetermined and controlled conditions, with the rate of drainage regulated by appropriately installed devices.

**DETENTION.** The capture of stormwater and release over a given period of time through an outlet structure at a controlled rate.

**DEVELOPED or DEVELOPMENT.** The installation or construction of impervious surfaces on a development site that requires, pursuant to state law or local ordinance, Township approval of a site plan, plat, site condominium, special land use, planned unit development, or permit for the erection of buildings or structures; provided, however, the terms DEVELOPED or DEVELOPMENT do not refer to individual single-family or two-family dwellings or projects involving the construction of such a dwelling, or to projects involving an addition, extension or modification to such dwelling or the parcel on which it is located.

**DEVELOPER.** Any person proposing or implementing the development of land.

**DEVELOPMENT SITE.** Any land that is being or has been developed, or that a developer proposes for development.

**DISCHARGE.** The release or outflow of water from any source.

**DISCHARGER.** Any person or entity that directly or indirectly discharges stormwater from any property. DISCHARGER also means any employee, officer, director, partner, contractor, or other person who participates



in, or is legally or factually responsible for, any act or omission that is or results in a violation of this Ordinance.

**DRAIN COMMISSIONER.** The Isabella County Drain Commissioner or designee.

**DRAINAGE AREA.** The area from which stormwater runoff is conveyed to a single outlet (i.e., a watershed or catchment area).

**DRAINAGE.** The collection, conveyance, or discharge of groundwater or surface water.

**EARTH CHANGE.** Any human activity, which removes groundcover, changes the slope or contours of the land, or exposes the soil surface to the actions of wind and rain. EARTH CHANGE includes, but is not limited to, any excavating, surface grading, filling, landscaping, or removal of vegetative roots.

**EROSION.** The process by which the ground surface is worn away by action of wind, water, gravity or a combination thereof.

**EXEMPTED DISCHARGES.** Discharges other than stormwater.

**FLOOD or FLOODING.** A general and temporary condition of partial or complete inundation of normally dry land areas resulting from the overflow of waterbodies or the unusual and rapid accumulation of surface water runoff from any source.

**FLOODPLAIN.** Any land area susceptible to being inundated by flood waters from any source.

**FLOODWAY.** The channel of any watercourse and the adjacent land areas that must be reserved to carry and discharge a base flood without cumulatively increasing the water surface elevation more than one-tenth of a foot.

**FOREBAY.** Manmade surface waters used as pretreatment systems. They are designed to temporarily store the first flush of runoff from a storm event and provide for pollutant removal through settling. A FOREBAY or other pretreatment system is recommended at each inlet to a detention system or retention basin.

**FREEBOARD.** A volume of additional storage designed within a detention basin. A safety factor within a stormwater detention system that is based on a minimum of one foot detention volume above the proposed high water elevation of a detention pond. This volume provides additional stormwater detention in the event that a storm exceeds the design capacity.

**GRADING.** Any stripping, excavating, filling, and stockpiling of soil or any combination thereof.

**IMPERVIOUS SURFACE.** Surface that does not allow stormwater runoff to percolate into the ground.

**INFILTRATION FACILITIES.** A Structure designed to direct runoff into the ground (e.g., French drains, seepage pits, and seepage trenches).

**INFILTRATION TRENCH.** Also known as a PERCOLATION TRENCH, is a shallow excavated trench, filled with gravel or crushed stone, designed to infiltrate stormwater through permeable soils into the ground water aquifer. This type of trench is not considered a preferred means of discharging stormwater.

**INFILTRATION.** A process whereby precipitation or groundwater seeps into the ground.

**LAND DISTURBANCE.** Any activity involving grading, tilling, digging, or filling of ground; stripping of vegetation; or any other activity that causes land to be exposed to the danger of erosion.

**LEACHING BASIN.** A catch basin that is fabricated of barrel and riser sections that permit runoff into the ground. This type of basin is not considered an effective means of controlling and treating stormwater runoff.

**LOW-IMPACT DESIGN (LID).** A stormwater management strategy that aims to control water, both rainfall and stormwater runoff, at the source.

**OPERATIONS AND MAINTENANCE PLAN.** One or more documents that describe in some detail the responsible organization, responsibilities, policies, and general procedures for maintaining and operating the specified

stormwater management facilities.

