TOWNES OF MAIN STREET
JSP20-35

TOWNES OF MAIN STREET JSP 20-35

Public hearing at the request of Singh Development for JSP 20-35 Townes of Main Street for a revised Wetland Permit. The subject property is zoned TC-1 (Town Center One) and is approximately 17.7 acres. It is located north and south of Main Street, east of Novi Road, in Section 23. The applicant received City Council approval of their Preliminary Site Plan for a multifamily development with 192 townhouse-style apartments on May 23, 2022. On April 27, 2022 Planning Commission approved the wetland permit with the condition that wetland mitigation plans in compliance with the Code of Ordinances be provided at the time of Final Site Plan submittal. The applicant now proposes wetland mitigation through the purchase of bank credits outside the city.

Required Action

Approval or denial of revised Wetland Permit.

REVIEW	RESULT	DATE	COMMENTS
Planning	Approval not recommended		• **Chapter 12 of the Code of Ordinances does not allow wetland mitigation to be provided outside the city** • Items to be addressed by the applicant prior to Final Site Plan approval
Wetlands	Approval not recommended		• **Chapter 12 of the Code of Ordinances does not allow wetland mitigation to be provided outside the city** • Items to be addressed by the applicant prior to Final Site Plan approval

MOTION SHEET

Denial– Wetland Permit

In the matter of Townes at Main Street JSP20-35, motion to **deny** the Wetland Permit for the following reasons:

a. The plan is not in compliance with Chapter 12 of the Code of Ordinances.
b. The applicant has offered alternatives that would comply with the ordinance standards.
c. Allowing developers to purchase wetland mitigation credits outside the City, if permitted with increased regularity, would not allow the City to enjoy for the benefits that wetlands provide, including floodwater management, plant and wildlife habitat, open space, passive recreation and filtering of runoff pollutants, and
d. (*additional reasons here if any)*

– OR –

Approval – Wetland Permit

In the matter of Townes at Main Street JSP20-35, motion to **approve** the Wetland Permit based on and subject to the following:

a. The findings of compliance with Ordinance standards in the staff and consultant review letters, and the conditions and items listed in those letters being addressed on the Final Site Plan; and
b. *(additional conditions here if any)*

(This motion is made because the plan is otherwise in compliance with Chapter 12 of the Code of Ordinances and all other applicable provisions of the Ordinance.)

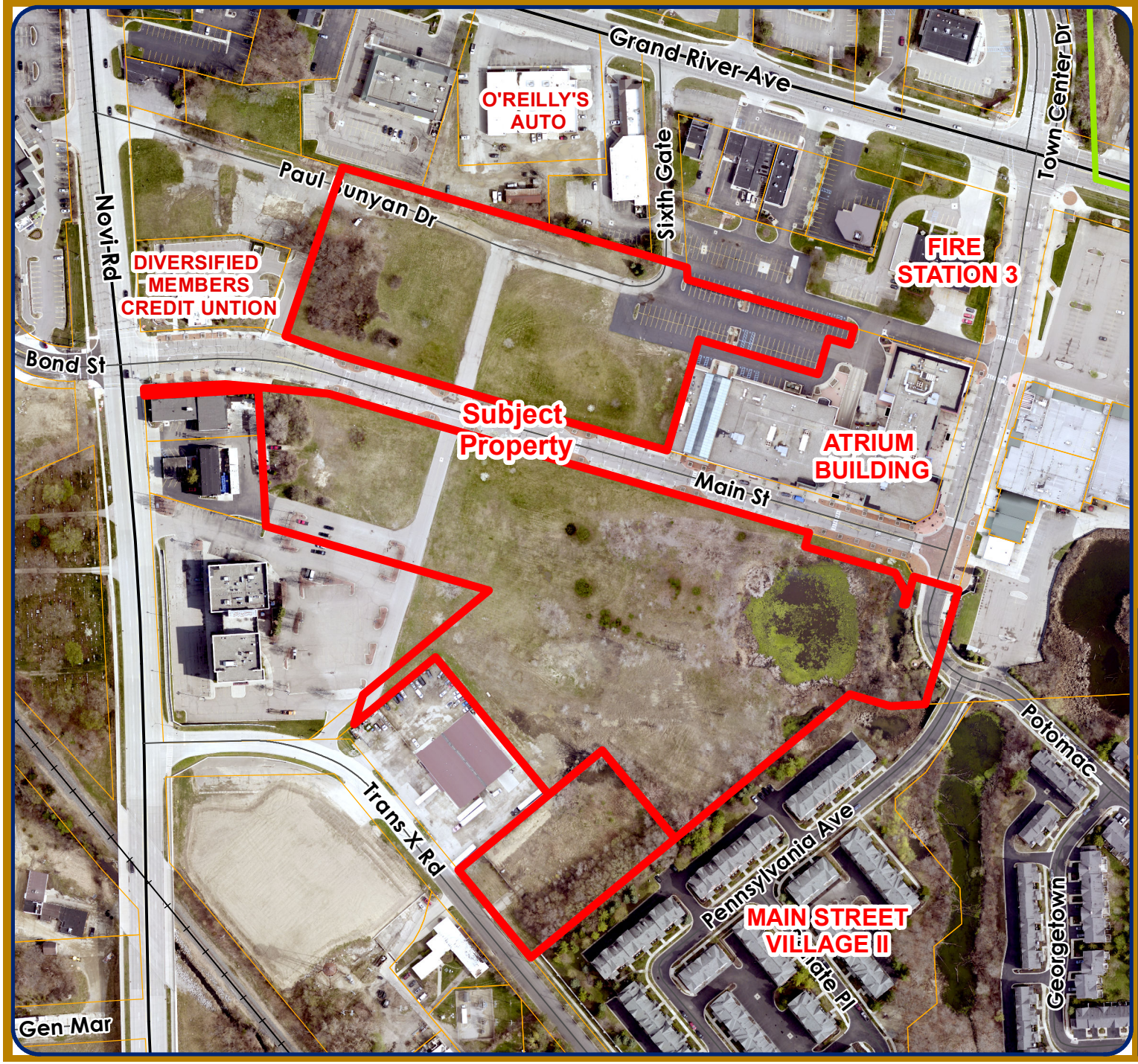
MAPS

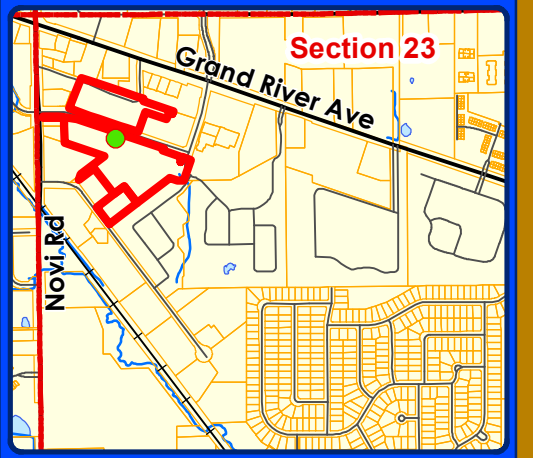
Location

Natural Features

JSP20-35 TOWNES AT MAIN STREET

LOCATION





LEGEND

Subject Property

City of Novi
Dept. of Community Development
City Hall / Civic Center
45175 W Ten Mile Rd
Novi, MI 48375
cityofnovi.org

