

DOWNTOWN DEVELOPMENT AUTHORITY/LOCAL DEVELOPMENT FINANCE AUTHORITY AGENDA



Regular Meeting

February 27, 2025 at 4:00 PM

- 1) **CALL TO ORDER**
- 2) **ROLL CALL**
- 3) **APPROVAL OF AGENDA** - Items can be added or deleted from the Agenda by City Council action.
- 4) **PUBLIC COMMENT ON AGENDA ITEMS** Persons addressing the board are required to give their name and address for the record when called upon by the Chair. Members of the public shall be limited to speaking for a maximum of five (5) minutes. Comments should address AGENDA ITEM topics. Public Hearing items should be addressed during the PUBLIC HEARING portion of the meeting agenda. Non-Agenda items should be addressed during the PUBLIC COMMENT-NON-AGENDA ITEMS portion of the meeting agenda.
- 5) **PRESENTATIONS AND RECOGNITIONS**
- 6) **CONSENT AGENDA**
 - A. **DDA/LDFA Minutes**
DDA/LDFA Minutes- November 21, 2024
DDA/LDFA Minutes- January 23, 2025
 - B. **Financial Reports**
DDA Revenue/Expense Report- January 31, 2025
LDFA Revenue/Expense Report- January 31, 2025
- 7) **MAEDA UPDATE**
- 8) **PUBLIC HEARINGS & SUBSEQUENT BOARD ACTION**
- 9) **DDA NEW BUSINESS**
 - A. Special Event - Bluesfest
 - B. Facade Grant Update
 - C. 2026-2031 Capital Improvement Program
- 10) **DDA OLD BUSINESS**
- 11) **LDFA NEW BUSINESS**
 - A. 2026-2031 Capital Improvement Program
 - B. Wetland Delineation Report
- 12) **LDFA OLD BUSINESS**
- 13) **Brownfield Redevelopment Authority (BRA) New Business**
 - A. Building Better Spaces- Development and Reimbursement Agreement

, 323 W Michigan Ave, Training Room, Marshall, MI 49068

- 14) Brownfield Redevelopment Authority (BRA) Old Business**
- 15) BOARD REPORTS**
- 16) ADJOURNMENT**

DOWNTOWN DEVELOPMENT AUTHORITY/LOCAL DEVELOPMENT FINANCE AUTHORITY MINUTES

November 21, 2024
Regular Meeting - 4:00 PM

1) **CALL TO ORDER**

IN A REGULAR SESSION held on Thursday, November 21, 2024 at 4:00 PM in the training room of City Hall, 323 West Michigan Ave, Marshall, MI 49068, the Marshall Downtown Development Authority/Local Development Finance Authority was called to order by Chair Beck.

2) **ROLL CALL**

Roll was called:

Present: Beck, Damron, Kirkland, LaForge, Lankerd, Perry Thompson and Yates.

Also Present:

Absent: Davis, Jones and Whitesell.

3) **APPROVAL OF AGENDA** - Items can be added or deleted from the Agenda by City Council action.

Moved by Catherine Yates, supported by Diane Thompson to approve the agenda as presented. On a voice vote: **motion carried.**

4) **PUBLIC COMMENT ON AGENDA ITEMS** Persons addressing the board are required to give their name and address for the record when called upon by the Chair. Members of the public shall be limited to speaking for a maximum of five (5) minutes. Comments should address AGENDA ITEM topics. Public Hearing items should be addressed during the PUBLIC HEARING portion of the meeting agenda. Non-Agenda items should be addressed during the PUBLIC COMMENT-NON-AGENDA ITEMS portion of the meeting agenda.

none

5) **PRESENTATIONS AND RECOGNITIONS**

6) **CONSENT AGENDA**

Moved by Diane Thompson, supported by Catherine Yates to approve the consent agenda as presented. On a voice vote: **motion carried.**

A. **DDA/LDFA Minutes**

DDA/LDFA Minutes - October 24, 2024

B. **Financial Reports**

DDA Revenue/Expense Report- October 31, 2024

LDFA Revenue/Expense Report- October 31, 2024

7) **MAEDA UPDATE**

MAEDA report was given by Beck.

8) **PUBLIC HEARINGS & SUBSEQUENT BOARD ACTION**

9) **BRA NEW BUSINESS**

A. 100 PAGE ST./500 INDUSTRIAL ROAD - DARK HORSE BROWNFIELD PLAN TERMINATION

Moved by Sue Damron, supported by Catherine Yates to recommend the City of Marshall City Council begin the proceedings to terminate the Brownfield Plan with Dark Horse for the 100 Page St/500 Industrial Rd properties. On a voice vote: **motion carried.**

B. 100 PAGE ST./500 INDUSTRIAL ROAD - Review of Proposed Plan

C. 100 PAGE ST./500 INDUSTRIAL ROAD - Action To Support Proposed Brownfield Project

Moved by Diane Thompson, supported by Sue Damron to approve the resolution of support of the proposed Brownfield Project at 100 Page St/500 Industrial Rd. On a roll call vote:

Ayes: Mike Beck, Sue Damron, Desmond Kirkland, Jason LaForge, Amanda Lanker, Derek N. Perry, Diane Thompson, Catherine Yates

Nays: None

Abstain: None

Motion carried.

10) BRA OLD BUSINESS

11) DDA NEW BUSINESS

12) DDA OLD BUSINESS

A. DOWNTOWN MICHIGAN AVENUE TRAFFIC CALMING PLAN

Moved by Amanda Lanker, supported by Diane Thompson to Recommend approval of the proposed traffic-calming plan on Michigan Avenue between Kalamazoo Ave and Marshall Avenue to City Council and recommend that the public open house occur prior to the City Council approval. On a roll call vote:

Ayes: Mike Beck, Sue Damron, Desmond Kirkland, Jason LaForge, Amanda Lanker, Derek N. Perry, Diane Thompson, Catherine Yates

Nays: None

Abstain: None

Motion carried.

13) LDFA NEW BUSINESS

14) LDFA OLD BUSINESS

15) BOARD REPORTS

16) ADJOURNMENT

The meeting was adjourned at 5:03pm.

Respectfully submitted by,

Michelle Eubank
City Clerk

DOWNTOWN DEVELOPMENT AUTHORITY/LOCAL DEVELOPMENT FINANCE AUTHORITY MINUTES

January 23, 2025
Regular Meeting - 4:00 PM

1) CALL TO ORDER

IN A REGULAR SESSION held on Thursday, January 23, 2025 at 4:19 PM in the Training Room of City Hall, 323 West Michigan Ave, Marshall, MI 49068, the Marshall Downtown Development Authority/Local Development Finance Authority was called to order by Chair Beck.

2) ROLL CALL

Roll was called:

Present: Chair Beck, Lankerd, Perry, Whitesell

Also Present: Clerk Eubank

Absent: Damron, Davis, Jones, Kirkland, LaForge, Yates

Meeting was adjourned at 4:20 pm due to lack of quorum.

3) APPROVAL OF AGENDA - Items can be added or deleted from the Agenda by City Council action.

4) PUBLIC COMMENT ON AGENDA ITEMS Persons addressing the board are required to give their name and address for the record when called upon by the Chair. Members of the public shall be limited to speaking for a maximum of five (5) minutes. Comments should address AGENDA ITEM topics. Public Hearing items should be addressed during the PUBLIC HEARING portion of the meeting agenda. Non-Agenda items should be addressed during the PUBLIC COMMENT-NON-AGENDA ITEMS portion of the meeting agenda.

5) PRESENTATIONS AND RECOGNITIONS

6) CONSENT AGENDA

A. Financial Reports

DDA Revenue/Expense Report- December 31, 2024

LDFA Revenue/Expense Report- December 31, 2024

7) MAEDA UPDATE

8) PUBLIC HEARINGS & SUBSEQUENT BOARD ACTION

9) DDA NEW BUSINESS

10) DDA OLD BUSINESS

11) LDFA NEW BUSINESS

12) LDFA OLD BUSINESS

13) Brownfield Redevelopment Authority (BRA) New Business

14) Brownfield Redevelopment Authority (BRA) Old Business

15) BOARD REPORTS

16) ADJOURNMENT

Meeting was adjourned at 4:20 pm due to lack of quorum.

Respectfully submitted by,

Michelle Eubank
City Clerk

PERIOD ENDING 01/31/2025

GL NUMBER	DESCRIPTION	2024-25 AMENDED BUDGET	YTD BALANCE 01/31/2025	ACTIVITY FOR MONTH 01/31/2025	% BDGT USED
Fund 248 - DOWNTOWN DEVELOPMENT AUTHORITY					
Revenues					
Dept 000					
248-000-402.00	Current Property Taxes	181,147.00	215,072.11	0.00	118.73
248-000-404.00	Property Taxes - Prior Years	0.00	0.00	0.00	0.00
248-000-412.00	Delinquent Personal Prop Taxes	0.00	0.00	0.00	0.00
248-000-445.00	Penalties & Int. on Taxes	0.00	0.52	0.00	100.00
248-000-565.00	Sales Tax Inventory Refund	0.00	0.00	0.00	0.00
248-000-573.00	LOCAL COMM STAB SHARE TAX	30,000.00	47,461.94	0.00	158.21
248-000-588.00	Contributions from Local Units	0.00	0.00	0.00	0.00
248-000-665.00	Interest	3,000.00	5,759.57	0.00	191.99
248-000-665.03	UNREALIZED GAIN/LOSS ON INVESTM	0.00	0.00	0.00	0.00
248-000-675.00	Contrib. from Other Sources	0.00	0.00	0.00	0.00
248-000-676.00	Reimbursement	0.00	0.00	0.00	0.00
248-000-679.00	MISCELLANEOUS REVENUE	0.00	0.00	0.00	0.00
248-000-679.16	MISC REVENUE - BLUES FEST	65,000.00	1,080.00	1,000.00	1.66
248-000-696.00	Proceeds from Bonds/Notes	0.00	0.00	0.00	0.00
248-000-699.00	Transfers From Other Funds	0.00	0.00	0.00	0.00
Total Dept 000		279,147.00	269,374.14	1,000.00	96.50
Dept 729 - Community Development					
248-729-588.00	Contributions from Local Units	0.00	0.00	0.00	0.00
248-729-675.00	Contrib. from Other Sources	0.00	0.00	0.00	0.00
248-729-679.00	MISCELLANEOUS REVENUE	0.00	0.00	0.00	0.00
248-729-699.00	Transfers From Other Funds	0.00	0.00	0.00	0.00
Total Dept 729 - Community Development		0.00	0.00	0.00	0.00
TOTAL REVENUES		279,147.00	269,374.14	1,000.00	96.50
Expenditures					
Dept 000					
248-000-702.00	Payroll	2,000.00	488.61	104.24	24.43
248-000-702.01	Other Fringe Benefits-taxable	0.00	0.00	0.00	0.00
248-000-702.40	Payroll - Rubbish/Garbage	3,000.00	1,393.64	273.63	46.45
248-000-702.41	Payroll - Mowing/Trimming	0.00	0.00	0.00	0.00
248-000-702.42	Payroll - Parking Structure	0.00	735.57	114.05	100.00
248-000-702.43	Payroll - Sidewalk Snow Removal	0.00	496.87	357.29	100.00
248-000-702.44	Payroll - Flowers	0.00	759.34	0.00	100.00
248-000-703.00	Part-time Salaries	15,120.00	6,642.00	391.50	43.93
248-000-703.40	PART-TIME - RUBBISH/GARBAGE	0.00	0.00	0.00	0.00
248-000-703.41	PART-TIME - MOWING/TRIMMING	0.00	0.00	0.00	0.00
248-000-703.42	PART-TIME - PARKING STRUCTURE	0.00	0.00	0.00	0.00
248-000-703.43	PART-TIME - SIDEWALK SNOW REMOV	0.00	0.00	0.00	0.00
248-000-703.44	PART-TIME - FLOWERS	0.00	0.00	0.00	0.00
248-000-704.00	Overtime Salaries	0.00	0.00	0.00	0.00
248-000-704.40	Overtime - Rubbish/Garbage	0.00	84.72	0.00	100.00
248-000-704.41	Overtime - Mowing/Trimming	0.00	0.00	0.00	0.00
248-000-704.42	Overtime - Parking Structure	0.00	1,080.26	832.64	100.00
248-000-704.43	Overtime - Sidewalk Snow Remova	0.00	862.24	321.05	100.00
248-000-704.44	Overtime - Flowers	0.00	0.00	0.00	0.00
248-000-712.00	WORKERS COMPENSATION	0.00	0.00	0.00	0.00
248-000-715.00	Social Security	0.00	950.06	182.00	100.00
248-000-716.00	Hospitalization	0.00	0.00	0.00	0.00
248-000-717.00	Life Insurance	0.00	0.00	0.00	0.00
248-000-718.00	RETIREMENT - D/B	0.00	0.00	0.00	0.00
248-000-755.00	Miscellaneous Supplies	5,000.00	2,284.31	0.00	45.69
248-000-755.01	MISC SUPPLIES - DOWNTOWN PLANTE	2,040.00	361.96	0.00	17.74
248-000-757.00	Fuels & Lubricants	200.00	0.00	0.00	0.00
248-000-777.00	MINOR TOOLS AND EQUIPMENT	300.00	0.00	0.00	0.00
248-000-801.00	Professional Services	1,000.00	375.00	0.00	37.50
248-000-801.01	Prof. Services - Streetscape	0.00	0.00	0.00	0.00
248-000-803.00	Service Fee	0.00	0.00	0.00	0.00
248-000-805.00	Administrative Costs	26,000.00	16,688.35	0.00	64.19
248-000-810.00	Dues & Memberships	0.00	0.00	0.00	0.00
248-000-811.00	Taxes	0.00	0.00	0.00	0.00
248-000-820.00	Contracted Services	23,997.00	23,538.55	5,750.00	98.09
248-000-820.01	Contracted Maint. - Plowing	0.00	0.00	0.00	0.00
248-000-820.02	Contracted Maint - Lawn	0.00	0.00	0.00	0.00
248-000-825.00	Insurance	0.00	0.00	0.00	0.00
248-000-850.00	Communications	720.00	480.00	60.00	66.67
248-000-860.00	Transportation & Travel	0.00	0.00	0.00	0.00
248-000-901.00	Advertising	0.00	0.00	0.00	0.00
248-000-921.00	Utilities - Gas	0.00	0.00	0.00	0.00
248-000-922.00	Utilities-Elec, Water, Sewer	0.00	0.00	0.00	0.00

PERIOD ENDING 01/31/2025

GL NUMBER	DESCRIPTION	2024-25 AMENDED BUDGET	YTD BALANCE 01/31/2025	ACTIVITY FOR MONTH 01/31/2025	% BDGT USED
Fund 248 - DOWNTOWN DEVELOPMENT AUTHORITY					
Expenditures					
248-000-941.00	MOTOR POOL VEHICLE RENTAL	5,000.00	6,852.13	4,468.19	137.04
248-000-942.00	Rent	0.00	0.00	0.00	0.00
248-000-958.00	Education & Training	0.00	0.00	0.00	0.00
248-000-961.00	COMMUNITY PROMOTIONS	65,000.00	18,110.00	13,110.00	27.86
248-000-964.00	Refund or Rebates	0.00	0.00	0.00	0.00
248-000-970.00	Capital Outlay	115,200.00	0.00	0.00	0.00
248-000-971.00	Capital Outlay - Land	0.00	0.00	0.00	0.00
248-000-990.00	Debt Service	59,000.00	0.00	0.00	0.00
248-000-994.00	Bond Interest Paid	0.00	14,069.04	0.00	100.00
248-000-995.00	Transfers to Other Funds	0.00	0.00	0.00	0.00
Total Dept 000		323,577.00	96,252.65	25,964.59	29.75
Dept 717 - DDA Parking Lots					
248-717-941.00	MOTOR POOL VEHICLE RENTAL	0.00	0.00	0.00	0.00
Total Dept 717 - DDA Parking Lots		0.00	0.00	0.00	0.00
Dept 718 - DDA Parking Ramp					
248-718-941.00	MOTOR POOL VEHICLE RENTAL	0.00	0.00	0.00	0.00
Total Dept 718 - DDA Parking Ramp		0.00	0.00	0.00	0.00
Dept 719 - DDA Sidewalk					
248-719-941.00	MOTOR POOL VEHICLE RENTAL	0.00	0.00	0.00	0.00
248-719-941.02	MOTOR POOL REPLACEMENT CHARGE	1,343.00	671.52	0.00	50.00
248-719-941.03	MOTOR POOL OPERATING CHARGE	3,235.00	1,617.48	0.00	50.00
248-719-941.05	VEHICLE RENTAL CREDIT	0.00	0.00	0.00	0.00
Total Dept 719 - DDA Sidewalk		4,578.00	2,289.00	0.00	50.00
Dept 729 - Community Development					
248-729-702.00	Payroll	0.00	0.00	0.00	0.00
248-729-702.01	Other Fringe Benefits-taxable	0.00	0.00	0.00	0.00
248-729-703.00	Part-time Salaries	0.00	0.00	0.00	0.00
248-729-704.00	Overtime Salaries	0.00	0.00	0.00	0.00
248-729-712.00	WORKERS COMPENSATION	0.00	0.00	0.00	0.00
248-729-715.00	Social Security	0.00	0.00	0.00	0.00
248-729-716.00	Hospitalization	0.00	0.00	0.00	0.00
248-729-717.00	Life Insurance	0.00	0.00	0.00	0.00
248-729-718.00	RETIREMENT - D/B	0.00	0.00	0.00	0.00
248-729-719.00	Hospitalization - Prescription	0.00	0.00	0.00	0.00
248-729-740.00	Operating Supplies	0.00	97.97	0.00	100.00
248-729-801.00	Professional Services	0.00	0.00	0.00	0.00
248-729-806.00	MEDICAL SERVICES	0.00	0.00	0.00	0.00
248-729-810.00	Dues & Memberships	0.00	0.00	0.00	0.00
248-729-820.00	Contracted Services	0.00	892.00	0.00	100.00
248-729-850.00	Communications	0.00	0.00	0.00	0.00
248-729-860.00	Transportation & Travel	0.00	0.00	0.00	0.00
248-729-901.00	Advertising	0.00	0.00	0.00	0.00
248-729-902.00	Marketing	0.00	0.00	0.00	0.00
248-729-940.00	Rentals	0.00	0.00	0.00	0.00
248-729-941.00	MOTOR POOL VEHICLE RENTAL	0.00	0.00	0.00	0.00
248-729-941.01	TECHNOLOGY INTERNAL SERVICE CHAI	0.00	0.00	0.00	0.00
248-729-958.00	Education & Training	0.00	0.00	0.00	0.00
248-729-961.00	COMMUNITY PROMOTIONS	0.00	0.00	0.00	0.00
248-729-964.00	Refund or Rebates	0.00	0.00	0.00	0.00
248-729-969.00	Contingency	0.00	0.00	0.00	0.00
248-729-995.00	Transfers to Other Funds	0.00	0.00	0.00	0.00
Total Dept 729 - Community Development		0.00	989.97	0.00	100.00
TOTAL EXPENDITURES		328,155.00	99,531.62	25,964.59	30.33
Fund 248 - DOWNTOWN DEVELOPMENT AUTHORITY:					
TOTAL REVENUES		279,147.00	269,374.14	1,000.00	96.50
TOTAL EXPENDITURES		328,155.00	99,531.62	25,964.59	30.33
NET OF REVENUES & EXPENDITURES		(49,008.00)	169,842.52	(24,964.59)	346.56

PERIOD ENDING 01/31/2025

GL NUMBER	DESCRIPTION	2024-25 AMENDED BUDGET	YTD BALANCE 01/31/2025	ACTIVITY FOR MONTH 01/31/2025	% BDGT USED
Fund 250 - LOCAL DEVELOPMENT FINANCE AUTHORITY FUND					
Revenues					
Dept 000					
250-000-402.00	Current Property Taxes	782,444.00	791,434.11	0.00	101.15
250-000-404.00	Property Taxes - Prior Years	0.00	0.00	0.00	0.00
250-000-445.00	Penalties & Int. on Taxes	0.00	0.00	0.00	0.00
250-000-540.00	State Grants	0.00	0.00	0.00	0.00
250-000-573.00	LOCAL COMM STAB SHARE TAX	150,000.00	200,747.89	0.00	133.83
250-000-665.00	Interest	33,000.00	28,576.80	1,499.24	86.60
250-000-673.00	Sales of Fixed Assets	0.00	0.00	0.00	0.00
250-000-675.00	Contrib. from Other Sources	0.00	0.00	0.00	0.00
250-000-675.60	CONTRIBUTED CAPITAL	0.00	0.00	0.00	0.00
250-000-679.00	MISCELLANEOUS REVENUE	0.00	0.00	0.00	0.00
250-000-696.00	Bond Proceeds	0.00	0.00	0.00	0.00
250-000-697.00	PREMIUMS ON BONDS	0.00	0.00	0.00	0.00
250-000-699.00	Transfers From Other Funds	0.00	0.00	0.00	0.00
Total Dept 000		965,444.00	1,020,758.80	1,499.24	105.73
TOTAL REVENUES		965,444.00	1,020,758.80	1,499.24	105.73
Expenditures					
Dept 000					
250-000-727.00	Office Supplies	0.00	0.00	0.00	0.00
250-000-740.00	Operating Supplies	0.00	0.00	0.00	0.00
250-000-755.00	Miscellaneous Supplies	0.00	0.00	0.00	0.00
250-000-801.00	Professional Services	50,401.05	77,522.20	7,032.50	153.81
250-000-803.00	Service Fee	500.00	0.00	0.00	0.00
250-000-805.00	Administrative Costs	160,537.00	66,666.65	0.00	41.53
250-000-810.00	Dues & Memberships	0.00	0.00	0.00	0.00
250-000-811.00	Taxes	0.00	0.00	0.00	0.00
250-000-820.00	Contracted Services	255,720.40	177,450.00	58,750.00	69.39
250-000-826.00	Bond Issuance Costs	0.00	0.00	0.00	0.00
250-000-860.00	Transportation & Travel	0.00	0.00	0.00	0.00
250-000-901.00	Advertising	0.00	0.00	0.00	0.00
250-000-902.00	Marketing	1,500.00	0.00	0.00	0.00
250-000-922.00	Utilities-Elec, Water, Sewer	1,200.00	0.00	0.00	0.00
250-000-941.00	MOTOR POOL VEHICLE RENTAL	0.00	0.00	0.00	0.00
250-000-941.01	TECHNOLOGY INTERNAL SERVICE CHARGE	0.00	0.00	0.00	0.00
250-000-958.00	Education & Training	0.00	0.00	0.00	0.00
250-000-960.00	REBATE REIMBURSEMENT	0.00	0.00	0.00	0.00
250-000-964.00	Refund or Rebates	0.00	46,582.53	0.00	100.00
250-000-970.00	Capital Outlay	0.00	0.00	0.00	0.00
250-000-970.35	BROOKS INDUSTRIAL PARK SUBSTATION	0.00	0.00	0.00	0.00
250-000-972.00	SHARE OF CAPITAL PURCHASED BY OTHER	0.00	0.00	0.00	0.00
250-000-990.00	Debt Service	350,000.00	0.00	0.00	0.00
250-000-994.00	Bond Interest Paid	233,000.00	116,500.00	0.00	50.00
250-000-995.00	Transfers to Other Funds	0.00	0.00	0.00	0.00
Total Dept 000		1,052,858.45	484,721.38	65,782.50	46.04
TOTAL EXPENDITURES		1,052,858.45	484,721.38	65,782.50	46.04
Fund 250 - LOCAL DEVELOPMENT FINANCE AUTHORITY FUND:					
TOTAL REVENUES		965,444.00	1,020,758.80	1,499.24	105.73
TOTAL EXPENDITURES		1,052,858.45	484,721.38	65,782.50	46.04
NET OF REVENUES & EXPENDITURES		(87,414.45)	536,037.42	(64,283.26)	613.21
TOTAL REVENUES - ALL FUNDS					
TOTAL REVENUES - ALL FUNDS		1,244,591.00	1,290,132.94	2,499.24	103.66
TOTAL EXPENDITURES - ALL FUNDS		1,381,013.45	584,253.00	91,747.09	42.31
NET OF REVENUES & EXPENDITURES		(136,422.45)	705,879.94	(89,247.85)	517.42



City Of Marshall
323 West Michigan Ave
Marshall, MI 49068
Phone: 269.781.5183
Fax: 269.781.2878

Special Events Application

Important: Please fill out each item as completely so that the application can be processed as quickly as possible, without unnecessary delays. Please return the completed, signed application, with any necessary attachments, to the City Clerk's Office, at the address shown above. Special Events must be approved by the City Council, which typically meets twice per month. We recommend submitting your application at least 90 days before your organization wishes to receive approval, to allow time to work through issues with the staff, and to allow for the possibility that the City Council may still see issues that should be addressed before approval.

Applicant Information

Name of Special Event: _____

Is the sponsoring organization: ☐ Non-Profit, please provide status letter* ☐ For Profit

Mailing/Billing Address: _____

City/State/ZIP Code: _____

Business Phone: _____ Cell Phone: _____

Email Address(es): _____

Event Information

*A separate event schedule and/or description may be attached in response to questions 1 through 5.

**For any question, if there is not room to include a complete response, please include the response on a separate attachment and note "see attached". When providing information in an attachment, please refer to the appropriate question number(s) to help the City staff review the application.

1. Requested day(s), date(s), and time(s) of the Special Event: _____

2. Is there a requested alternative date(s)? ☐ Yes ☐ No

If yes, please provide the alternative date(s): _____

3. Please describe the event(s): _____

4. What is the requested location(s) of the event(s): _____

5. Does this event require a street closure? ☐ Yes ☐ No Street Name: _____

Start and End Locations: _____

Please complete the following check list regarding your event and special needs: More detailed instructions are included on the following pages. Please use additional sheets where appropriate for more detailed responses.

General

6. Is this event expected to occur again in a future calendar year? Yes_____No_____
- Normal Annual Date?_____
7. Have you included a map indicating the location of your event?* Yes_____No_____
8. Is your event located within the Downtown Development Authority? Yes_____No_____
9. Does the applicant wish to prohibit vending within the event area? Yes_____No_____
10. Does the applicant plan to include vending as part of this event?* Yes_____No_____
11. Will this event include the use of signs? Yes_____No_____
12. Will the event require the hanging of a banner? Yes_____No_____
13. Is the applicant requesting special parking arrangements, such as reserved parking?* Yes_____No_____

Public Services

14. Is the applicant requiring utility connections, such as electric or water services?* Yes_____No_____
15. Does the applicant require other public services? Yes_____No_____
- a. Barricades Yes_____No_____
- b. Fencing Yes_____No_____
- c. Street Sweeping Yes_____No_____
- d. Mowing Yes_____No_____
- e. Rubbish Containers Quantity:_____ Yes_____No_____
- f. Picnic Tables Yes_____No_____
- g. Cessation of Lawn Sprinklings Yes_____No_____
- h. Other_____ Yes_____No_____
- i. Map including indicating location of these services?* Yes_____No_____
16. Do you plan to utilize volunteers to help run the event? Yes_____No_____
17. Do you plan to rent a park facility for the event? Yes_____No_____

Public Safety

18. Does the applicant have any special security or safety concerns? Yes_____No_____
19. Are you requesting assistance from the Police/Fire Departments? Yes_____No_____
20. Will the event include loud or unusual sounds? Yes_____No_____
- a. Musicians Yes_____No_____
- b. Singers Yes_____No_____
- c. Amplified Announcers Yes_____No_____
- d. Carnival Rides Yes_____No_____
- e. Motor Vehicle Noises Yes_____No_____
- f. Other_____ Yes_____No_____
21. What are the planned hours for loud or unusual sounds?_____
22. Will the event include unusual lighting beyond what is normal at that location? Yes_____No_____

Alcohol Consumption

23. Are alcoholic beverages proposed to be served as part of the event? Yes_____No_____
24. Will you be utilizing a LLC regulated boundary? Yes_____No_____
25. Are you using the Social District for outdoor alcohol consumption? Yes_____No_____
26. Have all necessary liquor licenses been obtain at the time of this application? Yes_____No_____
27. Does the applicant have any other requests that are not listed in this form? Yes_____No_____
28. The applicant is require to provide \$1,000,000 of liability insurance coverage with respect to the event; have you attached a Certificate of Insurance listing the City of Marshall as an additionally insured? Yes_____No_____

Questionnaire Explanations

6. **Is this event expected to occur again in a future calendar year?** You may ask to reserve a date for a future calendar year with this application. To reserve an event date for a future calendar year, please provide the normal annual event date. *Note:* Granting such a reservation does not constitute final approval of the event, but will reserve the same area as granted for the current year, until three months before the reserved date.
7. **An Event Map**—if your event will use streets or sidewalks or will use multiple locations, please attach one or more maps showing the locations requested. Please show any streets or parking lots that you are asking be blocked off or reserved for specific purposes, locations of specific events or objects (carnival rides, bleachers, medical care, exhibits, special parking, pick-up/drop-off areas, etc.), remote parking lots, the actual route of a parade or race, and similar information appropriate to clarify the exact request.
8. **Is your event located within the Downtown Development Authority?** The DDA will be asked to formally support the Special Event prior to the event approval going to City Council. The City believes support and coordination with downtown business is critical to the success of the downtown area. The DDA meets once a month so timing of the application should be adjusted accordingly to allow for both DDA and City Council approval.
- 9/10. **Does the applicant wish to have control of vending within the festival area?** In some instances, the applicant may be granted control of vending, the applicant is solely responsible for ensuring that all vendors are properly licensed with any appropriate agencies (Health Department). The City of Marshall Fire Department will hold vendors responsible for the National Fire Prevention Association's (NFPA) standards relating to general safety, fuel and power sources, clearances, and operational safety.
11. **Will this event include the use of signs?** If yes, please attach information on the size, content, and location of any requested signs; signs may be shown on the event map or on a separate map, if appropriate. Small directional signs that do not obstruct pedestrian or vehicular traffic may be placed in the event area, during the event, without being included in this application.
12. **Will the event require the hanging of a banner?** Event sponsors can purchase banners to be hung across North Kalamazoo Avenue or Michigan Avenue. The fee to hang a banner is \$400. The banner must be 3 or 4-foot by 20-foot in size for North Kalamazoo or 25 to 35-foot in length for Michigan Avenue. For proper hanging the banner must have grommets in each corner as well as along the top of the banner and wind slits throughout the banner. The city will supply the rope for hanging of the banner.
13. **Is the applicant requesting special parking arrangements—such as limiting parking areas to certain groups of users?** If yes, you must coordinate with the Police Chief.
14. **Is the applicant requiring utility connections, such as electric service or water?** If yes, you must coordinate with the Director of Public Services to review what utilities are available in the requested area, and provide a detailed map showing the utilities requested. Requests for electricity will require an *Electric Drop* form to be completed and submitted with the application.
15. **Does the applicant have any other requests for public services, such as street sweeping, mowing, rubbish containers or removal, placement or removal of picnic tables or other fixtures, or cessation of lawn sprinkling?** If yes, you must coordinate with the Director of Public Services to determine if assistance from Public Services is appropriate and available, and provide a description of the services Public Services has indicated it could provide. The applicant will be charged for these services. Any
16. **Do you plan to utilize volunteers to help run the event?** Depending on the scope of the event, volunteers can help reduce the cost of special events for the applicant. The City has limited staff to help with special events and encourages organizers to utilize volunteers as much as possible.
17. **Is your event located at Stuarts Landing Band Shell or Ketchum Park's Cronin Millrace Pavilion?** These two facilities are available for rent. A separate *Park Rental Agreement* for park facilities is required as part of the special event application.

- 18. Does the applicant have any special security or safety concerns? Is the applicant requesting assistance from the Police Department in addressing these concerns?** If yes, you must contact the Chief of Police to determine what assistance from the Police Department is appropriate and available, and provide a description of the services the Police Department has indicated it could provide. The applicant will be charged for these services.
- 19. Is the applicant requesting assistance from the Police or Fire Departments in addressing these concerns?**
If yes, you must contact both the Police and Fire Chief to determine what assistance from the Departments is appropriate and available, and provide a description of the services the Departments have indicated they could provide. The applicant will be charged for these services.
- 20. Will the event include loud or unusual sounds, such as a musicians, singers, amplified announcers, carnival rides, motor vehicle noises beyond those regularly present in the location, etc.?**
If yes, you must please attach information indicating all of these on this application.
- 20. Will the event include unusual lighting beyond that regularly present in the location that could have an impact upon occupants of neighboring properties?**
If yes, you must please attach information indicating all of the types of lighting, the location, the beginning and end times, and whether the lighting is constant or intermittent during those times.
- 21. Are alcoholic beverages proposed to be served as part of the event?**
If yes, you must advise the Police Department of your intention to serve alcoholic beverages. Approval of the special event does not constitute final approval of service of alcoholic beverages; any necessary approval of a liquor license is a separate process.
- 25. Please attach a separate sheet detailing any aspects of the event that are not specifically addressed in this form but of which the City Council should be aware to make a fully informed decision with regard to approval of the proposed event.**
- 26. The applicant is required to provide \$1,000,000 of liability insurance coverage with respect to the event. A Certificate of Insurance, with the City listed as an additional named insured, must be provided to the City Clerk's Office at least one calendar month before the event. Is the insurance certificate attached?**

The City of Marshall PROHIBITS any and all painting of any city property, including sidewalk and streets. Events of those persons violating this policy will be canceled and not future event will be allowed.

Continue to next page...

Applicant Signature

I hereby affirm that the information is true to the best of my knowledge and belief, and agree that the applicant will be responsible for making certain that the event follows the ordinances, rules, and regulations of the City of Marshall and that the event takes place in accordance with the application as approved by the Marshall City Council, including any conditions placed thereon.

Applicant Signature: _____



Printed Name: _____

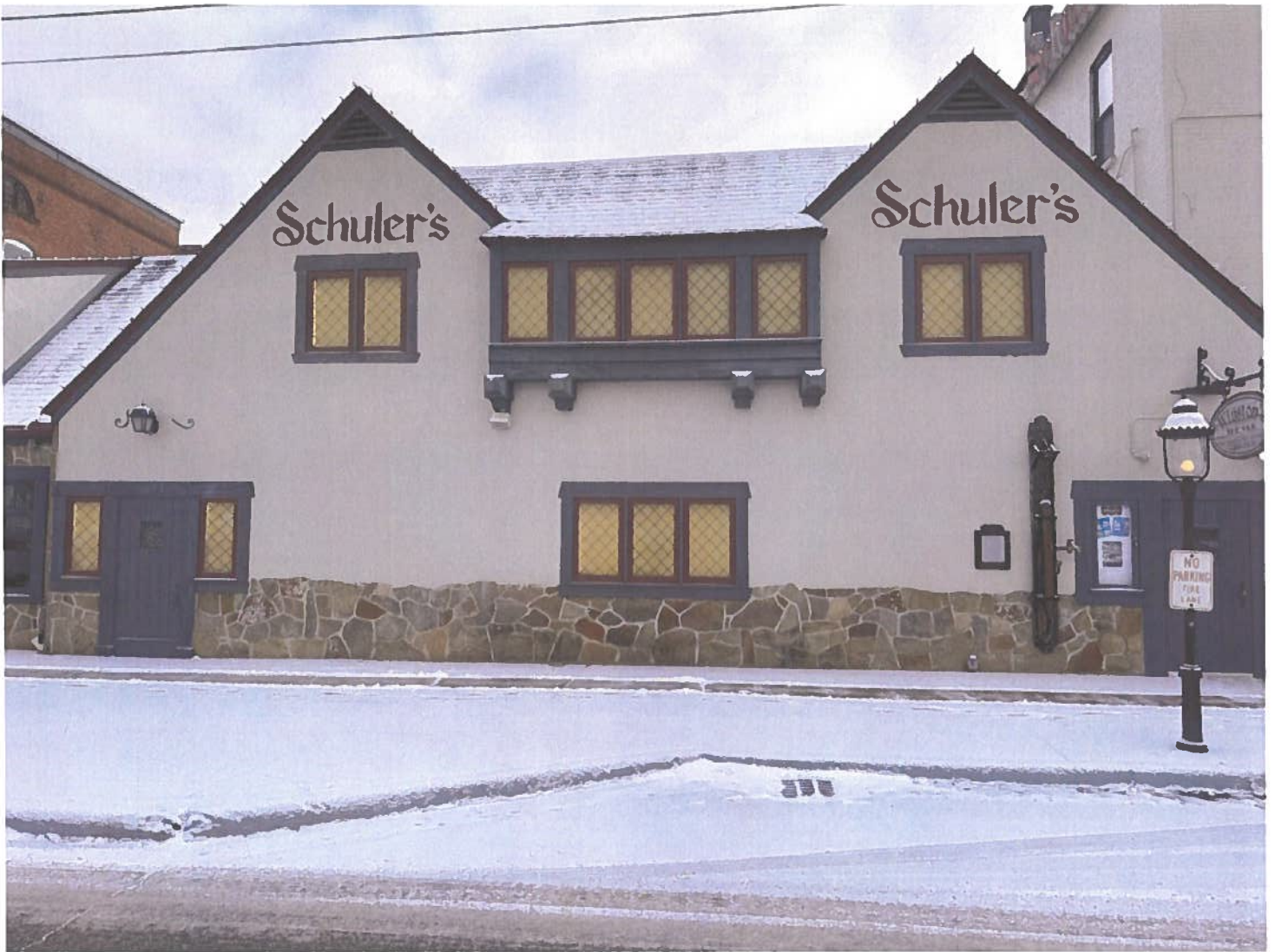
Michael Beck

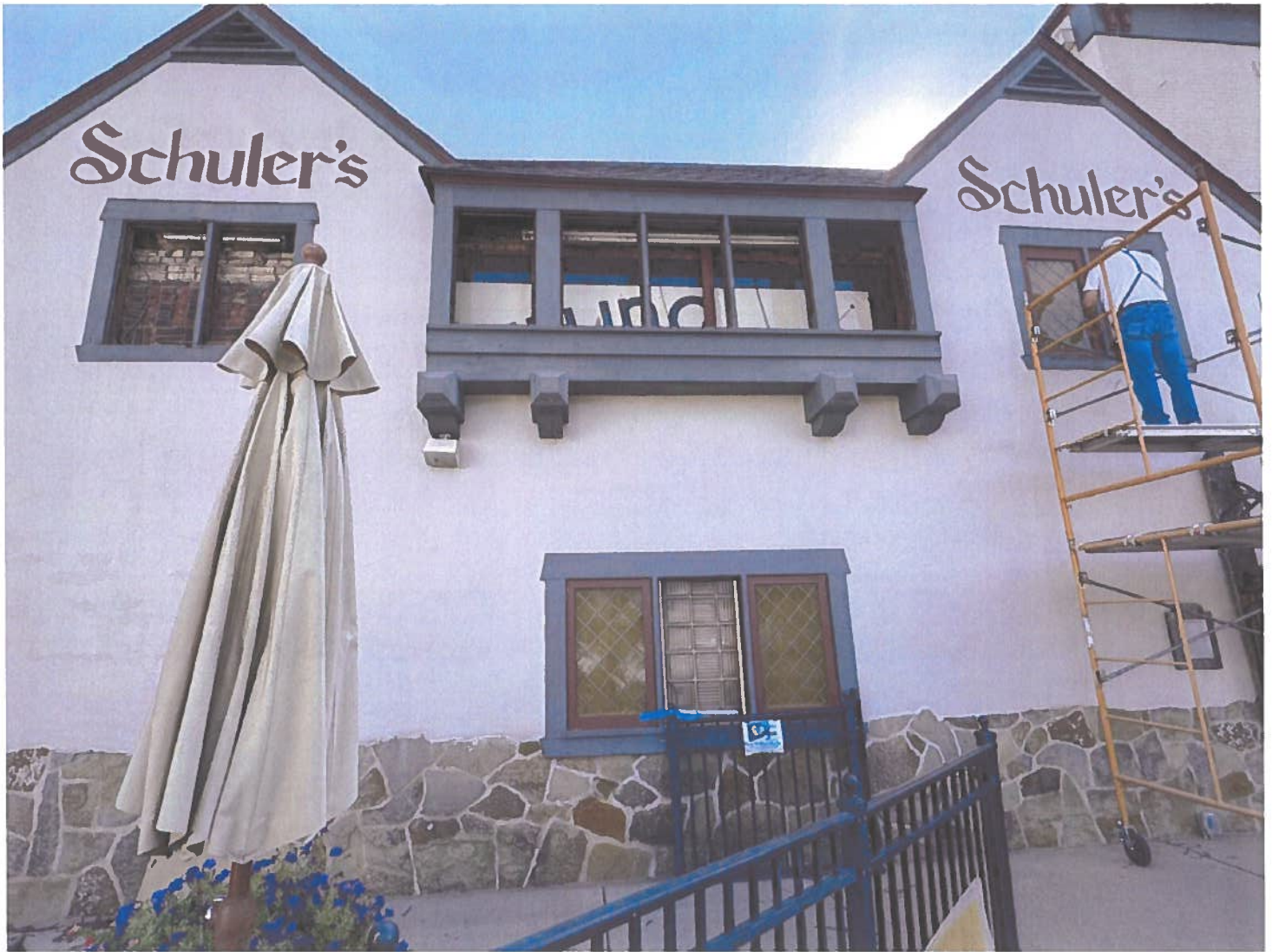
Date: _____

4/14/2025

The APPLICANT does hereby agree to indemnify, hold harmless and defend the CITY and each of its officers, officials, employees, agents and authorized volunteers from any and all loss, liability, fines, penalties, forfeitures, costs and damages (whether in contract, tort or strict liability, including but not limited to personal injury, death at any time and property damage) incurred by CITY, OWNER, PERMITTEE (Renter) or any other person, and from any and all claims, demands and actions in law or equity (including attorney's fee and litigation expenses), arising or alleged to have arisen directly or indirectly out of the operation and use of CITY property and public right of way. APPLICANT'S obligations under the preceding sentence shall apply regardless of whether City or any of its officers, officials, employees, agents or authorized volunteers are negligent, but shall not apply to any loss, liability, fines, penalties, forfeitures, costs or damages caused solely by the gross negligence, or caused by the willful misconduct, of CITY or any of its officers, officials, employees, agents or authorized volunteers.