**OWNER.** Any person or entity having legal or equitable title to property, or any person or entity having or exercising care, custody, or control over any property.

**PEAK RUNOFF.** The maximum rate of flow of stormwater runoff discharge at a given location.

**PERSON.** An individual, firm, partnership, association, public or private corporation, public agency, instrumentality, or any other legal entity.

**POLLUTANT.** A substance discharged, which includes, but is not limited to, the following: any dredged spoil, solid waste, vehicle fluids, yard wastes, animal wastes, agricultural waste products, sediment, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological wastes, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, commercial and agricultural waste, or any other contaminant or other substance defined as a pollutant under the Clean Water Act.

**REDEVELOPMENT.** Altering, improving, or otherwise changing the use of an existing developed property, including, but not limited to, roof, pavement, or any other impervious surface. Ordinary maintenance of impervious surfaces to address the effects of weathering (including, for example, pothole repair or overlays, crack seal, and seal coating to address pavement defects) does not constitute REDEVELOPMENT. However, crush and shape projects affecting pavement base materials shall constitute REDEVELOPMENT.

**RETENTION.** The capture and containment of stormwater until it infiltrates the soil and/or evaporates.

**RETENTION BASIN.** An area of excavated earth for the collection and storage of runoff without subsequent discharge to surface waters and into which surface water is directed into the ground.

**RUNOFF.** That part of precipitation that flows over the land.

**SEDIMENT.** Soil material, both mineral and organic, that is in suspension, which is being transported, or that has been moved from its site of origin by water.

**SINGLE-FAMILY DWELLING.** A building used exclusively for one-family occupancy.

**SITE.** Any tract, lot, or parcel of land or combination of tracts, lots, or parcels of land that are in one ownership or that are contiguous and in diverse ownership where development is to be performed as part of a unit, subdivision, or project.

**SOIL EROSION.** The stripping of soil and weathered rock from land, creating sediment for transport by water, wind or ice, and enabling formation of new sedimentary deposits.

**STORM DRAIN.** A system of open or enclosed conduits and appurtenant structures intended to convey or manage stormwater runoff, groundwater and drainage.

**STORM EVENT.** A precipitation event of specific frequency and duration having a probable recurrence interval of once in the specified frequency (i.e., a 25-year, 24-hour storm event).

**STORMWATER.** Water that results from precipitation that is not absorbed by the soil or vegetation or evaporated and that flows over the ground surface or is collected in channels or conduits.

**STORMWATER PLAN.** Written narratives, specifications, drawings, sketches, written standards, operating procedures, or any combination of these.

**STORMWATER MANAGEMENT FACILITY.** The method, structure, area, system, or other equipment or measures designed to receive, control, store, or convey stormwater.

**STORMWATER MANAGEMENT (SWM) PERMIT.** A permit issued pursuant to this Ordinance.

**STORMWATER RUNOFF.** The water from a rainstorm, snow melt or other natural event or process, which flows over the surface of the ground or is collected in a drainage system.

**STREAM.** A river, stream or creek, which may or may not be serving as a drain, or any other water body that has definite banks, a bed, and visible evidence of a continued flow or continued occurrence of water.

**SUBDIVISION.** The division or redivision of a lot, tract, or parcel of land by any means into two or more lots, tracts, parcels, or other divisions of land, including changes in existing lot lines for the purpose, whether immediate or future, of lease, transfer of ownership, or building or lot development.

**TIME OF CONCENTRATION.** The elapsed time for stormwater runoff to flow from the most distant point in a drainage area to the outlet or other predetermined point.

**TOWNSHIP.** The Charter Township of Union, Isabella County, Michigan, except where otherwise stated.

**TOWNSHIP ENGINEER.** The Townships' designated civil engineering consultant, employee, or other designated representative as determined from time to time by the Township.

**TWO-FAMILY DWELLING.** A building used exclusively for the occupancy of two individual families living independently of each other.

**UNDERGROUND DETENTION SYSTEM.** An underground system consisting of one or more underground pipes or structures that are designed to provide the required volumes for storage for a development project.

**UPLAND AREA.** Land located in the upper portion of a watershed whose surface drainage flows toward the area being considered for development.

**VEGETATED SWALES.** Channels that are broad, shallow, and lined with vegetation that slow and filter stormwater runoff and promote infiltration.