Map Author: Lindsay Bell
Date: 4/18/22
Project: TOWNES OF MAIN ST
Version #: 1

Feet
0 55 110 220 330

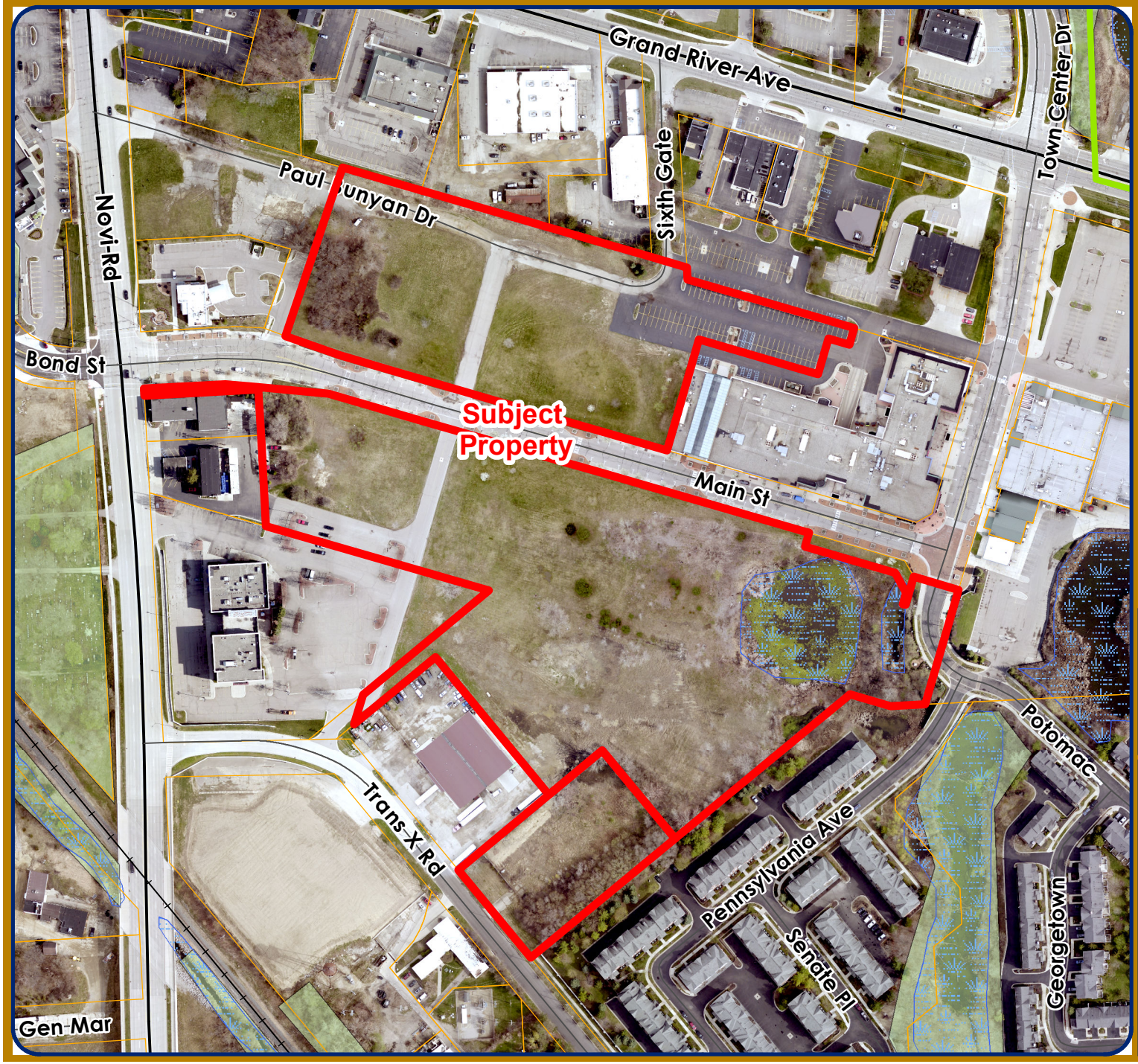
1 inch = 250 feet

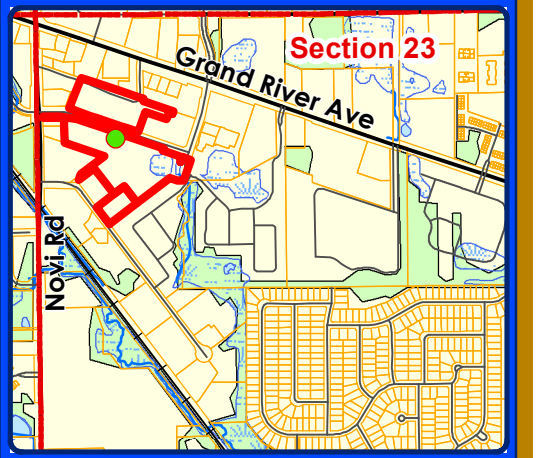
MAP INTERPRETATION NOTICE

Map information depicted is not intended to replace or substitute for any official or primary source. This map was intended to meet National Map Accuracy Standards and use the most recent, accurate sources available to the people of the City of Novi. Boundary measurements and area calculations are approximate and should not be construed as survey measurements performed by a licensed Michigan Surveyor as defined in Michigan Public Act 132 of 1970 as amended. Please contact the City GIS Manager to confirm source and accuracy information related to this map.

JSP20-35 TOWNES AT MAIN STREET

NATURAL FEATURES





LEGEND

- WETLANDS
- WOODLANDS
- Subject Property

City of Novi
Dept. of Community Development
City Hall / Civic Center
45175 W Ten Mile Rd
Novi, MI 48375
cityofnovi.org

Map Author: Lindsay Bell
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SITE PLAN AND WETLAND IMPACTS
(Full plan set available for viewing at the Community Development Department.)

ENGINEERING CONSTRUCTION PLANS FOR:

THE TOWNES AT MAIN STREET

SECTION 23, TOWN 1 NORTH, RANGE 8 EAST,
CITY OF NOVI, OAKLAND COUNTY, MICHIGAN

PREPARED FOR:

SINGH DEVELOPMENT, LLC
7125 ORCHARD LAKE ROAD, SUITE 200
WEST BLOOMFIELD, MICHIGAN 48325
PHONE: 248.865.1600

LEGAL DESCRIPTIONS

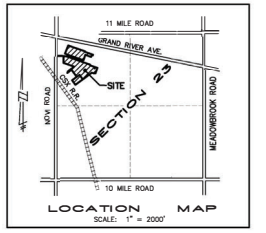
LEGAL DESCRIPTION FOR PARCEL I.D. #22-23-176-035 (NORTH PARCEL)
PART OF THE NW 1/4 OF SECTION 23, T01N-R08E, CITY OF NOVI, OAKLAND COUNTY, MICHIGAN, MORE PARTICULARLY DESCRIBED AS: COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 23; THENCE ALONG THE WEST LINE OF SAID SECTION 23, DUE SOUTH 459.17 FEET; THENCE SOUTH 70°43'20" EAST 453.55 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 70°43'20" EAST 164.38 FEET; THENCE SOUTH 70°40'00" EAST 462.86 FEET; THENCE SOUTH 00°05'00" EAST 21.62 FEET; THENCE SOUTH 70°35'20" EAST 303.49 FEET; THENCE SOUTH 19°19'42" WEST 30.00 FEET; THENCE NORTH 70°35'20" WEST 38.00 FEET; THENCE SOUTH 19°19'42" WEST 65.00 FEET; THENCE NORTH 70°35'20" WEST 218.50 FEET; THENCE SOUTH 19°19'42" WEST 201.55 FEET; THENCE NORTH 70°40'18" WEST 594.09 FEET; THENCE NORTH 67°10'40" WEST 101.33 FEET; THENCE NORTH 21°51'23" EAST 311.03 FEET TO THE POINT OF BEGINNING. SAID PARCEL CONTAINS 238,818 SQUARE FEET, OR 5.48 ACRES, OF LAND.