FUND	Department	Project Title	Priority Ranking	Estimated Useful Life	Source of Funding	Project Narrative/Purpose	2025-2026 Expenditure	2026-2027 Expenditure	2027-2028 Expenditure	2028-2029 Expenditure	2029-2030 Expenditure	2030-2031 Expenditure	City Expenditure	Other Funds or Grant Share	Total Expenditure
101	DPW	Facility Needs Assessment	2	10	General Fund	Facility Assessment and Planning The DPW building does not meeting the City's needs due to design and condition. The first step in determining how to move forward is to complete an assessment/review of the Departments needs.	\$40,000						\$40,000		\$40,000
101	DPW	Facility: Material Storage Building	3	175	General Fund	New Storage Building Material Storage for Salt, Sand, Top Soil, Gravel.		\$100,000					\$100,000		\$100,000
101	DPW	Equipment	2	15	General Fund	Asphalt Hot Box Trailer Replace inoperable hot box Without hot box, asphalt patch material cools very quickly which results in bad pothole patching and material waste.	\$50,000						\$50,000		\$50,000
101	Engineering	GIS and Cityworks Support	2	20	Various	GIS & Cityworks Support Anticipated growth will result in the need for GIS and Cityworks supports in the engineering department.	\$30,000	\$30,000	\$30,000	\$30,000			\$120,000		\$120,000
101	Engineering	MAJOR Campus Stormwater District	1	20	Various	Stormwater District The City of Marshall will be responsible for the operation and maintenance of a stormwater management system that supports the MAJOR Campus. The system consists of stormwater conveyance infrastructure and two large stormwater basins. The conveyance infrastructure includes open swales and ditches and a variety of culverts, all of which total over 5,000 feet of conveyance structures. The stormwater basins total approximately 60 acres in size.	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$450,000		\$450,000
101	Engineering	Engineering Standards	2	20	Various	Engineering Standards Develop standard details and specifications for water, wastewater, stormwater, and roads.	\$50,000						\$50,000		\$50,000
101	Engineering	Asset Management Plan(s)	3	20	Various	Asset Management Program and Plans Develop a city-wide asset management program that would identify the level of service, goals, and overall standardization of Asset Management Plans. Complete the water, sewer, stormwater, and roads asset management plans.		\$60,000	\$70,000				\$130,000		\$130,000
101	PSB	Building Expansion	2	10	General Fund	Building Expansion Planning Analyze existing building for current and future use. Use facility assesment to determine future needs. Develop conceptual plan for expansion of facility to meet needs.			\$75,000				\$75,000		\$75,000
101	PSB	Facility Assessment	2	10	General Fund	Building Expansion Planning Analyze existing building for current and future use. Use facility assesment to determine future needs. Develop conceptual plan for expansion of facility to meet needs		\$50,000					\$50,000		\$50,000
101	PSB	Building Improvements	1	40	General Fund	Building Expansion Planning Analyze existing building for current and future use. Use facility assesment to determine future needs. Develop conceptual plan for expansion of facility to meet needs	\$30,000						\$30,000		\$30,000
101	PSB	Building Roof	1	35	General Fund	Building Expansion Planning Analyze existing building for current and future use. Use facility assesment to determine future needs. Develop conceptual plan for expansion of facility to meet needs				\$300,000			\$300,000		\$300,000
101	PSB	Engineering- Office HVAC	1	5	General Fund	Building Expansion Planning Analyze existing building for current and future use. Use facility assesment to determine future needs. Develop conceptual plan for expansion of facility to meet needs	\$25,000						\$25,000		\$25,000
101	PSB	Replace Garage/Warehouse Heat and Lighting	1	25	General Fund	Building Expansion Planning Analyze existing building for current and future use. Use facility assesment to determine future needs. Develop conceptual plan for expansion of facility to meet needs	\$250,000						\$250,000		\$250,000
101	PSB	Replace HVAC	2	5	General Fund	Building Expansion Planning Analyze existing building for current and future use. Use facility assesment to determine future needs. Develop conceptual plan for expansion of facility to meet needs		\$50,000					\$50,000		\$50,000

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101	PSB	Carpet Replacement	2	12	General Fund	Building Expansion Planning Analyze existing building for current and future use. Use facility assesment to determine future needs. Develop conceptual plan for expansion of facility to meet needs		\$30,000					\$30,000		\$30,000
101	PSB	Parking and Driveways	1	12	General Fund	Building Expansion Planning Analyze existing building for current and future use. Use facility assesment to determine future needs. Develop conceptual plan for expansion of facility to meet needs				\$25,000			\$25,000		\$25,000
101	PSB	Parking and Driveways	1	25	General Fund	Building Expansion Planning Analyze existing building for current and future use. Use facility assesment to determine future needs. Develop conceptual plan for expansion of facility to meet needs						\$100,000	\$100,000		\$100,000
101	City wide	S Kalamazoo Pathway - River District	2	20	General Fund	Building Expansion Planning Analyze existing building for current and future use. Use facility assesment to determine future needs. Develop conceptual plan for expansion of facility to meet needs						\$1,000,000	\$500,000	\$500,000	\$1,000,000
101	City wide	Sidewalk repairs	3	20	General Fund	Analyze existing building for current and future use. Use facility assesment to determine future needs. Develop conceptual plan for expansion of facility to meet needs	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$300,000		\$300,000
101	Parks	Stuarts Landing Improvements	3	30	Grants & other	Rehabilitation of Stuart's Landing including the following updates: replace canoe/kayak launch, a new shelter, a linear path around the site, improved shoreline and river access, and related improvements.			\$910,000				\$0	\$910,000	\$910,000
101	Parks	Repair Brooks Fountain	1	25	General Fund	The Brooks Fountain structural repairs.			\$750,000	\$750,000	\$500,000		\$2,000,000		\$2,000,000
101	Parks	Carver Park Fountain Replacement/Repair	2	30	General Fund	Carver Park Fountain replacement.						\$100,000	\$100,000		\$100,000
101	Parks	Riverwalk Repairs Phase 1B	1		General Fund	Replace structural beams along riverwalk. Fix and replace fencing and deckboards. Trim and remove trees throughout riverwalk.	\$200,000						\$50,000	\$150,000	\$200,000
101	Parks	Riverwalk Repairs Phase 2	2		General Fund	Replace structural beams along riverwalk. Fix and replace fencing and deckboards. Trim and remove trees throughout riverwalk.		\$200,000					\$50,000	\$150,000	\$200,000
101	Parks	Riverwalk Repairs Phase 2B	3		General Fund	Replace structural beams along riverwalk. Fix and replace fencing and deckboards. Trim and remove trees throughout riverwalk.			\$500,000				\$200,000	\$300,000	\$500,000
101	Parks	Riverwalk Repairs Phase 3	3		General Fund	Replace structural beams along riverwalk. Fix and replace fencing and deckboards. Trim and remove trees throughout riverwalk.				\$500,000			\$200,000	\$300,000	\$500,000
101	Parks	Riverwalk Repairs Phase 3B	3		General Fund	Replace structural beams along riverwalk. Fix and replace fencing and deckboards. Trim and remove trees throughout riverwalk.					\$500,000		\$200,000	\$300,000	\$500,000
101	Parks	Riverwalk Extension	3	30	General Fund	Extend Riverwalk west of Kalamazoo towards Historic Bridge Park, partner with County.						\$3,500,000	\$0	\$3,500,000	\$3,500,000
101	Parks	Athletic Field Renovations	2	7	General Fund	Athletic Field Resurface, clay replacement for pitching areas and batters boxes, level outfield with sand, replace all base pegs, new bases for all fields, fencing repairs.		\$150,000					\$50,000	\$100,000	\$150,000
101	Parks	Ketchum Park Great Lawn	2	50	General Fund	LOWER KETCHUM COMMONS AND PROMENADE Work related to the establishment of the lower lawn commons, drainage system, and its perimeter pedestrian walkway. Also included is the main path between parking on Montgomery Street and the Rotary Bridge. Construction Cost: \$143,000 Construction and Soft Costs: \$185,900.						\$1,285,900	\$0	\$1,285,900	\$1,285,900
101	Parks	North & South Ketchum Park Parking Lot	4	15	General Fund	Mill and repave parking lot/paint parking spots.			\$35,000				\$35,000		\$35,000
101	Parks	Sand Volleyball Court Renovations	2	20	General Fund	Replace all fencing at Volleyball courts, remove current sand and equipment. Replace with sugar sand. Replace post with new. Replace nets.		\$250,000					\$100,000	\$150,000	\$250,000
101	Parks	Skate Park Equipment	2	30	General Fund	Adding up to date & safe skateboard equipment to existing skatepark.	\$100,000						\$25,000	\$75,000	\$100,000
101	Parks	Athletic Field Playground Replacement	2	20	General Fund	Replace Old playground equipment.		\$75,000					\$25,000	\$50,000	\$75,000
101	Parks	North Ketchum Park Playground Replacement	2	20	General Fund	Replace Old playground equipment.			\$75,000				\$25,000	\$50,000	\$75,000
101	Parks	Shearman Park Playground Replacement	2	20	General Fund	Replace Old playground equipment.				\$75,000			\$25,000	\$50,000	\$75,000
101	Parks	Kids Kingdom Renovation	2	30	General Fund	Replace dilapidated equipment with new equipment @ Kids Kingdom. Update with state of the art play structure with accessible equipment for all.					\$1,000,000		\$0	\$1,000,000	\$1,000,000
TOTAL							\$300,000	\$675,000	\$2,270,000	\$1,325,000	\$2,000,000	\$4,885,900	\$3,085,000	\$8,370,900	\$11,455,900

FUND	Department	Project Title	Priority Ranking	Estimated Useful Life	Source of Funding	Project Narrative/Purpose	2025-2026 Expenditure	2026-2027 Expenditure	2027-2028 Expenditure	2028-2029 Expenditure	2029-2030 Expenditure	2030-2031 Expenditure	City Expenditure	Other Funds or Grant Share	Total Expenditure
101	Clerk	Election Tabulators	1	10	General Fund	Replace existing 3 tabulators and Voter Assist Terminal, which have reached end of life, with new State and County approved equipment.		\$30,000					\$30,000		\$30,000
TOTAL							\$0	\$30,000	\$0	\$0	\$0	\$0	\$30,000	\$0	\$30,000
101	Fire	Self-Contained Breathing Apparatus	3	10	General Fund/Grants	Our current Self Contained Breathing Apparatus was purchased in the beginning of 2018. They have a life expectancy of 10 to 15 years. This is mandated by MIOSHA and is National Fire Protection Association and Manufactures recommendations. We will need to replace these by the end of 2031.						\$250,000	\$250,000		\$250,000
101	fire	Fire Hose	2	25 Years	General Fund	Replace Fire Hose.		\$30,000					\$30,000		\$30,000
101	Fire	Fire Station Roof	2	25 Years	General Fund	Repair Fire station Roof that was not installed Properly.	\$110,000						\$110,000		\$110,000
101	Fire	Auxiliary Fire Equipment	4	25	General Fund	We have auxiliary equipment such as compressor and fill station for SCBA Bottles and Oxygen Bottles and a hose washer for cleaning soiled fire hose after fires. These are items that will eventually need replaced in the future. They last a long time be we need to plan for replacement through the CIP. Is it better to plan a yearly contribution to CIP or just fund we needed if they need replaced.						\$75,000	\$75,000		\$75,000
TOTAL							\$110,000	\$30,000	\$0	\$0	\$0	\$325,000	\$465,000	\$0	\$465,000
101	Police	Taser Upgrade	3	5-7 years	General Fund	The Police Department issues each sworn officer the Axon Taser X-2 weapon as a less than lethal use of force option. National studies have shown the Taser as an effective means of applying force at a distance, thus minimizing the risks of injury to patrol officers from a physical altercation. Axon only warranties their devices for 5 years, and have typically phased in a newer model every five years. As they are a weapon that can cause injury or death, we should strive to keep the warranty in place. This is both for officer safety (if Taser malfunctions due to age), and to some degree of liability mitigation, as Taser may not legally support us if we are using an out of warranty device.			\$35,000				\$35,000		\$35,000
101	Police	Firearm Replacement	3	10-15 years	General Fund	Replacement of glock pistols and shot guns. Includes red dot sights, holsters and accessories.		\$30,000					\$30,000		\$30,000
101	Police	Community Camera Project	2	5-7 years	General Fund	A community camera program is an integrated camera system that will improve the safety of the Marshall Communtiy. The program includes surveillance cameras at the city parks, traffic cameras to monitor high traffic areas, and software that will use LPR, AI, and dispatch integration to assist law enforcement and first responders.		\$250,000					\$0	\$250,000	\$250,000
101	Police	MVR/Body Camera Change Over	1	5-7 years	General Fund	Moble Car Camera and Body Camera replacement.	\$140,000						\$140,000		\$140,000
TOTAL							\$140,000	\$280,000	\$35,000	\$0	\$0	\$0	\$205,000	\$250,000	\$455,000
202	Major Streets	Road Reconstruction	1	100	Act 51	South Marshall Street Michigan to Spruce Street Reconstruction the street from curb to curb, analyze for non-motorized improvements. Engineering Design FY26.	\$54,200	\$487,800					\$542,000		\$542,000
202	Major Streets	Partial Reconstruction	3	15	Act 51	East Green Street Marshall Ave - City Boundary Full reconstruction in area over the watermain, repair patches from franchise utility work, improveme non-motorized assets.				\$562,000			\$562,000		\$562,000
202	Major Streets	Road Reconstruction	1	100	Act 51	South Marshall Street Spruce to Clinton Reconstruction the street from curb to curb, analyze for non-motorized improvements, and assess the intersection of Spruce, S Marshall, and Exchange; will use MDOT Small Urban Program Funding Engineering Design FY26; application for Small Urban Grant FY26.	\$63,200	\$953,800					\$632,000	\$385,000	\$1,017,000

FUND	Department	Project Title	Priority Ranking	Estimated Useful Life	Source of Funding	Project Narrative/Purpose	2025-2026 Expenditure	2026-2027 Expenditure	2027-2028 Expenditure	2028-2029 Expenditure	2029-2030 Expenditure	2030-2031 Expenditure	City Expenditure	Other Funds or Grant Share	Total Expenditure
202	Local Streets	Partial Reconstruction	4	15	Street Millage	Mulberry Prospect to Hanover Pair with watermain project						\$376,000	\$376,000		\$376,000
202	Local Streets	Partial Reconstruction	4	15	Street Millage	Forest St Allen to Sibley Pair with watermain project Possible new sidewalk installation						\$210,000	\$210,000		\$210,000
202	Local Streets	Partial Reconstruction	4	15	Street Millage	Sibley Lane Okeefe to Forest Partial Reconstruction Pair with Watermain Project						\$405,000	\$405,000		\$405,000
202	Local Streets	Road Partial Reconstruction	2	100	Street Millage	North Gordon Street Mansion to Forest Full reconstruction for watermain trench, Partial reconstruction on remaining road area.					\$535,000		\$535,000		\$535,000
202	Local Streets	Road Reconstruction	4	25	Street Millage	Rose St & Oak St Full Reconstruction Potential non-motorized improvements Pair with Watermain Project						\$497,000	\$497,000		\$497,000
203	Local Streets	Road Partial Reconstruction	2	25	Act 51	High Street Forest to Michigan Ave Full reconstruction for portion of watermain replacement. Partial reconstruction on remainder of road.					\$566,000		\$566,000		\$566,000
203	Local Streets	Fountain St. Paving	2	25	Act 51	Fountain Street Michigan to Hanover Rehabilitation Construction to follow completion of the Recreation Fields Pickleball and Splash Pad Project.		\$130,000					\$130,000		\$130,000
TOTAL							\$117,400	\$1,571,600	\$0	\$562,000	\$1,101,000	\$1,488,000	\$4,455,000	\$385,000	\$4,840,000
207	MRLEC	Front Parking Lot Expansion	3	40	MRLEC Operations	A need for additional parking has been identified at MRLEC. There are numerous times each month where the parking lot is overflowing because of trainings or events at MRLEC. The expansion will help solve this issue. The estimated cost (with assistance of the Marshall DPW) of expanding the parking lot is \$50,000. The new section will be added to the 5 year maintenance schedule for resurfacing.	\$100,000						\$35,000	\$65,000	\$100,000

FUND	Department	Project Title	Priority Ranking	Estimated Useful Life	Source of Funding	Project Narrative/Purpose	2025-2026 Expenditure	2026-2027 Expenditure	2027-2028 Expenditure	2028-2029 Expenditure	2029-2030 Expenditure	2030-2031 Expenditure	City Expenditure	Other Funds or Grant Share	Total Expenditure
207	MRLEC	MRLEC Barn Expansion	1	40	MRLEC Operations	The MRLEC agencies have identified a need for an added secured storage area for vehicles held for evidence. Currently we are all being asked to hold vehicles for evidence when involved in major crimes. The delayed time frame is leading to vehicles being parked in the storage area of our shared barn. An addition is being proposed to be added to the MRLEC barn to individually secure 8-10 vehicles. The building would be on the east side of the building and would require new construction.		\$250,000					\$87,500	\$162,500	\$250,000
TOTAL							\$100,000	\$250,000	\$0	\$0	\$0	\$0	\$122,500	\$227,500	\$350,000
208	Recreation	Replacement of Athletic Field Light System	3	30	Recreation Fund	The current lights on diamond #1 & #2 are approaching the end of their expected life. The entire system should be replaced.			\$350,000				\$350,000		\$350,000
208	Recreation	Seal Coating Athletic Field Parking Lot & Pathways. Striping of Parking Lot	4	12	Recreation Fund	Seal Coating Athletic Field Parking Lot & Pathways is considered routine maintenance.	\$50,000				\$50,000		\$100,000		\$100,000
208	Recreation	Athletic Fields- Batting Cages	2	15	Recreation Fund	Two batting cages-35'x70'			\$30,000				\$30,000		\$30,000
208	Recreation	Recreation Athletic Facility	4	30	Grants/Fund Raising	Construction of a Recreation Center that would include 2 basketball courts, community room, etc.						\$6,000,000	\$6,000,000		\$6,000,000
TOTAL							\$50,000	\$0	\$380,000	\$0	\$50,000	\$6,000,000	\$6,480,000	\$0	\$6,480,000
211	Farmer's Market	Farmers Market Project	2	20	Grants / Fundraising	Replace old storage shed w/ newer larger shed 12x20 add electric throughout market area.	\$25,000							\$25,000	\$25,000
211	Farmer's Market	Farmer's Market Pavilion	3	40	Farmer's Market/Donations	Farmer's Market pavilion will include a covered area for the farmer's market. The space design will consider supporting a winter market, event space (in conjunction with social district), and maintaining parking.			\$1,000,000				\$500,000	\$500,000	\$1,000,000
TOTAL							\$25,000	\$0	\$1,000,000	\$0	\$0	\$0	\$500,000	\$525,000	\$1,025,000
247	NE NIA	Eastside Redevelopment Infrastructure	1	20	NIA TIF Capture	Infrastructure necessary to allow the redevelopment of the Land Bank property off of East Dr/Mann. Extension of water, sewer, storm sewer, roads, and sidewalks for the development. Does not include electric or fiber extension at this time.		\$1,341,900					\$1,341,900		\$1,341,900
247	NE NIA	Mann Extension	3	20	NIA TIF Capture	Infrastructure necessary to allow the extension of Mann to O'Keefe allowing the development of 10 acres for additional housing opportunities. Extension of water, sewer, storm sewer, roads, and sidewalks for the development.	\$1,520,700						\$1,520,700		\$1,520,700
247	NE NIA	Pratt Park Future Phases	3	20	NIA TIF Capture	Infrastructure necessary to allow for the development of future phases of Pratt Park for housing opportunities. Extension of water, sewer, storm sewer, roads, and sidewalks for the development.				\$3,172,800			\$3,172,800		\$3,172,800
TOTAL							\$1,520,700	\$1,341,900	\$0	\$3,172,800	\$0	\$0	\$6,035,400	\$0	\$6,035,400
248	Downtown Development Authority	North Activation Zone	2	30	DDA Revenues/Grants	The proposed Social Area will be a 4,000 square foot community area with tables and chairs in the northern portion of lot 10 along the south alley. The proposed trash component will be a coral for business use. The businesses to be served are those located along Michigan Avenue between Eagle Street and Jefferson Streets.			\$500,000	\$100,000			\$600,000		\$600,000
248	Downtown Development Authority	DDA Parking Lots (8,13,14,15)	2	15	DDA Revenues	Mill and pave downtown parking lots #8, 13, 14, 15.		\$78,400					\$78,400		\$78,400
248	Downtown Development Authority	DDA Parking Lots (1, 4, 5, 6, 7)	2	20	DDA Revenues	Mill and pave downtown parking lots #1, 4, 5, 6, 7.	\$115,200						\$115,200		\$115,200
248	Downtown Development Authority	Sound System Upgrades	3	15	DDA Revenues	Improve the downtown sound system and incorporate cameras for events and security. This is an estimate as this has not been explored with vendors at this time.	\$90,000						\$90,000		\$90,000

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TOTAL							\$205,200	\$78,400	\$500,000	\$100,000	\$0	\$0	\$883,600	\$0	\$883,600
250	LDFA	Oliver Drive Extension	3	30	LDFA reserves and possible Bond	Extension of Oliver Drive, water, and sewer infrastructure to serve over 100 acres of undeveloped Industrial zoned property.				\$550,000			\$550,000		\$550,000
250	LDFA	Udell Property Lift Station	3	30	LDFA reserves and possible Bond	Addition of a new sanitary lift station to serve 100+ acres of industrial zoned property. Exact location of station on property to be determined.			\$400,000				\$400,000		\$400,000
250	LDFA	Land Acquisition	2	50	LDFA reserves and possible Bond	Explore land acuisition possibilities.	\$500,000						\$500,000		\$500,000
250	LDFA	Pedestrian Path LDFA	2	15	LDFA reserves and possible Bond	Construction of an 10' wide patch connecting the Industrial Park to the south NIA and rest of town. Council has made a goal of increased walkability and we have seen an increased level of pedestrian activity to and from the Industrial Park.		\$166,700					\$166,700		\$166,700
250	LDFA	Pratt Avenue Rehabilitation	2	15	LDFA reserves and possible Bond	Mill and overlay of Pratt Avenue as it will be in need of maintenance due to age and condition.	\$413,500						\$413,500		\$413,500
TOTAL							\$913,500	\$166,700	\$400,000	\$550,000	\$0	\$0	\$2,030,200	\$0	\$2,030,200
251	S NIA	Hughes Street Infrastructure Extension	3	30	S NIA TIF Capture	Extension of sewer, electric, fiber, streets, etc. to add or create buildable lots.	TBD						\$0		TBD
251	S NIA	Emerald Hills Phase 2	1	20	S NIA TIF Capture	Extension of sewer, electric, fiber, streets, etc. to add or create buildable lots.	\$2,161,700						\$2,161,700		\$2,161,700
251	S NIA	Emerald Hills Phase 3	1	20	S NIA TIF Capture	Infrastructure necessary to allow the construction of the third phase of the emerald hills subdivision which includes the planned multi-family units (6 buildings). Extension of water, sewer, storm sewer, roads, and sidewalks for the development.		\$780,000					\$780,000		\$780,000
251	S NIA	Emerald Hills Phase 4	1	20	S NIA TIF Capture	Infrastructure necessary to allow the construction of the fourth phase of the emerald hills subdivision which includes 42 housing units. Extension of water, sewer, storm sewer, roads, and sidewalks for the development.				\$1,142,100			\$1,142,100		\$1,142,100
251	S NIA	Emerald Hills Phase 5	1	20	S NIA TIF Capture	Infrastructure necessary to allow the construction of the fifth phase of the emerald hills subdivision which is 98 housing units. Extension of water, sewer, storm sewer, roads, and sidewalks for the development.					\$3,550,600		\$3,550,600		\$3,550,600
251	S NIA	Emerald Hills Pedestrian Path	3	15	S NIA TIF Capture	10' wide path built between Circle Drive and the Airport on the east side of South Kalamazoo. This would improve walkability for the proposed development, Fairway meadows, and the surrounding neighborhood. This would be a connection between downtown and the extension of a path from the airport to the industrial park (which is included in LDFA CIP).		\$118,300					\$118,300		\$118,300
TOTAL							\$2,161,700	\$898,300	\$0	\$1,142,100	\$3,550,600	\$0	\$7,752,700	\$0	\$7,752,700
295	Airport	Pavement Marking and Crack Sealing	1	10	General Fund 5%, FAA Allocation 90%, State 5%	Replacement of pavement markings and crack sealing as necessary. Participation in the MDOT crack sealing program to prolong the life of the airport runway and taxiways.	\$4,350			\$60,000			\$2,600	\$61,750	\$64,350
295	Airport	North Perimeter Fence	2	20	General Fund 5%, FAA Allocation 90%, State 5%	Design and installation of a fence on the north perimeter of the airport property for safety reasons (wildlife and proximity to new Emerald Hills Development.			\$21,500	\$350,000			\$19,000	\$352,500	\$371,500
295	Airport	North Apron and West Parallel Taxiway Rehabilitation	1	15	General Fund 5%, FAA Allocation 90%, State 5%	Engineering and Construction of North Apron and West Parallel Taxiway.	\$790,000						\$39,500	\$750,500	\$790,000
295	Airport	Airport Master Plan (ALP Update)	2	20	General Fund 5%, FAA Allocation 90%, State 5%	Update of the Airport Master Layout Plan which is used as a guide for future development on the airport grounds. Funding is \$225,000 Federal, \$12,500 State, and \$12,500 City.		\$250,000					\$12,500	\$237,500	\$250,000

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295	Airport	Construction Hangar Taxiway	3	20	General Fund 5%, FAA Allocation 90%, State 5%	Construct a new hangar taxiway to provide access to new T-hangar buildings east of the current buildings. New hangars would be a partnership with a third party. Project would only move forward if hangars were constructed.	\$25,000	\$225,000					\$12,500	\$237,500	\$250,000
295	Airport	Main Hangar Improvements	1	25	General Fund 0%, FAA Allocation 95%, State 5%	The roof over the main hangar and the space leased by Griswold Aviation is nearing the end of life and needs to be replaced. The City would need to fund \$13,000 (2023 \$1250 and 2024 \$11,750) of the improvements and the Feds/State \$247,000 (2023 \$23,750 and 2024 \$223,250).	\$25,000	\$235,000					\$15,000	\$245,000	\$260,000
295	Airport	Land Acquisition	3	50	General Fund/LDFA	Purchase of 66.34 acres from the Udell Trust for airport and Industrial Park expansion. Purchase would have to be funded by City/LDFA and reimbursement for portion used by airport can be pursued using our annual allocation.		TBD	TBD						\$0
TOTAL							\$844,350	\$710,000	\$21,500	\$410,000	\$0	\$0	\$101,100	\$1,884,750	\$1,985,850
570	FiberNet	Vehicle	1	15	FiberNet Fund	Service Van	\$115,000						\$115,000		\$115,000
570	FiberNet	Vehicle	3	15	FiberNet Fund	Bucket Truck			\$125,000				\$125,000		\$125,000
570	FiberNet	Vehicle	3	15	FiberNet Fund	Bucket Truck					\$125,000		\$125,000		\$125,000
570	FiberNet	Network	1	10	FiberNet Fund	Equipment Network Upgrades	\$150,000	\$150,000	\$150,000				\$450,000		\$450,000
582	Electric	Network	4	10	FiberNet Fund	Expansion of Network				\$150,000	\$150,000	\$150,000	\$450,000		\$450,000
TOTAL							\$265,000	\$150,000	\$275,000	\$150,000	\$275,000	\$150,000	\$1,265,000	\$0	\$1,265,000
582	Electric	Replace Tie 1 and 2 underground cable	4	40 years	Electric Fund	A portion of the two main express feeder cables from Pearl St. Substation to the Powerhouse are underground and in a duct system. They have been in service for 35 years and have met their life expectancy. The feeder cables are the main source of power to the City's electric load and are the connection to the grid for the City's internal generation. Because they are a critical component of the electric system the cables should be modernized.						\$2,500,000	\$2,500,000		\$2,500,000
582	Electric	Replace Windows	3	50	Electric Fund	Existing Powerhouse windows are the original single pane steel framed and not energy efficient. Many of the window sills and frames are deteriorated to the point that water is coming in and further damaging the building. Architect plans will be done in 2024/2025 with replacments done in stages starting in 2025.	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$300,000		\$300,000
582	Electric	Pearl St. Substation 7.2/12.5 KV Upgrade	1	40	Electric Fund - Revenue Bond	Modernize obsolete 7.2/12.5 KV cubicle breaker and bus systems with open-air system to improve operations and increase safety.	\$1,050,000						\$1,050,000		\$1,050,000
582	Electric	Pole Replacement and Line Reconstruction	2	40	Electric Fund	Wooden poles have an estimated service life of 33-40 years. To maintain safe, reliable electric service, replacement of old and unsafe poles must be performed on an annual basis.	\$75,000	\$77,250	\$79,568	\$81,955	\$84,413	\$86,946	\$485,131		\$485,131
582	Electric	AMI Project	4	20	Electric Fund - Bond	The Automated Metering Infrastructure (AMI) Project consists of hardware, software, communications and metering that will allow electric meters to be read remotely, in the same manner that water meters are now read. The system is designed to reduce operating expenses and provide additional services to customers.						\$1,000,000	\$1,000,000		\$1,000,000
582	Electric	Underground Cable Replacement	2	40	Electric Fund	Replace 40 year old underground electric system in the Waldon Pond Apartment Complex, Homer Road, Circle/Rose/Lowe Subdivision & Polo Club Apartments, Hospital circiut.	\$530,450	\$546,364	\$562,754	\$579,637	\$597,026	\$614,937	\$3,431,168		\$3,431,168

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582	Electric	Additional Local Generating Resources	3	50	Bond	The Power Plant's primary functions include emergency backup power in the event of a transmission system or substation failure, as well as helping meet Midcontinent Independent System Operator (MISO) capacity requirements that are based on the City's peak electric demand. The City's average demand is approximately 20 MW, and 2022 peak demand exceeded 29 MW. Additional generation to continue to help meet the City's MISO capacity obligations while also providing additional emergency backup service.						\$3,600,000	\$3,600,000		\$3,600,000
582	Electric	Distribution Tranformer Replacements	3	40	Electric Fund	The estimated service life of electric distribution system transformers is 25-40 years. The City has numerous electric distribution system transformers that are approaching or exceed 40 years of service. Some are live-front transformers with exposed cable and terminals, which are dangerous to staff and the public. In addition to new growth and voltage conversion, proactively replacing old transformers rather than running to failure is a goal of the department.	\$210,000	\$220,500	\$231,525	\$243,101	\$255,256	\$268,019	\$1,428,402		\$1,428,402
582	Electric	Rewind Hydroelectric Generating Units #1 and #3	1	50	Electric Fund	Hydroelectric Generating Unit #3 was installed in 1919. Unit #1 was installed in 1928. Neither unit appears to have been rewound since they were installed. Unit #1 generator windings were tested and inspected earlier this year. Visual inspection shows insulating material flaking off of the generator windings. Based on megger tests, the windings insulation appears to be failing. The City received two 2023 quotes for rewinding Hydroelectric Unit #1 generator at a cost of approximately \$250,000. Rewinding the generator will improve its reliability and also result in increased capacity, and energy and Renewable Energy Credits/Certificates (RECs) production. Unit #1 generator rewind is scheduled for FY2025, followed by Unit #3 rewind in FY2026.		\$250,000					\$250,000		\$250,000
582	Electric	Circuit Upgrade / Voltage Upgrade	2	50	Electric Fund	The municipal electric distribution system currently has two operating voltages, 4,160 volts and 12,470 volts. Circuits on each system cannot be directly tied together for maintenance and reliability purposes, limiting operational flexibility and reliability. The 4,160-volt system has greater resistance losses and less power-carrying capability than if its circuits were operated at 12,470 volts. Staff estimates approximately one-half of the electric distribution system operates at 4,160 volts. These 4,160-volt circuits should be upgraded to 12,470-volt operation as time and funds allow.	\$412,000	\$424,360	\$437,091	\$450,204	\$463,710	\$477,621	\$2,664,985		\$2,664,985
582	Electric	Vehicle and Equipment Replacement	2	15	Electric Fund	Electric Department vehicles are no longer in motorpool; therefore, their replacment needs to be planned into Capital Outlay. Each year, vehicles will be identified for replacement. 2025:Truck 301, car 126 2026:Truck 114, dump truck #310 2027: wire trailer, pole trailer 2028:Light tower, 2029:Digger #300 2030: car #125	\$325,000	\$130,000	\$60,000	\$25,000	\$300,000	\$35,000	\$875,000		\$875,000
TOTAL							\$2,652,450	\$1,698,474	\$1,420,938	\$1,429,896	\$1,750,405	\$8,632,523	\$17,584,685	\$0	\$17,584,685
590	Wastewater	Facility	2	50	Wastewater Fund	Garage Building A new 4-bay garage building on the WWTP premises for storage of equipment owned by the Wastewater Department. The current buildings that make up the Wastewater Plant are inadequate to store all the mobile equipment assigned to the Wastewater Department.		\$500,000					\$500,000		\$500,000
590	Wastewater	Planning	2	4	Wastewater Fund	Utility Rate Study The last rate study completed in 2023 will require an update leading into the 2026 fiscal year. City Staff will be involved with the process but a consultant with appropriate experience will be hire to perform the evaluation and provide rate recommendations.			\$35,000				\$35,000		\$35,000

FUND	Department	Project Title	Priority Ranking	Estimated Useful Life	Source of Funding	Project Narrative/Purpose	2025-2026 Expenditure	2026-2027 Expenditure	2027-2028 Expenditure	2028-2029 Expenditure	2029-2030 Expenditure	2030-2031 Expenditure	City Expenditure	Other Funds or Grant Share	Total Expenditure
590	Wastewater	Facility	2	25	Wastewater Fund	Laboratory Remodel Full remodel of outdated laboratory built in 1975, including cabinets, counter tops, fixtures, flooring, lighting, and lab safety equipment. We plan on retaining much of the existing lab equipment as that has been updated regularly.			\$250,000				\$250,000		\$250,000
590	Wastewater	Vehicle	2	15	Wastewater Fund	Wastewater Truck Wastewater staff currently have two assigned vehicles. There are times when department staff utilize their personal vehicles to go to meetings or conduct field work, especially when the Department Superintendent is utilizing a vehicle.			\$50,000				\$50,000		\$50,000
590	Wastewater	Treatment	2	5	Wastewater Fund	Replace Muffin Monster Cutters Replace the cutter cartridge in the in-line Muffin Monsters as recommended by the manufacture.			\$30,000				\$30,000		\$30,000
590	Wastewater	Treatment	1	15	MAJOR Campus Developer	Aeration Blower Replacement The current aeration blowers were installed in 1999. Since that time our aeration needs have changed and these blowers provide more air than necessary. Technology has advanced to a level that we can meet today's needs and retain the ability to meet future needs by replacing our current centrifugal blower with one that may be controlled by VFD. The current blowers cannot be controlled by a VFD and must run and full speed.	\$700,000							\$700,000	\$700,000
590	Wastewater	Treatment	1	20	MAJOR Campus Developer	Headworks & Equalization Basin Improvements Headworks improvements including grit removal and fine screening will extend the life of the downstream equipment.	\$20,000,000							\$20,000,000	\$20,000,000
590	Wastewater	Planning	2	15	Wastewater Fund	Wastewater Collection Plan The wastewater utility needs to complete a Collection Plan. The plan will include analysis of lift stations, expansion areas, capacity, and future flows.			\$150,000				\$150,000		\$150,000
590	Wastewater	Planning	2	15	Wastewater Fund	Wastewater Facilities Plan The wastewater utility needs to complete a Facilities Plan. The plan will include analysis of treatment systems, lift stations, capacity, future flows, land planning, and emerging technology.		\$250,000					\$250,000		\$250,000
590	Wastewater	Collection System	1	30	Wastewater Fund	Sewer Lining Project will line sewers which have experienced failure and root penetration.	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$1,200,000		\$1,200,000
590	Wastewater	Treatment	2	20	Wastewater Fund	New Sludge Thickening/De-watering Process The current equipment (2000) is beyond its estimated useful life. With a new system, Class A biosolids may be achieved. Class A biosolids may offer the Departmentthe ability to recover some costs of operation.				\$500,000			\$500,000		\$500,000
590	Wastewater	Engineering - Service Area Planning	1			Conceptual Service Area Expansion With an influx of infrastructure built in 2023 and 2024, the Department has several request for water service or is aware of multiple future residential development areas. A conceptual plan on how we serve these areas with water is needed.	\$75,000						\$75,000		\$75,000
590	Wastewater	Engineering - System Collection Model	1	25	Wastewater Fund	Sanitary Sewer Collection System Model The utility needs a flow model to better assess current trends and needs in the system. Furture development will be dependent on the sanitary sewer collection system so accuracy is its operation is paramount.	\$200,000	\$100,000					\$300,000		\$300,000
TOTAL							\$21,175,000	\$1,050,000	\$715,000	\$700,000	\$200,000	\$200,000	\$3,340,000	\$20,700,000	\$24,040,000
591	Water	Engineering - Risk and Resiliency & ERP	1	5	Water Fund	Risk and Resiliency Assessment Emergency Response Plan Both of these plans are regulatory requirements. They provide an opportunity for the Water Department to analyze their operations and ensure that a current and effective emergency response plan is created.	\$ 25,000.00						\$25,000		\$25,000