**WATER BODY.** A river, lake, stream, creek or other watercourse or wetlands.

**WATER QUALITY VOLUME (WQV).** The amount of stormwater runoff from any given storm that should be captured and treated in order to remove a majority of stormwater pollutants on an average annual basis.

**WATERCOURSE.** Any natural or artificial stream, river, creek, channel, ditch, canal, conduit, culvert, drain, waterway, gully, ravine, street, roadway, swale, or wash in which water flows in a definite direction, either continuously or intermittently.

**WATERSHED.** A region draining into a water body.

**WEIR.** A low dam built to raise the level of water upstream and regulate its flow. The flow is frequently controlled by a notch through which water flows. WEIR control may be a depression in the side of a tank, reservoir, or channel, or it may be an overflow dam or other similar structure.

**WETLANDS.** Land characterized by the presence of water at a frequency and duration sufficient to support wetland vegetation or aquatic life as defined in Act 451.

<b>To:</b> Board of Trustees	<b>DATE:</b> February 16, 2023
<b>FROM:</b> Mark Stuhldreher, Township Manager	<b>DATE FOR BOARD CONSIDERATION:</b> 2/22/2023
<b>Action Requested:</b> To approve a commitment to Central Michigan University for funding of up to \$332,456.20 to support construction of an eight-foot-wide asphalt pathway with lighting and security improvements from Deerfield Road north to Denison Drive to complete phase two of a collaborative effort with CMU to establish a safe pedestrian connection for Township residents in the student and workforce housing south of Deerfield Road to the CMU campus area.	

Current Action   X        Emergency           
Funds Budgeted: Yes   X        Account #101-441-970.100  
Finance Approval:         MDS        

**BACKGROUND INFORMATION**

**Development of the student and workforce housing south of Deerfield Road**

Beginning in the late 1960s, land south of Deerfield Rd. between S. Mission Rd. and Crawford Rd. developed over time into a substantial concentration of student and workforce housing that includes 865 rental apartments in four separate communities (Northwinds, Lexington Ridge, Timber Creek, and Deerfield Apartments). Much of this housing is geared towards lower income housing needs, both for students and for entry-level employees of CMU, the Soaring Eagle Casino & Resort, and other area businesses.

With an additional 305 residential sites in the adjacent and rapidly renovating Summerhill Village Mobile Home Park and additional single-family and duplex residences around Silverberry Lane at Deerfield Rd., there is a total capacity of 1,192 residences in this 0.26 square-mile area, making it one of the highest density housing blocks in the Township and the greater Mt. Pleasant community.

**Phase two of a collaborative effort with CMU**

The proposed Deerfield Rd. to Denison Dr. connector pathway is phase two of a two-part collaborative effort between the Township and Central Michigan University (CMU) to establish a safe, barrier-free pedestrian and bicycle connection for Township residents in the student and workforce housing south of Deerfield Road to the CMU campus area, and to access on-campus and off-campus employment opportunities in the community. The first part of this project, an eight-foot wide asphalt pathway connection from Denison Dr. and West Campus Dr. to an existing pathway near the CMU baseball stadium, was completed in 2020.

A new eight-foot-wide asphalt path is proposed, along with CMU standard campus pathway lighting and the addition of security cameras to provide for a safe environment for all users. It will begin with a barrier-free accessible mid-block crossing of Deerfield Road, and will continue north by the CMURC Business Incubator building approximately 840 feet to Denison Drive and a second barrier-free crossing to connect to the existing pathway system into CMU's campus and the City of Mt. Pleasant. With Township support, the project is anticipated to be constructed by CMU in 2023.

### **Project funding and status of grant applications**

The FY2023 General Fund - Public Works – Sidewalks and Non-Motorized Pathways budget (account #101-441-970.100) includes a total of \$925,000.00 for sidewalk and pathway improvements. \$175,000 of this total is specifically earmarked for the proposed Deerfield Rd. to Denison Dr. connector pathway. In September of 2022, Township Administration applied to the Saginaw Chippewa Indian Tribe for a 2% Grant of \$165,000 to provide the additional funding support needed for this project, but was unsuccessful (the Township did receive a generous funding award from the Tribe to support the S. Lincoln Rd. – E. Broomfield Rd. reconstruction project).