LEGAL DESCRIPTION FOR PARCEL I.D. #22-23-151-039 (LARGE MIDDLE PARCEL)
PART OF THE NW 1/4 OF SECTION 23, T01N-R08E, CITY OF NOVI, OAKLAND COUNTY, MICHIGAN, MORE PARTICULARLY DESCRIBED AS: COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 23; THENCE ALONG THE WEST LINE OF SAID SECTION 23, DUE SOUTH 978.10 FEET; THENCE DUE EAST 60.00 FEET TO THE POINT OF BEGINNING; THENCE DUE EAST 142.73 FEET; THENCE SOUTH 81°30'37" EAST 181.83 FEET; THENCE SOUTH 70°40'18" EAST 874.52 FEET; THENCE SOUTH 19°19'42" WEST 25.00 FEET; THENCE SOUTH 70°40'18" EAST 164.46 FEET; THENCE SOUTH 25°40'18" EAST 39.46 FEET; THENCE SOUTH 19°19'42" WEST 20.96 FEET; THENCE SOUTH 70°40'18" EAST 5.00 FEET; THENCE NORTH 19°19'42" EAST 51.32 FEET; THENCE SOUTH 70°40'18" EAST 81.43 FEET; THENCE SOUTH 19°19'42" WEST 208.78 FEET; THENCE NORTH 89°39'47" WEST 61.37 FEET; THENCE NORTH 70°45'15" WEST 72.73 FEET; THENCE SOUTH 53°38'45" WEST 398.82 FEET; THENCE NORTH 36°20'45" WEST 200.00 FEET; THENCE SOUTH 53°38'45" WEST 121.35 FEET; THENCE NORTH 36°19'15" WEST 312.40 FEET; THENCE SOUTH 53°33'45" WEST 184.33 FEET; THENCE NORTH 19°53'48" EAST 53.91 FEET; THENCE NORTH 53°28'08" EAST 285.74 FEET; THENCE NORTH 70°45'15" WEST 405.98 FEET; THENCE DUE NORTH 239.68 FEET; THENCE DUE WEST 199.78 FEET; THENCE DUE NORTH 12.09 FEET TO THE POINT OF BEGINNING. SAID PARCEL CONTAINS 465,802 SQUARE FEET, OR 10.70 ACRES, OF LAND.

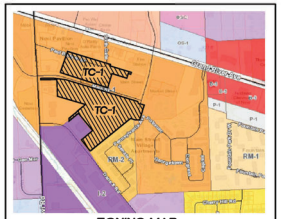
LEGAL DESCRIPTION FOR PARCEL I.D. #22-23-151-013 (SOUTH PARCEL)
PART OF THE NW 1/4 OF SECTION 23, T01N-R08E, CITY OF NOVI, OAKLAND COUNTY, MICHIGAN, MORE PARTICULARLY DESCRIBED AS: COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 23; THENCE ALONG THE WEST LINE OF SAID SECTION 23, DUE SOUTH 1137.17 FEET; THENCE SOUTH 70°45'15" EAST 1086.70 FEET; THENCE SOUTH 53°38'45" WEST 259.85 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 36°20'45" EAST 200.00 FEET; THENCE SOUTH 53°38'45" WEST 326.70 FEET; THENCE NORTH 36°20'45" WEST 200.00 FEET; THENCE NORTH 53°38'45" EAST 326.70 FEET TO THE POINT OF BEGINNING. SAID PARCEL CONTAINS 65,340 SQUARE FEET, OR 1.50 ACRES, OF LAND.

WAIVERS AND VARIANCES REQUESTED

1. LANDSCAPE WAIVERS GRANTED BY PLANNING COMMISSION ON 4/27/22: SEE SHEET L-1 FOR LANDSCAPE WAIVERS GRANTED.
2. FAÇADE WAIVER – CITY COUNCIL GRANTED A SECTION 9 FACADE WAIVER ON 5/23/22, WOOD, VINYL, AND CEMENT SIDING ARE NOT ALLOWED. A WAIVER COULD BE GRANTED FOR ACCENT PATTERNED OR TEXTURED SIDING UP TO 25%. THE PROPOSED FRONT FAÇADE INCLUDES 51% BRICK, 42% SIDING AND 8" ACCENT MATERIALS. A WAIVER TO APPROVE THE ARCHITECTURE AS SUBMITTED IS REQUESTED.
3. MAIN STREET DESIGN GUIDELINES WAIVER – THE PROPOSED ARCHITECTURE IS NOT CONSISTENT WITH THESE GUIDELINES. THE UNITS FACING MAIN STREET SHOULD HAVE A UNIQUE DESIGN. WAIVERS COULD BE CONSIDERED FOR THE REMAINING BUILDINGS. THE MAIN STREET FAÇADES HAVE BEEN REVISED TO BE CONSISTENT WITH THE MAIN STREET GUIDELINES. A WAIVER FOR THE DEVIATIONS IS REQUESTED.
4. ZONING ORDINANCE SECTION 3.6.2.H.i.A VARIANCE GRANTED BY THE ZBA ON 7/12/22. – A SETBACK FROM THE RM-2 DISTRICT OF 3 FEET FOR EVERY 1 FOOT OF BUILDING HEIGHT. THE PROPOSED TOWNHOMES UNITS BACK UP TO EXISTING TOWNHOME UNITS IN MAIN STREET VILLAGE 4. THE INTENT OF THE ORDINANCE IS TO PROVIDE ADDITIONAL SETBACK FOR COMMERCIAL USES FROM EXISTING RESIDENTIAL ZONING. SINCE THE PROPOSED USE IS A MULTIPLE STORY TOWNHOME RESIDENTIAL USE BACKING UP TO AN EXISTING MULTIPLE STORY TOWNHOME RESIDENTIAL USE, THE ADDITIONAL SETBACK SHOULD NOT BE APPLICABLE. THE PROPOSED BUILDING TO BUILDING SPACING BETWEEN THE PROPOSED RESIDENTIAL USE IN THE IC-1 DISTRICT AND THE EXISTING RESIDENTIAL USE IN THE RM-2 DISTRICT IS APPROXIMATELY 115 FEET.
5. ZONING ORDINANCE 4.82.2.A AND 4.82.2.B CITY COUNCIL GRANTED A ROOM COUNT INCREASE ON 5/23/22 – ROOM COUNT – APPLICANT REQUESTS CITY COUNCIL TO INCREASE THE ALLOWABLE ROOM COUNT FROM 642 ROOMS TO 965 ROOMS.
6. ZONING ORDINANCE SECTION 5.10.1.B.v.d VARIANCE GRANTED BY THE ZBA ON 7-12-22.. THREE (3) ACCESSIBLE SPACES ARE PROVIDED ON STEINBECK CIRCLE (A "MAJOR ROAD") AND ARE ORIENTED PERPENDICULAR TO THE ROAD. A VARIANCE TO ORIENT THESE THREE (3) SPACES PERPENDICULAR TO THE MAJOR ROAD IS REQUESTED.



LOCATION MAP
SCALE: 1" = 2000'



ZONING MAP
(NO SCALE)

SHEET INDEX:

ENGINEERING PLANS

CITY OF NOVI DETAILS:

SANITARY SEWER DETAILS (3) – DATED: 02/2018
WATER MAIN DETAILS (5) – DATED: 02/2018
STORM SEWER DETAILS (2) – DATED: 02/2018
PAVING DETAILS (2) – DATED: 03/2018
OCWRC SESC DETAILS (1) – DATED: 4/16/2013

LANDSCAPE PLANS

IRRIGATION PLANS

PHOTOMETRIC PLANS

ARCHITECTURAL PLANS

ELEVATION PLANS:
"HIGH VIZ" ELEVATION FOR
3 UNIT TO 8 UNIT BUILDINGS
A3.01 – A8.04 (16 SHEETS)
"STANDARD" ELEVATION FOR
3 UNIT TO 8 UNIT BUILDINGS
A3.01 – A8.04 (16 SHEETS)
FLOOR PLANS:
A1 4–1.1 FIRST FLOOR
A1 4–2.1 SECOND FLOOR
A1 4–3.1 THIRD FLOOR
ROOF DECK OPTION:
A2 6–HA–G.1
CP–58 3.2

BENCHMARKS

BENCHMARKS ON NAVD88 DATUM PROVIDED BY SEIBER KEAST LEHNER, TO BE USED FOR CONSTRUCTION.