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591	Water	Engineering - Water Reliability Study	1	5		Update Water Reliability Study The first study was complete in 2020 when the regulation requiring it was created. An update to the plan is required every 5 years.	\$ 35,000.00						\$35,000		\$35,000
591	Water	Engineering - Service Area Planning	1	20		Conceptual Service Area Expansion With an influx of infrastructure built in 2023 and 2024, the Department has several request for water service or is aware of multiple future residential development areas. A conceptual plan on how we serve these areas with water is needed.	\$ 25,000.00						\$25,000		\$25,000
591	Water	Watermain Replacement	2	100	Water Fund	South Marshall Street Michigan to Spruce Street (2b)Replace undersized 6" cast iron water main on S. Marshall from Michigan to Spruce St. This main was installed in 1958 and will be past it's useful life. Engineering Design FY26.	\$46,000	\$414,000					\$460,000		\$460,000
591	Water	Watermain Lining	2			South Marshall Street Clinton to Kalamazoo River Bridge		\$250,000					\$250,000		\$250,000
591	Water	Watermain Replacement	2	100	Water Fund	South Marshall Street Spruce to Clinton (2A)Replace 4" main on S. Marshall from Spruce to Clinton. This main is undersized and past its useful life. Engineering Design FY26	\$53,500	\$481,500					\$535,000		\$535,000
591	Water	Watermain Lining	2	50	Water Fund	S Kalamazoo Michigan Ave to Railroad Tracks Line water main from Brooks Fountain south to Railroad tracks. Replacement of valves, hydrants and services through the entire area.				\$550,000			\$550,000		\$550,000
591	Water	Watermain Replacement	2	100	Water Fund	Hanover Street Marshall to Kalamazoo Replace/line aging 6" water main on Hanover from S. Marshall to S. Kalamazoo. This main is past it's useful life and is known to be in poor condition. Includes a significant number of lead service lines (possibly).				\$2,000,000			\$2,000,000		\$2,000,000
591	Water	Watermain Replacement	2	100	Water Fund	High Street Michigan to Forest Street (4) Replace 10" water main on High St. from Michigan Ave. to Forest St. Also replace all lead services, hydrants, valves, and connections. The size of the water main and amount of flow is causing water quality issues.					\$681,000		\$681,000		\$681,000
591	Water	Watermain Replacement	2	100	Water Fund	Fountain Street Hanover to Arms Street Line 6" cast iron pipe			\$675,000				\$675,000		\$675,000
591	Water	Water Storage	1	25	Water Fund	500,000 Gallong Tower; 2019 Maintenance Inspection identified several items that needed to be addressed. 2024 Inspection will occur in Q1 of 25. Definite rehab list will come out of that inspection for work in FY26.	\$40,000.00						\$40,000		\$40,000
591	Water	Water Storage	1	15	Water Fund	200,000 Gallon Tower; 2019 Water Tower inspection identified that the water tower would need an exterior overcoat in approximately 5-6 years.	\$150,000.00						\$150,000		\$150,000
591	Water	Watermain Replacement	2	100	Water Fund	North Gordon Street Mansion to Forest 6" cast iron, 1950s Undersized, pipe age lead service line replacements					\$568,000		\$568,000		\$568,000
591	Water	Water Treatment Plant	1	60	Water Fund Bond	Build new iron removal plant. Existing plant has reached the end of its useful life.						\$5,000,000	\$5,000,000		\$5,000,000
591	Water	Watermain Replacement	1	100	Water Fund	East Michigan Ave (2D) Replace 6" water main on E. Michigan with 8". This is the only section of Michigan Ave that has not been replaced. This replaceent would complete the Michigan Ave loop through the City. The existing water main was installed in 1950, and is past its useful life.			\$358,000				\$358,000		\$358,000

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591	Water	Watermain Replacement	1	100	Water Fund	Rose St & Oak St 6" cast iron, 1950s Undersized, Pipe Age Pair with Street Millage Work						\$479,000	\$479,000		\$479,000
591	Water	Watermain Replacement	2	100	Water Fund	Waldon Ponds Apartments Line watermain through Walden Pond Apartments from Verona to Arms. This section of water main is known to have poor water quality and is aging past it's useful life.			\$700,500				\$700,500		\$700,500
591	Water	Water Withdrawal	1	N/A	Water Fund	Expand Source Water Capacity The 2020 Water Reliability Study identified a furture shortfall of permitted groundwater withdrawal for the utility's 20-year outlook. Work on expanding this water withdrawal capacity is necessary for the future of the City's water supply.	\$75,000						\$75,000		\$75,000
591	Water	Watermain Replacement	1	100	Water Fund	Sibley Lane Okeefe to Forest 6" Cast Iron, 1950s Undersized, Pipe Age						\$405,000	\$405,000		\$405,000
591	Water	Watermain Replacement	3		Water Fund	East Green Street Marshall Ave - WTP 8" Cast Iron, 1950s Undersized, pipe age				\$571,000			\$571,000		\$571,000
591	Water	Watermain Replacement	3		Water Fund	Forest St Allen to Sibley 6" & 8" Cast Iron, 1960s Pipe age, Frequent Breaks						\$237,000	\$237,000		\$237,000
591	Water	Watermain Replacement	1	100	Water Fund	Mulberry Prospect to Hanover 6" Cast Iron, 1960s Undersized, Pipe Age, Break History Lead Service Line Replacements						\$433,000	\$433,000		\$433,000
TOTAL							\$449,500	\$1,145,500	\$1,733,500	\$3,121,000	\$1,249,000	\$6,554,000	\$14,252,500	\$0	\$14,252,500
661	Motor Pool	Fleet Management Software Implementation	1	15	Motor Pool	Fleet Maintenance Software The need for fleet maintenance software accessible to all staff is growing. The reliance on our fleet to perform services to the level of service expected continues to expand. The complexity and cost of vehicle repairs continues to increase. For these reasons, a fleet maintenance and tracking software is needed.	\$25,000	\$30,000	\$30,000				\$85,000		\$85,000
661	Motor Pool	Annual Vehicle Replacement	1	Variable	Motor Pool	City vehicles and equipment are critical in the level of service staff provide residents. Vehicles are schedule for replacement at the end of their useful life. Staying on schedule with replacements minimized unplanned downtime and impacts to resident's level of service. 2026; 7 units 2027; 6 units 2028; 4 units 2029; 6 units 2030; 2 units 2031; 5 units	\$1,500,000	\$450,000	\$250,000	\$300,000	\$150,000	\$375,000	\$3,025,000		\$3,025,000
TOTAL							\$1,500,000	\$450,000					\$3,025,000		\$3,025,000

FUND	Department	Project Title	Priority Ranking	Estimated Useful Life	Source of Funding	Project Narrative/Purpose	2025-2026 Expenditure	2026-2027 Expenditure	2027-2028 Expenditure	2028-2029 Expenditure	2029-2030 Expenditure	2030-2031 Expenditure	City Expenditure	Other Funds or Grant Share	Total Expenditure
711	Cemetery	Cemetery Road Paving Project	2	20	Cemetery Trust Fund	Finishing the drives in the cemetery will provide a clean and solid surface during inclement weather for those visiting their loved ones during a funeral service. 1,400 feet.	\$18,000			\$25,000	\$25,000		\$68,000		\$68,000
711	Cemetery	Cemetery Water Line Replacement	2	100		The water lines throughout the have failed at various times over the last 3 years. The complete replacement of the waterlines and upgrade to current standards is necessary for the future operation and maintenance of the cemetery.		\$30,000	\$30,000	\$30,000			\$90,000		\$90,000
711	Cemetery	Cemetery Expansion to Meet Future Demand	2	150	Cemetery Trust Fund	Cemetery has two sections left holding 500 spaces for purchase. The number available will shrink exponentially as families begin having trouble finding blocks of spaces available for family plots. This will drive many to seek alternate locations. \$35,000 Design - \$100,000 Construction. Columbarium - \$75,000.			\$35,000	\$100,000	\$75,000		\$210,000		\$210,000
TOTAL							\$18,000	\$30,000	\$65,000	\$155,000	\$100,000	\$0	\$368,000	\$0	\$368,000
GRAND TOTAL							\$33,160,300	\$11,015,874	\$9,255,938	\$13,447,796	\$10,476,005	\$29,647,923	\$74,698,185	\$32,843,150	\$107,541,335
GENERAL FUND TOTALS							\$1,150,000	\$1,460,000	\$2,605,000	\$1,805,000	\$2,125,000	\$6,435,900	\$6,460,000	\$9,120,900	\$15,580,900



ITEM 11.B

TO: Downtown Development Authority/Local Development Finance Authority
FROM: Marcia Strange, Director of Community Development
DATE: February 27, 2025
SUBJECT: Wetland Delineation Report

The project to define areas available to build on at the Brooks Industrial Park is complete and is presented for consideration.

RECOMMENDATION:



WETLAND REPORT

MARSHALL INDUSTRIAL PARK SURVEY
MARSHALL, MICHIGAN

SME Project No.: 095567.01
December 18, 2024



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1. INTRODUCTION

The following study was conducted to assess and delineate the possible wetlands near 1631 Pratt Ave, Marshall, Michigan, with an investigation area of approximately 165 acres. During this study, internet research, as well as field surveying, was conducted to determine the presence and approximate boundary of any wetlands on the study site.

Between July 29, 2024, and October 18, 2024, SME conducted a wetland assessment and delineation of the above-mentioned site. During this site visit, data was collected to analyze the vegetation and soil and hydric conditions which were on site in the areas of interest. As a result of this work, SME concluded that there were 22 wetlands (as defined by the USACE) in the areas of interest. SME found that Wetland C, Wetland E, Wetland F, Wetland G, Wetland J, Wetland K, Wetland N, Wetland V, Wetland W, Wetland X, and Wetland Z are regulated by EGLE, while Wetland A, Wetland B, Wetland I, Wetland L, Wetland M, Wetland R, Wetland S, Wetland T, Wetland U, and Wetland Y are not regulated. Wetland Q is the only wetland that is undeterminable because it continues off site and there isn't enough NWI data to make an educated decision. All wetlands on site may also be regulated by the City of Marshall or Marshall Township, and their review and approval will be required.

2. METHODOLOGY

The following sections outline the methodology used to conduct the study and identify resources used to formulate conclusions regarding the wetland and other water delineation.

2.1 PRELIMINARY DATA GATHERING

The initial project boundary was provided by the Marshall Area Economic Development Alliance prior to any survey work beginning. The following public resources were used to retrieve information to aid in the identification of wetlands as well as the delineation of wetlands and other waters within the proposed property boundary. The examined resources include:

- U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle maps;
- U.S. Department of Agriculture Soil Survey Online Database (USDA-SS);
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI);
- Michigan Department of Environment, Great Lakes, and Energy (EGLE) Wetland Map Viewer (EGLE, 2022);
- USGS National Hydrography Dataset (NHD);
- National Flood Hazard Layer (NFHL);
- Calhoun County Parcel Viewer; and
- Historical Aerial and Satellite imagery from various sources.

These data sources were used to assist in the development of a field investigation plan. Data from sampling location throughout the survey area were collected to intersect plant community cover, changes in soil type, and other developed areas of interest from historical aerial and satellite imagery.

2.2 WETLAND DELINEATION AND OTHER FIELD WORK

SME Survey Specialist, Alexander Kriebel, reviewed the area of interest in accordance with the U.S. Army Corps of Engineers standards for delineation. This involves looking at the hydrologic features, soil types, and fauna and flora found on site to determine the presence or absence of wetlands.

3. FINDINGS

3.1 FINDINGS OF PRELIMINARY DATA GATHERING

Remote Surveying of the site using satellite and aerial imagery indicated that one surface water resource, Talmadge Creek is on site. Additionally, the USFWS-NWI Indicated numerous wetlands on site.

The soil map unites from the USDA-SS dataset that occurred within the study project can be found in Table 1. Additionally, the hydrologic classification for each soil type based on the USDA-SS is shown. Approximate locations of these units as indicated on the USDA-SS are shown on Figure 3.

TABLE 1: USDA-SS MAPPING UNITS WITHIN THE STUDY SITE

SOIL MAP UNIT SYMBOL	SOIL MAP UNIT NAME	HYDROLOGIC RATING
12B	Coloma loamy sand, 0 to 6 percent slopes	
12C	Coloma loamy sand, 6 to 12 percent slopes	
14B	Bronson sandy loam, 0 to 6 percent slopes	
16B	Oshtemo sandy loam, 0 to 6 percent slopes	
16C	Oshtemo sandy loam, 6 to 12 percent slopes	
25A	Kalamazoo loam, 0 to 2 percent slopes	
25B	Kalamazoo loam, 2 to 6 percent slopes	
44A	Matherton loam, 0 to 3 percent slopes	
45A	Sleeth loam, 0 to 2 percent slopes	
63	Gilford fine sandy loam, 0 to 2 percent slopes, gravelly subsoil	
65	Sebewa loam, 0 to 2 percent slopes	
HgtajA	Houghton muck, undrained, 0 to 1 percent slopes	
PmsacA	Palms muck, 0 to 1 percent slopes	

3.2 FINDINGS OF WETLAND DELINEATION AND OTHER FIELD WORK

SME found that there were 22 wetlands within the project area, and they were designated and flagged. The delineated extent of wetlands are shown shown on Figure 4. The site was somewhat problematic due to an unseasonably dry spell in the latter half of the year and farming activities. The total wetland acreage for the site was found to be 43.81 acres in our surveyed area.

Wetland A was mapped as having soil types of 12C (Coloma loamy sand, 6 to 12 percent slopes), 16B (Oshtemo sandy loam, 0 to 6 percent slopes), 25B (Kalamazoo loam, 2 to 6 percent slopes). There were a lot of field stones buried in this wetland's strata. It is not recorded on NWI. Wetland A is delineated at 0.06 acres. The vegetation in Wetland A consisted mostly of Silver Maple and Swamp Red Oak. The prevalence index was calculated to be 2.41. This wetland was not found to be regulated. The wetland line was delineated and marked in the field from point A1-A13.

Wetland B was mapped as having soil types of 12C (Coloma Loamy Sand, 6-12 percent slopes), 16B (Oshtemo Sandy Loam, 0-6 percent slopes), 25B (Kalamazoo Loam, 2-6 percent slopes), 45A (Sleeth Loam, 0-2 percent slopes), 65 (Sebewa Loam, 0-2 percent slopes). It is recorded on NWI as PSS1C (Freshwater Forested/Shrub Wetland). Wetland B is delineated at 0.41 acres. The vegetation in Wetland B consisted mostly of Button Bush, Duckweed, and Green Ash. The prevalence index was calculated to be 1.22. This wetland was not found to be regulated. The wetland line was delineated and marked in the field from point B1-B23.

Wetland C was mapped as having soil types of 45A (Sleeth Loam, 0-2 percent slopes), 65 (Sebewa Loam, 0-2 percent slopes), PmsacA (Palms Muck, 0-1 percent slopes). It is recorded on NWI as PSS1C (Freshwater Forested/Shrub Wetland). Wetland C is delineated at 0.81 acres. The vegetation in Wetland C consisted mostly of American Elm, Green Ash, and Silver Maple. The prevalence index was calculated to be 2.02. This wetland was found to be regulated. The wetland line was delineated and marked in the field from point C1-C115.

Wetland E was mapped as having soil types of 25B (Kalamazoo Loam 2-6 percent slopes), 44A (Matherton Loam, 0-3 percent slopes), 65 (Sebewa Loam, 0-2 percent slopes), HgtajA (Houghton Muck Undrained, 0-1 percent slopes). It is recorded on NWI as PSS1C (Freshwater Forested/Shrub Wetland) and PFO1C (Freshwater Forested/Shrub Wetland). Wetland E is delineated at 26.52 acres; however, it continues northward and also westward offsite. The vegetation in Wetland E consisted of both open and woodland wetland vegetative zones. The wooded wetland area consisted of Green Ash, Swamp Red Oak, Swamp White Oak, Silver Maple, Slippery and American Elm and various sedges. The open wetland areas consisted of Barnyard Grass, Reed Canary Grass, Smartweed, Wool Grass and various sedges. The prevalence index was calculated to be 2.23. This wetland was found to be regulated. The wetland line was delineated and marked in the field from point E1-E470, with two upland exclusion zones marked as E700-E706 and E800-E845.

Wetland F was mapped as having soil types of 25A (Kalamazoo Loam 0-2 percent slopes), 44A (Matherton Loam, 0-3 percent slopes), 65 (Sebewa Loam, 0-2 percent slopes), HgtajA (Houghton Muck Undrained, 0-1 percent slopes). It is recorded on NWI as being part of the larger PFO1Cd (Freshwater Forested/Shrub Wetland) that is associated with Talmadge Creek. Wetland F is delineated at 0.04 acres. The vegetation in Wetland F consisted mostly of Peach-Leaved Willow, American Aster, and various sedges. The prevalence index was calculated to be 2.16. This wetland was found to be regulated. The wetland line was delineated and marked in the field from point F1-F14.

Wetland G, also known as Talmadge Creek, was mapped as having soil types of 25A (Kalamazoo Loam 0-2 percent slopes), 44A (Matherton Loam, 0-3 percent slopes), 45A (Sleeth Loam, 0-2 percent slopes), 65 (Sebewa Loam, 0-2 percent slopes), HgtajA (Houghton Muck Undrained, 0-1 percent slopes). Of special note, this part of the year was much drier than earlier in the year. It is recorded on NWI as being part of the larger PFO1Cd (Freshwater Forested/Shrub Wetland) that is associated with Talmadge Creek. Only the north edge of the wetland to the creek was delineated as the south side was off the site boundary. The on-site acreage of Wetland G was 2.13 acres; however, the wetland continues southward and also westward off site. The vegetation in Wetland G consisted mostly of Duckweed, Swamp Smartweed, and Silver Maple. The prevalence index was calculated to be 1.77. This wetland was found to be regulated. The northern wetland line was delineated and marked in the field from point G1-G57.

Wetland I was mapped as having soil types of 25B (Kalamazoo Loam 2-6 percent slopes) and HgtajA (Houghton Muck Undrained, 0-1 percent slopes). Of special note, this part of the year was much drier than earlier in the year. It is not recorded on NWI. The acreage of Wetland I was 0.06 acres. The vegetation in Wetland I consisted mostly of Duckweed, Broadleaf Cattail and Peach-Leaved Willow. The prevalence index was calculated to be 1.53. This wetland was not found to be regulated. The wetland line was delineated and marked in the field from point I1-I14.

Wetland J was mapped as having soil types of 44A (Matherton Loam, 0-3 percent slopes) and 65 (Sebewa Loam, 0-2 percent slopes). Of special note, this part of the year was much drier than earlier in the year. Earlier parts of the year showed significant amounts of standing water, as can be illustrated in the attached pictures. This wetland was disturbed by farming activities. It is not recorded on NWI. The acreage of Wetland J was 0.86 acres. The vegetation in Wetland J consisted mostly of New England Aster, Common Spiked Rush and Grass-Leaved Goldenrod. The prevalence index was calculated to be 1.62. This wetland was found to be regulated. The wetland line was delineated and marked in the field from point J1-J31.

Wetland K was mapped as having soil types of 44A (Matherton Loam, 0-3 percent slopes) and 65 (Sebewa Loam, 0-2 percent slopes). Of special note, this part of the year was much drier than earlier in the year. Earlier parts of the year showed significant amounts of standing water, as can be illustrated in the attached pictures. This wetland was disturbed by farming activities. It is not recorded on NWI. The acreage of Wetland K was 0.16 acres. The vegetation in Wetland K consisted mostly of New England Aster, Common Spiked Rush and Fox Sedge. The prevalence index was calculated to be 2.20. This wetland was found to be regulated. The wetland line was delineated and marked in the field from point K1-K20.

Wetland L was mapped as having soil types of 44A (Matherton Loam, 0-3 percent slopes). Of special note, this part of the year was much drier than earlier in the year. Earlier parts of the year showed significant amounts of standing water. This wetland was disturbed by farming activities. It is not recorded on NWI. The acreage of Wetland L was 0.08 acres. The vegetation in Wetland L consisted mostly of New England Aster, Reed Canary Grass and Fox Sedge. The prevalence index was calculated to be 2.06. This wetland was not found to be regulated. The wetland line was delineated and marked in the field from point L1-L11.

Wetland M was mapped as having soil types of 44A (Matherton Loam, 0-3 percent slopes) and 65 (Sebewa Loam, 0-2 percent slopes). Of special note, this part of the year was much drier than earlier in the year. Earlier parts of the year showed significant amounts of standing water. This wetland was disturbed by farming activities. It is not recorded on NWI. The acreage of Wetland M was 0.08 acres. The vegetation in Wetland M consisted mostly of New England Aster, Reed Canary Grass and Fox Sedge. The prevalence index was calculated to be 2.32. This wetland was not found to be regulated. The wetland line was delineated and marked in the field from point M1-M17.

Wetland N was mapped as having soil types of 63 (Gilford Fine Sandy Loam, 0-2 percent slopes), 65 (Sebewa Loam, 0-2 percent slopes), PmsacA (Palms Muck, 0-1 percent slopes). Of special note, this part of the year was much drier than earlier in the year. Earlier parts of the year showed significant amounts of standing water. Part of the wetland is recorded on NWI as PSS1C (Freshwater Forested/Shrub Wetland). The on-site acreage of Wetland N was 7.69 acres; however, the wetland continues eastward off site. The vegetation in Wetland N consisted of both open and woodland wetland vegetative zones. The wooded wetland area consisted of Green Ash, Swamp Red Oak, Swamp White Oak, Peach-Leaved Willow, and various sedges. The open wetland areas consisted of Barnyard Grass, Reed Canary Grass, Smartweed, Wool Grass and various sedges. The prevalence index was calculated to be 1.94. This wetland was found to be regulated. The wetland line was delineated and marked in the field from point N1-N69, N300-N349, N400-N510, N600-N679.

Wetland Q was mapped as having soil types of 14B (Bronson Sandy Loam, 0-6 percent slopes) and 65 (Sebewa Loam, 0-2 percent slopes). Of special note, this part of the year was much drier than earlier in the year. Earlier parts of the year showed significant amounts of standing water. It is not recorded on NWI. The on-site acreage of Wetland Q was 0.41 acres; however, the wetland continues southward off site near points Q30 and Q31. The vegetation in Wetland Q consisted mostly of Blunt Spiked Rush, Barnyard Grass and Reed Canary Grass. The prevalence index was calculated to be 2.52. This wetland does not appear to be regulated; however, because it continues off site, we are unable to make a full determination. The wetland line was delineated and marked in the field from point Q1-Q32.

Wetland R was mapped as having soil types of 25B (Kalamazoo Loam 2-6 percent slopes) and 45A (Sleeth Loam, 0-2 percent slopes). Of special note, this part of the year was much drier than earlier in the year. Earlier parts of the year showed significant amounts of standing water. This wetland was disturbed by tree clearing and chipping activities. It is not recorded on NWI. The on-site acreage of Wetland R was 0.05 acres. The vegetation in Wetland R consisted mostly of Green Ash, Fox Sedge and Reed Canary Grass. The prevalence index was calculated to be 2.23. This wetland was not found to be regulated. The wetland line was delineated and marked in the field from point R1-R9.

Wetland S was mapped as having soil types of 14B (Bronson Sandy Loam, 0-6 percent slopes) and 65 (Sebewa Loam, 0-2 percent slopes). Of special note, this part of the year was much drier than earlier in the year. Earlier parts of the year showed significant amounts of standing water. This wetland was disturbed by farming activities. It is not recorded on NWI. The on-site acreage of Wetland S was 0.24 acres. The vegetation in Wetland S consisted mostly of Blunt Spiked Rush, Wool Grass and Reed Canary Grass. The prevalence index was calculated to be 1.53. This wetland was not found to be regulated. The wetland line was delineated and marked in the field from point S1-S17.

Wetland T was mapped as having soil types of 14B (Bronson Sandy Loam, 0-6 percent slopes) and 65 (Sebewa Loam, 0-2 percent slopes). Of special note, this part of the year was much drier than earlier in the year. Earlier parts of the year showed significant amounts of standing water. This wetland was disturbed by farming activities. It is not recorded on NWI. The on-site acreage of Wetland T was 0.60 acres. The vegetation in Wetland T consisted mostly of Blunt Spiked Rush, Swamp Red Oak, New England Aster, Reed Canary Grass. The prevalence index was calculated to be 2.42. This wetland was not found to be regulated. The wetland line was delineated and marked in the field from point T1-T43 with two upland exclusion zones marked as T100-T109 and T200-T208.

Wetland U was mapped as having soil types of 14B (Bronson Sandy Loam, 0-6 percent slopes) and 65 (Sebewa Loam, 0-2 percent slopes). Of special note, this part of the year was much drier than earlier in the year. Earlier parts of the year showed significant amounts of standing water. This wetland was disturbed by farming activities. It is not recorded on NWI. The on-site acreage of Wetland U was 0.74 acres. The vegetation in Wetland U consisted mostly of Wool Grass, Barnyard Grass, Blunt Spiked Rush and Reed Canary Grass. The prevalence index was calculated to be 2.18. This wetland was not found to be regulated. The wetland line was delineated and marked in the field from point U1-U60.

Wetland V was mapped as having soil types of 45A (Sleeth Loam, 0-2 percent slopes) and 65 (Sebewa Loam, 0-2 percent slopes). Of special note, this part of the year was much drier than earlier in the year. Earlier parts of the year showed significant amounts of standing water. It is recorded on NWI as PEM1C (Freshwater Emergent Wetland). The acreage of Wetland V was 0.70 acres. The vegetation in Wetland V consisted mostly of Swamp Red Oak, Silver Maple, Green Ash and Fox Sedge. The prevalence index was calculated to be 2.38. This wetland was found to be regulated. The wetland line was delineated and marked in the field from point V1-V53.

Wetland W was mapped as having soil types of 65 (Sebewa Loam, 0-2 percent slopes). Of special note, this part of the year was much drier than earlier in the year. Earlier parts of the year showed significant amounts of standing water. This wetland was disturbed by farming activities. It is not recorded on NWI. The acreage of Wetland W was 0.40 acres. The vegetation in Wetland W consisted mostly of Pink Smartweed, Reed Canary Grass, and New England Aster. The prevalence index was calculated to be 2.19. This wetland was found to be regulated. The wetland line was delineated and marked in the field from point W1-W48.

Wetland X was mapped as having soil types of 65 (Sebewa Loam, 0-2 percent slopes). Of special note, this part of the year was much drier than earlier in the year. Earlier parts of the year showed significant amounts of standing water, as can be illustrated in the attached pictures. This wetland was disturbed by farming activities. It is not recorded on NWI. The acreage of Wetland X was 0.86 acres. The vegetation in Wetland X consisted mostly of Barnyard Grass, Blunt Spiked Rush and Dwarf St. John's wort. The prevalence index was calculated to be 1.83. This wetland was found to be regulated. The wetland line was delineated and marked in the field from point X1-X70.

Wetland Y was mapped as having soil types of 65 (Sebewa Loam, 0-2 percent slopes). Of special note, this part of the year was much drier than earlier in the year. Earlier parts of the year showed significant amounts of standing water, as can be illustrated in the attached pictures. This wetland was disturbed by farming activities. It is recorded on NWI as PEM1Af (Freshwater Emergent Wetland). The acreage of Wetland Y was 0.45 acres. The vegetation in Wetland Y consisted mostly of Straw-colored Flat Sedge, Reed Canary Grass, and Common Spiked Rush. The prevalence index was calculated to be 1.89. This wetland was not found to be regulated. The wetland line was delineated and marked in the field from point Y1-Y34.

Wetland Z was mapped as having soil types of 44A (Matherton Loam, 0-3 percent slopes) and 65 (Sebewa Loam, 0-2 percent slopes). Of special note, this part of the year was much drier than earlier in the year. Earlier parts of the year showed significant amounts of standing water. It is not recorded on NWI. The acreage of Wetland Z was 0.46 acres. The vegetation in Wetland Z consisted mostly of Duckweed, Reed Canary Grass, Swamp Red Oak, and Peach-Leaved Willow. The prevalence index was calculated to be 1.88. This wetland was found to be regulated. The wetland line was delineated and marked in the field from point Z1-Z71.

4. REGULATORY CONSIDERATIONS

4.1 STATE CONSIDERATIONS

4.1.1 REGULATION OF INLAND LAKES AND STREAMS BY THE STATE OF MICHIGAN

Inland lakes and streams are protected under Part 301 Inland Lakes and Streams of P.A. 451 of 1994, Natural Resources and Environmental Protection Act. An inland lake or stream is defined by the EGLE as “a natural or artificial lake, pond, or impoundment; a river, stream, or creek which may or may not be serving as a drain or any other body of water that has definite banks, a bed, and continued flow or continued occurrence of water.” Ponds include natural or artificial open water bodies with a surface area that is greater than one acre in size. Lakes include open water bodies with a surface area that is greater than five acres.

Please note that the following activities are prohibited within regulated inland lakes and streams without an EGLE permit.

- Dredging or filling bottomland.
- Constructing, enlarging, extending, removing or placing a structure on bottomland.
- Erecting, maintaining or operating a marina.
- Creating, enlarging or diminishing an inland lake or stream.
- Structurally interfering with the natural flow of an inland lake or stream.
- Constructing, dredging, commencing, extending or enlarging an artificial channel, ditch, lagoon, pond, lake, or similar waterway where the purpose is ultimate connection with an existing inland lake or stream, or where any part of the artificial waterway is located within 500 feet of the ordinary high-water mark of an existing inland lake or stream.
- Connecting any natural or artificially constructed waterway, canal, channel, ditch, lagoon, pond, lake or similar water with an existing inland lake or stream for navigation or any other purpose.

4.1.2 REGULATION OF WETLANDS BY THE STATE OF MICHIGAN

Wetlands are protected under Part 303 Wetland Protection of 1994 P.A. 451, Natural Resources and Environmental Protection Act. The Michigan Department of Environment, Great Lakes, and Energy (EGLE) has authority over wetlands that are:

- Contiguous to the Great Lakes or Lake St. Clair, an inland lake, pond or stream.
- Located within 500 feet of an inland lake, pond, river or stream or are within 1,000 feet of a Great Lake, Lake St. Clair, the St. Clair River or the Detroit River.
- Not contiguous to the Great Lakes, an inland lake or pond, or a river or stream; and more than five acres in size except in counties of less than 100,000 population.
- Not contiguous to the Great Lakes, an inland lake or pond, or a river or stream; and five acres or less in size if the department determines that protection of the area is essential to the preservation of the natural resources of the state from pollution, impairment or destruction and the department has so notified the owner.

The following activities are prohibited within regulated wetlands without an EGLE permit:

- Placing of fill material
- Dredging or the removal of soil
- Construction or development within
- Draining of surface water

4.2 LOCAL CONSIDERATIONS

4.2.1 CITY OF MARSHALL, CALHOUN COUNTY, MICHIGAN

The City of Marshall does have a wetlands ordinance. The city will need to review and approve any proposed work on site.

5. CONCLUSIONS

Based upon the data, criteria, and evidence noted above, it is SME's professional opinion that the area of interest surveyed for the site does include 11 regulated wetlands, 10 unregulated wetlands, and one undetermined wetland.

Appended are the photo logs with representative photographs of the site and soil profiles, and the US Army Corps of Engineers (USACE) Midwest Region Wetland Determination Data Forms and calculations.

PREPARED BY:

Alexander Kriebel

Alexander Kriebel
Survey Specialist

REVIEWED BY:

Sarah B. Wilson

Sarah Wilson
Project Consultant

FIGURES

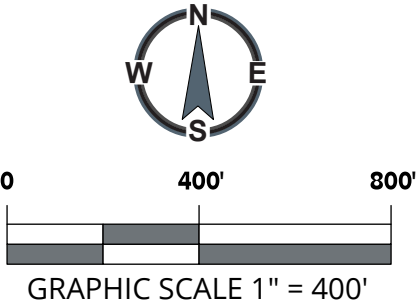
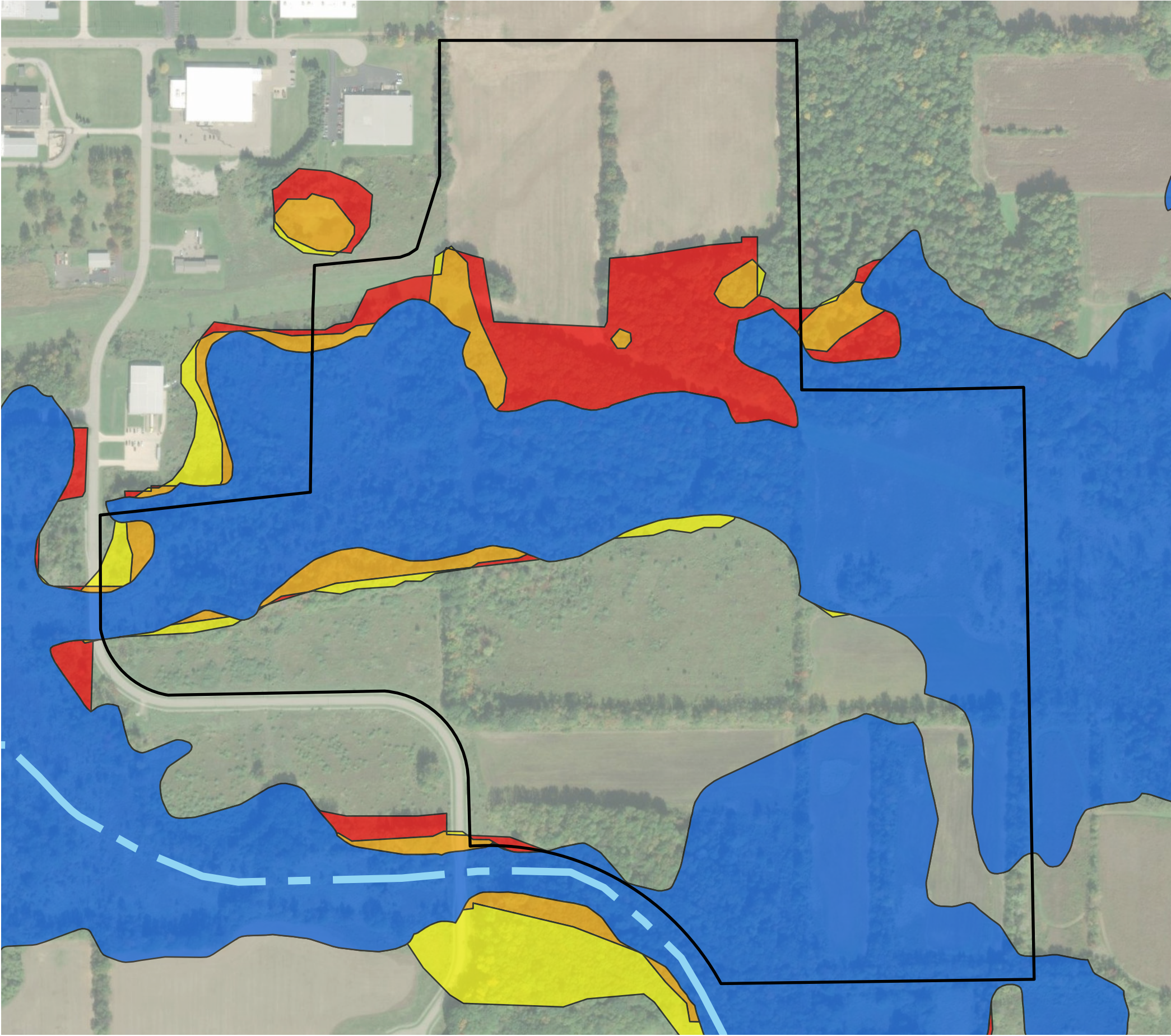
FIGURE 1: EGLE PART 303 WETLAND DIAGRAM

FIGURE 2: NATIONAL WETLAND INVENTORY DIAGRAM

FIGURE 3: USDA SOIL SURVEY DIAGRAM

FIGURE 4: DELINEATED WETLAND AREA AND FLAGGING LOCATIONS DIAGRAM

User: tylor.mahany
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Date Exported: 11/1/2024 11:54 AM



- LEGEND**
- APPROXIMATE DELINEATION BOUNDARY
 - - - APPROXIMATE LOCATION OF TALMADGE CREEK
 - [Red Box] APPROXIMATE AREA IDENTIFIED AS: 78 DNR
 - [Yellow Box] APPROXIMATE AREA IDENTIFIED AS: NWI ONLY
 - [Blue Box] APPROXIMATE AREA IDENTIFIED AS: HYDRIC SOILS
 - [Orange Box] APPROXIMATE AREA IDENTIFIED AS: 78 DNR & NWI
 - [Green Box] APPROXIMATE AREA IDENTIFIED AS: HYDRIC SOILS & NWI
 - [Purple Box] APPROXIMATE AREA IDENTIFIED AS: HYRIC SOILS & 78 DNR
 - [Brown Box] APPROXIMATE AREA IDENTIFIED AS: HYDRIC SOILS, 78 DNR, & NWI

NOTES:
1. BASE DRAWING INFORMATION TAKEN FROM ESRI WORLD IMAGERY SERVICE, UNDATED IMAGE.
2. DATA WAS COLLECTED FROM THE MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY (EGLE) ONLINE ENVIRONMENTAL MAPS AND OPEN DATA HUB, DOWNLOADED ON 10-31-2024.