If approved, this authorization would be reflected in the mid-year FY2023 Budget Amendment. The Administration plans to apply again to the Tribe for this 2% Grant award during the Spring 2023 funding cycle. If awarded, any grant would reduce the amount needed from the General Fund.

If the project does not receive a grant award in this funding cycle, Instead, an increase in the earmark for this Deerfield Rd. to Denison Dr. connector pathway from \$175,000 to \$332,456.40 would be included in the mid-year FY2023 Budget Amendment, with the difference reallocated from the planned E. Broomfield Rd. and E. Bluegrass Rd. sidewalk projects where a lack of easements have delayed completion of these improvements. The Administration does not anticipate the need for any increase in the overall FY2023 Public Works – Sidewalks and Non-Motorized Pathways budget.

### **SCOPE OF THIS AUTHORIZATION**

Board approval of the proposed commitment to Central Michigan University would authorize funding of up to \$332,456.20 to support construction of the proposed Deerfield Rd. to Denison Dr. connector pathway to be constructed by CMU.

Once the construction has been completed, all annual pathway operations and maintenance, including winter snowplowing, repairs, security, and utilities, will be the sole responsibility of CMU in perpetuity.

### **JUSTIFICATION**

Many of the residents in the student and workforce housing area located in the Township south of Deerfield Rd. have income constraints that limit access to reliable private transportation. The proposed Deerfield Rd. to Denison Dr. connector pathway is critical to providing safe, direct, and convenient non-motorized transportation options for these residents to access educational and employment opportunities in the area. The proposed safety measures (lighting and security cameras) are also critical to maximizing the safety of pathway users.

This project is consistent with the Township's Master Plan, the CMU Campus Master Plan, and the Greater Mt. Pleasant Area Non- Motorized Plan. The addition of this connector pathway will also improve barrier-free accessibility for Township residents and represents another step forward in the collaborative effort of Tribal, local, and state entities and the Mid-Michigan Community Pathways Group to develop a regional pathway network through the greater Mt. Pleasant area.

**GOALS ADDRESSED**

Board of Trustees goals addressed by this Ordinance (From Policy 1.0: Global End):

- 1. Community well-being and common good**
- 3. Safety**
- 4. Health**
- 5. Natural environment**

The proposed Deerfield Rd. to Denison Dr. connector pathway would expand the pedestrian pathway network for an accessible, walkable and bikeable community (1.4.1). This project will help to all residents to enjoy a safe environment (1.3), including safe, accessible routes for pedestrians and bicyclists (1.3.1) and safety in parks and township property (1.3.3). The improved pedestrian access can be used by residents of all ages and abilities to engage in a vibrant community life (1.1) and to maintain an active and healthy lifestyle (1.4).

**COSTS**

Estimated Total Project Cost:	\$460,306.80
Less CMU Share:	<u>(\$127,850.40)</u>
<b>Township Share:</b>	<b>\$332,456.40</b>

**TIMETABLE**

With Township support, the project is anticipated to be constructed by CMU during the 2023 construction season.

**RESOLUTION**

To approve a commitment to Central Michigan University for funding of up to \$332,456.20 to support construction of an eight-foot-wide asphalt pathway with lighting and security improvements from Deerfield Road north to Denison Drive to complete phase two of a collaborative effort with CMU to establish a safe pedestrian connection for Township residents in the student and workforce housing south of Deerfield Road to the CMU campus area.

Resolved by \_\_\_\_\_ Seconded by \_\_\_\_\_

- Yes:
- No:
- Absent:

# Central Michigan University

Deerfield and Denison Drive Sidewalk Connector

March 2022

Construction Cost Opinion

840+/-' of 8' wide paved pathway

Pay Item	Quantity	Unit	Unit Price	Total
Mobilization, Max 10%	1	LS	\$ 12,250.00	\$ 12,250.00
Maintaining Traffic	1	LS	\$ 5,500.00	\$ 5,500.00
Excavation, Earth	240	Cyd	\$ 9.00	\$ 2,160.00
Subgrade Undercutting, Type II	165	Cyd	\$ 16.00	\$ 2,640.00
Geotextile Stabilization	945	Syd	\$ 4.00	\$ 3,780.00
Culv, Cl A, 24 inch	60	Ft	\$ 95.00	\$ 5,700.00
Culv End Sect, 24 inch	4	Ea	\$ 675.00	\$ 2,700.00
Culv, Cl A, 30 inch	30	Ft	\$ 135.00	\$ 4,050.00
Culv End Sect, 30 inch	2	Ea	\$ 900.00	\$ 1,800.00
Riprap, Plain	140	Syd	\$ 50.00	\$ 7,000.00
Curb and Gutter, Rem	20	Ft	\$ 40.00	\$ 800.00
Curb and Gutter, Conc, Det F4	20	Ft	\$ 35.00	\$ 700.00
Sidewalk Ramp, Conc, 6 inch	260	Sft	\$ 9.00	\$ 2,340.00
Detectable Warning Surface	32	Ft	\$ 45.00	\$ 1,440.00
Sign, Type II with Flashers & Push Button	2	Ea	\$ 5,000.00	\$ 10,000.00
Aggregate Base, 6 inch, Modified (21AA)	945	Syd	\$ 22.00	\$ 20,790.00
HMA, LVSP (3")	145	Ton	\$ 100.00	\$ 14,500.00
Soil Erosion and Sedimentation Control	1	LS	\$ 3,250.00	\$ 3,250.00
Site Lighting	1	LS	\$ 142,000.00	\$ 142,000.00
Turf Establishment	3750	Syd	\$ 3.50	\$ 13,125.00

Construction Subtotal (Stakeholders)	\$	256,525.00
Inflation and Supply Chain Issues 8% (Stakeholders)	\$	20,522.00
Contingency 20% (Stakeholders)	\$	55,409.40
Total (Stakeholders)	\$	332,456.40

Security Camera Conduits	1	LS	\$ 26,750.00	\$ 26,750.00
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Construction Subtotal (CMU)	\$	26,750.00
Electrical Engineering (CMU)	\$	15,000.00
Surveying and Engineering (CMU)	\$	31,000.00
Soil Borings (CMU)	\$	5,000.00
Project Management (CMU)	\$	18,900.00
Misc, Shops (CMU)	\$	2,000.00
Subtotal (CMU)	\$	98,650.00
Inflation and Supply Chain Issues 8% (CMU)	\$	7,892.00
Contingency 20% (CMU)	\$	21,308.40
Total (CMU)	\$	127,850.40

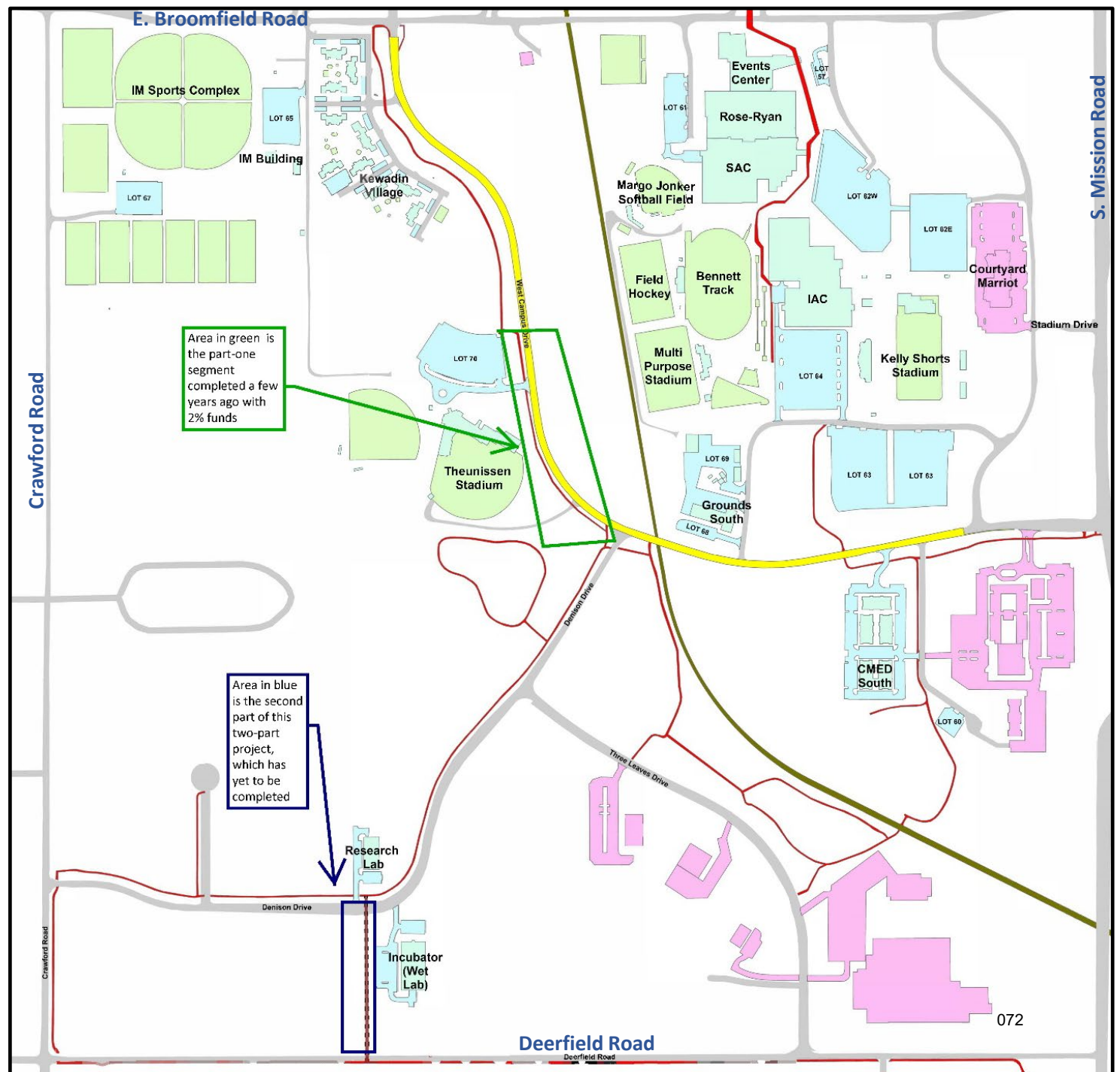
# Central Michigan University Bike Paths