NORTH BM #1 – ARROW ON HYDRANT, NORTH SIDE OF MAIN STREET, 450' WEST OF MARKET STREET.
ELEVATION = 916.14 (NAVD88)

NORTH BM #2 – ARROW ON HYDRANT, 225' NORTH OF MAIN STREET, 200' SOUTHEAST OF THE SOUTHWEST CORNER OF THE FIRESTONE TIRE BUILDING.
ELEVATION = 919.64 (NAVD88)

NORTH BM #3 – ARROW ON HYDRANT, NORTH SIDE OF MAIN STREET, 360' EAST OF NOVI ROAD.
ELEVATION = 915.24 (NAVD88)

SOUTH BM #1 – RIM OF STORM MANHOLE LOCATED 260' EAST OF THE CENTERLINE OF NOVI ROAD AND 20' NORTH OF THE CENTERLINE OF TRANS-X DRIVE.
ELEVATION = 911.97 (NAVD88)

SOUTH BM #2 – RIM OF GATE VALVE & WELL, LOCATED 75' EAST OF THE CENTERLINE OF NOVI ROAD AND 50' SOUTH OF THE CENTERLINE OF MAIN STREET.
ELEVATION = 913.85 (NAVD88)

SOUTH BM #3 – RIM OF GATE VALVE & WELL, LOCATED 30' NORTH OF THE CENTERLINE OF MARKET STREET, AND 80' WEST OF THE CENTERLINE OF MARKET STREET.
ELEVATION = 911.84 (NAVD88)

CITY OF NOVI BENCHMARK #2312 – "X" ON NORTH RIM OF GATEWELL LOCATED IN THE SOUTHEAST QUADRANT OF MAIN STREET AND NOVI ROAD INTERSECTION, 10' SOUTH OF BACK OF CURB AND 5' SOUTHEAST OF TRAFFIC POLE. (PUBLISHED ELEVATION PER CITY OF NOVI = 914.50)
ELEVATION = 913.85 (NAVD88)

*THE EXISTING TOPOGRAPHIC SURVEY ELEVATION DATA FOR MAIN STREET NORTH THAT WAS PROVIDED BY ALPINE ENGINEERING HAS BEEN LOWERED BY 0.42' TO BE ON NAVD88 DATUM.

**FOR MAIN STREET SOUTH, EXISTING TOPOGRAPHIC SURVEY SHOULD BE ADJUSTED 0.00' TO BE ON NAVD88 DATUM.

***CITY OF NOVI BENCHMARK #23-12 SHOULD BE LOWERED 0.65' TO BE ON NAVD88 DATUM.

BENCHMARKS (MAIN STREET NORTH)

CITY OF NOVI BENCHMARK 234 – "X" ON SOUTHEAST FLANGE BOLT OF FIRE HYDRANT LOCATED BETWEEN PARKING LOT #3151 "NOVI AUTO PARTS" AND SOUTH EDGE OF GRAND RIVER AVE.
ELEVATION 914.09

BM#1 – ARROW ON HYDRANT, NORTH SIDE OF MAIN ST., 450' WEST OF MARKET ST.
ELEVATION 916.56 (CITY OF NOVI)

BM#2 – ARROW ON HYDRANT, 225' NORTH OF MAIN ST., 202' SOUTHEAST OF THE SOUTHWEST CORNER OF FIRESTONE TIRE BUILDING.
ELEVATION 920.08 (CITY OF NOVI)

BM#3 – ARROW ON HYDRANT, NORTH SIDE OF MAIN ST., 360' EAST OF NOVI RD.
ELEVATION 915.65 (CITY OF NOVI)

BENCHMARKS (MAIN STREET SOUTH)

CITY OF NOVI BENCHMARK 2311 – "X" ON NORTH RIM OF SAN. MANHOLE LOCATED ACROSS FROM INTERSECTION OF GEN-MAR AND NOVI ROAD, 45' EAST OF NOVI RD. CENTERLINE AND 80' NORTH OF GEN-MAR CENTERLINE.
ELEVATION 892.09

CITY OF NOVI BENCHMARK 2312 – "X" ON NORTH RIM OF GATEWELL LOCATED IN THE SOUTHEAST QUAD OF MAIN STREET AND NOVI ROAD INTERSECTION, 10' SOUTH OF BACK OF CURB AND 5' SOUTHEAST OF TRAFFIC POLE.
ELEVATION 914.50

SITE BENCHMARK 1
RIM OF STORM MANHOLE LOCATED 260' EAST OF THE CENTERLINE OF NOVI ROAD AND 20' NORTH OF THE CENTERLINE OF TRANS-X DRIVE.
ELEVATION 911.93

SITE BENCHMARK 2
RIM OF GATE VALVE AND WELL, LOCATED 75' EAST OF THE CENTERLINE OF NOVI ROAD AND 50' SOUTH OF THE CENTERLINE OF MAIN STREET.
ELEVATION 913.88

SITE BENCHMARK 3
RIM OF GATE VALVE AND WELL, LOCATED 30' NORTH OF THE CENTERLINE OF MAIN STREET AND 80' WEST OF THE CENTERLINE OF MARKET STREET. ELEVATION 911.86

MAIN STREET PRELIMINARY QUANTITIES-PHASE 1
Quantity Summary

SANITARY SEWER

	ITEM	QUANTITY	
1	6" PVC SDR 23.5 HOUSE LEAD	643	L.F.
2	8" PVC SDR 26	1,005	L.F.
3	4' DIA. MANHOLE	8	EA.
4	5' DIA. MANHOLE	1	EA.

WATER MAIN

	ITEM	QUANTITY	
1	2" WATER SERVICE	1,523	L.F.
2	8" DI WATER MAIN	1,024	L.F.
3	8" GV&W	2	EA.
4	HYDRANTS	5	EA.
5	T.S.V.&W.	1	EA.

STORM SEWER

	ITEM	QUANTITY	
1	8" YARD DRAIN PIPE	923	L.F.
2	12" C-76 CL. 4	1,051	L.F.
3	30" C-76 CL. 4	233	L.F.
4	36" C-76 CL. 4	202	L.F.
5	12" AD-S NYOPLAST STRUCTURE	29	EA.
6	2' DIA. INLET	6	EA.
7	4' DIA. CATCH BASIN	12	EA.
8	4' DIA. MANHOLE	4	EA.
9	5' DIA. CB	1	EA.
10	5' DIA. MANHOLE	1	EA.
11	6' DIA. MANHOLE	1	EA.
12	12" END SECTION	1	EA.
13	8' DIA. CS-8	1	EA.

PAVING

	ITEM	QUANTITY	
1	ASPHALT PAVEMENT (4.5" ON 10")	4,592	SY
2	CONC. CURB & GUTTER	3,003	LF
3	SITE SIDEWALK (CONC)	20,435	SF
4	BUILDING SIDEWALK (CONC)	2,489	SF
5	CONCRETE DRIVEWAY	23,682	SF
6	BRICK PAVERS	813	SF

MAIN STREET PRELIMINARY QUANTITIES-PHASE 3
Quantity Summary

SANITARY SEWER

	ITEM	QUANTITY	
1	6" PVC SDR 23.5 HOUSE LEAD	301	L.F.
2	8" PVC SDR 26	230	L.F.
3	4' DIA. MANHOLE	2	EA.

WATER MAIN

	ITEM	QUANTITY	
1	2" WATER SERVICE	1,523	L.F.
2	8" DI WATER MAIN	1,177	L.F.
3	8" GV&W	3	EA.
4	HYDRANTS	5	EA.

STORM SEWER

	ITEM	QUANTITY	
1	12" C-76 CL. 4	1,726	L.F.
2	15" C-76 CL. 4	239	L.F.
3	18" C-76 CL. 4	280	L.F.
4	2' DIA. INLET	9	EA.
5	4' DIA. CATCH BASIN	23	EA.
6	4' DIA. MANHOLE	3	EA.
7	4' DIA. CS-4	1	EA.