Project:
BROOKS INDUSTRIAL PARK WETLAND DELINEATION

Project Location:
MARSHALL, MICHIGAN

Sheet Name:
EGLE PART 303 WETLAND DATA DIAGRAM

No.	Revision Date

Date:	11-01-2024
Drawn By:	T. MAHANY
Designer:	A. KREIBEL
Scale:	1" = 400'
Project:	095567.01

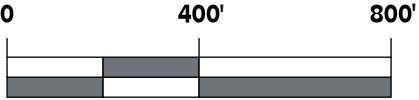
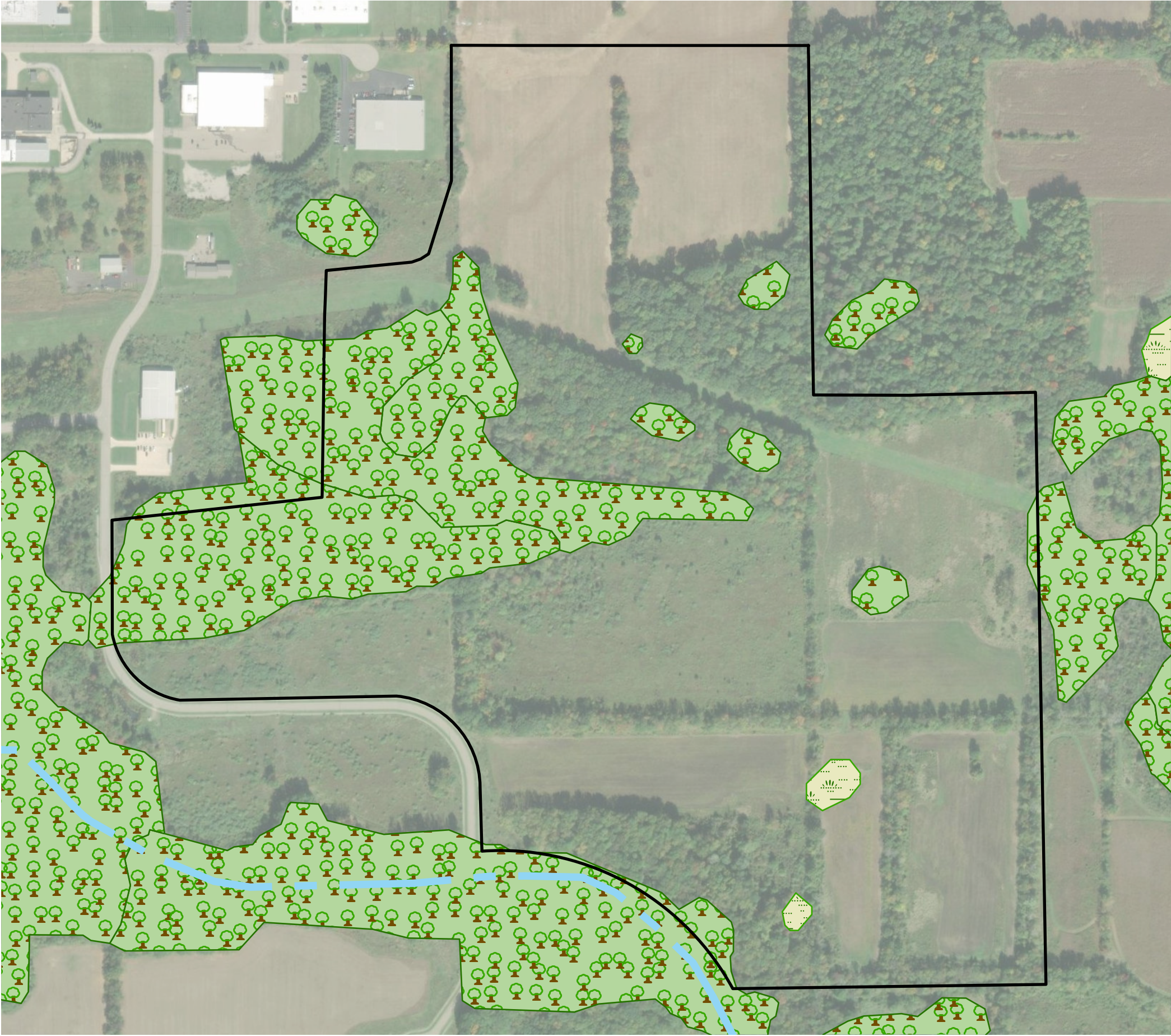
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01

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Date Exported: 11/1/2024 11:48 AM



GRAPHIC SCALE 1" = 400'

LEGEND

- APPROXIMATE DELINEATION BOUNDARY
- APPROXIMATE LOCATION OF TALMADGE CREEK
- APPROXIMATE AREA IDENTIFIED AS: FRESHWATER EMERGENT WETLAND
- APPROXIMATE AREA IDENTIFIED AS: FRESHWATER FORESTED/SHRUB WETLAND
- APPROXIMATE AREA IDENTIFIED AS: RIVERINE
- APPROXIMATE AREA IDENTIFIED AS: FRESHWATER LAKE
- APPROXIMATE AREA IDENTIFIED AS: FRESHWATER POND
- APPROXIMATE AREA IDENTIFIED AS: OTHER IDENTIFIED WETLAND

NOTES:
1. BASE DRAWING INFORMATION TAKEN FROM ESRI WORLD IMAGERY SERVICE, UNDATED IMAGE
2. DATA WAS COLLECTED FROM THE UNITED STATES FISH & WILDLIFE SERVICE ONLINE WETLAND DATA DOWNLOAD SERVICE, DOWNLOADED ON 10-31-2024.



Project:

BROOKS INDUSTRIAL PARK WETLAND DELINEATION

Project Location:

MARSHALL, MICHIGAN

Sheet Name:

NATIONAL WETLAND INVENTORY DIAGRAM

No.	Revision Date

Date:	10-31-2024
Drawn By:	T. MAHANY
Designer:	A. KREIBEL
Scale:	1" = 400'
Project:	095567.01

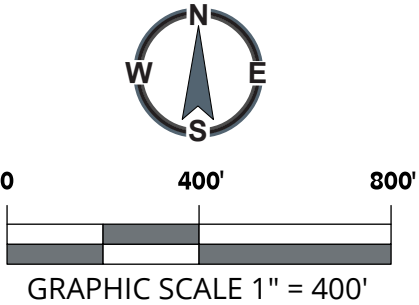
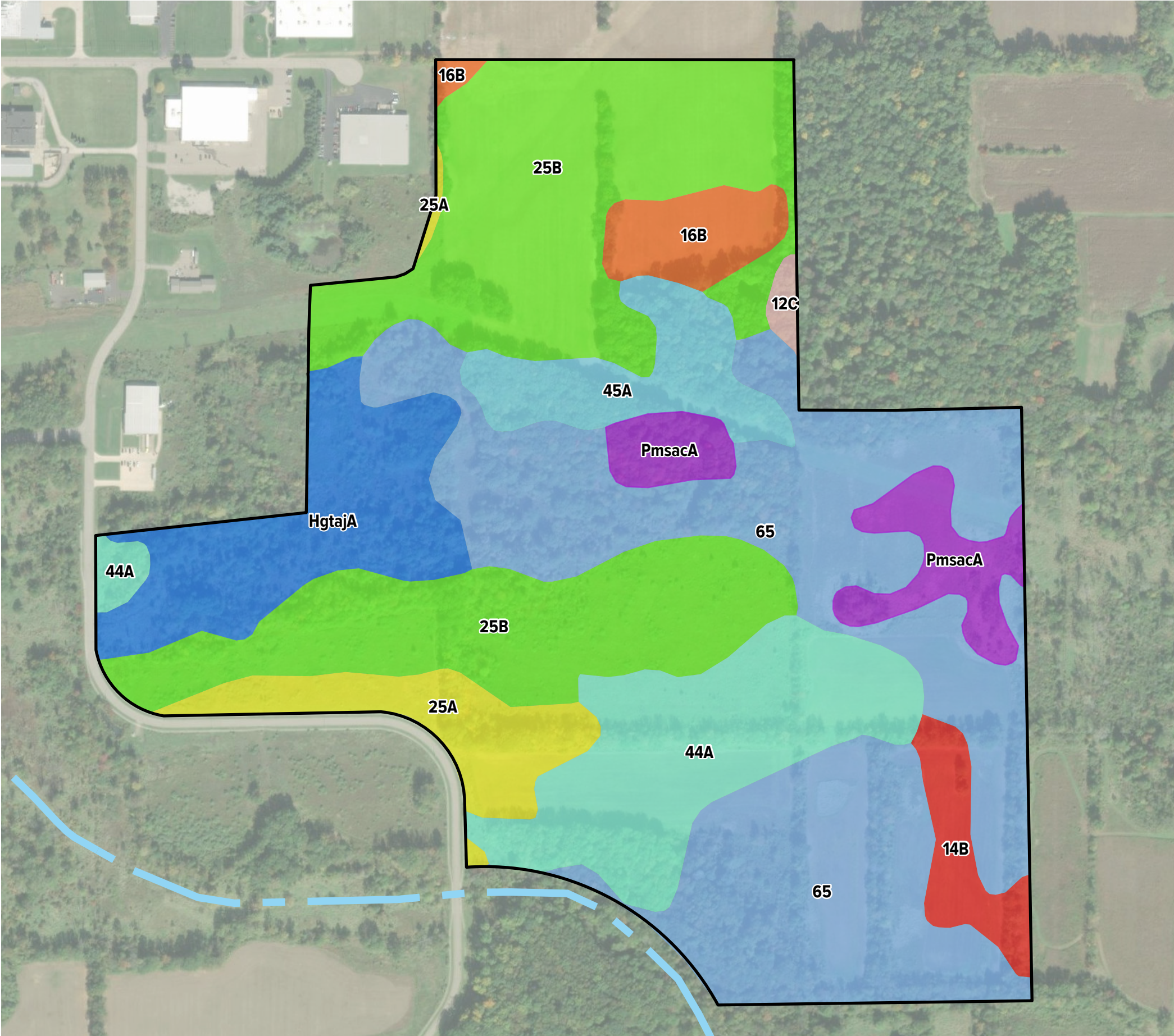
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LEGEND

- APPROXIMATE DELINEATION BOUNDARY
- APPROXIMATE LOCATION OF TALMADGE CREEK
- 12C: COLOMA LOAMY SAND, 6 TO 12 PERCENT SLOPES - HYDROLOGIC RATING A
- 14B: BRONSON SANDY LOAM, 0 TO 6 PERCENT SLOPES - HYDROLOGIC RATING B
- 16B: OSHTEMO SANDY LOAM, 0 TO 6 PERCENT SLOPES - HYDROLOGIC RATING A
- 25A: KALAMAZOO LOAM, 0 TO 2 PERCENT SLOPES - HYDROLOGIC RATING C
- 25B: KALAMAZOO LOAM, 2 TO 6 PERCENT SLOPES - HYDROLOGIC RATING C
- 44A: MATHERTON LOAM, 0 TO 3 PERCENT SLOPES - HYDROLOGIC RATING B/D
- 45A: SLEETH LOAM, 0 TO 2 PERCENT SLOPES - HYDROLOGIC RATING C
- 65: SEBEWA LOAM, 0 TO 2 PERCENT SLOPES - HYDROLOGIC RATING B/D
- HgtajA: HOUGHTON MUCK, UNDRAINED, 0 TO 1 PERCENT SLOPES - HYDROLOGIC RATING A/D
- PmsacA: PALMS MUCK, 0 TO 1 PERCENT SLOPES - HYDROLOGIC RATING B/D

NOTES:
1. BASE DRAWING INFORMATION TAKEN FROM ESRI WORLD IMAGERY SERVICE, UNDATED IMAGE.
2. DATA WAS COLLECT FROM THE USDA NATURAL RESOURCES CONSERVATION SERVICE (NRCS) WEB SOIL SURVEY ONLINE PORTAL, DOWNLOADED ON 10-31-2024.



Project:
BROOKS INDUSTRIAL PARK WETLAND DELINEATION

Project Location:
MARSHALL, MICHIGAN

Sheet Name:
USDA WEB SOIL SURVEY DIAGRAM

No.	Revision Date

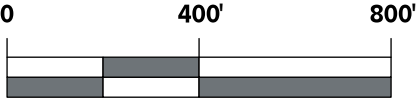
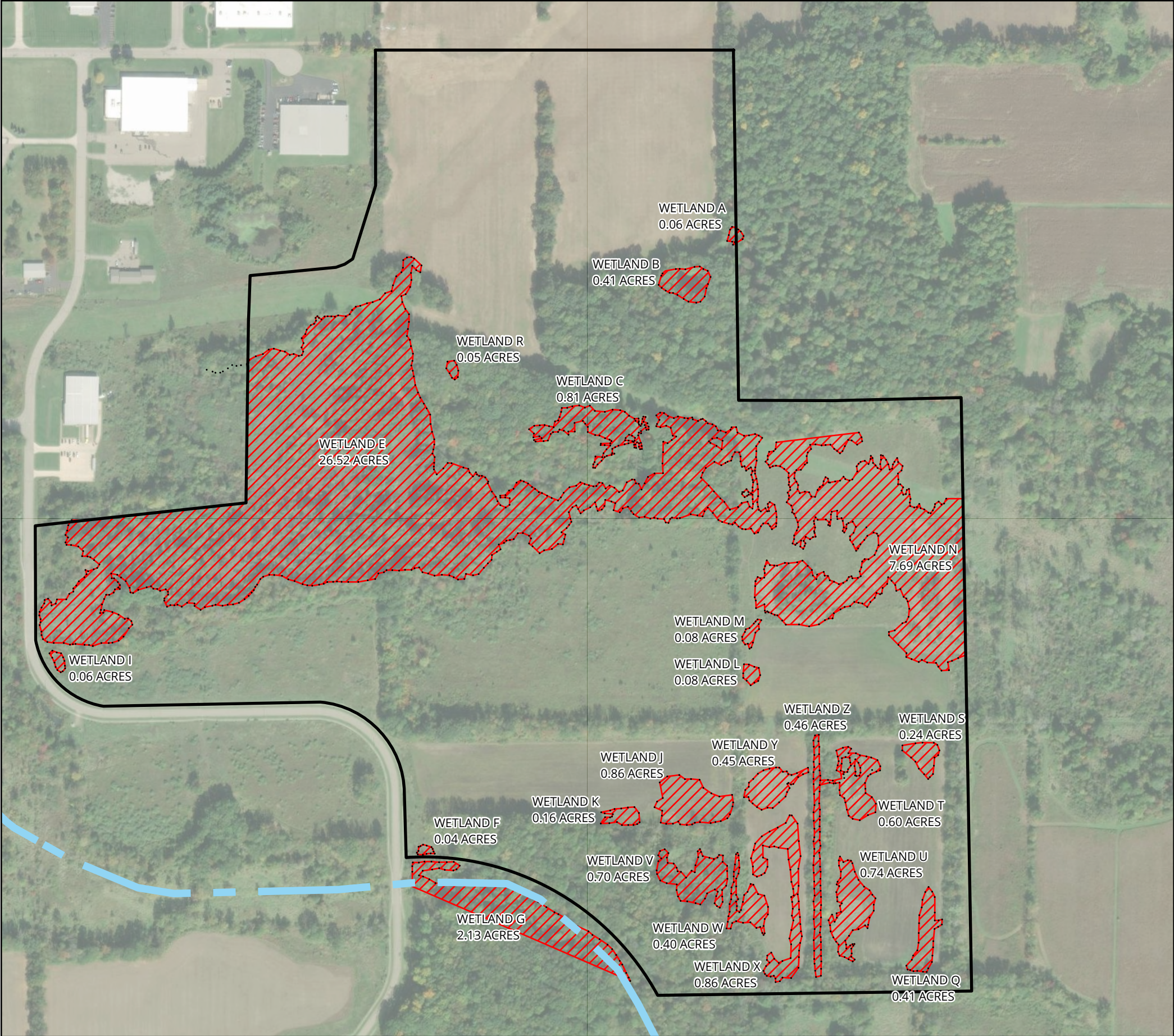
Date:	10-29-2024
Drawn By:	T. MAHANY
Designer:	A. KREIBEL
Scale:	1" = 400'
Project:	095567.01
Figure No.:	03

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GRAPHIC SCALE 1" = 400'

LEGEND

- APPROXIMATE WETLAND FLAGGING LOCATION
- APPROXIMATE DELINEATION BOUNDARY
- APPROXIMATE LOCATION OF TALMADGE CREEK
- ▨ APPROXIMATE WETLAND BOUNDARY

NOTES:
1. BASE DRAWING INFORMATION TAKEN FROM ESRI WORLD IMAGERY SERVICE, UNDATED IMAGE.



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Project:

BROOKS INDUSTRIAL PARK WETLAND DELINEATION

Project Location:

MARSHALL, MICHIGAN

Sheet Name:

DELINEATED WETLAND AREA AND FLAGGING LOCATIONS DIAGRAM

No.	Revision Date

Date:	10-29-2024
Drawn By:	T. MAHANY
Designer:	A. KREIBEL
Scale:	1" = 180'
Project:	095567.01

Figure No.:	04
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APPENDIX A

PHOTOLOGS



PHOTO NO. 1: Upland - Soil Profile



PHOTO NO. 2: Upland - Soil Pit

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 3: Upland - Habitat



PHOTO NO. 4: Upland - Habitat

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 5: Wetland A - Soil Profile



PHOTO NO. 6: Wetland A - Soil Pit

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 7: Wetland A - Habitat



PHOTO NO. 8: Wetland A - Habitat

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 9: Wetland B - Soil Profile



PHOTO NO. 10: Wetland B - Soil Pit

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 11: Wetland B - Habitat



PHOTO NO. 12: Wetland B - Habitat

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 13: Wetland C - Soil Profile



PHOTO NO. 14: Wetland C - Soil Pit

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 15: Wetland C - Habitat



PHOTO NO. 16: Wetland C - Habitat

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 17: Wetland E - Soil Profile



PHOTO NO. 18: Wetland E - Soil Pit

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 19: Wetland E - Habitat



PHOTO NO. 20: Wetland E - Habitat

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 21: Wetland F - Soil Profile



PHOTO NO. 22: Wetland F - Soil Pit

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 23: Wetland F - Soil Features



PHOTO NO. 24: Wetland F - Habitat

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 25: Wetland F - Habitat



PHOTO NO. 26: Wetland G - Soil Profile

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 27: Wetland G - Soil Pit



PHOTO NO. 28: Wetland G - Crayfish Burrows

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 29: Wetland G - Habitat



PHOTO NO. 30: Wetland G - Habitat

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 31: Wetland I - Soil Profile



PHOTO NO. 32: Wetland I - Soil Pit

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 33: Wetland I - Habitat



PHOTO NO. 34: Wetland I - Habitat

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 35: Wetland J - Soil Profile



PHOTO NO. 36: Wetland J - Soil Pit

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 37: Wetland J - Habitat



PHOTO NO. 38: Wetland J - Habitat

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 39: Wetland J - Farmed Wetland Area



PHOTO NO. 40: Wetland J - Farmed Wetland Area

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 41: Wetland J - Farmed Wetland Area



PHOTO NO. 42: Wetland J - Farmed Wetland Area Later Season

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 43: Wetland J - Farmed Wetland Area Later Season



PHOTO NO. 44: Wetland J - Farmed Wetland Area Later Season

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 45: Wetland K - Soil Profile



PHOTO NO. 46: Wetland K - Soil Pit

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 47: Wetland K - Habitat



PHOTO NO. 48: Wetland K - Farmed Wetland Area

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 49: Wetland K - Farmed Wetland Area



PHOTO NO. 50: Wetland L - Soil Profile

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 51: Wetland L - Soil Pit



PHOTO NO. 52: Wetland L - Soil Features

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 53: Wetland L - Soil Features



PHOTO NO. 54: Wetland L - Habitat

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 55: Wetland L - Farmed Wetland Area



PHOTO NO. 56: Wetland L - Farmed Wetland Area

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 57: Wetland M - Soil Profile



PHOTO NO. 58: Wetland M - Soil Pit

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 59: Wetland M - Soil Features



PHOTO NO. 60: Wetland M - Soil Features

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 61: Wetland M - Habitat



PHOTO NO. 62: Wetland M - Farmed Wetland Area

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 63: Wetland N - Soil Profile



PHOTO NO. 64: Wetland N - Soil Pit

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 65: Wetland N - Soil Features



PHOTO NO. 66: Wetland N - Soil Features

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 67: Wetland N - Habitat



PHOTO NO. 68: Wetland N - Habitat

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 69: Wetland N - Habitat



PHOTO NO. 70: Wetland N - Habitat

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 71: Wetland N - Habitat



PHOTO NO. 72: Wetland Q - Soil Profile

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 73: Wetland Q - Soil Pit



PHOTO NO. 74: Wetland Q - Soil Features

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 75: Wetland Q - Soil Features



PHOTO NO. 76: Wetland Q - Habitat

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 77: Wetland Q - Habitat



PHOTO NO. 78: Wetland Q - Farmed Wetland Area

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 79: Wetland R - Soil Profile



PHOTO NO. 80: Wetland R - Soil Pit

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 81: Wetland R - Soil Features



PHOTO NO. 82: Wetland R - Soil Features

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 83: Wetland R - Habitat



PHOTO NO. 84: Wetland R - Habitat

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 85: Wetland R - Habitat



PHOTO NO. 86: Wetland S - Soil Profile

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 87: Wetland S - Soil Features



PHOTO NO. 88: Wetland S - Soil Features

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 89: Wetland S - Algae and Cracks



PHOTO NO. 90: Wetland S - Habitat

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 91: Wetland S - Habitat



PHOTO NO. 92: Wetland S - Habitat

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 93: Wetland S - Habitat



PHOTO NO. 94: Wetland T -Soil Profile

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 95: Wetland T - Soil Pit



PHOTO NO. 96: Wetland T - Habitat

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 97: Wetland T - Habitat



PHOTO NO. 98: Wetland T - Algae and Cracks

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 99: Wetland T - Farmed Wetland Area



PHOTO NO. 100: Wetland T - Farmed Wetland Area

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 101: Wetland T - Farmed Wetland Area



PHOTO NO. 102: Wetland U - Soil Profile

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 103: Wetland U - Soil Pit



PHOTO NO. 104: Wetland U - Soil Features

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 105: Wetland U - Habitat



PHOTO NO. 106: Wetland U - Habitat

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 107: Wetland U - Farmed Wetland Area



PHOTO NO. 108: Wetland U - Farmed Wetland Area

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 109: Wetland U - Farmed Wetland Area



PHOTO NO. 110: Wetland U - Farmed Wetland Area

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 111: Wetland V - Soil Profile



PHOTO NO. 112: Wetland V - Soil Pit

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 113: Wetland V - Soil Features



PHOTO NO. 114: Wetland V - Habitat

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 115: Wetland V - Habitat



PHOTO NO. 116: Wetland V - Habitat

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 117: Wetland W – Soil Profile



PHOTO NO. 118: Wetland W – Soil Pit

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 119: Wetland W - Habitat



PHOTO NO. 120: Wetland W - Habitat

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 121: Wetland W - Habitat



PHOTO NO. 122: Wetland W - Algae and Cracks

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 123: Wetland X - Soil Profile



PHOTO NO. 124: Wetland X - Soil Pit

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 125: Wetland X - Habitat



PHOTO NO. 126: Wetland X - Farmed Wetland Area

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 127: Wetland X - Farmed Wetland Area



PHOTO NO. 128: Wetland X - Farmed Wetland Area Later Season

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 129: Wetland X - Algae and Cracks



PHOTO NO. 130: Wetland Y - Soil Profile

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 131: Wetland Y - Soil Pit



PHOTO NO. 132: Wetland Y - Habitat

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 133: Wetland Y - Farmed Wetland Area



PHOTO NO. 134: Wetland Y - Farmed Wetland Area Later Season

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 135: Wetland Y - Farmed Wetland Area Later Season



PHOTO NO. 136: Wetland Y - Algae and Cracks

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 137: Wetland Z - Soil Profile



PHOTO NO. 138: Wetland Z - Soil Pit

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan



PHOTO NO. 139: Wetland Z - Habitat



PHOTO NO. 140: Wetland Z - Habitat

SME Project No.	095567.01
Photographs by:	Alex Kriebel
Date:	December 9, 2024
Project:	Marshall (Drakes)
Location:	1631 Pratt Ave, Marshall, Michigan

APPENDIX B

US ARMY CORPS OF ENGINEERS (USACE) MIDWEST REGION WETLAND DETERMINATION DATA FORMS AND CALCULATIONS

WETLAND DETERMINATION DATA FORMS - WETLAND A
POINT INTERCEPT FORMS - WETLAND A
WETLAND DETERMINATION FORMS - WETLAND B
POINT INTERCEPT FORMS - WETLAND B
WETLAND DETERMINATION DATA FORMS - WETLAND C
POINT INTERCEPT FORMS - WETLAND C
WETLAND DETERMINATION DATA FORMS - WETLAND E
POINT INTERCEPT FORMS - WETLAND E
WETLAND DETERMINATION DATA FORMS - WETLAND F
POINT INTERCEPT FORMS - WETLAND F
WETLAND DETERMINATION DATA FORMS - WETLAND G
POINT INTERCEPT FORMS - WETLAND G
WETLAND DETERMINATION DATA FORMS - WETLAND I
POINT INTERCEPT FORMS - WETLAND I
WETLAND DETERMINATION DATA FORMS - WETLAND J
POINT INTERCEPT FORMS - WETLAND J
WETLAND DETERMINATION DATA FORMS - WETLAND K
POINT INTERCEPT FORMS - WETLAND K
WETLAND DETERMINATION DATA FORMS - WETLAND L
POINT INTERCEPT FORMS - WETLAND L
WETLAND DETERMINATION DATA FORMS - WETLAND M
POINT INTERCEPT FORMS - WETLAND M
WETLAND DETERMINATION DATA FORMS - WETLAND N
POINT INTERCEPT FORMS - WETLAND N
WETLAND DETERMINATION DATA FORMS - WETLAND Q
POINT INTERCEPT FORMS - WETLAND Q
WETLAND DETERMINATION DATA FORMS - WETLAND R
POINT INTERCEPT FORMS - WETLAND R
WETLAND DETERMINATION DATA FORMS - WETLAND S
POINT INTERCEPT FORMS - WETLAND S
WETLAND DETERMINATION DATA FORMS - WETLAND T
POINT INTERCEPT FORMS - WETLAND T
WETLAND DETERMINATION DATA FORMS - WETLAND U
POINT INTERCEPT FORMS - WETLAND U
WETLAND DETERMINATION DATA FORMS - WETLAND V
POINT INTERCEPT FORMS - WETLAND V
WETLAND DETERMINATION DATA FORMS - WETLAND W
POINT INTERCEPT FORMS - WETLAND W
WETLAND DETERMINATION DATA FORMS - WETLAND X
POINT INTERCEPT FORMS - WETLAND X
WETLAND DETERMINATION DATA FORMS - WETLAND Y
POINT INTERCEPT FORMS - WETLAND Y
WETLAND DETERMINATION DATA FORMS - WETLAND Z
POINT INTERCEPT FORMS - WETLAND Z
WETLAND DETERMINATION DATA FORMS - UPLAND
POINT INTERCEPT FORMS - UPLAND

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: 095567.01/Industrial Park City/County: Marshall/Calhoun County Sampling Date: 7/29/2024

Applicant/Owner: State: MI Sampling Point: Wetland-A

Investigator(s): Alexander Kriebel Section, Township, Range: Section 1 , Township 3 South , Range 6 West

Landform (hillside, terrace, etc.): Freshwater Forested Shrub Wetland Local relief (concave, convex, none): concave

Slope (%): 20 Lat: 42.244710 Long: -84.949074 Datum: WGS84

Soil Map Unit Name: 12-C (Coloma Loamy Sand, 6-12% Slopes), 16-B (Oshtemo Sandy Loam, 0-6% Slopes), 25-B (Kalamazoo Loam, 2-6% Slopes) NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area within a Wetland? Yes X No
Hydric Soil Present? Yes X No	
Wetland Hydrology Present? Yes X No	

Remarks:
Old field stones burried in strata.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: (A) Total Number of Dominant Species Across All Strata: (B) Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
1.				
2.				
3.				
4.				
5.				
=Total Cover				
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species x 1 = FACW species x 2 = FAC species x 3 = FACU species x 4 = UPL species x 5 = Column Totals: (A) (B) Prevalence Index = B/A =
1.				
2.				
3.				
4.				
5.				
=Total Cover				
Herb Stratum (Plot size:)				Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 ¹ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
=Total Cover				
Woody Vine Stratum (Plot size:)				Hydrophytic Vegetation Present? Yes X No
1.				
2.				
=Total Cover				

Remarks: (Include photo numbers here or on a separate sheet.)
Point Intercept Method used, see attached files. PI= 2.41

SOIL

Sampling Point: Wetland-A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 4/2	85	5YR 3/4	15	C	M	Loamy/Clayey	Prominent redox concentrations
6-24	10YR 4/2	80	5YR 3/4	20	C	M	Loamy/Clayey	Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

☐ Histosol (A1)

☐ Histic Epipedon (A2)

☐ Black Histic (A3)

☐ Hydrogen Sulfide (A4)

☐ Stratified Layers (A5)

☐ 2 cm Muck (A10)

☐ Depleted Below Dark Surface (A11)

☐ Thick Dark Surface (A12)

☐ Sandy Mucky Mineral (S1)

☐ 5 cm Mucky Peat or Peat (S3)

☐ Sandy Gleyed Matrix (S4)

☐ Sandy Redox (S5)

☐ Stripped Matrix (S6)

☐ Dark Surface (S7)

☐ Loamy Mucky Mineral (F1)

☐ Loamy Gleyed Matrix (F2)

☒ Depleted Matrix (F3)

☐ Redox Dark Surface (F6)

☐ Depleted Dark Surface (F7)

☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

☐ Coast Prairie Redox (A16)

☐ Iron-Manganese Masses (F12)

☐ Red Parent Material (F21)

☐ Very Shallow Dark Surface (F22)

☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes ☒ No ☐

Remarks:
This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

☒ Surface Water (A1)

☒ High Water Table (A2)

☒ Saturation (A3)

☐ Water Marks (B1)

☐ Sediment Deposits (B2)

☐ Drift Deposits (B3)

☐ Algal Mat or Crust (B4)

☐ Iron Deposits (B5)

☐ Inundation Visible on Aerial Imagery (B7)

☒ Sparsely Vegetated Concave Surface (B8)

☐ Water-Stained Leaves (B9)

☐ Aquatic Fauna (B13)

☐ True Aquatic Plants (B14)

☐ Hydrogen Sulfide Odor (C1)

☐ Oxidized Rhizospheres on Living Roots (C3)

☐ Presence of Reduced Iron (C4)

☐ Recent Iron Reduction in Tilled Soils (C6)

☐ Thin Muck Surface (C7)

☐ Gauge or Well Data (D9)

☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)

☐ Drainage Patterns (B10)

☐ Dry-Season Water Table (C2)

☐ Crayfish Burrows (C8)

☐ Saturation Visible on Aerial Imagery (C9)

☒ Stunted or Stressed Plants (D1)

☒ Geomorphic Position (D2)

☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☒ No ☐

Water Table Present? Yes ☒ No ☐

Saturation Present? Yes ☒ No ☐

Depth (inches): 8

Depth (inches): 2

Depth (inches): 0

Wetland Hydrology Present? Yes ☒ No ☐

(includes capillary fringe)

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland A				Date: 8/7/2024			
Transect 1				Transect 2			
Looking Down		Looking Up		Looking Down		Looking Up	
Interval	Species	Wetland Indicator	Species	Wetland Indicator	Interval	Species	Wetland Indicator
1	Circaea canadensis	FACU	Quercus shumardii	FACW	1	Circaea canadensis	FACU
2	Circaea canadensis	FACU	Quercus shumardii	FACW	2	Circaea canadensis	FACU
3	Circaea canadensis	FACU	Quercus shumardii	FACW	3	Circaea canadensis	FACU
4	Null		Acer saccharinum	FACW	4	Rosa multiflora	FACU
5	Null		Acer saccharinum	FACW	5	Rosa multiflora	FACU
6	Null		Acer saccharinum	FACW	6		
7	Null		Acer saccharinum	FACW	7		
8	Null		Acer saccharinum	FACW	8		
9	Null		Acer saccharinum	FACW	9		
10	Null		Acer saccharinum	FACW	10		
11	Null		Acer saccharinum	FACW	11		
12	Null		Acer saccharinum	FACW	12		
13	Null		Acer saccharinum	FACW	13		
14	Null		Acer saccharinum	FACW	14		
15	Null		Acer saccharinum	FACW	15		
16	Null		Acer saccharinum	FACW	16		
17	Null		Acer saccharinum	FACW	17		
18	Null		Acer saccharinum	FACW	18		
19	Null		Acer saccharinum	FACW	19		
20	Null		Acer saccharinum	FACW	20		
21	Null		Acer saccharinum	FACW	21		
22	Null		Acer saccharinum	FACW	22		
23	Null		Acer saccharinum	FACW	23		
24	Ulmus americana	FACW	Acer saccharinum	FACW	24		
25	Circaea canadensis	FACU	Acer saccharinum	FACW	25		
26	Rosa multiflora	FACU	Acer saccharinum	FACW	26		
27	Ulmus americana	FACW	Acer saccharinum	FACW	27	Rosa multiflora	FACU
28	Circaea canadensis	FACU	Acer saccharinum	FACW	28	Rosa multiflora	FACU
29	Rosa multiflora	FACU	Acer saccharinum	FACW	29	Circaea canadensis	FACU
30	Ulmus americana	FACW	Acer saccharinum	FACW	30	Circaea canadensis	FACU

Point Intercept Calculations			
Wetland Indicator	Total Hits	Weight	Weighted Hits
OBL-Obligate		0 x1	0
FACW-Facultative Wetland	63	x2	126
FAC-Facultative		0 x3	0
FACU-Facultative Upland	16	x4	64
UPL-Upland		0 x5	0
Subtotals	79		190

PI = Weighted Hits/Unweighted Hits
PI = 190/79 = 2.41

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: 095567.01/Industrial Park City/County: Marshall/Calhoun County Sampling Date: 7/29/2024

Applicant/Owner: State: MI Sampling Point: Wetland-B

Investigator(s): Alexander Kriebel Section, Township, Range: Section 1 , Township 3 South , Range 6 West

Landform (hillside, terrace, etc.): Freshwater Forested Shrub Wetland Local relief (concave, convex, none): concave

Slope (%): 15 Lat: 42.244192 Long: -84.949423 Datum: WGS84

Soil Map Unit Name: 12-C (Coloma Loamy Sand, 6-12% Slopes), 15-B (Oshtemo Sandy Loam, 0-6% Slopes), 25-B (Kalamazoo Loam, 2-6% Slopes), 45-A (Sleeth Loam, 0-2% Slopes), 65 (Sebewa Loam, 0-2% Slopes) NWI classification: PSS1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area within a Wetland? Yes X No
Hydric Soil Present? Yes X No	
Wetland Hydrology Present? Yes X No	
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: (A) Total Number of Dominant Species Across All Strata: (B) Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
1.				
2.				
3.				
4.				
5.				
=Total Cover				
Sapling/Shrub Stratum (Plot size:)				
1.				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species x 1 = FACW species x 2 = FAC species x 3 = FACU species x 4 = UPL species x 5 = Column Totals: (A) (B) Prevalence Index = B/A =
2.				
3.				
4.				
5.				
=Total Cover				
Herb Stratum (Plot size:)				
1.				Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 ¹ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
=Total Cover				
Woody Vine Stratum (Plot size:)				
1.				Hydrophytic Vegetation Present? Yes X No
2.				
=Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				
Point Intercept Method used, see attached files. PI= 1.22				

SOILSampling Point: Wetland-B**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10YR 2/1	100					Mucky Sand	
10-24	10YR 5/2	100					Mucky Sand	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)
☒ Hydrogen Sulfide (A4)	☒ Dark Surface (S7)
☐ Stratified Layers (A5)	☐ Loamy Mucky Mineral (F1)
☐ 2 cm Muck (A10)	☐ Loamy Gleyed Matrix (F2)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Matrix (F3)
☐ Thick Dark Surface (A12)	☐ Redox Dark Surface (F6)
☒ Sandy Mucky Mineral (S1)	☐ Depleted Dark Surface (F7)
☐ 5 cm Mucky Peat or Peat (S3)	☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

☐ Coast Prairie Redox (A16)
☐ Iron-Manganese Masses (F12)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**
 Type: _____
 Depth (inches): _____
Hydric Soil Present? Yes ☒ No ☐**Remarks:**
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)
HYDROLOGY**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

☒ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☒ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☒ True Aquatic Plants (B14)
☐ Water Marks (B1)	☒ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☒ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)
☐ Drainage Patterns (B10)
☒ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☒ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☒	No ☐	Depth (inches): <u>24</u>
Water Table Present?	Yes ☒	No ☐	Depth (inches): <u>12</u>
Saturation Present?	Yes ☒	No ☐	Depth (inches): <u>0</u>
(includes capillary fringe)			

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

B14 (Duckweed)

Wetland B				Date: 8/7/2024			
Transect 1				Transect 2			
Looking Down		Looking Up		Looking Down		Looking Up	
Interval	Species	Wetland Indicator	Species	Interval	Species	Wetland Indicator	Species
1	Onoclea sensibilis	FACW	Cornus racemosa	1	Fraxinus pennsylvanica	FACW	Acer saccharinum
2	Onoclea sensibilis	FACW	Cornus racemosa	2	Fraxinus pennsylvanica	FACW	Acer saccharinum
3	Lemna minor	OBL	Cornus racemosa	3	Lemna minor	OBL	Acer saccharinum
4	Lemna minor	OBL	Null	4	Lemna minor	OBL	Acer saccharinum
5	Lemna minor	OBL	Null	5	Lemna minor	OBL	Acer saccharinum
6	Lemna minor	OBL	Null	6	Lemna minor	OBL	Null
7	Lemna minor	OBL	Null	7	Lemna minor	OBL	Null
8	Lemna minor	OBL	Null	8	Lemna minor	OBL	Null
9	Lemna minor	OBL	Null	9	Lemna minor	OBL	Null
10	Lemna minor	OBL	Null	10	Lemna minor	OBL	Null
11	Lemna minor	OBL	Null	11	Lemna minor	OBL	Null
12	Lemna minor	OBL	Null	12	Lemna minor	OBL	Null
13	Lemna minor	OBL	Null	13	Lemna minor	OBL	Null
14	Lemna minor	OBL	Null	14	Lemna minor	OBL	Null
15	Lemna minor	OBL	Null	15	Lemna minor	OBL	Null
16	Lemna minor	OBL	Null	16	Lemna minor	OBL	Null
17	Lemna minor	OBL	Null	17	Cephalanthus occidentalis	OBL	Null
18	Lemna minor	OBL	Null	18	Cephalanthus occidentalis	OBL	Null
19	Lemna minor	OBL	Null	19	Lemna minor	OBL	Null
20	Lemna minor	OBL	Null	20	Cephalanthus occidentalis	OBL	Null
21	Lemna minor	OBL	Null	21	Cephalanthus occidentalis	OBL	Null
22	Lemna minor	OBL	Null	22	Lemna minor	OBL	Null
23	Cephalanthus occidentalis	OBL	Null	23	Cephalanthus occidentalis	OBL	Null
24	Cephalanthus occidentalis	OBL	Null	24	Cephalanthus occidentalis	OBL	Null
25	Cephalanthus occidentalis	OBL	Null	25	Cephalanthus occidentalis	OBL	Null
26	Cephalanthus occidentalis	OBL	Null	26	Cephalanthus occidentalis	OBL	Null
27	Cephalanthus occidentalis	OBL	Null	27	Cephalanthus occidentalis	OBL	Null
28	Cephalanthus occidentalis	OBL	Null	28	Cephalanthus occidentalis	OBL	Null
29	Cephalanthus occidentalis	OBL	Null	29	Cephalanthus occidentalis	OBL	Null
30	Cephalanthus occidentalis	OBL	Null	30	Cephalanthus occidentalis	OBL	Null

Point Intercept Calculations			
Wetland Indicator	Total Hits	Weight	Weighted Hits
OBL-Obligate		56 x1	56
FACW-Facultative Wetland		9 x2	18
FAC-Facultative		3 x3	9
FACU-Facultative Upland		0 x4	0
UPL-Upland		0 x5	0
Subtotals	68		83

PI = Weighted Hits/Unweighted Hits
PI = 83/68 = 1.22

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: 095567.01/Industrial Park City/County: Marshall/Calhoun County Sampling Date: 8/1/2024
Applicant/Owner: _____ State: MI Sampling Point: Wetland C
Investigator(s): Alexander Kriebel Section, Township, Range: Section 1 , Township 3 South , Range 6 West
Landform (hillside, terrace, etc.): Freshwater Forested Shrub Wetland Local relief (concave, convex, none): Concave
Slope (%): 2 Lat: 42.242805 Long: -84.951222 Datum: WGS84
Soil Map Unit Name: 45-A (Sleeth Loam, 0-2% Slopes), PmsacA (Palms Muck, 0-1% Slopes), 65 (Sebewa Loam, 0-2% Slopes) NWI classification: PSS1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks:	