7-16-20

## Detail Map of Project Area

### Legend

-  Bike Lanes
-  Bike Paths
-  Proposed Bike Path





# Charter Township of Union



To: Township Board of Trustees  
From: Mark Stuhldreher, Township Manager  
Subject: Policy Governance Review  
Date: February 17, 2023

Policy Review: 2.2 Treatment of Staff  
Type of Review: Internal  
Review Interval: Annual  
Review Month: February

## **Policy Wording**

With respect to the treatment of paid and volunteer staff, Township Management may not cause or allow conditions which are unfair, undignified, disorganized, and unclear or violate collective bargaining agreements.

Further, without limiting the scope of the foregoing by this enumeration, Management shall not:

- 2.2.1 Operate without written personnel rules which: (a) clarify rules for staff, (b) provide for effective handling of grievances, and (c) protect against wrongful conditions such as nepotism and grossly preferential treatment for personal reasons.
- 2.2.2 Discriminate against any staff member for non-disruptive expression of dissent.
- 2.2.3 Prevent staff from grieving to the board when (A) internal grievance procedures have been exhausted and (B) the employee alleges that board policy has been violated to his or her detriment.
- 2.2.4 Operate without an appropriate level of cross-training so that employees can provide basic information and service to consumers.
- 2.2.5 Fail to acquaint staff with the Township Manager's interpretation of their protections under this policy.

## **Manager Interpretation**

Manager interprets this policy to indicate that Township management shall operate with written personnel policies which are available to staff, and which are clear, provides for effective handling of grievances, protects staff against wrongful conditions, protects against nepotism and grossly preferential treatment for personal reasons, and allows for diverse opinions on issues. Further, an appropriate level of cross training will exist so employees can

provide basic information and services to consumers. Conscious violation of Collective Bargaining Agreements by the employer will not occur.

### **Justification of Reasonability of Interpretation**

Use of written personnel and administrative policies, adherence to the collective bargaining agreements and staff training provide for consistent and fair treatment of staff, volunteers, and citizens when dealing with various and disparate situations.