PAVING

	ITEM	QUANTITY	
1	ASPHALT PAVEMENT (4.5" ON 10")	5,875	SY
2	CONC. CURB & GUTTER	3,709	LF
3	SITE SIDEWALK (CONC)	13,872	SF
4	BUILDING SIDEWALK (CONC)	4,948	SF
5	CONCRETE DRIVEWAY	39,500	SF

MAIN STREET PRELIMINARY QUANTITIES-PHASE 2
Quantity Summary

SANITARY SEWER

	ITEM	QUANTITY	
1	6" PVC SDR 23.5 HOUSE LEAD	40	L.F.
2	8" PVC SDR 26	231	L.F.
3	4' DIA. MANHOLE	2	EA.

WATER MAIN

	ITEM	QUANTITY	
1	2" WATER SERVICE	1,523	L.F.
2	8" DI WATER MAIN	660	L.F.
3	8" GV&W	2	EA.
4	HYDRANTS	5	EA.

STORM SEWER

	ITEM	QUANTITY	
1	8" YARD DRAIN PIPE	572	L.F.
2	12" C-76 CL. 4	1,296	L.F.
3	12" AD-S NYOPLAST STRUCTURE	17	EA.
4	2' DIA. INLET	6	EA.
5	4' DIA. CATCH BASIN	15	EA.
6	4' DIA. MANHOLE	6	EA.

PAVING

	ITEM	QUANTITY	
1	ASPHALT PAVEMENT (4.5" ON 10")	3,427	SY
2	CONC. CURB & GUTTER	2,579	LF
3	SITE SIDEWALK (CONC)	13,270	SF
4	BUILDING SIDEWALK (CONC)	2,639	SF
5	CONCRETE DRIVEWAY	23,369	SF

SEIBER KEAST LEHNER
ENGINEERING | SURVEYING
CLINTON TOWNSHIP OFFICE
17001 NINETEEN MILE ROAD, SUITE 3
CLINTON TOWNSHIP, MI 48038
586.412.7050

FARMINGTON HILLS OFFICE
39205 COUNTRY CLUB DRIVE, SUITE C8
FARMINGTON HILLS, MI 48331
248.308.3331

MAIN STREET NORTH & SOUTH BOUNDARY SURVEY PREPARED BY:
THE UMLOR GROUP
49287 WEST ROAD,
WIXOM, MICHIGAN, 48393
PHONE: 248.773.7656

MAIN STREET SOUTH TOPOGRAPHIC SURVEY PREPARED BY:
AMBIT LAND SURVEYORS, INC.
691 WING STREET, PLYMOUTH,
MICHIGAN, 48170
PHONE: 734.455.5501

MAIN STREET NORTH TOPOGRAPHIC SURVEY PREPARED BY:
ALPINE ENGINEERING, INC.
46892 WEST ROAD , SUITE 109,
NOVI, MICHIGAN, 48377
PHONE: 248.926.3701

WETLAND FLAGGING PREPARED BY:
WILSON ROAD GROUP, INC.
56383 HAYES ROAD
SHELBY TWP., MICHIGAN, 48315
PHONE: 810.664.6300

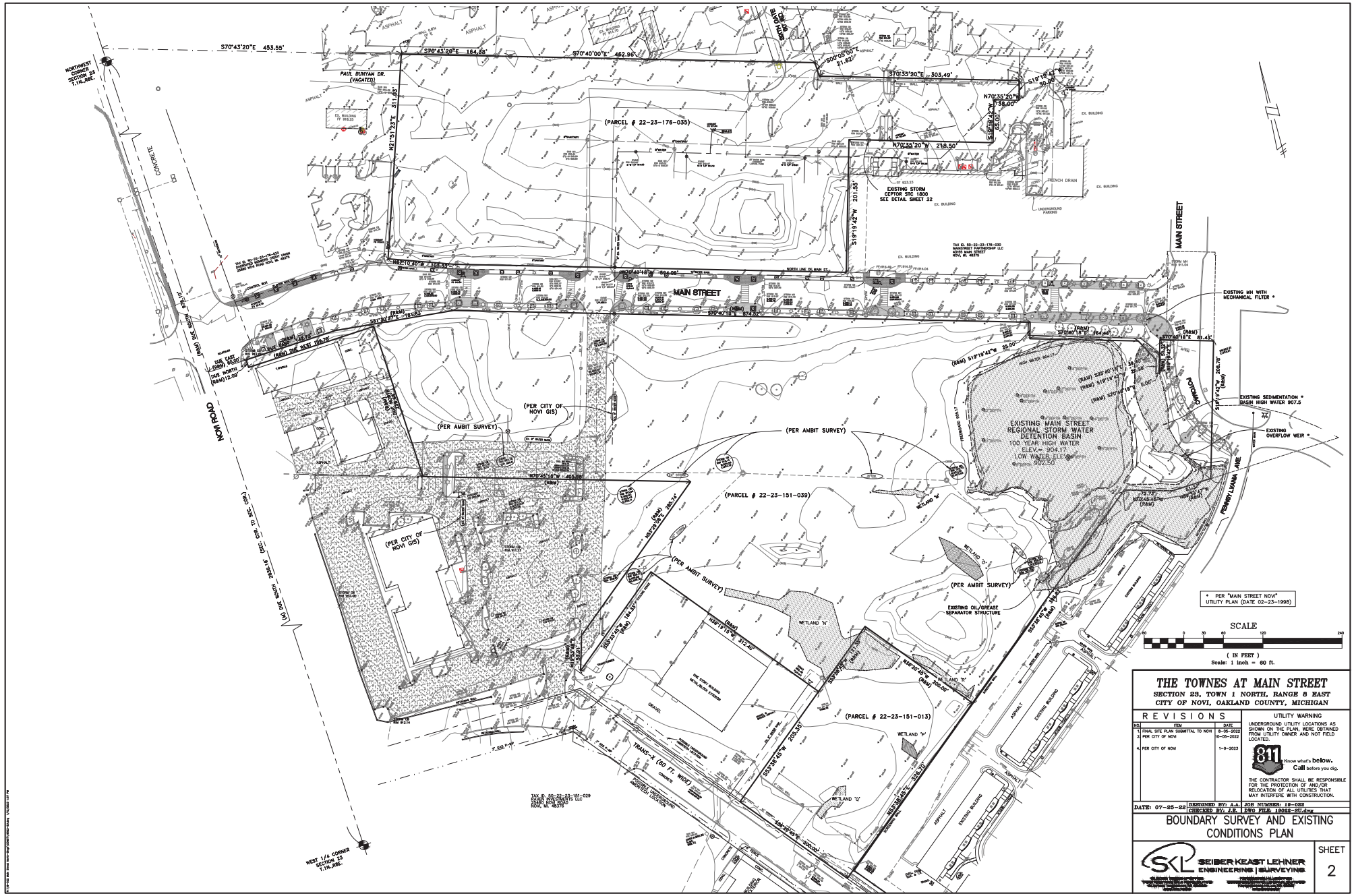
LANDSCAPE AND WOODLAND PLANS PREPARED BY:
ALLEN DESIGN, LLC
557 CARPENTER, NORTHVILLE,
MICHIGAN 48167
PHONE: 248.467.4668

REVISIONS

NO.	ITEM	DATE
1.	FINAL SITE PLAN SUBMITTAL TO NOVI	8-05-2022
2.	PER CITY OF NOVI	10-05-2022
3.	REV PER SESC PERMIT APP.	11-02-2022
4.	PER CITY OF NOVI	1-9-2023

ENGINEER'S SEAL
STATE OF MICHIGAN
JASON M. EMERLING
No. 6201054218
LICENSED PROFESSIONAL ENGINEER

DATE: 4-20-22 | DESIGNED BY: A.A. | CHECKED BY: J.E. | JOB NUMBER: 19-022 | DRAWING FILE: 19022-CV



THE TOWNES AT MAIN STREET

SECTION 23, TOWN 1 NORTH, RANGE 8 EAST
CITY OF NOVI, OAKLAND COUNTY, MICHIGAN

REVISIONS

NO.	ITEM	DATE
1.	FINAL SITE PLAN SUBMITTAL TO NOVI	8-05-2022
2.	PER CITY OF NOVI	10-05-2022
4.	PER CITY OF NOVI	1-9-2023

UTILITY WARNING

UNDERGROUND UTILITY LOCATIONS AS SHOWN ON THE PLAN, WERE OBTAINED FROM UTILITY OWNER AND NOT FIELD LOCATED.