VEGETATION – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: _____) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ _____ =Total Cover	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)																
<u>Sapling/Shrub Stratum</u> (Plot size: _____) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ _____ =Total Cover																	
<u>Herb Stratum</u> (Plot size: _____) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ _____ =Total Cover																	
<u>Woody Vine Stratum</u> (Plot size: _____) 1. _____ 2. _____ _____ =Total Cover	Prevalence Index worksheet: <table><tr><td>Total % Cover of:</td><td>Multiply by:</td></tr><tr><td>OBL species _____</td><td>x 1 = _____</td></tr><tr><td>FACW species _____</td><td>x 2 = _____</td></tr><tr><td>FAC species _____</td><td>x 3 = _____</td></tr><tr><td>FACU species _____</td><td>x 4 = _____</td></tr><tr><td>UPL species _____</td><td>x 5 = _____</td></tr><tr><td>Column Totals: _____ (A)</td><td>_____ (B)</td></tr><tr><td colspan="2">Prevalence Index = B/A = _____</td></tr></table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____ (A)	_____ (B)	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																
OBL species _____	x 1 = _____																
FACW species _____	x 2 = _____																
FAC species _____	x 3 = _____																
FACU species _____	x 4 = _____																
UPL species _____	x 5 = _____																
Column Totals: _____ (A)	_____ (B)																
Prevalence Index = B/A = _____																	
Hydrophytic Vegetation Indicators: ____ 1 - Rapid Test for Hydrophytic Vegetation ____ 2 - Dominance Test is >50% ____ 3 - Prevalence Index is ≤3.0 ¹ ____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																	
Hydrophytic Vegetation Present? Yes <u>X</u> No _____																	
Remarks: (Include photo numbers here or on a separate sheet.) Point Intercept Method used, see attached files. PI= 2.02																	

SOILSampling Point: Wetland C**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/1	95	10YR 3/4	5	C	PL	Sandy	Distinct redox concentrations
12-24	2.5Y 5/2	95	2.5Y 5/6	5	C	PL	Sandy	Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)
☐ Histic Epipedon (A2)	☒ Sandy Redox (S5)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)
☐ Hydrogen Sulfide (A4)	☒ Dark Surface (S7)
☐ Stratified Layers (A5)	☐ Loamy Mucky Mineral (F1)
☐ 2 cm Muck (A10)	☐ Loamy Gleyed Matrix (F2)
☒ Depleted Below Dark Surface (A11)	☐ Depleted Matrix (F3)
☐ Thick Dark Surface (A12)	☐ Redox Dark Surface (F6)
☐ Sandy Mucky Mineral (S1)	☐ Depleted Dark Surface (F7)
☐ 5 cm Mucky Peat or Peat (S3)	☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

☐ Coast Prairie Redox (A16)
☐ Iron-Manganese Masses (F12)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**
 Type: _____
 Depth (inches): _____
Hydric Soil Present? Yes ☒ No ☐**Remarks:**
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)
HYDROLOGY**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

☒ Surface Water (A1)	☒ Water-Stained Leaves (B9)
☒ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☒ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)
☐ Drainage Patterns (B10)
☒ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☒ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☒	No ☐	Depth (inches): <u>8</u>
Water Table Present?	Yes ☒	No ☐	Depth (inches): <u>13</u>
Saturation Present?	Yes ☒	No ☐	Depth (inches): <u>6</u>
(includes capillary fringe)			

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland C					Date: 8/7/2024				
Transect 1					Transect 2				
Looking Down		Looking Up			Looking Down		Looking Up		
Interval	Species	Wetland Indicator	Species	Wetland Indicator	Interval	Species	Wetland Indicator	Species	Wetland Indicator
1	Null		Acer saccharinum	FACW	1	Null		Ulmus americana	FACW
2	Null		Acer saccharinum	FACW	2	Null		Ulmus americana	FACW
3	Null		Acer saccharinum	FACW	3	Null		Acer saccharinum	FACW
4	Fraxinus pennsylvanica	FACW	Acer saccharinum	FACW	4	Null		Acer saccharinum	FACW
5	Fraxinus pennsylvanica	FACW	Acer saccharinum	FACW	5	Null		Acer saccharinum	FACW
6	Null		Acer saccharinum	FACW	6	Null		Ulmus americana	FACW
7	Null		Ulmus americana	FACW	7	Null		Ulmus americana	FACW
8	Null		Ulmus americana	FACW	8	Null		Ulmus americana	FACW
9	Null		Ulmus americana	FACW	9	Null		Ulmus americana	FACW
10	Null		Ulmus americana	FACW	10	Null		Ulmus americana	FACW
11	Null		Ulmus americana	FACW	11	Null		Ulmus americana	FACW
12	Null		Ulmus americana	FACW	12	Null		Ulmus americana	FACW
13	Null		Ulmus americana	FACW	13	Null		Ulmus americana	FACW
14	Null		Ulmus americana	FACW	14	Null		Ulmus americana	FACW
15	Null		Ulmus americana	FACW	15	Null		Ulmus americana	FACW
16	Null		Ulmus americana	FACW	16	Null		Ulmus americana	FACW
17	Null		Ulmus americana	FACW	17	Fraxinus pennsylvanica	FACW	Ulmus americana	FACW
18	Null		Ulmus americana	FACW	18	Null		Ulmus americana	FACW
19	Null		Ulmus americana	FACW	19	Fraxinus pennsylvanica	FACW	Ulmus americana	FACW
20	Fraxinus pennsylvanica	FACW	Ulmus americana	FACW	20	Null		Ulmus americana	FACW
21	Null		Ulmus americana	FACW	21	Null		Ulmus americana	FACW
22	Fraxinus pennsylvanica	FACW	Ulmus americana	FACW	22	Null		Ulmus americana	FACW
23	Null		Acer saccharinum	FACW	23	Null		Ulmus americana	FACW
24	Fraxinus pennsylvanica	FACW	Acer saccharinum	FACW	24	Null		Ulmus americana	FACW
25	Fraxinus pennsylvanica	FACW	Acer saccharinum	FACW	25	Null		Ulmus americana	FACW
26	Persicaria virginiana	FAC	Null		26	Fraxinus pennsylvanica	FACW	Ulmus americana	FACW
27	Persicaria virginiana	FAC	Null		27	Null		Acer saccharinum	FACW
28	Null		Ulmus americana	FACW	28	Null		Acer saccharinum	FACW
29	Null		Ulmus americana	FACW	29	Null		Acer saccharinum	FACW
30	Fraxinus pennsylvanica	FACW	Ulmus americana	FACW	30	Null		Acer saccharinum	FACW

Point Intercept Calculations			
Wetland Indicator	Total Hits	Weight	Weighted Hits
OBL-Obligate		0 x1	0
FACW-Facultative Wetland	68	x2	136
FAC-Facultative	2	x3	6
FACU-Facultative Upland	0	x4	0
UPL-Upland	0	x5	0
Subtotals	70		142

PI = Weighted Hits/Unweighted Hits
PI = 142/70 = 2.02

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: 095567.01/Industrial Park City/County: Marshall/Calhoun County Sampling Date: 8/1/2024

Applicant/Owner: State: MI Sampling Point: Wetland E

Investigator(s): Alexander Kriebel Section, Township, Range: Section 1 , Township 3 South , Range 6 West

Landform (hillside, terrace, etc.): Freshwater Forested Shrub Wetland/ Local relief (concave, convex, none): Concave

Slope (%): 2 Lat: 42.242421 Long: -84.949692 Datum: WGS84

Soil Map Unit Name: 25B (Kalamazoo Loam, 2-6% Slopes), 44A (Matherton Loam, 0-3% Slopes), 65 (Sebewa Loam, 0-2% Slopes), HgtajA (Houghton Muck, Undrained, 0-1% Slopes) NWI classification: PSS1C, PF01C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area within a Wetland? Yes X No
Hydric Soil Present? Yes X No	
Wetland Hydrology Present? Yes X No	
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: (A) Total Number of Dominant Species Across All Strata: (B) Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
1.				
2.				
3.				
4.				
5.				
=Total Cover				
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species x 1 = FACW species x 2 = FAC species x 3 = FACU species x 4 = UPL species x 5 = Column Totals: (A) (B) Prevalence Index = B/A =
1.				
2.				
3.				
4.				
5.				
=Total Cover				
Herb Stratum (Plot size:)				Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 ¹ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
=Total Cover				
Woody Vine Stratum (Plot size:)				Hydrophytic Vegetation Present? Yes X No
1.				
2.				
=Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) Point Intercept Method used, see attached files. PI= 2.23				

SOILSampling Point: Wetland E

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/1	90	10YR 3/4	10	C	PL	Sandy	Distinct redox concentrations
12-24	2.5Y 5/2	85	2.5Y 5/6	15	C	M	Sandy	Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)	☐ Coast Prairie Redox (A16)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
☐ Histic Epipedon (A2)	☒ Sandy Redox (S5)	☐ Iron-Manganese Masses (F12)	
☐ Black Histic (A3)	☒ Stripped Matrix (S6)	☐ Red Parent Material (F21)	
☐ Hydrogen Sulfide (A4)	☒ Dark Surface (S7)	☐ Very Shallow Dark Surface (F22)	
☐ Stratified Layers (A5)	☐ Loamy Mucky Mineral (F1)	☐ Other (Explain in Remarks)	
☐ 2 cm Muck (A10)	☐ Loamy Gleyed Matrix (F2)		
☒ Depleted Below Dark Surface (A11)	☐ Depleted Matrix (F3)		
☐ Thick Dark Surface (A12)	☐ Redox Dark Surface (F6)		
☐ Sandy Mucky Mineral (S1)	☐ Depleted Dark Surface (F7)		
☐ 5 cm Mucky Peat or Peat (S3)	☐ Redox Depressions (F8)		

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes ☒ No ☐
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Remarks:
This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
☒ Surface Water (A1)	☒ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)	Wetland Hydrology Present? Yes ☒ No ☐
☒ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Patterns (B10)	
☒ Saturation (A3)	☐ True Aquatic Plants (B14)	☒ Dry-Season Water Table (C2)	
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)	
☐ Sediment Deposits (B2)	☒ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)	
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☒ Stunted or Stressed Plants (D1)	
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☒ Geomorphic Position (D2)	
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ FAC-Neutral Test (D5)	
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)		
☒ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes ☒ No ☐ Depth (inches): <u>1</u> Water Table Present? Yes ☒ No ☐ Depth (inches): <u>12</u> Saturation Present? Yes ☒ No ☐ Depth (inches): <u>0</u> (includes capillary fringe)				Wetland Hydrology Present? Yes ☒ No ☐
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:				
Remarks:				

Wetland E				Date: 8/7/2024			
Transect 1				Transect 2			
Looking Down		Looking Up		Looking Down		Looking Up	
Interval	Species	Wetland Indicator	Species	Wetland Indicator	Interval	Species	Wetland Indicator
1	Carex vulpinoidea	FACW	Ulmus rubra	FAC	1	Null	Ulmus rubra
2	Carex vulpinoidea	FACW	Ulmus rubra	FAC	2	Null	Ulmus rubra
3	Null		Ulmus rubra	FAC	3	Null	Ulmus rubra
4	Null		Ulmus rubra	FAC	4	Null	Ulmus rubra
5	Null		Quercus shumardii	FACW	5	Null	Ulmus rubra
6	Null		Quercus shumardii	FACW	6	Carex vulpinoidea	FACW
7	Persicaria virginiana	FAC	Quercus shumardii	FACW	7	Carex vulpinoidea	FACW
8	Carex vulpinoidea	FACW	Quercus shumardii	FACW	8	Persicaria virginiana	FAC
9	Null		Quercus shumardii	FACW	9	Persicaria virginiana	FAC
10	Nyssa sylvatica	FAC	Quercus shumardii	FACW	10	Fraxinus pennsylvanica	FACW
11	Fraxinus pennsylvanica	FACW	Quercus shumardii	FACW	11	Fraxinus pennsylvanica	FACW
12	Carex vulpinoidea	FACW	Acer saccharinum	FACW	12	Onoclea sensibilis	FACW
13	Carex vulpinoidea	FACW	Acer saccharinum	FACW	13	Onoclea sensibilis	FACW
14	Null		Acer saccharinum	FACW	14	Carex vulpinoidea	FACW
15	Null		Quercus shumardii	FACW	15	Null	Quercus shumardii
16	Rosa multiflora	FACU	Quercus shumardii	FACW	16	Null	Quercus shumardii
17	Rosa multiflora	FACU	Quercus shumardii	FACW	17	Persicaria virginiana	FAC
18	Fraxinus pennsylvanica	FACW	Acer saccharinum	FACW	18	Persicaria virginiana	FAC
19	Fraxinus pennsylvanica	FACW	Acer saccharinum	FACW	19	Fraxinus pennsylvanica	FACW
20	Fraxinus pennsylvanica	FACW	Acer saccharinum	FACW	20	Carex vulpinoidea	FACW
21	Persicaria virginiana	FAC	Acer saccharinum	FACW	21	Carex vulpinoidea	FACW
22	Persicaria virginiana	FAC	Acer saccharinum	FACW	22	Echinochloa muricata	OBL
23	Null		Quercus shumardii	FACW	23	Fraxinus pennsylvanica	FACW
24	Null		Quercus shumardii	FACW	24	Fraxinus pennsylvanica	FACW
25	Carex vulpinoidea	FACW	Quercus shumardii	FACW	25	Null	Quercus bicolor
26	Null		Quercus shumardii	FACW	26	Null	Quercus bicolor
27	Persicaria virginiana	FAC	Null		27	Carex vulpinoidea	FACW
28	Echinochloa muricata	OBL	Null		28	Carex vulpinoidea	FACW
29	Echinochloa muricata	OBL	Null		29	Null	Quercus shumardii
30	Null		Nyssa sylvatica	FAC	30	Persicaria virginiana	FAC

Point Intercept Calculations			
Wetland Indicator	Total Hits	Weight	Weighted Hits
OBL-Obligate		3 x1	3
FACW-Facultative Wetland	69	x2	138
FAC-Facultative	21	x3	63
FACU-Facultative Upland	2	x4	8
UPL-Upland	0	x5	0
Subtotals	95		212

PI = Weighted Hits/Unweighted Hits
PI = 212/95 = 2.23

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: 095567.01/Industrial Park City/County: Marshall/Calhoun County Sampling Date: 9/20/2024
Applicant/Owner: _____ State: MI Sampling Point: Wetland F
Investigator(s): Alexander Kriebel Section, Township, Range: Section 1 , Township 3 South , Range 6 West
Landform (hillside, terrace, etc.): Swale Local relief (concave, convex, none): Concave
Slope (%): 20 Lat: 42.238492 Long: -84.953169 Datum: WGS84
Soil Map Unit Name: 25A (Kalamazoo Loam, 0-2% Slopes), 44A (Matherton Loam, 0-3% Slopes), 65 (Sebewa Loam, 0-2% Slopes) NWI classification: PF01Cd

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: Very Dry Season	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
		=Total Cover		
Sapling/Shrub Stratum	(Plot size: _____)			
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
		=Total Cover		
Herb Stratum	(Plot size: _____)			
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
8.	_____	_____	_____	_____
9.	_____	_____	_____	_____
10.	_____	_____	_____	_____
		=Total Cover		
Woody Vine Stratum	(Plot size: _____)			
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
		=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That
Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species
Across All Strata: _____ (B)

Percent of Dominant Species That
Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)
Prevalence Index = B/A = _____	

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0¹

____ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation

Present? Yes X No _____

Remarks: (Include photo numbers here or on a separate sheet.)
Point Intercept Method used, see attached files. PI= 2.16

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 2/1	100					Mucky Peat	
2-20	10YR 4/1	80	7.5YR 4/6	20	C	PL	Loamy/Clayey	Prominent redox concentrations
20-24	10YR 4/1	85	10YR 5/4	15	C	PL	Loamy/Clayey	Distinct redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

☐ Histosol (A1)

☐ Histic Epipedon (A2)

☐ Black Histic (A3)

☐ Hydrogen Sulfide (A4)

☐ Stratified Layers (A5)

☐ 2 cm Muck (A10)

☒ Depleted Below Dark Surface (A11)

☐ Thick Dark Surface (A12)

☐ Sandy Mucky Mineral (S1)

☐ 5 cm Mucky Peat or Peat (S3)

☐ Sandy Gleyed Matrix (S4)

☐ Sandy Redox (S5)

☐ Stripped Matrix (S6)

☐ Dark Surface (S7)

☐ Loamy Mucky Mineral (F1)

☐ Loamy Gleyed Matrix (F2)

☒ Depleted Matrix (F3)

☐ Redox Dark Surface (F6)

☐ Depleted Dark Surface (F7)

☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

☐ Coast Prairie Redox (A16)

☐ Iron-Manganese Masses (F12)

☐ Red Parent Material (F21)

☐ Very Shallow Dark Surface (F22)

☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes ☒ No ☐

Remarks:
This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

☐ Surface Water (A1)

☐ High Water Table (A2)

☒ Saturation (A3)

☐ Water Marks (B1)

☐ Sediment Deposits (B2)

☐ Drift Deposits (B3)

☐ Algal Mat or Crust (B4)

☐ Iron Deposits (B5)

☐ Inundation Visible on Aerial Imagery (B7)

☐ Sparsely Vegetated Concave Surface (B8)

☐ Water-Stained Leaves (B9)

☐ Aquatic Fauna (B13)

☐ True Aquatic Plants (B14)

☐ Hydrogen Sulfide Odor (C1)

☒ Oxidized Rhizospheres on Living Roots (C3)

☐ Presence of Reduced Iron (C4)

☐ Recent Iron Reduction in Tilled Soils (C6)

☐ Thin Muck Surface (C7)

☐ Gauge or Well Data (D9)

☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)

☐ Drainage Patterns (B10)

☐ Dry-Season Water Table (C2)

☒ Crayfish Burrows (C8)

☐ Saturation Visible on Aerial Imagery (C9)

☒ Stunted or Stressed Plants (D1)

☒ Geomorphic Position (D2)

☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):

Water Table Present? Yes ☐ No ☒ Depth (inches):

Saturation Present? Yes ☒ No ☐ Depth (inches): 8

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland F				Date: 8/7/2024			
Transect 1				Transect 2			
Looking Down		Looking Up		Looking Down		Looking Up	
Interval	Species	Wetland Indicator	Species	Interval	Species	Wetland Indicator	Species
1	Carex Stipata	OBL	Null	1	Quercus shumardii	FACW	Null
2	Symphyotrichum lanceolatum	FAC	Null	2	Symphyotrichum lanceolatum	FAC	Null
3	Parthenocissus quinquefolia	FACU	Null	3	Symphyotrichum lanceolatum	FAC	Salix amygdaloides
4	Eleocharis palustris	OBL	Null	4	Carex Stipata	OBL	Null
5	Eleocharis palustris	OBL	Null	5	Carex Stipata	OBL	Null
6	Euthamia graminifolia	FACW	Null	6	Salix amygdaloides	FACW	Null
7	Symphyotrichum lanceolatum	FAC	Cephalanthus occidentalis	7	Symphyotrichum lanceolatum	FAC	Null
8	Symphyotrichum lanceolatum	FAC	Cephalanthus occidentalis	8	Symphyotrichum lanceolatum	FAC	Null
9	Symphyotrichum lanceolatum	FAC	Cephalanthus occidentalis	9	Symphyotrichum lanceolatum	FAC	Null
10	Carex Stipata	OBL	Cephalanthus occidentalis	10	Symphyotrichum lanceolatum	FAC	Null
11	Symphyotrichum lanceolatum	FAC	Null	11	Euthamia graminifolia	FACW	Null
12	Euthamia graminifolia	FACW	Null	12	Carex Stipata	OBL	Null
13	Symphyotrichum lanceolatum	FAC	Null	13	Euthamia graminifolia	FACW	Null
14	Carex Stipata	OBL	Null	14	Symphyotrichum lanceolatum	FAC	Null
15	Symphyotrichum lanceolatum	FAC	Null	15	Euthamia graminifolia	FACW	Null
16	Carex Stipata	OBL	Null	16	Symphyotrichum lanceolatum	FAC	Null
17	Prunella vulgaris	FAC	Null	17	Symphyotrichum lanceolatum	FAC	Null
18	Salix amygdaloides	FACW	Null	18	Cephalanthus occidentalis	OBL	Quercus shumardii
19	Carex Stipata	OBL	Null	19	Symphyotrichum lanceolatum	FAC	Quercus shumardii
20	Carex Stipata	OBL	Null	20	Symphyotrichum lanceolatum	FAC	Null
21	Salix amygdaloides	FACW	Null	21	Symphyotrichum lanceolatum	FAC	Null
22	Carex Stipata	OBL	Salix amygdaloides	22	Symphyotrichum lanceolatum	FAC	Null
23	Symphyotrichum lanceolatum	FAC	Salix amygdaloides	23	Symphyotrichum lanceolatum	FAC	Salix amygdaloides
24	Carex Stipata	OBL	Salix amygdaloides	24	Symphyotrichum lanceolatum	FAC	Salix amygdaloides
25	Carex Stipata	OBL	Salix amygdaloides	25	Eleocharis palustris	OBL	Salix amygdaloides
26	Carex Stipata	OBL	Salix amygdaloides	26	Symphyotrichum lanceolatum	FAC	Salix amygdaloides
27	Symphyotrichum lanceolatum	FAC	Salix amygdaloides	27	Symphyotrichum lanceolatum	FAC	Salix amygdaloides
28	Eleocharis palustris	OBL	Salix amygdaloides	28	Symphyotrichum lanceolatum	FAC	Salix amygdaloides
29	Symphyotrichum lanceolatum	FAC	Salix amygdaloides	29	Rosa multiflora	FACU	Salix amygdaloides
30	Symphyotrichum lanceolatum	FAC	Salix amygdaloides	30	Rosa multiflora	FACU	Salix amygdaloides

Point Intercept Calculations			
Wetland Indicator	Total Hits	Weight	Weighted Hits
OBL-Obligate	22	x1	22
FACW-Facultative Wetland	29	x2	58
FAC-Facultative	30	x3	90
FACU-Facultative Upland	3	x4	12
UPL-Upland	0	x5	0
Subtotals	84		182

PI = Weighted Hits/Unweighted Hits
PI = 182/84 = 2.17

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: 095567.01/Industrial Park City/County: Marshall/Calhoun County Sampling Date: 9/23/2024
Applicant/Owner: _____ State: MI Sampling Point: Wetland G
Investigator(s): Alexander Kriebel Section, Township, Range: Section 1 , Township 3 South , Range 6 West
Landform (hillside, terrace, etc.): Talmadge Creek Local relief (concave, convex, none): Concave
Slope (%): 30 Lat: 42.238127 Long: -84.952187 Datum: WGS84
Soil Map Unit Name: 25A (Kalamazoo Loam, 0-2% Slopes), 44A (Matherton Loam, 0-3% Slopes), 45A (Sleeth Loam, 0-2% Slopes), 65 (Sebawa Loam, 0-2% Slopes), HgtajA (Houghton Muck, Undrained, 0-1% Slopes) NWI classification: PF01Cd

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: Unseasonable Dry	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)																
1.	_____	_____	_____	_____																	
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
					Prevalence Index worksheet: <table><tr><td>Total % Cover of:</td><td>Multiply by:</td></tr><tr><td>OBL species _____</td><td>x 1 = _____</td></tr><tr><td>FACW species _____</td><td>x 2 = _____</td></tr><tr><td>FAC species _____</td><td>x 3 = _____</td></tr><tr><td>FACU species _____</td><td>x 4 = _____</td></tr><tr><td>UPL species _____</td><td>x 5 = _____</td></tr><tr><td>Column Totals: _____ (A)</td><td>_____ (B)</td></tr><tr><td colspan="2">Prevalence Index = B/A = _____</td></tr></table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____ (A)	_____ (B)	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																				
OBL species _____	x 1 = _____																				
FACW species _____	x 2 = _____																				
FAC species _____	x 3 = _____																				
FACU species _____	x 4 = _____																				
UPL species _____	x 5 = _____																				
Column Totals: _____ (A)	_____ (B)																				
Prevalence Index = B/A = _____																					
					Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
					Hydrophytic Vegetation Present? Yes <u>X</u> No _____																
Remarks: (Include photo numbers here or on a separate sheet.) Point Intercept Method used, see attached files. PI=1.77																					

SOILSampling Point: Wetland G

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 2/1	100					Mucky Sand	
2-10	2.5Y 2.5/1	100					Sandy	
10-16	5Y 4/1	100					Sandy	
16-24	10BG 4/1	100					Sandy	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: ☐ Histosol (A1) ☐ Sandy Gleyed Matrix (S4) ☐ Histic Epipedon (A2) ☐ Sandy Redox (S5) ☐ Black Histic (A3) ☐ Stripped Matrix (S6) ☒ Hydrogen Sulfide (A4) ☒ Dark Surface (S7) ☐ Stratified Layers (A5) ☐ Loamy Mucky Mineral (F1) ☐ 2 cm Muck (A10) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3) ☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☒ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ 5 cm Mucky Peat or Peat (S3) ☐ Redox Depressions (F8)	Indicators for Problematic Hydric Soils³: ☐ Coast Prairie Redox (A16) ☐ Iron-Manganese Masses (F12) ☐ Red Parent Material (F21) ☐ Very Shallow Dark Surface (F22) ☐ Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
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Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes ☒ No ☐
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Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

Wetland Hydrology Indicators:			
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
☒ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)	
☒ High Water Table (A2)	☐ Aquatic Fauna (B13)	☒ Drainage Patterns (B10)	
☒ Saturation (A3)	☒ True Aquatic Plants (B14)	☒ Dry-Season Water Table (C2)	
☒ Water Marks (B1)	☒ Hydrogen Sulfide Odor (C1)	☒ Crayfish Burrows (C8)	
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)	
☒ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☒ Stunted or Stressed Plants (D1)	
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☒ Geomorphic Position (D2)	
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ FAC-Neutral Test (D5)	
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)		
☒ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)		

Field Observations:			
Surface Water Present?	Yes ☒ No ☐	Depth (inches): <u>12</u>	Wetland Hydrology Present? Yes ☒ No ☐
Water Table Present?	Yes ☒ No ☐	Depth (inches): <u>12</u>	
Saturation Present?	Yes ☒ No ☐	Depth (inches): <u>0</u>	
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: Duckweed			

Site: Wetland G					Date: 9/23/2024				
Transect 1					Transect 2				
Looking Down			Looking Up		Looking Down			Looking Up	
Interval	Species	Wetland Indicator	Species	Wetland Indicator	Interval	Species	Wetland Indicator	Species	Wetland Indicator
1	Polygonum hydropiperoides	OBL	Ulmus rubra	FAC	1	Polygonum hydropiperoides	OBL	Acer saccharinum	FACW
2	Polygonum hydropiperoides	OBL	Ulmus rubra	FAC	2	Polygonum hydropiperoides	OBL	Acer saccharinum	FACW
3	Polygonum hydropiperoides	OBL	Ulmus rubra	FAC	3	Nul		Acer saccharinum	FACW
4	Polygonum hydropiperoides	OBL	Fraxinus pennsylvanica	FACW	4	Polygonum hydropiperoides	OBL	Acer saccharinum	FACW
5	Polygonum hydropiperoides	OBL	Fraxinus pennsylvanica	FACW	5	Polygonum hydropiperoides	OBL	Acer saccharinum	FACW
6	Polygonum hydropiperoides	OBL	Acer saccharinum	FACW	6	Null		Acer saccharinum	FACW
7	Polygonum hydropiperoides	OBL	Acer saccharinum	FACW	7	Polygonum hydropiperoides	OBL	Acer saccharinum	FACW
8	Null		Acer saccharinum	FACW	8	Null		Acer saccharinum	FACW
9	Null		Acer saccharinum	FACW	9	Lemna minor	OBL	Acer saccharinum	FACW
10	Lemna minor	OBL	Acer saccharinum	FACW	10	Null		Acer saccharinum	FACW
11	Acer negundo	FAC	Acer saccharinum	FACW	11	Null		Null	
12	Null		Null		12	Null		Null	
13	Lemna minor	OBL	Acer saccharinum	FACW	13	Null		Null	
14	Null		Acer saccharinum	FACW	14	Null		Null	
15	Polygonum hydropiperoides	OBL	Acer saccharinum	FACW	15	Lemna minor	OBL	Null	
16	Null		Ulmus rubra	FAC	16	Null		Null	
17	Null		Ulmus rubra	FAC	17	Polygonum hydropiperoides	OBL	Null	
18	Polygonum hydropiperoides	OBL	Ulmus rubra	FAC	18	Polygonum hydropiperoides	OBL	Null	
19	Null		Ulmus rubra	FAC	19	Null		Null	
20	Polygonum hydropiperoides	OBL	Ulmus rubra	FAC	20	Polygonum hydropiperoides	OBL	Null	
21	Null		Ulmus rubra	FAC	21	Null		Null	
22	Null		Acer saccharinum	FACW	22	Lemna minor	OBL	Null	
23	Null		Ulmus rubra	FAC	23	Null		Null	
24	Null		Ulmus rubra	FAC	24	Polygonum hydropiperoides	OBL	Null	
25	Null		Ulmus rubra	FAC	25	Polygonum hydropiperoides	OBL	Null	
26	Lemna minor	OBL	Ulmus rubra	FAC	26	Polygonum hydropiperoides	OBL	Null	
27	Lemna minor	OBL	Ulmus rubra	FAC	27	Null		Null	
28	Lemna minor	OBL	Ulmus rubra	FAC	28	Null		Null	
29	Lemna minor	OBL	Acer saccharinum	FACW	29	Polygonum hydropiperoides	OBL	Null	
30	Lemna minor	OBL	Acer saccharinum	FACW	30	Polygonum hydropiperoides	OBL	Null	

Point Intercept Calculations			
Wetland Indicator	Total Hits	Weight	Weighted Hits
OBL-Obligate		33 x1	33
FACW-Facultative Wetland		24 x2	48
FAC-Facultative		16 x3	48
FACU-Facultative Upland		0 x4	0
UPL-Upland		0 x5	0
Subtotals	73		129

PI = Weighted Hits/Unweighted Hits
PI = 129/73 = 1.77

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: 095567.01/Industrial Park City/County: Marshall/Calhoun County Sampling Date: 9/23/2024
Applicant/Owner: _____ State: MI Sampling Point: Wetland I
Investigator(s): Alexander Kriebel Section, Township, Range: Section 1 , Township 3 South , Range 6 West
Landform (hillside, terrace, etc.): Emergent Marsh Local relief (concave, convex, none): Concave
Slope (%): 40 Lat: 42.240289 Long: -84.958186 Datum: WGS84
Soil Map Unit Name: 25B (Kalamazoo Loam, 2-6% Slopes), HgtajA (Houghton Muck, Undrained, 0-1% Slopes) NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: Unseasonable Dry	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
		=Total Cover		
Sapling/Shrub Stratum	(Plot size: _____)			
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
		=Total Cover		
Herb Stratum	(Plot size: _____)			
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
8.	_____	_____	_____	_____
9.	_____	_____	_____	_____
10.	_____	_____	_____	_____
		=Total Cover		
Woody Vine Stratum	(Plot size: _____)			
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
		=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)
Prevalence Index = B/A = _____	

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0¹

____ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: (Include photo numbers here or on a separate sheet.)
ee

SOILSampling Point: Wetland I**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 2/2	100					Muck	
2-24	2.5Y 3/2	100					Sandy	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)
☒ Hydrogen Sulfide (A4)	☒ Dark Surface (S7)
☐ Stratified Layers (A5)	☐ Loamy Mucky Mineral (F1)
☐ 2 cm Muck (A10)	☐ Loamy Gleyed Matrix (F2)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Matrix (F3)
☐ Thick Dark Surface (A12)	☐ Redox Dark Surface (F6)
☐ Sandy Mucky Mineral (S1)	☐ Depleted Dark Surface (F7)
☐ 5 cm Mucky Peat or Peat (S3)	☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

☐ Coast Prairie Redox (A16)
☐ Iron-Manganese Masses (F12)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**
 Type: _____
 Depth (inches): _____
Hydric Soil Present? Yes ☒ No ☐**Remarks:**
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)
HYDROLOGY**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

☒ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☒ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☒ True Aquatic Plants (B14)
☒ Water Marks (B1)	☒ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☒ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)
☐ Drainage Patterns (B10)
☒ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☒ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☒	No ☐	Depth (inches): <u>36</u>
Water Table Present?	Yes ☒	No ☐	Depth (inches): <u>6</u>
Saturation Present?	Yes ☒	No ☐	Depth (inches): <u>0</u>
(includes capillary fringe)			

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

(B14) Duckweed

Wetland I				Date: 8/7/2024			
Transect 1				Transect 2			
Looking Down		Looking Up		Looking Down		Looking Up	
Interval	Species	Wetland Indicator	Species	Wetland Indicator	Interval	Species	Wetland Indicator
1	Phalaris arundinacea	FACW	Salix amygdaloides	FACW	1	Phalaris arundinacea	FACW
2	Juncus effusus	OBL	Salix amygdaloides	FACW	2	Phalaris arundinacea	FACW
3	Carex vulpinoidea	FACW	Salix amygdaloides	FACW	3	Lemna minor	OBL
4	Carex vulpinoidea	FACW	Salix amygdaloides	FACW	4	Lemna minor	OBL
5	Null		Salix amygdaloides	FACW	5	Lemna minor	OBL
6	Null		Salix amygdaloides	FACW	6	Lemna minor	OBL
7	Lemna minor	OBL	Salix amygdaloides	FACW	7	Null	
8	Lemna minor	OBL	Salix amygdaloides	FACW	8	Null	
9	Salix amygdaloides	FACW	Salix amygdaloides	FACW	9	Null	
10	Salix amygdaloides	FACW	Salix amygdaloides	FACW	10	Null	
11	Salix amygdaloides	FACW	Salix amygdaloides	FACW	11	Null	
12	Null		Salix amygdaloides	FACW	12	Null	
13	Null		Null		13	Null	
14	Null		Null		14	Null	
15	Typha latifolia	OBL	Null		15	Typha latifolia	OBL
16	Typha latifolia	OBL	Null		16	Typha latifolia	OBL
17	Typha latifolia	OBL	Null		17	Typha latifolia	OBL
18	Typha latifolia	OBL	Null		18	Typha latifolia	OBL
19	Typha latifolia	OBL	Null		19	Typha latifolia	OBL
20	Typha latifolia	OBL	Null		20	Typha latifolia	OBL
21	Typha latifolia	OBL	Null		21	Typha latifolia	OBL
22	Typha latifolia	OBL	Null		22	Typha latifolia	OBL
23	Null		Null		23	Typha latifolia	OBL
24	Null		Null		24	Typha latifolia	OBL
25	Null		Null		25	Typha latifolia	OBL
26	Null		Null		26	Null	Salix amygdaloides
27	Null		Null		27	Lemna minor	OBL
28	Null		Null		28	Null	Salix amygdaloides
29	Null		Null		29	Null	Salix amygdaloides
30	Null		Null		30	Carex vulpinoidea	FACW

Point Intercept Calculations			
Wetland Indicator	Total Hits	Weight	Weighted Hits
OBL-Obligate		27 x1	27
FACW-Facultative Wetland		31 x2	62
FAC-Facultative		0 x3	0
FACU-Facultative Upland		0 x4	0
UPL-Upland		0 x5	0
Subtotals	58		89

PI = Weighted Hits/Unweighted Hits
PI = 89/58 = 1.53

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: 095567.01/Industrial Park City/County: Marshall/Calhoun County Sampling Date: 9/16/2024

Applicant/Owner: State: MI Sampling Point: Wetland J

Investigator(s): Alexander Kriebel Section, Township, Range: Section 1 , Township 3 South , Range 6 West

Landform (hillside, terrace, etc.): Wet Meadow Local relief (concave, convex, none): Concave

Slope (%): 2 Lat: 42.239022 Long: -84.949784 Datum: WGS84

Soil Map Unit Name: 44A (Matherton Loam, 0-3% Slopes), 65 (Sebewa Loam, 0-2% Slopes) NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If no, explain in Remarks.)

Are Vegetation X , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area within a Wetland? Yes X No
Hydric Soil Present? Yes X No	
Wetland Hydrology Present? Yes X No	

Remarks:
Unseasonable Dry, Farming

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
		=Total Cover		

Sapling/Shrub Stratum	(Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
		=Total Cover		

Herb Stratum	(Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
		=Total Cover		

Woody Vine Stratum	(Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
		=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals:	(A) (B)
Prevalence Index = B/A =	

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)
Point Intercept Method used, see attached files. PI= 1.62

SOILSampling Point: Wetland J**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	2.5Y 3/2	95	2.5Y 5/6	5	C	PL	Sandy	Prominent redox concentrations
10-24	5Y 6/1	100					Sandy	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)
☐ Histic Epipedon (A2)	☒ Sandy Redox (S5)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)
☐ Hydrogen Sulfide (A4)	☐ Dark Surface (S7)
☐ Stratified Layers (A5)	☐ Loamy Mucky Mineral (F1)
☐ 2 cm Muck (A10)	☐ Loamy Gleyed Matrix (F2)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Matrix (F3)
☐ Thick Dark Surface (A12)	☐ Redox Dark Surface (F6)
☐ Sandy Mucky Mineral (S1)	☐ Depleted Dark Surface (F7)
☐ 5 cm Mucky Peat or Peat (S3)	☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

☐ Coast Prairie Redox (A16)
☐ Iron-Manganese Masses (F12)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**
 Type: _____
 Depth (inches): _____
Hydric Soil Present? Yes ☒ No ☐**Remarks:**
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)
HYDROLOGY**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☒ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☒ Saturation Visible on Aerial Imagery (C9)
☒ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☒	Depth (inches): _____
Water Table Present?	Yes ☐	No ☒	Depth (inches): _____
Saturation Present?	Yes ☒	No ☐	Depth (inches): <u>10</u>
(includes capillary fringe)			

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Standing water earlier in year. See pictures and historical imagery.

Wetland J				Date: 8/7/2024							
Transect 1				Transect 2							
Looking Down			Looking Up			Looking Down			Looking Up		
Interval	Species	Wetland Indicator	Species	Wetland Indicator	Interval	Species	Wetland Indicator	Species	Wetland Indicator		
1	Eleocharis palustris	OBL	Null		1	Eleocharis palustris	OBL	Null			
2	Eleocharis palustris	OBL	Null		2	Eleocharis palustris	OBL	Null			
3	Apocynum cannabinum	FAC	Null		3	Symphyotrichum novae-angliae	FACW	Null			
4	Eleocharis palustris	OBL	Null		4	Eleocharis palustris	OBL	Null			
5	Symphyotrichum novae-angliae	FACW	Null		5	Eleocharis palustris	OBL	Null			
6	Ulmus rubra	FAC	Null		6	Symphyotrichum novae-angliae	FACW	Null			
7	Apocynum cannabinum	FAC	Null		7	Eleocharis palustris	OBL	Null			
8	Eleocharis palustris	OBL	Null		8	Eleocharis palustris	OBL	Null			
9	Symphyotrichum novae-angliae	FACW	Null		9	Symphyotrichum novae-angliae	FACW	Null			
10	Symphyotrichum novae-angliae	FACW	Null		10	Eleocharis palustris	OBL	Null			
11	Symphyotrichum novae-angliae	FACW	Null		11	Eleocharis palustris	OBL	Null			
12	Eleocharis palustris	OBL	Null		12	Symphyotrichum novae-angliae	FACW	Null			
13	Eleocharis palustris	OBL	Null		13	Eleocharis palustris	OBL	Null			
14	Eleocharis palustris	OBL	Null		14	Eleocharis palustris	OBL	Null			
15	Symphyotrichum novae-angliae	FACW	Null		15	Symphyotrichum novae-angliae	FACW	Null			
16	Eleocharis palustris	OBL	Null		16	Apocynum cannabinum	FAC	Null			
17	Eleocharis palustris	OBL	Null		17	Euthamia graminifolia	FACW	Null			
18	Symphyotrichum novae-angliae	FACW	Null		18	Eleocharis palustris	OBL	Null			
19	Eleocharis palustris	OBL	Null		19	Symphyotrichum novae-angliae	FACW	Null			
20	Eleocharis palustris	OBL	Null		20	Panicum virgatum	FAC	Null			
21	Symphyotrichum novae-angliae	FACW	Null		21	Eleocharis palustris	OBL	Null			
22	Eleocharis palustris	OBL	Null		22	Echinochloa muricata	OBL	Null			
23	Eleocharis palustris	OBL	Null		23	Echinochloa muricata	OBL	Null			
24	Symphyotrichum novae-angliae	FACW	Null		24	Echinochloa muricata	OBL	Null			
25	Eleocharis palustris	OBL	Null		25	Portulaca oleracea	FACU	Null			
26	Eleocharis palustris	OBL	Null		26	Portulaca oleracea	FACU	Null			
27	Apocynum cannabinum	FAC	Null		27	Echinochloa muricata	OBL	Null			
28	Symphyotrichum novae-angliae	FACW	Null		28	Echinochloa muricata	OBL	Null			
29	Eleocharis palustris	OBL	Null		29	Portulaca oleracea	FACU	Null			
30	Eleocharis palustris	OBL	Null		30	Echinochloa muricata	OBL	Null			

Point Intercept Calculations			
Wetland Indicator	Total Hits	Weight	Weighted Hits
OBL-Obligate		35 x1	35
FACW-Facultative Wetland		16 x2	32
FAC-Facultative		6 x3	18
FACU-Facultative Upland		3 x4	12
UPL-Upland		0 x5	0
Subtotals	60		97

PI = Weighted Hits/Unweighted Hits
PI = 97/60 = 1.62

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: 095567.01/Industrial Park City/County: Marshall/Calhoun County Sampling Date: 10/9/2024
Applicant/Owner: _____ State: MI Sampling Point: Wetland K
Investigator(s): Alexander Kriebel Section, Township, Range: Section 1 , Township 3 South , Range 6 West
Landform (hillside, terrace, etc.): Wet Meadow Local relief (concave, convex, none): Concave
Slope (%): 2 Lat: 42.238823 Long: -84.950462 Datum: WGS84
Soil Map Unit Name: 44A (Matherton Loam, 0-3% Slopes), 65 (Sebewa Loam, 0-2% Slopes) NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
Are Vegetation X , Soil _____ , or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____ , Soil _____ , or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	

Remarks:
Unseasonable Dry, Farming

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
		=Total Cover		
Sapling/Shrub Stratum	(Plot size: _____)			
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
		=Total Cover		
Herb Stratum	(Plot size: _____)			
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
8.	_____	_____	_____	_____
9.	_____	_____	_____	_____
10.	_____	_____	_____	_____
		=Total Cover		
Woody Vine Stratum	(Plot size: _____)			
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
		=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That
Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species
Across All Strata: _____ (B)

Percent of Dominant Species That
Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)
Prevalence Index = B/A = _____	

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0¹

____ 4 - Morphological Adaptations¹ (Provide supporting
data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be
present, unless disturbed or problematic.