### **Data**

- Collective bargaining agreements are adhered to and when there are questions of interpretation, the grievance process is followed. One grievance was filed late in 2018 that was resolved during 2019 in part via the grievance process and in part as part of the collective bargaining process. No grievances were filed in 2019, 2020 or 2021 or 2022.
- Under the CARES Act, which expired on 12/31/2020, employers were required to provide employees with up to two additional weeks of sick bank for use with COVID related illness. In response, the employer and the bargaining units agreed to a Memorandum of Understanding which granted an additional 80 hours of sick leave to use for COVID specific reasons. This provision expired on 6/30/21. The existing collective bargaining agreement allows for an additional five (5) sick days to be used exclusively in the event an employee test positive for COVID-19. These days do not carry over, have no cash value, and expire on 1/1/2024
- Training opportunities were provided to all staff which included BSA software training throughout the year and position relevant training for staff. A report is attached showing expenditures for professional development for FY 2022 compared to the prior year
  - Cross-training in the Public Service Department exist to ensure that water and sewer operations can continue in the absence of personnel and to provide coverage during events when additional staff is needed
  - Training opportunities were provided throughout the year to members of our volunteer boards such as Planning Commission, Board of Review and Zoning Board of Appeals
  - Public Service Department employees are encouraged to pursue and maintain State of Michigan Water and Wastewater Licenses above the level and outside their normal job parameters to ensure that the Township can maintain the level of license needed to meet State of Michigan licensing requirements in the absence of key personnel. Premium pay is part of the Collective Bargaining Unit for these licenses to provide employees with an incentive for obtaining and maintaining these licenses
    - Additional premium pay opportunities were recently made available to staff if they obtain certain Pesticide Application Certifications, Playground Safety Inspector Certification or Building Inspector Licensing. The premium pay is only available if the obtainment of these certifications is not required as part of their job description

- Employees from one area of the Public Services Department work in other areas of the department to allow employees to see how what they do impacts operations, recognize and appreciate the duties of their co-workers, improve teamwork, and to make the team more agile so that coverage during the absence of personnel and during emergency situations can be achieved.
- Bi-weekly staff meetings are held with the Township Manager where expectations are clearly communicated.
- One-on-one meetings are held between Department Directors and the Township Manager on a weekly or bi-weekly basis as appropriate which creates a venue for frank discussion and the opportunity to voice opinion on issues.
  - The Community and Economic Development Director holds a short coordination meeting with department staff each week and meets individually with staff members on a regular basis.
- Areas where compliance is not fully being met or compliance could be improved upon:
  - It is noted that the Personal and Administrative Policy document needs updating. A goal for 2023 is to create a replacement policy
  - Additional cross training among Township Hall office staff would help to ensure customer service goals are met regarding cash receipting, building permitting processing and responding to basic tax, assessing and utility billing related questions.
    - Toward this end, front office staff have registered for training to become a Michigan Certified Assessing Technician. This will provide basic education in assessing administration which will help front office staff assist taxpayers.

**Compliance**

Based on the interpretation and data, the Township Manager and management team complies with most but not all of policy 2.2.

EXPENDITURE REPORT FOR CHARTER TOWNSHIP OF UNION

PERIOD ENDING 12/31/2022

ACCOUNT	DEPARTMENT DESCRIPTION	DESCRIPTION	YTD BALANCE 12/31/2021		YTD BALANCE 12/31/2022		2022 AMENDED BUDGET
			NORMAL	(ABNORMAL)	NORMAL	(ABNORMAL)	
910.000	TWP MANAGER	PROFESSIONAL DEVELOPMENT		40.00		60.00	1,000.00
910.000	ACCOUNTING/GEN ADMIN	PROFESSIONAL DEVELOPMENT		838.00		4,013.88	3,500.00
910.000	ASSESSOR	PROFESSIONAL DEVELOPMENT		143.00		647.50	650.00
910.000	BUILDING INSPECTION	PROFESSIONAL DEVELOPMENT		715.00		1,243.00	5,000.00
910.000	PLANNING	PROFESSIONAL DEVELOPMENT		3,640.00		3,571.00	5,000.00
910.000	PARKS & RECREATION	PROFESSIONAL DEVELOPMENT		0.00		0.00	400.00
910.000	WATER/SEWER SYSTEMS	PROFESSIONAL DEVELOPMENT		512.50		392.50	2,500.00
910.000	WWTP	PROFESSIONAL DEVELOPMENT		1,117.80		2,404.20	3,000.00
910.000	WATER/SEWER SYSTEMS	PROFESSIONAL DEVELOPMENT		822.50		1,617.50	5,000.00
TOTAL EXPENDITURES - ALL FUNDS				7,828.80		13,949.58	26,050.00