811 Know what's **below.** **Call** before you dig.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF AND/OR RELOCATION OF ALL UTILITIES THAT MAY INTERFERE WITH CONSTRUCTION.

DATE: 07-25-22 | DESIGNED BY: A.A. | JOB NUMBER: 19-022
CHECKED BY: J.E. | DWG FILE: 19022-SU.dwg

BOUNDARY SURVEY AND EXISTING CONDITIONS PLAN

SEIBER KEAST LEHNER ENGINEERING | SURVEYING

SHEET 2

THE TOWNES AT MAIN STREET

SECTION 23, TOWN 1 NORTH, RANGE 8 EAST
CITY OF NOVI, OAKLAND COUNTY, MICHIGAN

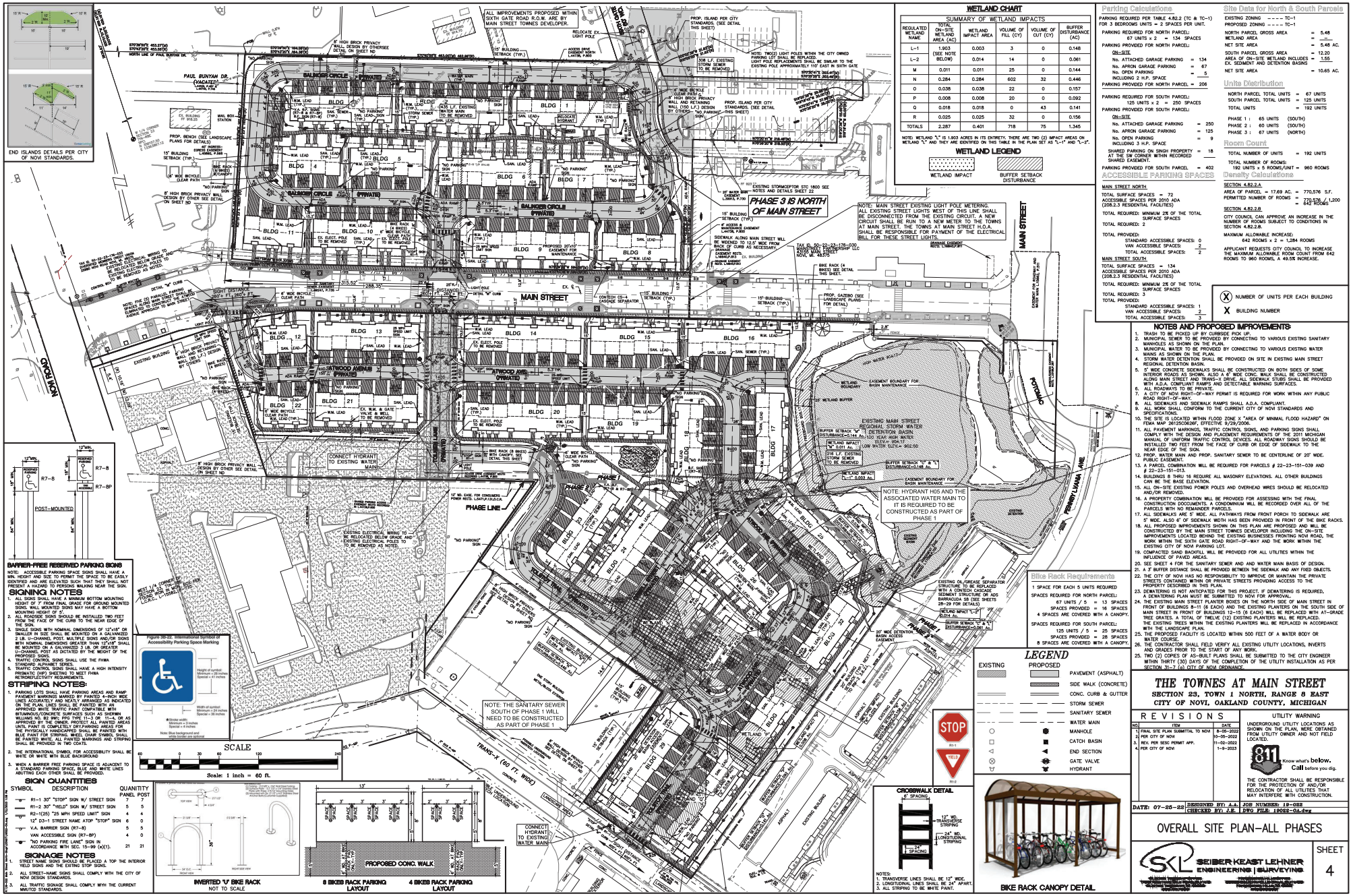
REVISIONS		ENGINEER'S SEAL
NO.	ITEM / DATE	
1.	FINAL SITE PLAN SUBMITTAL TO NOVI — 8-05-2022	
2.	PER CITY OF NOVI — 10-05-2022	
4.	PER CITY OF NOVI — 1-9-2023	

DATE: 07-25-22 | DESIGNED BY: A.A. | JOB NUMBER: 19-022
CHECKED BY: J.E. | DWG FILE: 19022-DEMO.dwg

DEMOLITION PLAN

SEIBER KEAST LEHNER ENGINEERING | SURVEYING

SHEET 3



END ISLANDS DETAILS PER CITY OF NOVI STANDARDS.

WETLAND CHART

SUMMARY OF WETLAND IMPACTS

REGULATED WETLAND NAME	TOTAL ON-SITE WETLAND AREA (AC)	WETLAND IMPACT AREA	VOLUME OF FILL (CY)	VOLUME OF CUT (CY)	BUFFER DISTURBANCE (AC)
L-1	1.903 (SEE NOTE BELOW)	0.003	3	0	0.148
L-2		0.014	14	0	0.061
M	0.011	0.011	25	0	0.144
N	0.284	0.284	602	32	0.446
O	0.038	0.038	22	0	0.157
P	0.008	0.008	20	0	0.092
Q	0.018	0.018	0	43	0.141
R	0.025	0.025	32	0	0.156
TOTALS	2.287	0.401	718	75	1.345

NOTE: WETLAND "L" IS 1.903 ACRES IN ITS ENTIRETY. THERE ARE TWO (2) IMPACT AREAS ON WETLAND "L" AND THEY ARE IDENTIFIED ON THIS TABLE IN THE PLAN SET AS "L-1" AND "L-2".

WETLAND LEGEND

WETLAND IMPACT — BUFFER SETBACK DISTURBANCE

Parking Calculations

PARKING REQUIRED PER TABLE 4.82.2 (TC & TC-1) FOR 3 BEDROOMS UNITS = 2 SPACES PER UNIT.