**Hydrophytic
Vegetation
Present?** Yes X No _____

Remarks: (Include photo numbers here or on a separate sheet.)
Point Intercept Method used, see attached files. PI= 2.20

SOILSampling Point: Wetland K**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	2.5Y 3/2	95	2.5Y 5/6	5	C	PL	Sandy	Prominent redox concentrations
10-24	5Y 6/1	100					Sandy	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)
☐ Histic Epipedon (A2)	☒ Sandy Redox (S5)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)
☐ Hydrogen Sulfide (A4)	☐ Dark Surface (S7)
☐ Stratified Layers (A5)	☐ Loamy Mucky Mineral (F1)
☐ 2 cm Muck (A10)	☐ Loamy Gleyed Matrix (F2)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Matrix (F3)
☐ Thick Dark Surface (A12)	☐ Redox Dark Surface (F6)
☐ Sandy Mucky Mineral (S1)	☐ Depleted Dark Surface (F7)
☐ 5 cm Mucky Peat or Peat (S3)	☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

☐ Coast Prairie Redox (A16)
☐ Iron-Manganese Masses (F12)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**
 Type: _____
 Depth (inches): _____
Hydric Soil Present? Yes ☒ No ☐**Remarks:**
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)
HYDROLOGY**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☒ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☒ Saturation Visible on Aerial Imagery (C9)
☒ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☒	Depth (inches): _____
Water Table Present?	Yes ☐	No ☒	Depth (inches): _____
Saturation Present?	Yes ☒	No ☐	Depth (inches): <u>10</u>
(includes capillary fringe)			

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Standing water earlier in year. See pictures and historical imagery.

Wetland K				Date: 8/7/2024					
Transect 1				Transect 2					
Looking Down			Looking Up		Looking Down			Looking Up	
Interval	Species	Wetland Indicator	Species	Wetland Indicator	Interval	Species	Wetland Indicator	Species	Wetland Indicator
1	Carex vulpinoidea	FACW	Null		1	Carex vulpinoidea	FACW	Null	
2	Carex vulpinoidea	FACW	Null		2	Symphyotrichum novae-angliae	FACW	Null	
3	Carex vulpinoidea	FACW	Null		3	Polygonum pensylvanicum	FACW	Null	
4	Euthamia graminifolia	FACW	Null		4	Solidago canadensis	FACU	Null	
5	Solidago canadensis	FACU	Null		5	Euthamia graminifolia	FACW	Null	
6	Scripus cyperinus	OBL	Null		6	Euthamia graminifolia	FACW	Null	
7	Apocynum cannabinum	FAC	Null		7	Solidago canadensis	FACU	Null	
8	Scripus cyperinus	OBL	Null		8	Ulmus rubra	FAC	Null	
9	Polygonum pensylvanicum	FACW	Null		9	Euthamia graminifolia	FACW	Null	
10	Carex vulpinoidea	FACW	Null		10	Symphyotrichum novae-angliae	FACW	Null	
11	Symphyotrichum novae-angliae	FACW	Null		11	Carex vulpinoidea	FACW	Null	
12	Polygonum pensylvanicum	FACW	Null		12	Carex vulpinoidea	FACW	Null	
13	Carex vulpinoidea	FACW	Null		13	Lythrum salicaria	OBL	Null	
14	Symphyotrichum novae-angliae	FACW	Null		14	Juncus effusus	OBL	Null	
15	Carex vulpinoidea	FACW	Null		15	Phalaris arundinacea	FACW	Null	
16	Symphyotrichum novae-angliae	FACW	Null		16	Lythrum salicaria	OBL	Null	
17	Symphyotrichum novae-angliae	FACW	Ulmus rubra	FAC	17	Phalaris arundinacea	FACW	Null	
18	Carex vulpinoidea	FACW	Ulmus rubra	FAC	18	Eleocharis obtusa	OBL	Null	
19	Ulmus rubra	FAC	Ulmus rubra	FAC	19	Eleocharis obtusa	OBL	Null	
20	Carex vulpinoidea	FACW	Ulmus rubra	FAC	20	Hypericum mutilum	FACW	Null	
21	Apocynum cannabinum	FAC	Ulmus rubra	FAC	21	Hypericum mutilum	FACW	Null	
22	Carex vulpinoidea	FACW	Ulmus rubra	FAC	22	Eleocharis obtusa	OBL	Null	
23	Carex vulpinoidea	FACW	Null		23	Carex vulpinoidea	FACW	Null	
24	Symphyotrichum novae-angliae	FACW	Null		24	Symphyotrichum novae-angliae	FACW	Null	
25	Carex vulpinoidea	FACW	Null		25	Symphyotrichum novae-angliae	FACW	Null	
26	Symphyotrichum novae-angliae	FACW	Null		26	Euthamia graminifolia	FACW	Null	
27	Euthamia graminifolia	FACW	Null		27	Solidago canadensis	FACU	Null	
28	Carex vulpinoidea	FACW	Null		28	Phalaris arundinacea	FACW	Null	
29	Carex vulpinoidea	FACW	Null		29	Solidago canadensis	FACU	Null	
30	Scripus cyperinus	OBL	Null		30	Solidago canadensis	FACU	Null	

Point Intercept Calculations			
Wetland Indicator	Total Hits	Weight	Weighted Hits
OBL-Obligate		9 x1	9
FACW-Facultative Wetland		41 x2	82
FAC-Facultative		10 x3	30
FACU-Facultative Upland		6 x4	24
UPL-Upland		0 x5	0
Subtotals	66		145

PI = Weighted Hits/Unweighted Hits
PI = 145/66 = 2.20

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: 095567.01/Industrial Park City/County: Marshall/Calhoun County Sampling Date: 9/23/2024
 Applicant/Owner: _____ State: MI Sampling Point: Wetland L
 Investigator(s): Alexander Kriebel Section, Township, Range: Section 1 , Township 3 South , Range 6 West
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave
 Slope (%): 4 Lat: 42.240287 Long: -84.948682 Datum: WGS84
 Soil Map Unit Name: 44A (Matherton Loam, 0-3% Slopes) NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation X, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: Unseasonable Dry, Farming	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
		=Total Cover		
Sapling/Shrub Stratum	(Plot size: _____)			
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
		=Total Cover		
Herb Stratum	(Plot size: _____)			
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
		=Total Cover		
Woody Vine Stratum	(Plot size: _____)			
1. _____				
2. _____				
		=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)
Prevalence Index = B/A = _____	

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is $\leq 3.0^1$

____ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: (Include photo numbers here or on a separate sheet.)
 Point Intercept Method used, see attached files. PI= 2.06

SOILSampling Point: Wetland L

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10YR 3/1	95	10YR 3/6	5	C	PL	Loamy/Clayey	Prominent redox concentrations
10-24	2.5Y 5/2	80	2.5Y 5/1	15	D	M	Sandy	
			10YR 4/6	5	C	PL		Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: ☐ Histosol (A1) ☐ Sandy Gleyed Matrix (S4) ☐ Histic Epipedon (A2) ☐ Sandy Redox (S5) ☐ Black Histic (A3) ☐ Stripped Matrix (S6) ☐ Hydrogen Sulfide (A4) ☐ Dark Surface (S7) ☐ Stratified Layers (A5) ☐ Loamy Mucky Mineral (F1) ☐ 2 cm Muck (A10) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3) ☐ Thick Dark Surface (A12) ☒ Redox Dark Surface (F6) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ 5 cm Mucky Peat or Peat (S3) ☐ Redox Depressions (F8)	Indicators for Problematic Hydric Soils³: ☐ Coast Prairie Redox (A16) ☐ Iron-Manganese Masses (F12) ☐ Red Parent Material (F21) ☐ Very Shallow Dark Surface (F22) ☐ Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
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Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes ☒ No _____
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Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

Wetland Hydrology Indicators:			
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
☐ Surface Water (A1)	☒ Water-Stained Leaves (B9)	☒ Surface Soil Cracks (B6)	
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Patterns (B10)	
☒ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)	
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)	
☐ Sediment Deposits (B2)	☒ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)	
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☒ Stunted or Stressed Plants (D1)	
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☒ Geomorphic Position (D2)	
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ FAC-Neutral Test (D5)	
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)		
☒ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes _____ No ☒ Depth (inches): _____ Water Table Present? Yes _____ No ☒ Depth (inches): _____ Saturation Present? Yes ☒ No _____ Depth (inches): <u>12</u> (includes capillary fringe)	Wetland Hydrology Present? Yes ☒ No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland L Transect 1				Date: 8/7/2024 Transect 2			
Looking Down		Looking Up		Looking Down		Looking Up	
Interval	Species	Wetland Indicator	Species	Interval	Species	Wetland Indicator	Species
1	Phalaris arundinacea	FACW	Null	1	Hypericum mutilum	FACW	Null
2	Phalaris arundinacea	FACW	Null	2	Panicum virgatum	FAC	Null
3	Phalaris arundinacea	FACW	Null	3	Polygonum pensylvanicum	FACW	Null
4	Phalaris arundinacea	FACW	Null	4	Hypericum mutilum	FACW	Null
5	Polygonum pensylvanicum	FACW	Null	5	Panicum virgatum	FAC	Null
6	Phalaris arundinacea	FACW	Null	6	Hypericum mutilum	FACW	Null
7	Phalaris arundinacea	FACW	Quercus shumardii	7	Polygonum pensylvanicum	FACW	Null
8	Polygonum pensylvanicum	FACW	Quercus shumardii	8	Panicum virgatum	FAC	Null
9	Null		Quercus shumardii	9	Eleocharis obtusa	OBL	Null
10	Null		Quercus shumardii	10	Eleocharis obtusa	OBL	Null
11	Null		Quercus shumardii	11	Eleocharis obtusa	OBL	Null
12	Phalaris arundinacea	FACW	Null	12	Panicum virgatum	FAC	Null
13	Phalaris arundinacea	FACW	Null	13	Eleocharis obtusa	OBL	Null
14	Eleocharis obtusa	OBL	Null	14	Eleocharis obtusa	OBL	Null
15	Null		Null	15	Hypericum mutilum	FACW	Null
16	Eleocharis obtusa	OBL	Null	16	Panicum virgatum	FAC	Null
17	Hypericum mutilum	FACW	Null	17	Phalaris arundinacea	FACW	Null
18	Panicum virgatum	FAC	Null	18	Phalaris arundinacea	FACW	Null
19	Panicum virgatum	FAC	Null	19	Phalaris arundinacea	FACW	Null
20	Eleocharis obtusa	OBL	Null	20	Polygonum pensylvanicum	FACW	Null
21	Null		Null	21	Phalaris arundinacea	FACW	Null
22	Carex vulpinoidea	FACW	Null	22	Phalaris arundinacea	FACW	Null
23	Null		Null	23	Phalaris arundinacea	FACW	Null
24	Eleocharis obtusa	OBL	Null	24	Phalaris arundinacea	FACW	Null
25	Panicum virgatum	FAC	Null	25	Polygonum pensylvanicum	FACW	Null
26	Hypericum mutilum	FACW	Null	26	Phalaris arundinacea	FACW	Quercus shumardii
27	Panicum virgatum	FAC	Null	27	Symphyotrichum novae-angliae	FACW	Quercus shumardii
28	Panicum virgatum	FAC	Null	28	Phalaris arundinacea	FACW	Quercus shumardii
29	Panicum virgatum	FAC	Null	29	Phalaris arundinacea	FACW	Quercus shumardii
30	Panicum virgatum	FAC	Null	30	Apocynum cannabinum	FAC	Quercus shumardii

Point Intercept Calculations			
Wetland Indicator	Total Hits	Weight	Weighted Hits
OBL-Obligate		9 x1	9
FACW-Facultative Wetland		42 x2	84
FAC-Facultative		13 x3	39
FACU-Facultative Upland		0 x4	0
UPL-Upland		0 x5	0
Subtotals	64		132

PI = Weighted Hits/Unweighted Hits
PI = 132/64 = 2.06

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: 095567.01/Industrial Park City/County: Marshall/Calhoun County Sampling Date: 10/9/2024
Applicant/Owner: _____ State: MI Sampling Point: Wetland M
Investigator(s): Alexander Kriebel Section, Township, Range: Section 1 , Township 3 South , Range 6 West
Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave
Slope (%): 3 Lat: 42.240680 Long: -84.948766 Datum: WGS84
Soil Map Unit Name: 44A (Matherton Loam, 0-3% Slopes), 65 (Sebewa Loam, 0-2% Slopes) NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
Are Vegetation X , Soil _____ , or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____ , Soil _____ , or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	

Remarks:
Unseasonable Dry, Farming

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
		=Total Cover		

Sapling/Shrub Stratum	(Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
		=Total Cover		

Herb Stratum	(Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
8.	_____	_____	_____	_____
9.	_____	_____	_____	_____
10.	_____	_____	_____	_____
		=Total Cover		

Woody Vine Stratum	(Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
		=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That
Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species
Across All Strata: _____ (B)

Percent of Dominant Species That
Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)
Prevalence Index = B/A = _____	

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0¹

____ 4 - Morphological Adaptations¹ (Provide supporting
data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be
present, unless disturbed or problematic.

**Hydrophytic
Vegetation
Present?** Yes X No _____

Remarks: (Include photo numbers here or on a separate sheet.)
Point Intercept Method used, see attached files. PI= 2.32

SOILSampling Point: Wetland M

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth	Matrix		Redox Features				Texture	Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10YR 3/1	95	10YR 3/6	5	C	PL	Sandy	Prominent redox concentrations
10-24	2.5Y 5/2	80	2.5Y 5/1	15	D	M	Sandy	
			10YR 4/6	5	C	PL		Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	☐ Coast Prairie Redox (A16)
☐ Histic Epipedon (A2)	☐ Iron-Manganese Masses (F12)
☐ Black Histic (A3)	☐ Red Parent Material (F21)
☐ Hydrogen Sulfide (A4)	☐ Very Shallow Dark Surface (F22)
☐ Stratified Layers (A5)	☐ Other (Explain in Remarks)
☐ 2 cm Muck (A10)	
☒ Depleted Below Dark Surface (A11)	
☐ Thick Dark Surface (A12)	
☐ Sandy Mucky Mineral (S1)	
☐ 5 cm Mucky Peat or Peat (S3)	
☐ Sandy Gleyed Matrix (S4)	
☐ Sandy Redox (S5)	
☐ Stripped Matrix (S6)	
☐ Dark Surface (S7)	
☐ Loamy Mucky Mineral (F1)	
☐ Loamy Gleyed Matrix (F2)	
☐ Depleted Matrix (F3)	
☐ Redox Dark Surface (F6)	
☐ Depleted Dark Surface (F7)	
☐ Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes ☒ No ☐
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Remarks:
This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☒ Surface Soil Cracks (B6)	
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Patterns (B10)	
☒ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)	
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)	
☐ Sediment Deposits (B2)	☒ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)	
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☒ Stunted or Stressed Plants (D1)	
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☒ Geomorphic Position (D2)	
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ FAC-Neutral Test (D5)	
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)		
☒ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (inches): _____ Water Table Present? Yes ☐ No ☒ Depth (inches): _____ Saturation Present? Yes ☒ No ☐ Depth (inches): <u>12</u> (includes capillary fringe)	Wetland Hydrology Present? Yes ☒ No ☐
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland M				Date: 8/7/2024			
Transect 1				Transect 2			
Looking Down			Looking Up		Looking Down		Looking Up
Interval	Species	Wetland Indicator	Species	Wetland Indicator	Interval	Species	Wetland Indicator
1	Hypericum mutilum	FACW	Null		1	Solidago canadensis	FACU
2	Phalaris arundinacea	FACW	Null		2	Hypericum mutilum	FACW
3	Hypericum mutilum	FACW	Null		3	Hypericum mutilum	FACW
4	Symphyotrichum novae-angliae	FACW	Null		4	Panicum virgatum	FAC
5	Carex vulpinoidea	FACW	Null		5	Panicum virgatum	FAC
6	Carex vulpinoidea	FACW	Null		6	Hypericum mutilum	FACW
7	Phalaris arundinacea	FACW	Null		7	Panicum virgatum	FAC
8	Phalaris arundinacea	FACW	Null		8	Hypericum mutilum	FACW
9	Phalaris arundinacea	FACW	Null		9	Panicum virgatum	FAC
10	Apocynum cannabinum	FAC	Null		10	Panicum virgatum	FAC
11	Quercus shumardii	FACW	Null		11	Hypericum mutilum	FACW
12	Quercus shumardii	FACW	Null		12	Solidago canadensis	FACU
13	Phalaris arundinacea	FACW	Null		13	Panicum virgatum	FAC
14	Symphyotrichum novae-angliae	FACW	Null		14	Panicum virgatum	FAC
15	Carex vulpinoidea	FACW	Null		15	Symphyotrichum novae-angliae	FACW
16	Quercus shumardii	FACW	Null		16	Carex vulpinoidea	FACW
17	Apocynum cannabinum	FAC	Null		17	Phalaris arundinacea	FACW
18	Solidago canadensis	FACU	Null		18	Phalaris arundinacea	FACW
19	Phalaris arundinacea	FACW	Null		19	Apocynum cannabinum	FAC
20	Phalaris arundinacea	FACW	Null		20	Euthamia graminifolia	FACW
21	Carex vulpinoidea	FACW	Null		21	Euthamia graminifolia	FACW
22	Symphyotrichum novae-angliae	FACW	Null		22	Quercus shumardii	FACW
23	Solidago canadensis	FACU	Null		23	Carex vulpinoidea	FACW
24	Carex vulpinoidea	FACW	Null		24	Carex vulpinoidea	FACW
25	Symphyotrichum novae-angliae	FACW	Salix amygdaloides	FACW	25	Vitis riparia	FACW
26	Symphyotrichum novae-angliae	FACW	Salix amygdaloides	FACW	26	Carex vulpinoidea	FACW
27	Carex vulpinoidea	FACW	Salix amygdaloides	FACW	27	Salix amygdaloides	FACW
28	Euthamia graminifolia	FACW	Salix amygdaloides	FACW	28	Salix amygdaloides	FACW
29	Euthamia graminifolia	FACW	Salix amygdaloides	FACW	29	Apocynum cannabinum	FAC
30	Solidago canadensis	FACU	Salix amygdaloides	FACW	30	Euthamia graminifolia	FACW

Point Intercept Calculations			
Wetland Indicator	Total Hits	Weight	Weighted Hits
OBL-Obligate		0 x1	0
FACW-Facultative Wetland		50 x2	100
FAC-Facultative		11 x3	33
FACU-Facultative Upland		5 x4	20
UPL-Upland		0 x5	0
Subtotals	66		153

PI = Weighted Hits/Unweighted Hits
PI = 153/66 = 2.32

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: 095567.01/Industrial Park City/County: Marshall/Calhoun County Sampling Date: 10/10/2024
Applicant/Owner: _____ State: MI Sampling Point: Wetland N
Investigator(s): Alexander Kriebel Section, Township, Range: Section 1 , Township 3 South , Range 6 West
Landform (hillside, terrace, etc.): Emergent Marsh Local relief (concave, convex, none): Concave
Slope (%): 5 Lat: 42.241178 Long: -84.948125 Datum: WGS84
Soil Map Unit Name: 63 (Gilford Fine Sandy Loam, 0-2% Slopes, Gravelly Subsoil), 65 (Sebewa Loam, 0-2% Slopes), PmsacA (Palms Muck, 0-1% Slopes) NWI classification: PSS1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	

Remarks:
Unseasonable Dry

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
		=Total Cover		
Sapling/Shrub Stratum	(Plot size: _____)			
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
		=Total Cover		
Herb Stratum	(Plot size: _____)			
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
8.	_____	_____	_____	_____
9.	_____	_____	_____	_____
10.	_____	_____	_____	_____
		=Total Cover		
Woody Vine Stratum	(Plot size: _____)			
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
		=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That
Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species
Across All Strata: _____ (B)

Percent of Dominant Species That
Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)
Prevalence Index = B/A = _____	

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0¹

____ 4 - Morphological Adaptations¹ (Provide supporting
data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be
present, unless disturbed or problematic.

**Hydrophytic
Vegetation
Present?** Yes X No _____

Remarks: (Include photo numbers here or on a separate sheet.)
Point Intercept Method used, see attached files. PI= 1.94

SOILSampling Point: Wetland N**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10YR 2/1	85	2.5YR 3/3	15	C	PL	Mucky Loam/Clay	Prominent redox concentrations
10-18	10YR 4/1	95	10YR 5/8	5	C	PL	Loamy/Clayey	Prominent redox concentrations
18-24	10GY 5/1	80	10YR 4/1	15	RM	M	Loamy/Clayey	
			10YR 5/8	5	C	PL		Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)
☐ Hydrogen Sulfide (A4)	☐ Dark Surface (S7)
☐ Stratified Layers (A5)	☐ Loamy Mucky Mineral (F1)
☐ 2 cm Muck (A10)	☐ Loamy Gleyed Matrix (F2)
☒ Depleted Below Dark Surface (A11)	☒ Depleted Matrix (F3)
☐ Thick Dark Surface (A12)	☒ Redox Dark Surface (F6)
☐ Sandy Mucky Mineral (S1)	☐ Depleted Dark Surface (F7)
☐ 5 cm Mucky Peat or Peat (S3)	☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

☐ Coast Prairie Redox (A16)
☐ Iron-Manganese Masses (F12)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**
 Type: _____
 Depth (inches): _____
Hydric Soil Present? Yes ☒ No ☐**Remarks:**
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)
HYDROLOGY**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

☐ Surface Water (A1)	☒ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☒ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☒ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☒ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☒ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☒ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐ No ☒	Depth (inches): _____
Water Table Present?	Yes ☒ No ☐	Depth (inches): <u>18</u>
Saturation Present?	Yes ☒ No ☐	Depth (inches): <u>10</u>
(includes capillary fringe)		

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland N				Date: 8/7/2024			
Transect 1				Transect 2			
Looking Down		Looking Up		Looking Down		Looking Up	
Interval	Species	Wetland Indicator	Species	Interval	Species	Wetland Indicator	Species
1	Carex crus-corvi	OBL	Quercus shumardii	1	Carex crus-corvi	OBL	Ulmus rubra
2	Carex crus-corvi	OBL	Quercus shumardii	2	Phalaris arundinacea	FACW	Fraxinus pennsylvanica
3	Carex crus-corvi	OBL	Null	3	Phalaris arundinacea	FACW	Fraxinus pennsylvanica
4	Carex crus-corvi	OBL	Null	4	Phalaris arundinacea	FACW	Fraxinus pennsylvanica
5	Carex crus-corvi	OBL	Null	5	Phalaris arundinacea	FACW	Fraxinus pennsylvanica
6	Phalaris arundinacea	FACW	Null	6	Phalaris arundinacea	FACW	Fraxinus pennsylvanica
7	Carex crus-corvi	OBL	Null	7	Phalaris arundinacea	FACW	Fraxinus pennsylvanica
8	Phalaris arundinacea	FACW	Null	8	Apocynum cannabinum	FAC	Fraxinus pennsylvanica
9	Carex crus-corvi	OBL	Fraxinus pennsylvanica	9	Phalaris arundinacea	FACW	Null
10	Phalaris arundinacea	FACW	Fraxinus pennsylvanica	10	Phalaris arundinacea	FACW	Null
11	Phalaris arundinacea	FACW	Fraxinus pennsylvanica	11	Phalaris arundinacea	FACW	Null
12	Carex crus-corvi	OBL	Fraxinus pennsylvanica	12	Phalaris arundinacea	FACW	Null
13	Symphyotrichum novae-angliae	FACW	Fraxinus pennsylvanica	13	Phalaris arundinacea	FACW	Null
14	Apocynum cannabinum	FAC	Fraxinus pennsylvanica	14	Carex crus-corvi	OBL	Null
15	Lythrum salicaria	OBL	Fraxinus pennsylvanica	15	Carex crus-corvi	OBL	Null
16	Phalaris arundinacea	FACW	Null	16	Apocynum cannabinum	FAC	Null
17	Lythrum salicaria	OBL	Null	17	Carex crus-corvi	OBL	Fraxinus pennsylvanica
18	Phalaris arundinacea	FACW	Null	18	Phalaris arundinacea	FACW	Fraxinus pennsylvanica
19	Phalaris arundinacea	FACW	Null	19	Apocynum cannabinum	FAC	Fraxinus pennsylvanica
20	Phalaris arundinacea	FACW	Null	20	Phalaris arundinacea	FACW	Fraxinus pennsylvanica
21	Phalaris arundinacea	FACW	Null	21	Carex crus-corvi	OBL	Null
22	Phalaris arundinacea	FACW	Null	22	Phalaris arundinacea	FACW	Null
23	Phalaris arundinacea	FACW	Null	23	Symphyotrichum novae-angliae	FACW	Null
24	Apocynum cannabinum	FAC	Null	24	Phalaris arundinacea	FACW	Fraxinus pennsylvanica
25	Ulmus rubra	FAC	Null	25	Symphyotrichum novae-angliae	FACW	Fraxinus pennsylvanica
26	Apocynum cannabinum	FAC	Null	26	Phalaris arundinacea	FACW	Quercus shumardii
27	Apocynum cannabinum	FAC	Null	27	Symphyotrichum novae-angliae	FACW	Quercus shumardii
28	Phalaris arundinacea	FACW	Null	28	Phalaris arundinacea	FACW	Null
29	Phalaris arundinacea	FACW	Null	29	Phalaris arundinacea	FACW	Null
30	Phalaris arundinacea	FACW	Null	30	Apocynum cannabinum	FAC	Null

Point Intercept Calculations			
Wetland Indicator	Total Hits	Weight	Weighted Hits
OBL-Obligate		15 x1	15
FACW-Facultative Wetland		60 x2	120
FAC-Facultative		10 x3	30
FACU-Facultative Upland		0 x4	0
UPL-Upland		0 x5	0
Subtotals	85		165

PI = Weighted Hits/Unweighted Hits
PI = 165/85 = 1.94

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: 095567.01/Industrial Park City/County: Marshall/Calhoun County Sampling Date: 10/11/2024
 Applicant/Owner: _____ State: MI Sampling Point: Wetland Q
 Investigator(s): Alexander Kriebel Section, Township, Range: Section 1 , Township 3 South , Range 6 West
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave
 Slope (%): 3 Lat: 42.239436 Long: -84.946430 Datum: WGS84
 Soil Map Unit Name: 14B (Bronson Sandy Loam, 0-6% Slopes), 65 (Sebewa Loam, 0-2% Slopes) NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation X, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks: Unseasonable Dry, Farming, Points Q30 and Q31 extend offsite	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____					Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)																
2. _____																					
3. _____																					
4. _____																					
5. _____																					
		=Total Cover																			
Sapling/Shrub Stratum	(Plot size: _____)				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____ (A)	_____ (B)	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																				
OBL species _____	x 1 = _____																				
FACW species _____	x 2 = _____																				
FAC species _____	x 3 = _____																				
FACU species _____	x 4 = _____																				
UPL species _____	x 5 = _____																				
Column Totals: _____ (A)	_____ (B)																				
Prevalence Index = B/A = _____																					
1. _____																					
2. _____																					
3. _____																					
4. _____																					
5. _____																					
		=Total Cover																			
Herb Stratum	(Plot size: _____)				Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation _____ 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 ¹ _____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. _____																					
2. _____																					
3. _____																					
4. _____																					
5. _____																					
6. _____																					
7. _____																					
8. _____																					
9. _____																					
10. _____																					
		=Total Cover																			
Woody Vine Stratum	(Plot size: _____)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____																
1. _____																					
2. _____																					
		=Total Cover																			

Remarks: (Include photo numbers here or on a separate sheet.)
 Point Intercept Method used, see attached files. PI= 2.52

SOILSampling Point: Wetland Q

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth	Matrix		Redox Features				Texture	Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 2/1	100					Mucky Sand	
8-20	10YR 5/1	90	10YR 5/6	10	C	PL	Loamy/Clayey	Prominent redox concentrations
20-24	10YR 5/1	75	5GY 5/1	15	RM	M	Loamy/Clayey	
			10YR 5/6	10	C	PL		Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	☐ Coast Prairie Redox (A16)
☐ Histic Epipedon (A2)	☐ Iron-Manganese Masses (F12)
☐ Black Histic (A3)	☐ Red Parent Material (F21)
☐ Hydrogen Sulfide (A4)	☐ Very Shallow Dark Surface (F22)
☐ Stratified Layers (A5)	☐ Other (Explain in Remarks)
☐ 2 cm Muck (A10)	
☐ Depleted Below Dark Surface (A11)	
☐ Thick Dark Surface (A12)	
☒ Sandy Mucky Mineral (S1)	
☐ 5 cm Mucky Peat or Peat (S3)	
☐ Sandy Gleyed Matrix (S4)	
☐ Sandy Redox (S5)	
☐ Stripped Matrix (S6)	
☐ Dark Surface (S7)	
☐ Loamy Mucky Mineral (F1)	
☐ Loamy Gleyed Matrix (F2)	
☐ Depleted Matrix (F3)	
☐ Redox Dark Surface (F6)	
☐ Depleted Dark Surface (F7)	
☐ Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes ☒ No ☐
---	---

Remarks:
This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☒ Surface Soil Cracks (B6)	
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Patterns (B10)	
☒ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)	
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)	
☐ Sediment Deposits (B2)	☒ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)	
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☒ Stunted or Stressed Plants (D1)	
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☒ Geomorphic Position (D2)	
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ FAC-Neutral Test (D5)	
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)		
☒ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (inches): _____ Water Table Present? Yes ☐ No ☒ Depth (inches): _____ Saturation Present? Yes ☒ No ☐ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes ☒ No ☐
--	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland Q				Date: 8/7/2024											
Transect 1				Transect 2											
Looking Down				Looking Up				Looking Down				Looking Up			
Interval	Species	Wetland Indicator	Species	Wetland Indicator	Interval	Species	Wetland Indicator	Species	Wetland Indicator	Interval	Species	Wetland Indicator	Species	Wetland Indicator	
1	Phalaris arundinacea	FACW	Null		1	Phalaris arundinacea	FACW	Null		1	Phalaris arundinacea	FACW	Null		
2	Phalaris arundinacea	FACW	Null		2	Solidago canadensis	FACU	Null		2	Solidago canadensis	FACU	Null		
3	Phalaris arundinacea	FACW	Null		3	Phalaris arundinacea	FACW	Null		3	Phalaris arundinacea	FACW	Null		
4	Phalaris arundinacea	FACW	Null		4	Echinochloa muricata	OBL	Null		4	Echinochloa muricata	OBL	Null		
5	Phalaris arundinacea	FACW	Null		5	Solidago canadensis	FACU	Null		5	Solidago canadensis	FACU	Null		
6	Apocynum cannabinum	FAC	Null		6	Euthamia graminifolia	FACW	Null		6	Euthamia graminifolia	FACW	Null		
7	Polygonum pensylvanicum	FACW	Null		7	Solidago canadensis	FACU	Null		7	Solidago canadensis	FACU	Null		
8	Phalaris arundinacea	FACW	Null		8	Solidago canadensis	FACU	Null		8	Solidago canadensis	FACU	Null		
9	Polygonum pensylvanicum	FACW	Null		9	Ulmus rubra	FAC	Null		9	Ulmus rubra	FAC	Null		
10	Phalaris arundinacea	FACW	Null		10	Solidago canadensis	FACU	Null		10	Solidago canadensis	FACU	Null		
11	Eleocharis obtusa	OBL	Null		11	Juncus effusus	OBL	Null		11	Juncus effusus	OBL	Null		
12	Eleocharis obtusa	OBL	Null		12	Ulmus rubra	FAC	Null		12	Ulmus rubra	FAC	Null		
13	Null		Null		13	Solidago canadensis	FACU	Null		13	Solidago canadensis	FACU	Null		
14	Null		Null		14	Solidago canadensis	FACU	Null		14	Solidago canadensis	FACU	Null		
15	Phalaris arundinacea	FACW	Null		15	Phalaris arundinacea	FACW	Null		15	Phalaris arundinacea	FACW	Null		
16	Eleocharis obtusa	OBL	Null		16	Phalaris arundinacea	FACW	Null		16	Phalaris arundinacea	FACW	Null		
17	Null		Null		17	Solidago canadensis	FACU	Null		17	Solidago canadensis	FACU	Null		
18	Null		Null		18	Phalaris arundinacea	FACW	Null		18	Phalaris arundinacea	FACW	Null		
19	Null		Null		19	Solidago canadensis	FACU	Null		19	Solidago canadensis	FACU	Null		
20	Null		Null		20	Solidago canadensis	FACU	Null		20	Solidago canadensis	FACU	Null		
21	Eleocharis obtusa	OBL	Null		21	Phalaris arundinacea	FACW	Null		21	Phalaris arundinacea	FACW	Null		
22	Echinochloa muricata	OBL	Null		22	Phalaris arundinacea	FACW	Null		22	Phalaris arundinacea	FACW	Null		
23	Echinochloa muricata	OBL	Null		23	Phalaris arundinacea	FACW	Null		23	Phalaris arundinacea	FACW	Null		
24	Panicum virgatum	FAC	Null		24	Phalaris arundinacea	FACW	Null		24	Phalaris arundinacea	FACW	Null		
25	Carex vulpinoidea	FACW	Null		25	Polygonum pensylvanicum	FACW	Null		25	Polygonum pensylvanicum	FACW	Null		
26	Solidago canadensis	FACU	Null		26	Phalaris arundinacea	FACW	Null		26	Phalaris arundinacea	FACW	Null		
27	Solidago canadensis	FACU	Null		27	Solidago canadensis	FACU	Null		27	Solidago canadensis	FACU	Null		
28	Solidago canadensis	FACU	Null		28	Phalaris arundinacea	FACW	Null		28	Phalaris arundinacea	FACW	Null		
29	Solidago canadensis	FACU	Null		29	Polygonum pensylvanicum	FACW	Null		29	Polygonum pensylvanicum	FACW	Null		
30	Solidago canadensis	FACU	Null		30	Phalaris arundinacea	FACW	Null		30	Phalaris arundinacea	FACW	Null		

Point Intercept Calculations			
Wetland Indicator	Total Hits	Weight	Weighted Hits
OBL-Obligate		8 x1	8
FACW-Facultative Wetland		26 x2	52
FAC-Facultative		4 x3	12
FACU-Facultative Upland		16 x4	64
UPL-Upland		0 x5	0
Subtotals	54		136

PI = Weighted Hits/Unweighted Hits
PI = 136/54 = 2.52

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: 095567.01/Industrial Park City/County: Marshall/Calhoun County Sampling Date: 10/4/2024
 Applicant/Owner: _____ State: MI Sampling Point: Wetland R
 Investigator(s): Alexander Kriebel Section, Township, Range: Section 1 , Township 3 South , Range 6 West
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave
 Slope (%): 4 Lat: 42.243390 Long: -84.952795 Datum: WGS84
 Soil Map Unit Name: 25B (Kalamazoo Loam, 2-6% Slopes), 45A (Sleeth Loam, 0-2% Slopes) NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation X, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks: Unseasonable Dry, Tree Clearing and Chipping	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.					Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)																
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Sapling/Shrub Stratum	(Plot size: _____)				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____ (A)	_____ (B)	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																				
OBL species _____	x 1 = _____																				
FACW species _____	x 2 = _____																				
FAC species _____	x 3 = _____																				
FACU species _____	x 4 = _____																				
UPL species _____	x 5 = _____																				
Column Totals: _____ (A)	_____ (B)																				
Prevalence Index = B/A = _____																					
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Herb Stratum	(Plot size: _____)				Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation _____ 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 ¹ _____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1.																					
2.																					
3.																					
4.																					
5.																					
6.																					
7.																					
8.																					
9.																					
10.																					
		=Total Cover																			
Woody Vine Stratum	(Plot size: _____)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____																
1.																					
2.																					
		=Total Cover																			

Remarks: (Include photo numbers here or on a separate sheet.)
 Point Intercept Method used, see attached files. PI= 2.23

Wetland R				Date: 8/7/2024			
Transect 1				Transect 2			
Looking Down		Looking Up		Looking Down		Looking Up	
Interval	Species	Wetland Indicator	Species	Interval	Species	Wetland Indicator	Species
1	Symphyotrichum novae-angliae	FACW	Null	1	Phalaris arundinacea	FACW	Acer saccharinum
2	Symphyotrichum novae-angliae	FACW	Null	2	Phalaris arundinacea	FACW	Acer saccharinum
3	Carex vulpinoidea	FACW	Null	3	Carex vulpinoidea	FACW	Acer saccharinum
4	Carex vulpinoidea	FACW	Null	4	Carex vulpinoidea	FACW	Null
5	Onoclea sensibilis	FACW	Null	5	Fragaria virginiana	FACU	Null
6	Carex vulpinoidea	FACW	Null	6	Vitis riparia	FACW	Null
7	Fraxinus pennsylvanica	FACW	Null	7	Carex vulpinoidea	FACW	Null
8	Carex vulpinoidea	FACW	Null	8	Carex vulpinoidea	FACW	Null
9	Carex vulpinoidea	FACW	Null	9	Fragaria virginiana	FACU	Null
10	Symphyotrichum novae-angliae	FACW	Null	10	Symphyotrichum novae-angliae	FACW	Null
11	Carex vulpinoidea	FACW	Null	11	Carex vulpinoidea	FACW	Null
12	Null		Null	12	Phalaris arundinacea	FACW	Null
13	Carex vulpinoidea	FACW	Null	13	Carex crus-corvi	OBL	Null
14	Fragaria virginiana	FACU	Null	14	Symphyotrichum novae-angliae	FACW	Null
15	Fragaria virginiana	FACU	Null	15	Carex vulpinoidea	FACW	Null
16	Carex vulpinoidea	FACW	Null	16	Carex vulpinoidea	FACW	Null
17	Carex vulpinoidea	FACW	Null	17	Carex vulpinoidea	FACW	Null
18	Carex vulpinoidea	FACW	Null	18	Acer saccharinum	FACW	Null
19	Prunella vulgaris	FAC	Null	19	Galium aparine	FACU	Null
20	Fraxinus pennsylvanica	FACW	Null	20	Carex vulpinoidea	FACW	Null
21	Carex vulpinoidea	FACW	Null	21	Fraxinus pennsylvanica	FACW	Null
22	Carex vulpinoidea	FACW	Null	22	Carex vulpinoidea	FACW	Null
23	Null		Null	23	Fraxinus pennsylvanica	FACW	Null
24	Carex vulpinoidea	FACW	Null	24	Prunella vulgaris	FAC	Null
25	Symphyotrichum novae-angliae	FACW	Null	25	Solidago canadensis	FACU	Acer saccharinum
26	Symphyotrichum novae-angliae	FACW	Null	26	Carex vulpinoidea	FACW	Acer saccharinum
27	Carex vulpinoidea	FACW	Null	27	Carex vulpinoidea	FACW	Acer saccharinum
28	Carex vulpinoidea	FACW	Null	28	Phalaris arundinacea	FACW	Acer saccharinum
29	Fraxinus pennsylvanica	FACW	Null	29	Cornus racemosa	FAC	Acer saccharinum
30	Apocynum cannabinum	FAC	Null	30	Null		Acer saccharinum

Point Intercept Calculations			
Wetland Indicator	Total Hits	Weight	Weighted Hits
OBL-Obligate		1 x1	1
FACW-Facultative Wetland	55	x2	110
FAC-Facultative	4	x3	12
FACU-Facultative Upland	6	x4	24
UPL-Upland		x5	0
Subtotals	66		147

PI = Weighted Hits/Unweighted Hits
PI = 147/66 = 2.23

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: 095567.01/Industrial Park City/County: Marshall/Calhoun County Sampling Date: 9/30/2024
 Applicant/Owner: _____ State: MI Sampling Point: Wetland S
 Investigator(s): Alexander Kriebel Section, Township, Range: Section 1 , Township 3 South , Range 6 West
 Landform (hillside, terrace, etc.): Emergent Marsh Local relief (concave, convex, none): Concave
 Slope (%): 4 Lat: 42.239413 Long: -84.946252 Datum: WGS84
 Soil Map Unit Name: 14B (Bronson Sandy Loam, 6-12% Slopes), 65 (Sebewa Loam, 0-2% Slopes) NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation X, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks: Unseasonable Dry, Farming	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____					Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. _____					
3. _____					
4. _____					
5. _____					
		=Total Cover			
Sapling/Shrub Stratum	(Plot size: _____)				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
1. _____					
2. _____					
3. _____					
4. _____					
		=Total Cover			
Herb Stratum	(Plot size: _____)				Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation _____ 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 ¹ _____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____					
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
		=Total Cover			
Woody Vine Stratum	(Plot size: _____)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. _____					
2. _____					
		=Total Cover			

Remarks: (Include photo numbers here or on a separate sheet.)
 Point Intercept Method used, see attached files. PI= 1.53

SOILSampling Point: Wetland S**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10YR 3/1	90	10YR 3/6	10	C	PL	Mucky Sand	Prominent redox concentrations
10-24	10YR 5/2	60	10YR 4/1	30	RM	M	Sandy	
			7.5YR 5/8	10	C	PL		Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)
☐ Hydrogen Sulfide (A4)	☐ Dark Surface (S7)
☐ Stratified Layers (A5)	☐ Loamy Mucky Mineral (F1)
☐ 2 cm Muck (A10)	☐ Loamy Gleyed Matrix (F2)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Matrix (F3)
☐ Thick Dark Surface (A12)	☐ Redox Dark Surface (F6)
☒ Sandy Mucky Mineral (S1)	☐ Depleted Dark Surface (F7)
☐ 5 cm Mucky Peat or Peat (S3)	☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

☐ Coast Prairie Redox (A16)
☐ Iron-Manganese Masses (F12)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**
 Type: _____
 Depth (inches): _____
Hydric Soil Present? Yes ☒ No ☐**Remarks:**
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)
HYDROLOGY**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☒ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☒ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☒ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☒ Surface Soil Cracks (B6)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☒ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☒	Depth (inches): _____
Water Table Present?	Yes ☐	No ☒	Depth (inches): _____
Saturation Present?	Yes ☒	No ☐	Depth (inches): <u>10</u>
(includes capillary fringe)			

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Standing water present earlier in year.