## Policy Governance Executive Limitations Evaluation Form

A tool to be used by individual Board members as they evaluate the internal monitoring reports

Policy being monitored: 2.2 (Treatment of Staff)

Date: February 2023

- |  |                              |                             |
|--|------------------------------|-----------------------------|
| 1. Was this report submitted when due?   | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 2. Did the report lay out the Manager's interpretation or an operational definition of the policy?       | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 3. Is the interpretation justified or is proof provided to explain why the interpretation is reasonable? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 4. Was I convinced that the interpretation is justified and reasonable?                                  | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 5. Did the interpretation address all aspects of the policy?   | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 6. Does the data show compliance with the Manager's interpretation of the policy?                        | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
- 

Comments regarding further policy development:

1. Is there any area regarding this policy that you worry about that is not clearly addressed in existing policy?

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2. What policy language would you like to see incorporated to address your concern?

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Signature and date of Board member

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# REQUEST FOR TOWNSHIP BOARD ACTION

**TO:** Board of Trustees **DATE:** February 17, 2023

**FROM:** Mark Stuhldreher, Township Manager **DATE FOR BOARD CONSIDERATION:** 02/22/2023

**ACTION REQUESTED:** Board of Trustees annual review of Board Governance Policy No. 3.2 – Board Job Description

Current Action  Emergency

Funds Budgeted: If Yes  Account # \_\_\_\_\_ No  N/A

Finance Approval \_\_\_\_\_ *MDS*

### BACKGROUND INFORMATION

The Board Governance Policy was originally adopted in 2010 with subsequent amendments since then with the most recent being 2022. The purpose of the Policy is to assist the Board of Trustees in the execution of their duties as a policy making body. Through the articulation of various policies within the totality of the document, the Board of Trustees is encouraged to focus on long term organizational outputs and the discharge of its fiduciary responsibilities.

Certain policies, such as Policy 3.2 (Board Job Description), are to be reviewed and monitored by the Board for compliance on an annual basis.

#### Governance Policy 3.2 - Board Job Description

The Policy States:

*Specific job outputs of the board, as an informed agent of the ownership, are those that ensure appropriate organizational performance.*

*Accordingly, the board has direct responsibility to create:*

- 3.2.1 *The link between the ownership and the operational organization.*
- 3.2.2 *Written governing policies that address the broadest levels of all organizational decisions and situations.*
  - 3.2.2.1 *Ends: Organizational products, impacts, benefits, outcomes, recipients, and their relative worth (what good for which recipients at what cost).*
  - 3.2.2.2 *Executive Limitations: Constraints on executive authority that establish the prudence and ethics boundaries within which all executive activity and decisions must take place.*
  - 3.2.2.3 *Governance Process: Specification of how the board conceives, carries out and monitors its own task.*
  - 3.2.2.4 *Board- Township Management Linkage: How power is delegated, and its proper use*

*monitored; the Township Management role, authority, and accountability.*

3.2.3 Assurance of successful Township Management performance.

Attached to this memo is an evaluation form that can be used for the review/discussion of Policy No. 3.2.

**SCOPE OF SERVICES**

Not applicable

**JUSTIFICATION**

An annual review of Board Policies allows for the Board of Trustees to monitor itself regarding adherence to policies that apply to the Board of Trustees.

**PROJECT IMPROVEMENTS**

The following Board of Trustees goals are addressed in this review (From Policy 1.0: Global End)

- Community well-being and common good
- Prosperity through economic diversity, cultural diversity , and social diversity
- Safety
- Health
- Natural environment
- Commerce

**COSTS**

Not applicable

**PROJECT TIME TABLE**

Not applicable

**RESOLUTION**

Not applicable

**Use this evaluation form for discussion at the Board of Trustees Meeting on February 22, 2023.**

**Review all sections of the policy listed and evaluate your compliance with policy.**

1. Indicate item by item if you believe the Board is in strict compliance with the policy as stated.
  
2. If you indicated that the Board is not in strict compliance with the policy as stated, please indicate what you notice that gives evidence that the Board is not in compliance?
  
3. How do you think the Board could improve the process to be in full compliance?
  
4. What does the Board need to learn or discuss in order to live by the policy more completely?