PARKING REQUIRED FOR NORTH PARCEL:
67 UNITS x 2 = 134 SPACES

PARKING PROVIDED FOR NORTH PARCEL:
ON-SITE
No. ATTACHED GARAGE PARKING = 134
No. APRON GARAGE PARKING = 67
No. OPEN PARKING = 5
INCLUDING 2 H.P. SPACE
PARKING PROVIDED FOR NORTH PARCEL = 206

PARKING REQUIRED FOR SOUTH PARCEL:
125 UNITS x 2 = 250 SPACES

PARKING PROVIDED FOR SOUTH PARCEL:
ON-SITE
No. ATTACHED GARAGE PARKING = 250
No. APRON GARAGE PARKING = 125
No. OPEN PARKING = 9
INCLUDING 3 H.P. SPACE
SHARED PARKING ON SINGH PROPERTY AT THE SW CORNER WITHIN RECORDED SHARED EASEMENT: = 18
PARKING PROVIDED FOR SOUTH PARCEL = 402

ACCESSIBLE PARKING SPACES

MAIN STREET NORTH
TOTAL SURFACE SPACES = 72
ACCESSIBLE SPACES PER 2010 ADA (208.2.3 RESIDENTIAL FACILITIES)
TOTAL REQUIRED: MINIMUM 2% OF THE TOTAL SURFACE SPACES
TOTAL REQUIRED: 2
TOTAL PROVIDED:
STANDARD ACCESSIBLE SPACES: 0
VAN ACCESSIBLE SPACES: 2
TOTAL ACCESSIBLE SPACES: 2

MAIN STREET SOUTH
TOTAL SURFACE SPACES = 134
ACCESSIBLE SPACES PER 2010 ADA (208.2.3 RESIDENTIAL FACILITIES)
TOTAL REQUIRED: MINIMUM 2% OF THE TOTAL SURFACE SPACES
TOTAL REQUIRED: 3
TOTAL PROVIDED:
STANDARD ACCESSIBLE SPACES: 1
VAN ACCESSIBLE SPACES: 2
TOTAL ACCESSIBLE SPACES: 3

Site Data for North & South Parcels

EXISTING ZONING ---- TC-1
PROPOSED ZONING ---- TC-1

NORTH PARCEL GROSS AREA = 5.48
WETLAND AREA = -.-
NET SITE AREA = 5.48 AC.

SOUTH PARCEL GROSS AREA = 12.20
AREA OF ON-SITE WETLAND INCLUDES EX. SEDIMENT AND DETENTION BASINS = 1.55
NET SITE AREA = 10.65 AC.

Units Distribution

NORTH PARCEL TOTAL UNITS = 67 UNITS
SOUTH PARCEL TOTAL UNITS = 125 UNITS
TOTAL UNITS = 192 UNITS

PHASE 1 : 65 UNITS (SOUTH)
PHASE 2 : 60 UNITS (SOUTH)
PHASE 3 : 67 UNITS (NORTH)

Room Count

TOTAL NUMBER OF UNITS = 192 UNITS
TOTAL NUMBER OF ROOMS:
192 UNITS x 5 ROOMS/UNIT = 960 ROOMS

Density Calculations

SECTION 4.82.2.A
AREA OF PARCEL = 17.69 AC. = 770,576 S.F.
PERMITTED NUMBER OF ROOMS = 770,576 / 1,200 = 642 ROOMS

SECTION 4.82.2.B
CITY COUNCIL CAN APPROVE AN INCREASE IN THE NUMBER OF ROOMS SUBJECT TO CONDITIONS IN SECTION 4.82.2.B.

MAXIMUM ALLOWABLE INCREASE:
642 ROOMS x 2 = 1,284 ROOMS

APPLICANT REQUESTS CITY COUNCIL TO INCREASE THE MAXIMUM ALLOWABLE ROOM COUNT FROM 642 ROOMS TO 960 ROOMS, A 49.5% INCREASE.

(X) NUMBER OF UNITS PER EACH BUILDING
X BUILDING NUMBER

NOTES AND PROPOSED IMPROVEMENTS:

1. TRASH TO BE PICKED UP BY CURBSIDE PICK UP.
2. MUNICIPAL SEWER TO BE PROVIDED BY CONNECTING TO VARIOUS EXISTING SANITARY MANHOLES AS SHOWN ON THE PLAN.
3. MUNICIPAL WATER TO BE PROVIDED BY CONNECTING TO VARIOUS EXISTING WATER MAINS AS SHOWN ON THE PLAN.
4. STORM WATER DETENTION SHALL BE PROVIDED ON SITE IN EXISTING MAIN STREET REGIONAL DETENTION BASIN.
5. 5' WIDE CONCRETE SIDEWALKS SHALL BE CONSTRUCTED ON BOTH SIDES OF SOME INTERIOR ROADS AS SHOWN. ALSO A 6' WIDE CONC. WALK SHALL BE CONSTRUCTED ALONG MAIN STREET AND TRANS-X DRIVE. ALL SIDEWALK STUBS SHALL BE PROVIDED WITH A.D.A. COMPLIANT RAMPS AND DETECTABLE WARNING SURFACES.
6. ALL ROADWAYS TO BE PRIVATE.
7. A CITY OF NOVI RIGHT-OF-WAY PERMIT IS REQUIRED FOR WORK WITHIN ANY PUBLIC ROAD RIGHT-OF-WAY.
8. ALL SIDEWALKS AND SIDEWALK RAMPS SHALL A.D.A. COMPLIANT.
9. ALL WORK SHALL CONFORM TO THE CURRENT CITY OF NOVI STANDARDS AND SPECIFICATIONS.
10. THE SITE IS LOCATED WITHIN FLOOD ZONE X "AREA OF MINIMAL FLOOD HAZARD" ON FEMA MAP # 26125C0626F, EFFECTIVE 9/29/2006.
11. ALL PAVEMENT MARKINGS, TRAFFIC CONTROL SIGNS, AND PARKING SIGNS SHALL COMPLY WITH THE DESIGN AND PLACEMENT REQUIREMENTS OF THE 2011 MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. ALL ROADWAY SIGNS SHOULD BE INSTALLED TWO FEET FROM THE FACE OF CURB OR EDGE OF SIDEWALK TO THE NEAR EDGE OF THE SIGN.
12. PROP. WATER MAIN AND PROP. SANITARY SEWER TO BE CENTERLINE OF 20' WIDE. PUBLIC EASEMENT.
13. A PARCEL COMBINATION WILL BE REQUIRED FOR PARCELS # 22-23-151-039 AND # 22-23-151-013.
14. BUILDINGS 8 THRU 16 REQUIRE ALL MASONRY ELEVATIONS. ALL OTHER BUILDINGS CAN BE THE BASE ELEVATION.
15. ALL ON-SITE EXISTING POWER POLES AND OVERHEAD WIRES SHOULD BE RELOCATED AND/OR REMOVED.
16. A PROPERTY COMBINATION WILL BE PROVIDED FOR ASSESSING WITH THE FINAL CONSTRUCTION DOCUMENTS. A CONDOMINIUM WILL BE RECORDED OVER ALL OF THE PARCELS WITH NO REMAINDER PARCELS.
17. ALL SIDEWALKS ARE 5' WIDE. ALL PATHWAYS FROM FRONT PORCH TO SIDEWALK ARE 5' WIDE. ALSO 6' OF SIDEWALK WIDTH HAS BEEN PROVIDED IN FRONT OF THE BIKE RACKS.
18. ALL PROPOSED IMPROVEMENTS SHOWN ON THIS PLAN ARE PROPOSED AND WILL BE CONSTRUCTED BY THE MAIN STREET TOWNES DEVELOPER INCLUDING THE ON-SITE IMPROVEMENTS LOCATED BEHIND THE EXISTING BUSINESSES FRONTING NOVI ROAD, THE WORK WITHIN THE SIXTH GATE ROAD RIGHT-OF-WAY AND THE WORK WITHIN THE EXISTING CITY OF NOVI PARKING LOT.
19. COMPACTED SAND BACKFILL WILL BE PROVIDED FOR ALL UTILITIES WITHIN THE INFLUENCE OF PAVED AREAS.
20. SEE SHEET 4 FOR THE SANITARY SEWER AND AND WATER MAIN BASIS OF DESIGN.
21. A 7' BUFFER DISTANCE SHALL BE PROVIDED BETWEEN THE SIDEWALK AND PARKED OBJECTS.
22. THE CITY OF NOVI HAS NO RESPONSIBILITY TO IMPROVE OR MAINTAIN THE PRIVATE STREETS CONTAINED WITHIN OR PRIVATE STREETS PROVIDING ACCESS TO THE PROPERTY DESCRIBED IN THIS PLAN.
23. DEWATERING IS NOT ANTICIPATED FOR THIS PROJECT. IF DEWATERING IS REQUIRED, A DEWATERING PLAN MUST BE SUBMITTED TO NOVI FOR APPROVAL.
24. THE EXISTING MAIN STREET PLANTER BOXES ON THE NORTH SIDE OF MAIN STREET IN FRONT OF BUILDINGS 8-11 (6 EACH) AND THE EXISTING PLANTERS ON THE SOUTH SIDE OF MAIN STREET IN FRONT OF BUILDINGS 12-15 (6 EACH) WILL BE REPLACED WITH AT-GRADE TREE GRATES. A TOTAL OF TWELVE (12) EXISTING PLANTERS WILL BE REPLACED. THE EXISTING TREES WITHIN THE EXISTING PLANTERS WILL BE REPLACED IN ACCORDANCE WITH THE LANDSCAPE PLAN.
25. THE PROPOSED FACILITY IS LOCATED WITHIN 500 FEET OF A WATER BODY OR WATER COURSE.
26. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITY LOCATIONS, INVERTS AND GRADES PRIOR TO THE START OF ANY WORK.
25. TWO (2) COPIES OF AS-BUILT PLANS SHALL BE SUBMITTED TO THE CITY ENGINEER WITHIN THIRTY (30) DAYS OF THE COMPLETION OF THE UTILITY INSTALLATION AS PER SECTION 31-7 (a) CITY OF NOVI ORDINANCE.