Wetland S				Date: 8/7/2024					
Transect 1				Transect 2					
Looking Down			Looking Up		Looking Down		Looking Up		
Interval	Species	Wetland Indicator	Species	Wetland Indicator	Interval	Species	Wetland Indicator	Species	Wetland Indicator
1	Echinochloa muricata	OBL	Null		1	Phalaris arundinacea	FACW	Null	
2	Eleocharis obtusa	OBL	Null		2	Juncus effusus	OBL	Null	
3	Eleocharis obtusa	OBL	Null		3	Phalaris arundinacea	FACW	Null	
4	Null		Null		4	Phalaris arundinacea	FACW	Null	
5	Eleocharis obtusa	OBL	Null		5	Juncus effusus	OBL	Null	
6	Eleocharis obtusa	OBL	Null		6	Juncus effusus	OBL	Null	
7	Null		Null		7	Echinochloa muricata	OBL	Null	
8	Null		Null		8	Phalaris arundinacea	FACW	Null	
9	Null		Null		9	Echinochloa muricata	OBL	Null	
10	Eleocharis obtusa	OBL	Null		10	Eleocharis obtusa	OBL	Null	
11	Phalaris arundinacea	FACW	Null		11	Eleocharis obtusa	OBL	Null	
12	Phalaris arundinacea	FACW	Null		12	Eleocharis obtusa	OBL	Null	
13	Phalaris arundinacea	FACW	Null		13	Eleocharis obtusa	OBL	Null	
14	Ulmus rubra	FAC	Null		14	Eleocharis obtusa	OBL	Null	
15	Phalaris arundinacea	FACW	Null		15	Null		Null	
16	Phalaris arundinacea	FACW	Quercus shumardii	FACW	16	Echinochloa muricata	OBL	Null	
17	Phalaris arundinacea	FACW	Quercus shumardii	FACW	17	Phalaris arundinacea	FACW	Null	
18	Scripus cyperinus	OBL	Quercus shumardii	FACW	18	Juncus effusus	OBL	Null	
19	Scripus cyperinus	OBL	Null		19	Symphyotrichum lateriflorum	FACW	Null	
20	Scripus cyperinus	OBL	Null		20	Symphyotrichum lateriflorum	FACW	Null	
21	Phalaris arundinacea	FACW	Null		21	Symphyotrichum lateriflorum	FACW	Null	
22	Phalaris arundinacea	FACW	Null		22	Apocynum cannabinum	FAC	Null	
23	Juncus effusus	OBL	Null		23	Apocynum cannabinum	FAC	Null	
24	Juncus effusus	OBL	Null		24	Apocynum cannabinum	FAC	Null	
25	Scripus cyperinus	OBL	Null		25	Scripus cyperinus	OBL	Null	
26	Scripus cyperinus	OBL	Null		26	Scripus cyperinus	OBL	Null	
27	Scripus cyperinus	OBL	Null		27	Scripus cyperinus	OBL	Null	
28	Scripus cyperinus	OBL	Salix amygdaloides	FACW	28	Null		Null	
29	Scripus cyperinus	OBL	Salix amygdaloides	FACW	29	Polygonum pensylvanicum	FACW	Null	
30	Scripus cyperinus	OBL	Salix amygdaloides	FACW	30	Polygonum pensylvanicum	FACW	Null	

Point Intercept Calculations			
Wetland Indicator	Total Hits	Weight	Weighted Hits
OBL-Obligate		32 x1	32
FACW-Facultative Wetland		24 x2	48
FAC-Facultative		4 x3	12
FACU-Facultative Upland		0 x4	0
UPL-Upland		0 x5	0
Subtotals	60		92

PI = Weighted Hits/Unweighted Hits
PI = 92/60 = 1.53

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: 095567.01/Industrial Park City/County: Marshall/Calhoun County Sampling Date: 9/20/2024
 Applicant/Owner: _____ State: MI Sampling Point: Wetland T
 Investigator(s): Alexander Kriebel Section, Township, Range: Section 1 , Township 3 South , Range 6 West
 Landform (hillside, terrace, etc.): Emergent Marsh Local relief (concave, convex, none): Concave
 Slope (%): 5 Lat: 42.239128 Long: -84.947330 Datum: WGS84
 Soil Map Unit Name: 14B (Bronson Sandy Loam, 6-12% Slopes), 65 (Sebewa Loam, 0-2% Slopes) NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation X, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks: Unseasonable Dry, Farming	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____					Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)																
2. _____																					
3. _____																					
4. _____																					
5. _____																					
		=Total Cover																			
Sapling/Shrub Stratum	(Plot size: _____)				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____ (A)	_____ (B)	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																				
OBL species _____	x 1 = _____																				
FACW species _____	x 2 = _____																				
FAC species _____	x 3 = _____																				
FACU species _____	x 4 = _____																				
UPL species _____	x 5 = _____																				
Column Totals: _____ (A)	_____ (B)																				
Prevalence Index = B/A = _____																					
1. _____																					
2. _____																					
3. _____																					
4. _____																					
5. _____																					
		=Total Cover																			
Herb Stratum	(Plot size: _____)				Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation _____ 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 ¹ _____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. _____																					
2. _____																					
3. _____																					
4. _____																					
5. _____																					
6. _____																					
7. _____																					
8. _____																					
9. _____																					
10. _____																					
		=Total Cover																			
Woody Vine Stratum	(Plot size: _____)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____																
1. _____																					
2. _____																					
		=Total Cover																			

Remarks: (Include photo numbers here or on a separate sheet.)
 Point Intercept Method used, see attached files. PI= 2.42

Wetland T				Date: 8/7/2024			
Transect 1				Transect 2			
Looking Down			Looking Up		Looking Down		Looking Up
Interval	Species	Wetland Indicator	Species	Wetland Indicator	Interval	Species	Wetland Indicator
1	Phalaris arundinacea	FACW	Null		1	Phalaris arundinacea	FACW
2	Polygonum pensylvanicum	FACW	Null		2	Phalaris arundinacea	FACW
3	Phalaris arundinacea	FACW	Null		3	Apocynum cannabinum	FAC
4	Phalaris arundinacea	FACW	Null		4	Phalaris arundinacea	FACW
5	Polygonum pensylvanicum	FACW	Null		5	Phalaris arundinacea	FACW
6	Phalaris arundinacea	FACW	Null		6	Symphyotrichum novae-angliae	FACW
7	Phalaris arundinacea	FACW	Null		7	Phalaris arundinacea	FACW
8	Phalaris arundinacea	FACW	Null		8	Verbena hastata	FACW
9	Symphyotrichum novae-angliae	FACW	Null		9	Phalaris arundinacea	FACW
10	Phalaris arundinacea	FACW	Null		10	Verbena hastata	FACW
11	Phalaris arundinacea	FACW	Null		11	Phalaris arundinacea	FACW
12	Scripus cyperinus	OBL	Null		12	Phalaris arundinacea	FACW
13	Scripus cyperinus	OBL	Null		13	Ulmus rubra	FAC
14	Scripus cyperinus	OBL	Null		14	Euthamia graminifolia	FACW
15	Symphyotrichum novae-angliae	FACW	Null		15	Euthamia graminifolia	FACW
16	Verbena hastata	FACW	Null		16	Euthamia graminifolia	FACW
17	Phalaris arundinacea	FACW	Null		17	Euthamia graminifolia	FACW
18	Phalaris arundinacea	FACW	Null		18	Verbena hastata	FACW
19	Apocynum cannabinum	FAC	Null		19	Phalaris arundinacea	FACW
20	Phalaris arundinacea	FACW	Null		20	Phalaris arundinacea	FACW
21	Phalaris arundinacea	FACW	Null		21	Phalaris arundinacea	FACW
22	Phalaris arundinacea	FACW	Null		22	Verbena hastata	FACW
23	Phalaris arundinacea	FACW	Null		23	Phalaris arundinacea	FACW
24	Phalaris arundinacea	FACW	Null		24	Solidago canadensis	FACU
25	Phalaris arundinacea	FACW	Ulmus rubra	FAC	25	Solidago canadensis	FACU
26	Solidago canadensis	FACU	Ulmus rubra	FAC	26	Phalaris arundinacea	FACW
27	Solidago canadensis	FACU	Ulmus rubra	FAC	27	Solidago canadensis	FACU
28	Solidago canadensis	FACU	Ulmus rubra	FAC	28	Solidago canadensis	FACU
29	Solidago canadensis	FACU	Ulmus rubra	FAC	29	Solidago canadensis	FACU
30	Solidago canadensis	FACU	Ulmus rubra	FAC	30	Solidago canadensis	FACU

Point Intercept Calculations			
Wetland Indicator	Total Hits	Weight	Weighted Hits
OBL-Obligate		3 x1	3
FACW-Facultative Wetland		43 x2	86
FAC-Facultative		9 x3	27
FACU-Facultative Upland		11 x4	44
UPL-Upland		0 x5	0
Subtotals	66		160

PI = Weighted Hits/Unweighted Hits
PI = 160/66 = 2.42

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: 095567.01/Industrial Park City/County: Marshall/Calhoun County Sampling Date: 9/25/2024
 Applicant/Owner: _____ State: MI Sampling Point: Wetland U
 Investigator(s): Alexander Kriebel Section, Township, Range: Section 1 , Township 3 South , Range 6 West
 Landform (hillside, terrace, etc.): Emergent Marsh Local relief (concave, convex, none): Concave
 Slope (%): 5 Lat: 42.237746 Long: -84.947145 Datum: WGS84
 Soil Map Unit Name: 14B (Bronson Sandy Loam, 6-12% Slopes), 65 (Sebewa Loam, 0-2% Slopes) NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation X, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks: Unseasonable Dry, Farming	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.					Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)																
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Sapling/Shrub Stratum		(Plot size: _____)			Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____ (A)	_____ (B)	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																				
OBL species _____	x 1 = _____																				
FACW species _____	x 2 = _____																				
FAC species _____	x 3 = _____																				
FACU species _____	x 4 = _____																				
UPL species _____	x 5 = _____																				
Column Totals: _____ (A)	_____ (B)																				
Prevalence Index = B/A = _____																					
1.																					
2.																					
3.																					
4.																					
5.																					
		=Total Cover																			
Herb Stratum		(Plot size: _____)			Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation _____ 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 ¹ _____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1.																					
2.																					
3.																					
4.																					
5.																					
6.																					
7.																					
8.																					
9.																					
10.																					
		=Total Cover																			
Woody Vine Stratum		(Plot size: _____)			Hydrophytic Vegetation Present? Yes <u>X</u> No _____																
1.																					
2.																					
		=Total Cover																			
Remarks: (Include photo numbers here or on a separate sheet.) Point Intercept Method used, see attached files. PI= 2.18																					

SOILSampling Point: Wetland U**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10YR 3/1	90	10YR 3/6	10	C	PL	Mucky Sand	Prominent redox concentrations
10-24	10YR 5/2	60	10YR 4/1	30	D	M	Sandy	
			7.5YR 5/8	10	C	PL		Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)
☐ Hydrogen Sulfide (A4)	☐ Dark Surface (S7)
☐ Stratified Layers (A5)	☐ Loamy Mucky Mineral (F1)
☐ 2 cm Muck (A10)	☐ Loamy Gleyed Matrix (F2)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Matrix (F3)
☐ Thick Dark Surface (A12)	☐ Redox Dark Surface (F6)
☒ Sandy Mucky Mineral (S1)	☐ Depleted Dark Surface (F7)
☐ 5 cm Mucky Peat or Peat (S3)	☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

☐ Coast Prairie Redox (A16)
☐ Iron-Manganese Masses (F12)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**
 Type: _____
 Depth (inches): _____
Hydric Soil Present? Yes ☒ No ☐**Remarks:**
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)
HYDROLOGY**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☒ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☒ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☒	Depth (inches): _____
Water Table Present?	Yes ☐	No ☒	Depth (inches): _____
Saturation Present?	Yes ☒	No ☐	Depth (inches): <u>10</u>
(includes capillary fringe)			

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland U				Date: 8/7/2024			
Transect 1				Transect 2			
Looking Down		Looking Up		Looking Down		Looking Up	
Interval	Species	Wetland Indicator	Species	Interval	Species	Wetland Indicator	Species
1	Juncus effusus	OBL	Null	1	Phalaris arundinacea	FACW	Null
2	Solidago canadensis	FACU	Null	2	Phalaris arundinacea	FACW	Null
3	Phalaris arundinacea	FACW	Null	3	Phalaris arundinacea	FACW	Null
4	Scripus cyperinus	OBL	Null	4	Solidago canadensis	FACU	Null
5	Phalaris arundinacea	FACW	Null	5	Solidago canadensis	FACU	Null
6	Solidago canadensis	FACU	Null	6	Phalaris arundinacea	FACW	Null
7	Scripus cyperinus	OBL	Null	7	Phalaris arundinacea	FACW	Null
8	Scripus cyperinus	OBL	Null	8	Euthamia graminifolia	FACW	Null
9	Phalaris arundinacea	FACW	Null	9	Phalaris arundinacea	FACW	Null
10	Phalaris arundinacea	FACW	Null	10	Scripus cyperinus	OBL	Null
11	Phalaris arundinacea	FACW	Null	11	Phalaris arundinacea	FACW	Null
12	Phalaris arundinacea	FACW	Null	12	Scripus cyperinus	OBL	Null
13	Phalaris arundinacea	FACW	Null	13	Solidago canadensis	FACU	Null
14	Scripus cyperinus	OBL	Null	14	Solidago canadensis	FACU	Null
15	Phalaris arundinacea	FACW	Null	15	Solidago canadensis	FACU	Null
16	Phalaris arundinacea	FACW	Null	16	Phalaris arundinacea	FACW	Null
17	Phalaris arundinacea	FACW	Null	17	Phalaris arundinacea	FACW	Null
18	Phalaris arundinacea	FACW	Null	18	Phalaris arundinacea	FACW	Null
19	Phalaris arundinacea	FACW	Null	19	Apocynum cannabinum	FAC	Null
20	Solidago canadensis	FACU	Null	20	Phalaris arundinacea	FACW	Null
21	Phalaris arundinacea	FACW	Null	21	Apocynum cannabinum	FAC	Null
22	Phalaris arundinacea	FACW	Null	22	Phalaris arundinacea	FACW	Null
23	Apocynum cannabinum	FAC	Null	23	Phalaris arundinacea	FACW	Null
24	Phalaris arundinacea	FACW	Null	24	Scripus cyperinus	OBL	Null
25	Phalaris arundinacea	FACW	Null	25	Phalaris arundinacea	FACW	Null
26	Phalaris arundinacea	FACW	Null	26	Scripus cyperinus	OBL	Null
27	Apocynum cannabinum	FAC	Null	27	Phalaris arundinacea	FACW	Null
28	Phalaris arundinacea	FACW	Null	28	Phalaris arundinacea	FACW	Null
29	Phalaris arundinacea	FACW	Null	29	Phalaris arundinacea	FACW	Null
30	Symphyotrichum novae-angliae	FACW	Null	30	Phalaris arundinacea	FACW	Null

Point Intercept Calculations			
Wetland Indicator	Total Hits	Weight	Weighted Hits
OBL-Obligate		9 x1	9
FACW-Facultative Wetland		39 x2	78
FAC-Facultative		4 x3	12
FACU-Facultative Upland		8 x4	32
UPL-Upland		0 x5	0
Subtotals	60		131

PI = Weighted Hits/Unweighted Hits
PI = 131/60 = 2.18

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: 095567.01/Industrial Park City/County: Marshall/Calhoun County Sampling Date: 9/30/2024
Applicant/Owner: _____ State: MI Sampling Point: Wetland V
Investigator(s): Alexander Kriebel Section, Township, Range: Section 1 , Township 3 South , Range 6 West
Landform (hillside, terrace, etc.): Hardwood Swamp Local relief (concave, convex, none): Concave
Slope (%): 3 Lat: 42.238180 Long: -84.949698 Datum: WGS84
Soil Map Unit Name: 45A (Sleeth Loam, 0-2% Slopes), 65 (Sebewa Loam, 0-2% Slopes) NWI classification: PEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	

Remarks:
Unseasonable Dry

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
		=Total Cover		
Sapling/Shrub Stratum	(Plot size: _____)			
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
		=Total Cover		
Herb Stratum	(Plot size: _____)			
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
8.	_____	_____	_____	_____
9.	_____	_____	_____	_____
10.	_____	_____	_____	_____
		=Total Cover		
Woody Vine Stratum	(Plot size: _____)			
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
		=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That
Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species
Across All Strata: _____ (B)

Percent of Dominant Species That
Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)
Prevalence Index = B/A = _____	

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0¹

____ 4 - Morphological Adaptations¹ (Provide supporting
data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be
present, unless disturbed or problematic.

**Hydrophytic
Vegetation
Present?** Yes X No _____

Remarks: (Include photo numbers here or on a separate sheet.)
Point Intercept Method used, see attached files. PI= 2.38

SOILSampling Point: Wetland V

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth	Matrix		Redox Features				Texture	Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 3/1	95	10YR 3/6	5	C	PL	Loamy/Clayey	Prominent redox concentrations
8-24	10YR 5/1	80	10YR 5/6	5	C	PL	Sandy	Prominent redox concentrations
			10YR 3/1	15	RM	M		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	☐ Coast Prairie Redox (A16)
☐ Histic Epipedon (A2)	☐ Iron-Manganese Masses (F12)
☐ Black Histic (A3)	☐ Red Parent Material (F21)
☐ Hydrogen Sulfide (A4)	☐ Very Shallow Dark Surface (F22)
☐ Stratified Layers (A5)	☐ Other (Explain in Remarks)
☐ 2 cm Muck (A10)	
☐ Depleted Below Dark Surface (A11)	
☐ Thick Dark Surface (A12)	
☐ Sandy Mucky Mineral (S1)	
☐ 5 cm Mucky Peat or Peat (S3)	
☐ Sandy Gleyed Matrix (S4)	
☐ Sandy Redox (S5)	
☐ Stripped Matrix (S6)	
☐ Dark Surface (S7)	
☐ Loamy Mucky Mineral (F1)	
☐ Loamy Gleyed Matrix (F2)	
☐ Depleted Matrix (F3)	
☒ Redox Dark Surface (F6)	
☐ Depleted Dark Surface (F7)	
☐ Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes ☒ No _____
---	--

Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
☐ Surface Water (A1)	☒ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)	
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Patterns (B10)	
☒ Saturation (A3)	☐ True Aquatic Plants (B14)	☐ Dry-Season Water Table (C2)	
☒ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)	
☐ Sediment Deposits (B2)	☒ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)	
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☒ Stunted or Stressed Plants (D1)	
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☒ Geomorphic Position (D2)	
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ FAC-Neutral Test (D5)	
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)		
☒ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)		

Field Observations: Surface Water Present? Yes _____ No ☒ Depth (inches): _____ Water Table Present? Yes _____ No ☒ Depth (inches): _____ Saturation Present? Yes ☒ No _____ Depth (inches): <u>10</u> (includes capillary fringe)	Wetland Hydrology Present? Yes ☒ No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland V				Date: 8/7/2024			
Transect 1				Transect 2			
Looking Down		Looking Up		Looking Down		Looking Up	
Interval	Species	Wetland Indicator	Species	Wetland Indicator	Interval	Species	Wetland Indicator
1	Null		Ulmus rubra	FAC	1	Null	Ulmus rubra
2	Null		Ulmus rubra	FAC	2	Null	Ulmus rubra
3	Geum canadense	FAC	Ulmus rubra	FAC	3	Geum canadense	FAC
4	Null		Ulmus rubra	FAC	4	Null	Ulmus rubra
5	Null		Ulmus rubra	FAC	5	Carex vulpinoidea	FACW
6	Null		Ulmus rubra	FAC	6	Geum canadense	FAC
7	Null		Ulmus rubra	FAC	7	Null	Acer saccharinum
8	Carex vulpinoidea	FACW	Ulmus rubra	FAC	8	Carex vulpinoidea	FACW
9	Null		Ulmus rubra	FAC	9	Null	Acer saccharinum
10	Null		Ulmus rubra	FAC	10	Null	Acer saccharinum
11	Null		Ulmus rubra	FAC	11	Null	Acer saccharinum
12	Ludwigia palustris	OBL	Ulmus rubra	FAC	12	Null	Fraxinus pennsylvanica
13	Null		Ulmus rubra	FAC	13	Ludwigia palustris	OBL
14	Persicaria virginiana	FAC	Ulmus rubra	FAC	14	Null	Fraxinus pennsylvanica
15	Null		Ulmus rubra	FAC	15	Null	Fraxinus pennsylvanica
16	Null		Ulmus rubra	FAC	16	Null	Vitis riparia
17	Acer saccharinum	FACW	Ulmus rubra	FAC	17	Null	Vitis riparia
18	Null		Ulmus rubra	FAC	18	Ulmus rubra	FAC
19	Null		Ulmus rubra	FAC	19	Null	Acer saccharinum
20	Null		Ulmus rubra	FAC	20	Ulmus rubra	FAC
21	Carex vulpinoidea	FACW	Ulmus rubra	FAC	21	Scutellaria lateriflora	OBL
22	Null		Ulmus rubra	FAC	22	Cornus racemosa	FAC
23	Urtica dioica	FACW	Ulmus rubra	FAC	23	Scutellaria lateriflora	OBL
24	Null		Vitis riparia	FACW	24	Null	Acer saccharinum
25	Geum canadense	FAC	Vitis riparia	FACW	25	Scutellaria lateriflora	OBL
26	Geum canadense	FAC	Vitis riparia	FACW	26	Carex vulpinoidea	FACW
27	Null		Quercus shumardii	FACW	27	Carex vulpinoidea	FACW
28	Null		Quercus shumardii	FACW	28	Carex vulpinoidea	FACW
29	Null		Quercus shumardii	FACW	29	Carex vulpinoidea	FACW
30	Null		Quercus shumardii	FACW	30	Carex vulpinoidea	FACW

Point Intercept Calculations			
Wetland Indicator	Total Hits	Weight	Weighted Hits
OBL-Obligate		5 x1	5
FACW-Facultative Wetland		43 x2	86
FAC-Facultative		37 x3	111
FACU-Facultative Upland		0 x4	0
UPL-Upland		0 x5	0
Subtotals	85		202

PI = Weighted Hits/Unweighted Hits
PI = 202/85 = 2.38

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: 095567.01/Industrial Park City/County: Marshall/Calhoun County Sampling Date: 10/2/2024
Applicant/Owner: _____ State: MI Sampling Point: Wetland W
Investigator(s): Alexander Kriebel Section, Township, Range: Section 1 , Township 3 South , Range 6 West
Landform (hillside, terrace, etc.): Emergent Marsh/Hardwood Swamp Local relief (concave, convex, none): Concave
Slope (%): 3 Lat: 42.237840 Long: -84.948700 Datum: WGS84
Soil Map Unit Name: 65 (Sebewa Loam, 0-2% Slopes) NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
Are Vegetation X , Soil _____ , or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____ , Soil _____ , or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	

Remarks:
Unseasonable Dry, Farming

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
		=Total Cover		
Sapling/Shrub Stratum	(Plot size: _____)			
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
		=Total Cover		
Herb Stratum	(Plot size: _____)			
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
8.	_____	_____	_____	_____
9.	_____	_____	_____	_____
10.	_____	_____	_____	_____
		=Total Cover		
Woody Vine Stratum	(Plot size: _____)			
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
		=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That
Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species
Across All Strata: _____ (B)

Percent of Dominant Species That
Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)
Prevalence Index = B/A = _____	

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0¹

____ 4 - Morphological Adaptations¹ (Provide supporting
data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be
present, unless disturbed or problematic.

**Hydrophytic
Vegetation
Present?** Yes X No _____

Remarks: (Include photo numbers here or on a separate sheet.)
Point Intercept Method used, see attached files. PI= 2.19

SOILSampling Point: Wetland W**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/1	95	10YR 3/6	5	C	PL	Mucky Loam/Clay	Prominent redox concentrations
12-24	10YR 5/1	65	10YR 5/6	5	C	PL	Sandy	Prominent redox concentrations
	10YR 3/1	30						

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)
☐ Hydrogen Sulfide (A4)	☐ Dark Surface (S7)
☐ Stratified Layers (A5)	☐ Loamy Mucky Mineral (F1)
☐ 2 cm Muck (A10)	☐ Loamy Gleyed Matrix (F2)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Matrix (F3)
☐ Thick Dark Surface (A12)	☒ Redox Dark Surface (F6)
☐ Sandy Mucky Mineral (S1)	☐ Depleted Dark Surface (F7)
☐ 5 cm Mucky Peat or Peat (S3)	☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

☐ Coast Prairie Redox (A16)
☐ Iron-Manganese Masses (F12)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**
 Type: _____
 Depth (inches): _____
Hydric Soil Present? Yes ☒ No ☐**Remarks:**
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)
HYDROLOGY**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☒ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☒ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☒ Surface Soil Cracks (B6)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☒ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☒	Depth (inches): _____
Water Table Present?	Yes ☐	No ☒	Depth (inches): _____
Saturation Present?	Yes ☒	No ☐	Depth (inches): <u>10</u>
(includes capillary fringe)			

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Flooded earlier in year.

Wetland W				Date: 8/7/2024			
Transect 1				Transect 2			
Looking Down		Looking Up		Looking Down		Looking Up	
Interval	Species	Wetland Indicator	Species	Interval	Species	Wetland Indicator	Species
1	Phalaris arundinacea	FACW	Null	1	Phalaris arundinacea	FACW	Null
2	Phalaris arundinacea	FACW	Null	2	Phalaris arundinacea	FACW	Null
3	Polygonum pensylvanicum	FACW	Null	3	Phalaris arundinacea	FACW	Null
4	Phalaris arundinacea	FACW	Null	4	Phalaris arundinacea	FACW	Null
5	Phalaris arundinacea	FACW	Null	5	Phalaris arundinacea	FACW	Ulmus rubra
6	Phalaris arundinacea	FACW	Null	6	Acer saccharinum	FACW	Ulmus rubra
7	Polygonum pensylvanicum	FACW	Null	7	Juncus effusus	OBL	Ulmus rubra
8	Phalaris arundinacea	FACW	Null	8	Acer saccharinum	FACW	Ulmus rubra
9	Phalaris arundinacea	FACW	Null	9	Phalaris arundinacea	FACW	Ulmus rubra
10	Polygonum pensylvanicum	FACW	Null	10	Quercus shumardii	FACW	Ulmus rubra
11	Phalaris arundinacea	FACW	Ulmus rubra	11	Phalaris arundinacea	FACW	Ulmus rubra
12	Phalaris arundinacea	FACW	Ulmus rubra	12	Phalaris arundinacea	FACW	Ulmus rubra
13	Polygonum pensylvanicum	FACW	Ulmus rubra	13	Phalaris arundinacea	FACW	Ulmus rubra
14	Phalaris arundinacea	FACW	Ulmus rubra	14	Null		Quercus shumardii
15	Apocynum cannabinum	FAC	Ulmus rubra	15	Null		Quercus shumardii
16	Symphyotrichum novae-angliae	FACW	Ulmus rubra	16	Null		Quercus shumardii
17	Phalaris arundinacea	FACW	Ulmus rubra	17	Carex vulpinoidea	FACW	Quercus shumardii
18	Phalaris arundinacea	FACW	Null	18	Phalaris arundinacea	FACW	Null
19	Symphyotrichum novae-angliae	FACW	Null	19	Phalaris arundinacea	FACW	Null
20	Phalaris arundinacea	FACW	Null	20	Symphyotrichum novae-angliae	FACW	Null
21	Symphyotrichum novae-angliae	FACW	Null	21	Polygonum pensylvanicum	FACW	Null
22	Phalaris arundinacea	FACW	Null	22	Phalaris arundinacea	FACW	Cephalanthus occidentalis
23	Symphyotrichum novae-angliae	FACW	Null	23	Phalaris arundinacea	FACW	Cephalanthus occidentalis
24	Phalaris arundinacea	FACW	Null	24	Phalaris arundinacea	FACW	Cephalanthus occidentalis
25	Phalaris arundinacea	FACW	Null	25	Phalaris arundinacea	FACW	Null
26	Symphyotrichum novae-angliae	FACW	Null	26	Apocynum cannabinum	FAC	Null
27	Phalaris arundinacea	FACW	Null	27	Ulmus rubra	FAC	Null
28	Phalaris arundinacea	FACW	Null	28	Phalaris arundinacea	FACW	Null
29	Symphyotrichum novae-angliae	FACW	Null	29	Symphyotrichum novae-angliae	FACW	Null
30	Phalaris arundinacea	FACW	Null	30	Symphyotrichum novae-angliae	FACW	Null

Point Intercept Calculations			
Wetland Indicator	Total Hits	Weight	Weighted Hits
OBL-Obligate		4 x1	4
FACW-Facultative Wetland		57 x2	114
FAC-Facultative		19 x3	57
FACU-Facultative Upland		0 x4	0
UPL-Upland		0 x5	0
Subtotals	80		175

PI = Weighted Hits/Unweighted Hits
PI = 175/80 = 2.19

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: 095567.01/Industrial Park City/County: Marshall/Calhoun County Sampling Date: 10/3/2024
Applicant/Owner: _____ State: MI Sampling Point: Wetland X
Investigator(s): Alexander Kriebel Section, Township, Range: Section 1 , Township 3 South , Range 6 West
Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave
Slope (%): 3 Lat: 42.238705 Long: -84.948139 Datum: WGS84
Soil Map Unit Name: 65 (Sebewa Loam, 0-2% Slopes) NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
Are Vegetation X , Soil _____ , or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____ , Soil _____ , or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	

Remarks:
Unseasonable Dry, Farming

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
		=Total Cover		
Sapling/Shrub Stratum	(Plot size: _____)			
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
		=Total Cover		
Herb Stratum	(Plot size: _____)			
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
8.	_____	_____	_____	_____
9.	_____	_____	_____	_____
10.	_____	_____	_____	_____
		=Total Cover		
Woody Vine Stratum	(Plot size: _____)			
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
		=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That
Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species
Across All Strata: _____ (B)

Percent of Dominant Species That
Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)
Prevalence Index = B/A = _____	

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0¹

____ 4 - Morphological Adaptations¹ (Provide supporting
data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be
present, unless disturbed or problematic.

**Hydrophytic
Vegetation
Present?** Yes X No _____

Remarks: (Include photo numbers here or on a separate sheet.)
Point Intercept Method used, see attached files. PI= 1.83

SOILSampling Point: Wetland X**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 2/1	95	10YR 3/6	5	C	PL	Loamy/Clayey	Prominent redox concentrations
8-24	10YR 5/2	65	7.5YR 5/8	5	C	PL	Sandy	Prominent redox concentrations
			10YR 4/1	30	RM	M		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)
☐ Hydrogen Sulfide (A4)	☐ Dark Surface (S7)
☐ Stratified Layers (A5)	☐ Loamy Mucky Mineral (F1)
☐ 2 cm Muck (A10)	☐ Loamy Gleyed Matrix (F2)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Matrix (F3)
☐ Thick Dark Surface (A12)	☒ Redox Dark Surface (F6)
☐ Sandy Mucky Mineral (S1)	☐ Depleted Dark Surface (F7)
☐ 5 cm Mucky Peat or Peat (S3)	☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

☐ Coast Prairie Redox (A16)
☐ Iron-Manganese Masses (F12)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**
 Type: _____
 Depth (inches): _____
Hydric Soil Present? Yes ☒ No ☐**Remarks:**
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)
HYDROLOGY**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☒ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☒ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☒ Surface Soil Cracks (B6)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☒ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☒	Depth (inches): _____
Water Table Present?	Yes ☐	No ☒	Depth (inches): _____
Saturation Present?	Yes ☒	No ☐	Depth (inches): <u>8</u>
(includes capillary fringe)			

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Flooded earlier in year.

Wetland X				Date: 8/7/2024					
Transect 1				Transect 2					
Looking Down			Looking Up		Looking Down		Looking Up		
Interval	Species	Wetland Indicator	Species	Wetland Indicator	Interval	Species	Wetland Indicator	Species	Wetland Indicator
1	Eleocharis obtusa	OBL	Null		1	Carex vulpinoidea	FACW	Null	
2	Eleocharis obtusa	OBL	Null		2	Carex vulpinoidea	FACW	Null	
3	Eleocharis obtusa	OBL	Null		3	Panicum virgatum	FAC	Null	
4	Echinochloa muricata	OBL	Null		4	Eleocharis obtusa	OBL	Null	
5	Echinochloa muricata	OBL	Null		5	Eleocharis obtusa	OBL	Null	
6	Panicum virgatum	FAC	Null		6	Panicum virgatum	FAC	Null	
7	Eleocharis obtusa	OBL	Null		7	Panicum virgatum	FAC	Null	
8	Eleocharis obtusa	OBL	Null		8	Eleocharis obtusa	OBL	Null	
9	Echinochloa muricata	OBL	Null		9	Hypericum mutilum	FACW	Null	
10	Echinochloa muricata	OBL	Null		10	Eleocharis obtusa	OBL	Null	
11	Panicum virgatum	FAC	Null		11	Eleocharis obtusa	OBL	Null	
12	Panicum virgatum	FAC	Null		12	Panicum virgatum	FAC	Null	
13	Echinochloa muricata	OBL	Null		13	Carex vulpinoidea	FACW	Null	
14	Echinochloa muricata	OBL	Null		14	Hypericum mutilum	FACW	Null	
15	Echinochloa muricata	OBL	Null		15	Panicum virgatum	FAC	Null	
16	Hypericum mutilum	FACW	Null		16	Eleocharis obtusa	OBL	Null	
17	Hypericum mutilum	FACW	Null		17	Eleocharis obtusa	OBL	Null	
18	Echinochloa muricata	OBL	Null		18	Eleocharis obtusa	OBL	Null	
19	Echinochloa muricata	OBL	Null		19	Carex vulpinoidea	FACW	Null	
20	Hypericum mutilum	FACW	Null		20	Hypericum mutilum	FACW	Null	
21	Null		Null		21	Hypericum mutilum	FACW	Null	
22	Hypericum mutilum	FACW	Null		22	Panicum virgatum	FAC	Null	
23	Eleocharis obtusa	OBL	Null		23	Carex vulpinoidea	FACW	Null	
24	Eleocharis obtusa	OBL	Null		24	Carex vulpinoidea	FACW	Null	
25	Eleocharis obtusa	OBL	Null		25	Hypericum mutilum	FACW	Null	
26	Panicum virgatum	FAC	Null		26	Panicum virgatum	FAC	Null	
27	Eleocharis obtusa	OBL	Null		27	Panicum virgatum	FAC	Null	
28	Panicum virgatum	FAC	Null		28	Panicum virgatum	FAC	Null	
29	Eleocharis obtusa	OBL	Null		29	Panicum virgatum	FAC	Null	
30	Panicum virgatum	FAC	Null		30	Panicum virgatum	FAC	Null	

Point Intercept Calculations			
Wetland Indicator	Total Hits	Weight	Weighted Hits
OBL-Obligate		27 x1	27
FACW-Facultative Wetland		15 x2	30
FAC-Facultative		17 x3	51
FACU-Facultative Upland		0 x4	0
UPL-Upland		0 x5	0
Subtotals	59		108

PI = Weighted Hits/Unweighted Hits
PI = 108/59 = 1.83

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: 095567.01/Industrial Park City/County: Marshall/Calhoun County Sampling Date: 10/7/2024

Applicant/Owner: State: MI Sampling Point: Wetland Y

Investigator(s): Alexander Kriebel Section, Township, Range: Section 1 , Township 3 South , Range 6 West

Landform (hillside, terrace, etc.): Emergent Marsh Local relief (concave, convex, none): Concave

Slope (%): 5 Lat: 42.239054 Long: -84.948617 Datum: WGS84

Soil Map Unit Name: 65 (Sebewa Loam, 0-2% Slopes) NWI classification: PEM1AF

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If no, explain in Remarks.)

Are Vegetation X , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area within a Wetland? Yes X No
Hydric Soil Present? Yes X No	
Wetland Hydrology Present? Yes X No	

Remarks:
Unseasonable Dry, Farming

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
		=Total Cover		

Sapling/Shrub Stratum	(Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
		=Total Cover		

Herb Stratum	(Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
		=Total Cover		

Woody Vine Stratum	(Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
		=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals:	(A) (B)
Prevalence Index = B/A =	

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)
Point Intercept Method used, see attached files. PI= 1.89

Wetland Y				Date: 8/7/2024			
Transect 1				Transect 2			
Looking Down			Looking Up		Looking Down		Looking Up
Interval	Species	Wetland Indicator	Species	Wetland Indicator	Interval	Species	Wetland Indicator
							Species
							Wetland Indicator
1	Cyperus strigosus	FACW	Null		1	Cyperus strigosus	FACW
2	Cyperus strigosus	FACW	Null		2	Null	Null
3	Eleocharis palustris	OBL	Null		3	Cyperus strigosus	FACW
4	Eleocharis palustris	OBL	Null		4	Cyperus strigosus	FACW
5	Phalaris arundinacea	FACW	Null		5	Null	Null
6	Eleocharis palustris	OBL	Null		6	Cyperus strigosus	FACW
7	Phalaris arundinacea	FACW	Null		7	Phalaris arundinacea	FACW
8	Phalaris arundinacea	FACW	Null		8	Null	Null
9	Polygonum pensylvanicum	FACW	Null		9	Cyperus strigosus	FACW
10	Phalaris arundinacea	FACW	Null		10	Phalaris arundinacea	FACW
11	Phalaris arundinacea	FACW	Null		11	Phalaris arundinacea	FACW
12	Phalaris arundinacea	FACW	Null		12	Panicum virgatum	FAC
13	Phalaris arundinacea	FACW	Null		13	Phalaris arundinacea	FACW
14	Phalaris arundinacea	FACW	Null		14	Phalaris arundinacea	FACW
15	Phalaris arundinacea	FACW	Null		15	Quercus bicolor	FACW
16	Phalaris arundinacea	FACW	Null		16	Phalaris arundinacea	FACW
17	Phalaris arundinacea	FACW	Null		17	Phalaris arundinacea	FACW
18	Phalaris arundinacea	FACW	Null		18	Panicum virgatum	FAC
19	Phalaris arundinacea	FACW	Null		19	Symphyotrichum novae-angliae	FACW
20	Phalaris arundinacea	FACW	Null		20	Phalaris arundinacea	FACW
21	Phalaris arundinacea	FACW	Null		21	Lythrum salicaria	OBL
22	Phalaris arundinacea	FACW	Null		22	Phalaris arundinacea	FACW
23	Phalaris arundinacea	FACW	Null		23	Panicum virgatum	FAC
24	Phalaris arundinacea	FACW	Null		24	Phalaris arundinacea	FACW
25	Phalaris arundinacea	FACW	Null		25	Lythrum salicaria	OBL
26	Phalaris arundinacea	FACW	Null		26	Phalaris arundinacea	FACW
27	Phalaris arundinacea	FACW	Null		27	Phalaris arundinacea	FACW
28	Phalaris arundinacea	FACW	Null		28	Phalaris arundinacea	FACW
29	Phalaris arundinacea	FACW	Null		29	Phalaris arundinacea	FACW
30	Phalaris arundinacea	FACW	Null		30	Phalaris arundinacea	FACW

Point Intercept Calculations			
Wetland Indicator	Total Hits	Weight	Weighted Hits
OBL-Obligate		5 x1	5
FACW-Facultative Wetland	49	x2	98
FAC-Facultative	3	x3	9
FACU-Facultative Upland	0	x4	0
UPL-Upland	0	x5	0
Subtotals	59		112

PI = Weighted Hits/Unweighted Hits
PI = 112/59 = 1.89

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: 095567.01/Industrial Park City/County: Marshall/Calhoun County Sampling Date: 10/9/2024

Applicant/Owner: State: MI Sampling Point: Wetland Z

Investigator(s): Alexander Kriebel Section, Township, Range: Section 1 , Township 3 South , Range 6 West

Landform (hillside, terrace, etc.): Farm Ditch Local relief (concave, convex, none): Concave

Slope (%): 30 Lat: 42.238529 Long: -84.947781 Datum: WGS84

Soil Map Unit Name: 44A (Matherton Loam, 0-3% Slopes), 65 (Sebewa Loam, 0-2% Slopes) NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area within a Wetland? Yes X No
Hydric Soil Present? Yes X No	
Wetland Hydrology Present? Yes X No	

Remarks:
Unseasonable Dry

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
		=Total Cover		

Sapling/Shrub Stratum	(Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
		=Total Cover		

Herb Stratum	(Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
		=Total Cover		

Woody Vine Stratum	(Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
		=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals:	(A) (B)
Prevalence Index = B/A =	

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)
Point Intercept Method used, see attached files. PI= 1.88

SOILSampling Point: Wetland Z**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 2/1	100					Muck	
8-16	N 4/	95	7.5YR 3/4	5	C	PL	Mucky Loam/Clay	Prominent redox concentrations
16-24	2.5Y 3/2	100					Sandy	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)
☒ Histic Epipedon (A2)	☐ Sandy Redox (S5)
☒ Black Histic (A3)	☐ Stripped Matrix (S6)
☒ Hydrogen Sulfide (A4)	☐ Dark Surface (S7)
☐ Stratified Layers (A5)	☐ Loamy Mucky Mineral (F1)
☒ 2 cm Muck (A10)	☒ Loamy Gleyed Matrix (F2)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Matrix (F3)
☐ Thick Dark Surface (A12)	☐ Redox Dark Surface (F6)
☐ Sandy Mucky Mineral (S1)	☐ Depleted Dark Surface (F7)
☐ 5 cm Mucky Peat or Peat (S3)	☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

☐ Coast Prairie Redox (A16)
☐ Iron-Manganese Masses (F12)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**
 Type: _____
 Depth (inches): _____
Hydric Soil Present? Yes ☒ No ☐**Remarks:**
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)
HYDROLOGY**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

☒ Surface Water (A1)	☒ Water-Stained Leaves (B9)
☒ High Water Table (A2)	☐ Aquatic Fauna (B13)
☒ Saturation (A3)	☒ True Aquatic Plants (B14)
☒ Water Marks (B1)	☒ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☒ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☒ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)
☒ Drainage Patterns (B10)
☒ Dry-Season Water Table (C2)
☒ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☒ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☒	No ☐	Depth (inches): <u>8</u>
Water Table Present?	Yes ☒	No ☐	Depth (inches): <u>8</u>
Saturation Present?	Yes ☒	No ☐	Depth (inches): <u>0</u>
(includes capillary fringe)			

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

B14 (Duckweed)

Wetland Z				Date: 8/7/2024			
Transect 1				Transect 2			
Looking Down		Looking Up		Looking Down		Looking Up	
Interval	Species	Wetland Indicator	Species	Wetland Indicator	Interval	Species	Wetland Indicator
1	Null		Ulmus rubra	FAC	1	Null	
2	Null		Ulmus rubra	FAC	2	Null	
3	Null		Ulmus rubra	FAC	3	Null	
4	Lemna minor	OBL	Ulmus rubra	FAC	4	Null	
5	Null		Quercus shumardii	FACW	5	Null	
6	Lemna minor	OBL	Quercus shumardii	FACW	6	Lemna minor	OBL
7	Null		Quercus shumardii	FACW	7	Lemna minor	OBL
8	Null		Quercus shumardii	FACW	8	Lemna minor	OBL
9	Null		Quercus shumardii	FACW	9	Phalaris arundinacea	FACW
10	Lemna minor	OBL	Quercus shumardii	FACW	10	Phalaris arundinacea	FACW
11	Lemna minor	OBL	Quercus shumardii	FACW	11	Lemna minor	OBL
12	Lemna minor	OBL	Salix amygdaloides	FACW	12	Lemna minor	OBL
13	Null		Salix amygdaloides	FACW	13	Null	
14	Null		Salix amygdaloides	FACW	14	Null	
15	Null		Quercus shumardii	FACW	15	Null	
16	Lemna minor	OBL	Quercus shumardii	FACW	16	Null	
17	Lemna minor	OBL	Quercus shumardii	FACW	17	Null	
18	Phalaris arundinacea	FACW	Null		18	Lemna minor	OBL
19	Phalaris arundinacea	FACW	Null		19	Lemna minor	OBL
20	Phalaris arundinacea	FACW	Null		20	Phalaris arundinacea	FACW
21	Lemna minor	OBL	Null		21	Lemna minor	OBL
22	Lemna minor	OBL	Null		22	Phalaris arundinacea	FACW
23	Null		Quercus shumardii	FACW	23	Phalaris arundinacea	FACW
24	Null		Quercus shumardii	FACW	24	Lemna minor	OBL
25	Null		Quercus shumardii	FACW	25	Null	
26	Null		Quercus shumardii	FACW	26	Null	
27	Null		Null		27	Null	
28	Null		Null		28	Null	
29	Null		Null		29	Null	
30	Null		Null		30	Null	

Point Intercept Calculations			
Wetland Indicator	Total Hits	Weight	Weighted Hits
OBL-Obligate		18 x1	18
FACW-Facultative Wetland		39 x2	78
FAC-Facultative		10 x3	30
FACU-Facultative Upland		0 x4	0
UPL-Upland		0 x5	0
Subtotals	67		126

PI = Weighted Hits/Unweighted Hits
PI = 126/67 = 1.88

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: 095567.01/Industrial Park City/County: Marshall/Calhoun County Sampling Date: 8/14/2024

Applicant/Owner: State: MI Sampling Point: Upland

Investigator(s): Alexander Kriebel Section, Township, Range: Section 1 , Township 3 South , Range 6 West

Landform (hillside, terrace, etc.): Old Field Local relief (concave, convex, none): Concave

Slope (%): 2 Lat: 42.240103 Long: -84.954955 Datum: WGS84

Soil Map Unit Name: 25A (Kalamazoo Loam, 0-2% Slopes) 25B (Kalamazoo Loam, 2-6% Slopes) NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes No X	Is the Sampled Area within a Wetland? Yes No X
Hydric Soil Present? Yes No X	
Wetland Hydrology Present? Yes No X	
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: (A) Total Number of Dominant Species Across All Strata: (B) Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
1.				
2.				
3.				
4.				
5.				
=Total Cover				
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species x 1 = FACW species x 2 = FAC species x 3 = FACU species x 4 = UPL species x 5 = Column Totals: (A) (B) Prevalence Index = B/A =
1.				
2.				
3.				
4.				
5.				
=Total Cover				
Herb Stratum (Plot size:)				Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 ¹ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
=Total Cover				
Woody Vine Stratum (Plot size:)				Hydrophytic Vegetation Present? Yes No X
1.				
2.				
=Total Cover				

Remarks: (Include photo numbers here or on a separate sheet.)
Point Intercept Method used, see attached files. PI= 4.07

Upland Transect 1				Date: 8/7/2024 Transect 2			
Looking Down		Looking Up		Looking Down		Looking Up	
Interval	Species	Wetland Indicator	Species	Interval	Species	Wetland Indicator	Species
1	Solidago canadensis	FACU	Null	1	Daucus carota	UPL	Null
2	Solidago canadensis	FACU	Null	2	Solidago canadensis	FACU	Null
3	Daucus carota	UPL	Null	3	Solidago canadensis	FACU	Null
4	Plantago lanceolata	FACU	Null	4	Lotus corniculatus	FACU	Null
5	Solidago canadensis	FACU	Null	5	Lotus corniculatus	FACU	Null
6	Solidago canadensis	FACU	Null	6	Rosa multiflora	FACU	Null
7	Lotus corniculatus	FACU	Null	7	Solidago canadensis	FACU	Null
8	Lotus corniculatus	FACU	Null	8	Rosa multiflora	FACU	Null
9	Plantago lanceolata	FACU	Null	9	Solidago canadensis	FACU	Null
10	Solidago canadensis	FACU	Null	10	Solidago canadensis	FACU	Null
11	Achillea millefolium	FACU	Null	11	Rosa multiflora	FACU	Null
12	Rosa multiflora	FACU	Null	12	Solidago canadensis	FACU	Null
13	Rosa multiflora	FACU	Null	13	Solidago canadensis	FACU	Null
14	Solidago canadensis	FACU	Null	14	Achillea millefolium	FACU	Null
15	Solidago canadensis	FACU	Null	15	Lotus corniculatus	FACU	Null
16	Rosa multiflora	FACU	Null	16	Lotus corniculatus	FACU	Null
17	Lotus corniculatus	FACU	Null	17	Rosa multiflora	FACU	Null
18	Lotus corniculatus	FACU	Null	18	Rosa multiflora	FACU	Null
19	Solidago canadensis	FACU	Null	19	Plantago lanceolata	FACU	Null
20	Lotus corniculatus	FACU	Null	20	Daucus carota	UPL	Null
21	Lotus corniculatus	FACU	Null	21	Solidago canadensis	FACU	Null
22	Solidago canadensis	FACU	Null	22	Solidago canadensis	FACU	Null
23	Solidago canadensis	FACU	Null	23	Daucus carota	UPL	Null
24	Solidago canadensis	FACU	Null	24	Lotus corniculatus	FACU	Null
25	Rosa multiflora	FACU	Null	25	Lotus corniculatus	FACU	Null
26	Rosa multiflora	FACU	Null	26	Solidago canadensis	FACU	Null
27	Rosa multiflora	FACU	Null	27	Solidago canadensis	FACU	Null
28	Achillea millefolium	FACU	Null	28	Solidago canadensis	FACU	Null
29	Plantago lanceolata	FACU	Null	29	Rosa multiflora	FACU	Null
30	Achillea millefolium	FACU	Null	30	Rosa multiflora	FACU	Null

Point Intercept Calculations			
Wetland Indicator	Total Hits	Weight	Weighted Hits
OBL-Obligate		0 x1	0
FACW-Facultative Wetland		0 x2	0
FAC-Facultative		0 x3	0
FACU-Facultative Upland	56	x4	224
UPL-Upland	4	x5	20
Subtotals	60		244

PI = Weighted Hits/Unweighted Hits
PI = 244/60 = 4.07



*Passionate People Building
and Revitalizing our World*



BROWNFIELD PLAN DEVELOPMENT AND REIMBURSEMENT AGREEMENT

THIS BROWNFIELD PLAN DEVELOPMENT AND REIMBURSEMENT AGREEMENT (the "Agreement"), is entered into on _____, 2025 between the **CITY OF MARSHALL BROWNFIELD REDEVELOPMENT AUTHORITY**, a Michigan public body corporate established pursuant to Act 381 of the Public Acts of 1996, as amended, MCL 125.2651 et seq. ("Act 381"), whose address is 323 West Michigan Avenue, Marshall, Michigan 49068 (the "Authority"), and **BUILDING BETTER SPACES, LLC**, a Michigan limited liability company, whose address is 119 Marshall Street, Battle Creek, Michigan 49014 (the "Developer") (individually, a "party", collectively, the "parties").

RECITALS

- A. The Authority, and the City of Marshall (the "City"), have determined that brownfield redevelopment constitutes the performance of an essential public purpose which protects and promotes the public health, safety and welfare.
- B. The City has established a Brownfield Redevelopment Authority and the Authority, and the City have adopted a Brownfield Plan specifically for this site (the "Plan"), pursuant to the provisions of Act 381.
- C. The Authority and the City have designated certain properties that have conditions of environmental contamination, blight or obsolescence as appropriate sites for creating a Plan.
- D. Act 381 permits the use of the real and personal property tax revenues generated from the increase in value (the "Increment") to brownfield sites constituting Eligible Property under Act 381 resulting from their redevelopment to pay or reimburse the payment of costs of conducting Eligible Activities (these costs are referred to as "Eligible Costs") and permits the reimbursement to Developer of Eligible Costs it has incurred.
- E. Developer currently owns property in the City commonly known as 100 Page Street and 500 Industrial Road, Marshall, Michigan 49068, Parcel Numbers 53-002-552-01 & 53-002-560-00.
- F. The Property has been included in the Plan and qualified as an "Eligible Property" under the terms of Act 381.
- G. Developer intends to redevelop the Property, which is a facility, into a commercial storage units business. The total capital investment on the project is expected to be approximately \$1.27 million. Commencement of construction of the project is intended to begin within six-eight months of the Effective Date of this Agreement and be completed within 24 months thereafter (Together, this description constitutes the "Project").
- H. The Project will require the Developer to incur Eligible Costs associated with certain Eligible Activities including environmental response activities, site preparation activities, public infrastructure improvements. Brownfield Plan/Work Plan preparation and contingency and which may require the services of various contractors, engineers, environmental consultants, attorneys and other professionals. The Developer's Eligible Costs shall not exceed \$588,459, over a period of not-to-exceed 20 years and/or actual expenses incurred and documented to the Authority's satisfaction.
- I. The parties are entering into this Agreement to establish the procedure for the reimbursement from Tax Increment Revenues under Act 381 as amended.
- J. The obligation of Developer to develop the Project on the Property is contingent

upon Developer's ability to secure the following:

- Developer shall have obtained all necessary governmental and quasi-governmental approvals needed to develop the Property and permit the use of the Property for the Project, including, for example and not limitation, a special use permit, site plan approvals, zoning variances and/or rezoning, building permits, and any and all other permits, consents and final approvals and authorizations necessary to develop, construct and utilize the Property for the Project.

NOW THEREFORE, in consideration of the mutual covenants, conditions and agreements set forth herein, the parties agree as follows:

1. Recitals. The above recitals are acknowledged as true and correct, and are incorporated by reference into this Paragraph.

2. The Plan. The Plan, approved by the Authority and the Marshall City Council, is attached as Exhibit B and incorporated as part of this Agreement. To the extent provisions of the Plan or this Agreement conflict with Act 381, Act 381 controls.

3. Term of Agreement. Pursuant to the Plan and this Agreement, the Authority agrees it shall capture and reimburse the Developer that amount of Tax Increment Revenues generated from real and personal property taxes allowed by law on the Eligible Property. At any time after the completion of the Project, Developer may give to the Authority written notice directing the Authority to commence the capture of such Tax Increment Revenues (the "Capture Commencement Notice"). Completion of the Project shall be deemed achieved once a final certificate of occupancy is obtained for the Project. Capture will begin in the first full year after Developer's delivery of the Capture Commencement Notice, and will continue until the earlier of:

3.1. Full reimbursement to the Authority of its Administrative Costs, plus reimbursement to the Developer of the Property as outlined in the Plan, including reimbursement of Eligible Costs for those Eligible Activities set forth in Paragraph 5, plus an additional amount captured by the Authority for an additional five full years of tax capture ("Additional Authority Amount") such Additional Authority Amount to be designated for the Local Brownfield Revolving Fund "Local Fund"; or

3.2. Up to 24 full years following the commencement of the reimbursement to the Developer of the Property as outlined in the Plan. With five of the 24 years designated for Local Brownfield Revolving Fund (LBRF) capture only.

4. Evidence of Ownership. Not later than the date of delivery of the Capture Commencement Notice, Developer shall provide to the Authority each of the following: (a)

evidence satisfactory to the Authority that the Developer has acquired fee simple title to the Property, which evidence shall include (without limitation) a copy of a recorded deed to the Property in favor of the Developer; and (b) a copy of a commitment for owner's title insurance with respect to the Property (the "Commitment"), which Commitment shall show the Developer as record owner of the Property, and shall otherwise be in form and reasonably substance satisfactory to the Authority.

5. Eligible Activities. The Developer shall diligently pursue completion of the Eligible Activities summarized in the Plan and set forth in this Paragraph. The Authority shall, in accordance with the terms of this Agreement, reimburse the Developer for Eligible Costs incurred on or after the date of the inclusion of this Project in the Plan. For purposes of this Agreement, "Eligible Costs" means costs incurred in conducting Eligible Activities including environmental due diligence and due care activities, site assessment and baseline environmental assessment activities, public infrastructure, site preparation, Brownfield Plan/Work Plan Preparation, and a contingency amount, and which may require the services of various contractors, engineers, environmental consultants, attorneys and other professionals, and/or any other Eligible Activities permitted under Act 381 and summarized in the Plan.

6. Reimbursement Source. During the term of this Agreement and except as otherwise set forth in this Agreement, the Authority shall reimburse the Developer for its Eligible Costs, in accordance with the process herein, and as limited under this Agreement, from all available (actually captured) Tax Increment Revenues collected from the real and personal property taxes on the Property.

7. Reimbursement Process.

7.1. Cost Reimbursement Request. Before December 31 of the year Developer provides the Capture Commencement Notice (and in no event more than two (2) years following the Completion Date (any submittal occurring after that two (2) year period being a ("Late Submittal")), the Developer will provide sufficient documentation of the Eligible Costs incurred including the dates of each Eligible Activity, a complete description of the work, proof of payment, detailed invoices for the costs involved for each Eligible Activity, sworn statements, lien waivers from Developer's general contractor (to include verification that all applicable subcontractors were paid in full) and other back up documentation reasonably requested by the Authority; a written statement certifying to the Authority that all such costs are Eligible Costs; and a final certificate of occupancy to document completion of the Project or such other certificate as is required under any tenant lease for the applicable portion of the Project in order for Developer to turnover such space to its tenant. The information and documentation described in the preceding sentence comprise the "Completed Request".

Failure to provide the above noted information when due, or within the time permitted by the Authority under Paragraph 7.1, shall not extend the term of the Agreement and consequently may result in foregone reimbursement, to the Developer by the Authority, for Eligible Costs.

7.2. Authority Staff Review. The Authority Staff shall review each reimbursement request within 30 days after receiving it. If Authority Staff determines that the documentation submitted by the Developer is not a Completed Request, then Developer shall

reasonably cooperate in the Authority's review by providing, within 30 days of the Authority's written request, any additional documentation of the Eligible Costs as is reasonable and necessary by the Authority in order to complete its review. Within 45 days following the receipt of such supplemental information, the Authority shall make the determination of whether the costs are eligible for reimbursement with the Authority and Developer agreeing, in general, that the Eligible Costs as defined in the Plan are eligible for reimbursement and so long as such Eligible Costs are documented sufficiently to the Authority, the Authority will not unreasonably withhold its approval of the Developer's reimbursement request.. If the Developer wishes to challenge that determination, it shall provide written notice to the Authority within 15 days of the Authority Staff's written determination, and the issue shall be brought to the Authority within 45 days thereafter for its determination. The Developer shall not be entitled to any claim or cause of action for consequential damages against the Authority as a result of any determinations made in good faith regarding whether or not any cost submitted by the Developer constitutes an "Eligible Cost," and hereby grants the City and the Authority and their respective officers, agents and employees, a complete release and waiver of any such claims or causes of action as a result of the foregoing. Any dispute arising out of a request for reimbursement shall not affect Developer's right to receive reimbursements as to the undisputed portions of the Completed Request.

7.3. Reimbursement. Before July 31 of the year after Developer delivers a Capture Commencement Notice (and as property taxes are received each subsequent year) after both the summer and winter taxes are captured and collected on the Property, the Authority shall reimburse its Administrative Costs and pay approved Eligible Costs to the Developer from Tax Increment Revenues that are generated from the Property in accordance with the Plan and Paragraph 7 to the extent that taxes have been captured and are available in that fiscal year. The Authority shall receive ten (10) percent of Tax Increment Revenues each year until its Administrative Costs are fully reimbursed, unless a lower percentage is otherwise designated by the Authority.

In the event that there are insufficient Tax Increment Revenues available in any given year to reimburse all of Developer's Eligible Costs, as described in Paragraph 5, then the Authority shall reimburse the Authority or Developer only from available Tax Increment Revenues. The Authority shall make additional payments, on an annual basis as property taxes are received, toward the Developer's remaining unpaid Eligible Costs during the term of this Agreement. Except as otherwise provided in this Agreement, the Developer shall not be entitled to receive any interest on amounts for which reimbursement is requested under this Agreement. The Developer shall not be entitled to reimbursement under this Agreement unless all real and personal property taxes have been timely and completely paid, including all penalties, interest and other amounts due in relation thereto when due. For purposes of this Agreement, to be timely paid, taxes must be paid before the date on which they can no longer be paid without penalties or interest. The repayment obligation under this Agreement shall expire upon the earlier of the full payment by the Authority to the Developer of all amounts due to the Developer from the Tax Increment Revenues or up to 14 full years from the beginning of Tax Increment Revenue capture. Notwithstanding anything herein to the contrary, if there is a reduction of the Tax Increment Revenue capture for the Project from that projected, then the Authority shall, in good faith, upon request from the Developer to extend the term of this Agreement and/or the capture and reimbursement term to allow for the full reimbursement to Developer for all of the Developer's Eligible Costs.

7.4. Method of Reimbursement. The Authority will reimburse the Developer for Eligible Costs as follows:

Checks shall be payable to and delivered by certified mail (or through electronic transfer if available through Developer) to:

Building Better Spaces, LLC
119 Marshall Street
Battle Creek, MI 49014

8. Adjustments. The parties acknowledge that adjustments regarding the amount of Tax Increment Revenue paid to the Developer may occur under any of the following circumstances:

8.1. Audit or Court Ruling: In the event that a state agency of competent jurisdiction conducting an audit of payments made to the Developer under this Agreement or a court of competent jurisdiction determines that any portion of the payments made to the Developer under this Agreement is unlawful, the Developer shall pay back to the Authority that portion of the payments made to the Developer within 30 days of the determination made by a state agency or the court as the case may be. However, the Developer shall have the right, before any such repayment is made, to appeal on its or the Authority's behalf, any such determination made by a state agency or court as the case may be. If the Developer is unsuccessful in such an appeal, the Developer shall repay the portion of payments found to be unlawful to the Authority within thirty (30) days of the date when the final determination is made on the appeal. The Developer shall be responsible for payment of all of the City's and Authority's legal fees associated with any determination of whether a cost for which reimbursement is requested constitutes an "Eligible Cost" and all of the City's and Authority's legal fees associated with the review or determination of such issues by any state agency or court.

8.2. Property Tax Appeal: In the event the Developer, or any subsequent owner of real estate on the Property, files an appeal related to the taxable value of parcels of property included in the Brownfield Plan, the Authority shall do the following:

- (a) The Authority will continue to make the Tax Increment Financing Reimbursement payments based upon its taxing authorities assessment of the real property taxes for the Project;
- (b) Once any tax appeals are adjudicated, the Authority will make adjusted payments pursuant to Section 8.3 of this Agreement.

8.3. Reduction of Property Assessments. If the Authority (i) incurs Administrative Costs on behalf of the Developer with respect to the Project, Site or Application and (ii) the Developer initiates, participates in or supports any proceeding or process which results in a reduction of the tax increment capture for the Project from that projected and along the same term as contained within the Plan, then the provisions under Paragraph 3 will require a redetermination recalculation regarding the amount of Tax Increment Revenues that the Authority previously paid to Developer (the excess amount determined to have been paid is the "Excess Amount") as a result of such lower assessments. If that amount is less than the actual amount of Tax Increment Revenues that the Authority has already paid to the Developer, the Excess Amount shall be offset against future reimbursements to Developer of Eligible Costs.

9. Responsibilities of Developer. In consideration of the inclusion of the Property into the Plan and the resulting financial benefits, which it expects to receive, and the Authority's commitments to capture of Tax Increment Revenue and to assist the Developer in the Project, Developer agrees to the following:

9.1. Project. At its sole expense, the Developer shall use its best efforts to conduct the activities described in the Plan and to construct the Project. Notwithstanding anything herein to the contrary, the Developer's obligation to commence construction of the Project shall be subject to Developer's determination, in its business discretion, that the Project is viable. The total capital investment on all phases of the project is expected to be approximately \$4.9 million. Subject to matters beyond the reasonable control of the Developer (e.g., war, acts of God, failure to obtain governmental approvals, governmental restrictions, exceptional health concerns for which a "stay at home" or "shelter in place" order is issued by an applicable governmental authority, etc. and any other delays due to war, terrorism, lock-out, fire, or other casualty, unavailability of materials, unanticipated construction delay, acts or omission of governmental authorities, severe weather, or other causes beyond the reasonable control of Developer and its contractors) (collectively "Force Majeure" events), the Developer shall commence construction of the Project within a commercially reasonable time after the date that Developer secures all necessary approvals, authorizations, permits and entitlements for the Project and otherwise satisfies all requirements of Developer's lenders or other financing parties for the Project (collectively, the "Approvals", and such date on which Developer is required to commence construction being the "Commencement Date"). Subject to Force Majeure, the Developer shall use commercially reasonable efforts to substantially complete the Project to the point of obtaining a certificate of occupancy within 24 months after the Commencement Date. Under no circumstances shall the Authority have any responsibility or liability for remediation or redevelopment of the Property, or for conducting any "Eligible Activities" at the Property, except for its obligations under this Agreement to provide funds to the extent available as permitted in Paragraph 7 hereof with respect to payments from Tax Increment Revenues.

9.2. Employment Opportunities. To make every reasonable effort to work with the City and community employment agencies to hire city residents for new employment opportunities created by the Project, and to encourage the local contracting of employment opportunities through re-entry employment programs. ~~Regardless of Developer's ability to hire city residents it shall make every reasonable effort to follow, and to cause any contractors hired to perform work on the Project, to follow the City's "Ex-Offender Purchasing" policy regarding hiring new employees who will work on the Project. A copy of this policy is attached as Exhibit C and Developer will provide a copy of it to its general contractor prior to performing any work on the Project.~~

9.3. Ordinances. Develop the Property, including landscaping and all other improvements required for the Project, in compliance with all local ordinances, site plan reviews, and this Agreement. The redevelopment of the Property shall be subject to all zoning approvals. This Agreement does not obligate any governing municipality to grant any such approvals.

9.4. Project Sign. Place on the Property during rehabilitation/redevelopment a development sign provided by the Authority to promote the Project and the Authority's participation in it. Upon completion of the Project, the sign will be returned to the Authority.

9.5. Promotion and Marketing. Permit the Authority to cite or to use any renderings or photographs or other materials of the Project as an example of private/public partnership and brownfield site redevelopment.

9.6. Cooperation. Assist and cooperate with the Authority in providing information that the Authority may require in providing necessary reports to governmental or other agencies, including, but not limited to, information regarding the amount of Developer expenditures and capital investments, jobs created, and square footage developed or rehabilitated with respect to the Project.

10. Responsibilities of the Authority. In consideration of the preceding commitments of Developer the Authority further agrees to:

10.1. Agency Contacts. Provide Developer with appropriate service/employment agency contacts for the identification of City residents to interview for potential employment; and

10.2. Tax Increment Revenues. To utilize Tax Increment Revenue to reimburse Developer for Eligible Costs incurred by Developer in completing the Project subject to actual capture and as limited and detailed in this Agreement.

11. Developer's Representations, Warranties and Covenants. The Developer hereby makes the following representations, warranties and covenants:

11.1. Eligible Property. To Developer's knowledge and belief, the Property is "eligible property" as defined in Act 381 and is eligible for the capture of Tax Increment Revenues pursuant to Act 381.

11.2. Eligible Costs. The Developer will only submit for reimbursement under Paragraph 7 hereof such costs that it has reasonably determined are Eligible Costs within the meaning of Act 381.

11.3. Due Authorization. The representatives signing this Agreement are duly authorized by the Developer to enter into this Agreement.

12. Events of Default. Each of the following shall constitute an event of default:

12.1. Any representation or warranty made by the Developer in this Agreement proves to have been incorrect or incomplete in any material respect when made or deemed to be made.

12.2. The Developer fails to observe or perform any covenant or agreement contained in this Agreement for 30 days after written notice thereof shall have been given to the Developer by the Authority.

12.3. The Developer abandons or withdraws from the reuse and redevelopment of the Property.

12.4. The Developer fails to pay when due any funds which are required to be paid

to the Authority pursuant to this Agreement, including but not limited to its real and personal property taxes as set forth in Paragraph 7 hereof, and such failure continues for thirty (30) days after written notice from the Authority.

12.5. The Developer terminates its existence in order to avoid its obligations under this Agreement.

13. Remedies upon Default.

13.1. If any event of default as defined above shall occur and be continuing for 30 days after written notice of default from the Authority (or such additional time as may be reasonably necessary to cure the default at issue provided that Developer has commenced such cure within the initial thirty (30) days and is proceeding in good faith to cure), the Authority shall have the right, but not the obligation, to exercise any of the following rights and remedies either individually or concurrently:

- (a) All other remedies available at law or in equity;
- (b) In addition, if the Developer fails to substantially complete the Project within the timelines required by this Agreement (but subject to Force Majeure), or if Developer otherwise defaults prior to substantial completion of the Project, Developer shall pay back to the Authority (within thirty (30) days following demand by the Authority) any amounts paid to Developer as reimbursement for Eligible Costs with respect to such incomplete phase of the Project pursuant to the terms of this Agreement or otherwise; and
- (c) Withhold, suspend or rescind reimbursement to Developer for Eligible Costs from Tax Increment Revenue as set forth in Paragraph 5 until Developer has cured such default to the satisfaction of the Authority. Any such action by the Authority shall not under any circumstances extend the time period under subparagraph 3.2 unless specifically approved by the Authority.
- (d) The Authority is responsible for its own cost and expenses including attorney fees incurred by the Authority to enforce its rights under this Agreement.

13.2. If the Authority fails in any material respect to perform or provide the Tax Increment Revenue incentives, and such failure continues for a period of thirty (30) days after written notice from Developer to the Authority specifying the alleged default (or such additional time as may be reasonably necessary to cure the default at issue provided that the Authority has commenced such cure within the initial thirty (30) days and is proceeding in good faith to cure), the Developer shall have the option to exercise one or any combination of remedies under this Agreement or otherwise available at law or in equity, including without limitation, to withhold or suspend the performance of all or any of the commitments under Paragraph 9. The Developer is responsible for its own cost and expenses including attorney fees incurred by Developer to enforce its rights under this Agreement.

14. Legislative Authorization. This Agreement is governed by and subject to the restrictions set forth in Act 381. In the event that there is legislation enacted in the future which alters or affects the amount of Tax Increment Revenues subject to capture, Eligible Properties, or Eligible Activities, then the Developer's rights and the Authority's obligations under this Agreement may be modified accordingly by agreement of the parties.

15. Freedom of Information Act. Developer stipulates that all petitions and documentation submitted by Developer shall be open to the public under the Freedom of Information Act, Act No. 442 of the Public Acts of 1976, MCL 15.231 et seq., and no claim of trade secrets or other privilege or exception to the Freedom of Information Act will be claimed by Developer as it relates to this Agreement or petitions and supporting documentation.

16. Plan Modification. The Plan and this Agreement may be modified to the extent allowed under the Act by mutual agreement of the parties.

17. Notices. All notices and other communications required or permitted under this Agreement shall be in writing, shall be deemed given when delivered, and shall be sent by personal delivery, overnight courier, or registered mail, return receipt requested, to the following addresses (or any other address that is specified in writing by either party):

If to Developer:

Building Better Spaces,
LLC
119 Marshall Street,
Battle Creek, Michigan
49014

If to the Authority:

City of Marshall
Brownfield
Redevelopment Authority
323 W Michigan Avenue,
Marshall, MI 49068

18. Indemnification. Developer shall defend, indemnify and hold harmless the Authority and the City, and any of their respective past, present and future members, officials, employees, agents or representatives from all losses, demands, claims, judgments, suits, costs and expenses (including without limitation the costs and fees of attorneys or other consultants) arising from or related to (i) the capture and use of Tax Increment Revenue paid to Developer as a reimbursable payment under this Agreement made in excess of the amount of tax increment revenues the Authority is determined by the State or court to be allowed by law to use for that reimbursement, and (ii) the Project.

19. Governing Law. This Agreement shall be construed in accordance with and governed by the laws of the State of Michigan.

20. Binding Effect/Third Parties. This Agreement is binding on and shall inure to the benefit of the parties to this Agreement and their respective successors, but it may not be assigned by any party without the prior written consent of the other party, which consent may not be unreasonably withheld, conditioned or delayed (it being agreed that an arm's length sale of the Project shall be a reasonable assignment provided the buyer is a commercially reasonable property owner). The Developer may make a collateral assignment of this Agreement to any institutional lender in connection with any financing for the Project. The parties do not intend to confer any benefits on any person, firm, corporation, or other entity which is not party to this Agreement.

21. Waiver. No failure of either party to complain of any act or omission on the part of the other party, no matter how long this same may continue, is considered as a waiver by that party to any of its rights hereunder. No waiver by either party, expressed or implied, of any breach of any provision of this Agreement is considered a waiver or a consent to any subsequent breach of this same or other provision.

22. Authorization. Each of the parties represents and warrants to the other that this Agreement and its execution by the individual on its behalf are authorized by the board of directors or other governing body of that party.

23. Entire Agreement. This Agreement supersedes all agreements previously made between the parties relating to the subject matter. There are no other understandings or agreements between them.

24. Headings. Headings in this Agreement are for convenience only and shall not be used to interpret or construe its provisions.

25. Estoppel. At the request of Developer, the Authority will, within twenty (20) days after request, deliver to Developer, or anyone designated by Developer, an estoppel certificate stating that, as of the date of the certificate, Developer: (i) has performed all of its undertakings under this Agreement; (ii) has met all of its obligations for capital investment, square footage or job creation criteria; (iii) has substantially completed the Project in accordance with project plans or satisfied the requirements set forth in the approved site plan; (iv) has fulfilled commitments under Paragraph 9; and (v) is otherwise not in default under this Agreement, if all the above are true. Further, the Authority shall indicate that the Agreement is in full force and effect and is unmodified; or if modified, Developer has complied with all modifications and that Developer

is not in default under the Agreement; or if Developer is in default, stating the nature of the default.

26. Definitions. The following capitalized terms are used in this Agreement with the following meanings:

"Administrative Costs" means the Authority's out-of-pocket costs associated with the Project (including reasonable attorney fees and costs, environmental consulting fees and costs, and similar fees and costs) as well as the Authority's indirect costs associated with the Project (including allocation of the fixed costs of the Authority staff);

"Brownfield Plan" is defined by Section 2(e) of Act 381;

"Due Care Activities" is defined by Section 2(m) of Act 381;

"Eligible Activities" is defined by Section 2(o) of Act 381;

"Eligible Property or Properties" is defined by Section 2(p) Act 381;

"Tax Increment Revenues" is defined by Section 2(ss) of Act 381, and, for purposes of this Agreement, includes school taxes and local (non-school) taxes.

[Signatures appear on the following pages]

In witness of their intent to be legally bound by the terms of this Agreement, each of the parties has set forth its signature below by its duly authorized representative.

CITY OF MARSHALL BROWNFIELD REDEVELOPMENT AUTHORITY

By: _____

Its: _____

BUILDING BETTER
SPACES, LLC

By: _____

Its: _____

EXHIBITS:

A (Legal Description of Property)
B (Copy of Brownfield Plan)