Bike Rack Requirements

1 SPACE FOR EACH 5 UNITS REQUIRED

SPACES REQUIRED FOR NORTH PARCEL:
67 UNITS / 5 = 13 SPACES
SPACES PROVIDED = 16 SPACES
4 SPACES ARE COVERED WITH A CANOPY.

SPACES REQUIRED FOR SOUTH PARCEL:
125 UNITS / 5 = 25 SPACES
SPACES PROVIDED = 28 SPACES
8 SPACES ARE COVERED WITH A CANOPY.

LEGEND

EXISTING / PROPOSED
PAVEMENT (ASPHALT)
SIDE WALK (CONCRETE)
CONC. CURB & GUTTER
STORM SEWER
SANITARY SEWER
WATER MAIN
MANHOLE
CATCH BASIN
END SECTION
GATE VALVE
HYDRANT

BARRIER-FREE RESERVED PARKING SIGNS

NOTE: ACCESSIBLE PARKING SPACE SIGNS SHALL HAVE A MIN. HEIGHT AND SIZE TO PERMIT THE SPACE TO BE EASILY IDENTIFIED AND ARE ELEVATED SUCH THAT THEY SHALL NOT PRESENT A HAZARD TO PERSONS WALKING NEAR THE SIGN.

SIGNING NOTES

1. ALL SIGNS SHALL HAVE A MINIMUM BOTTOM MOUNTING HEIGHT OF 7' FROM FINAL GRADE FOR GROUND MOUNTED SIGNS. WALL MOUNTED SIGNS MAY HAVE A BOTTOM MOUNTING HEIGHT OF 5'.
2. ALL ROADSIDE SIGNS SHOULD BE INSTALLED TWO FEET FROM THE FACE OF THE CURB TO THE NEAR EDGE OF THE SIGN.
3. SINGLE SIGNS WITH NOMINAL DIMENSIONS OF 12"x18" OR SMALLER IN SIZE SHALL BE MOUNTED ON A GALVANIZED 2 LB. U-CHANNEL POST. MULTIPLE SIGNS AND/OR SIGNS WITH NOMINAL DIMENSIONS GREATER THAN 12"x18" SHALL BE MOUNTED ON A GALVANIZED 3 LB. OR GREATER U-CHANNEL POST AS DICTATED BY THE WEIGHT OF THE PROPOSED SIGNS.
4. TRAFFIC CONTROL SIGNS SHALL USE THE FHWA STANDARD ALPHABET SERIES.
5. TRAFFIC CONTROL SIGNS SHALL HAVE A HIGH INTENSITY PRISMATIC (HIP) SHEETING TO MEET FHWA RETROREFLECTIVITY REQUIREMENTS.

STRIPING NOTES:

1. PARKING LOTS SHALL HAVE PARKING AREAS AND RAMP PAVEMENT MARKINGS MARKED BY PAINTED 4-INCH WIDE LINES ACCURATELY AND NEATLY ARRANGED AS INDICATED ON THE PLAN. LINES SHALL BE PAINTED WITH AN APPROVED WHITE TRAFFIC PAINT COMPATIBLE WITH BITUMINOUS/CONCRETE SURFACES SUCH AS SHERWIN WILLIAMS NO. B2 WHI; PPG TYPE 11-7 OR 11-4, OR AS APPROVED BY THE OWNER. PROTECT ALL PAINTED AREAS UNTIL PAINT IS COMPLETELY DRY. PARKING AREAS FOR THE PHYSICALLY HANDICAPPED SHALL BE PAINTED WITH BLUE PAINT AND SHALL BE CLEARLY MARKED. SIGNS SHALL BE PAINTED WHITE. ALL PAINTED MARKINGS AND STRIPING SHALL BE PROVIDED IN TWO COATS.
2. THE INTERNATIONAL SYMBOL FOR ACCESSIBILITY SHALL BE WHITE OR WHITE WITH BLUE BACKGROUND
3. WHEN A BARRIER FREE PARKING SPACE IS ADJACENT TO A STANDARD PARKING SPACE, BLUE AND WHITE LINES ABUTTING EACH OTHER SHALL BE PROVIDED.

SIGN QUANTITIES

SYMBOL	DESCRIPTION	QUANITY PANEL	QUANITY POST
	R1-1 30" "STOP" SIGN W/ STREET SIGN	7	7
	R1-2 30" "YIELD" SIGN W/ STREET SIGN	5	5
	R2-1(25) "25 MPH SPEED LIMIT" SIGN	4	4
	12" D3-1 STREET NAME ATOP "STOP" SIGN	6	0
	V.A. BARRIER SIGN (R7-8)	5	5
	VAN ACCESSIBLE SIGN (R7-8P)	4	0
	"NO PARKING FIRE LANE" SIGN IN ACCORDANCE WITH SEC. 15-99 (e)(1).	21	21

SIGNAGE NOTES

1. STREET NAME SIGNS SHOULD BE PLACED A TOP THE INTERIOR YIELD SIGNS AND THE EXITING STOP SIGNS.
2. ALL STREET-NAME SIGNS SHALL COMPLY WITH THE CITY OF NOVI DESIGN STANDARDS.
3. ALL TRAFFIC SIGNAGE SHALL COMPLY WITH THE CURRENT MMUTCD STANDARDS.

INVERTED 'U' BIKE RACK — NOT TO SCALE

8 BIKES RACK PARKING LAYOUT

4 BIKES RACK PARKING LAYOUT

CROSSWALK DETAIL

NOTES:
1. TRANSVERSE LINES SHALL BE 12" WIDE.
2. LONGITUDINAL LINES SHALL BE 24" APART.
3. ALL STRIPING TO BE WHITE PAINT.

BIKE RACK CANOPY DETAIL

THE TOWNES AT MAIN STREET

SECTION 23, TOWN 1 NORTH, RANGE 8 EAST
CITY OF NOVI, OAKLAND COUNTY, MICHIGAN

REVISIONS

NO.	ITEM	DATE
1.	FINAL SITE PLAN SUBMITTAL TO NOVI	8-05-2022
2.	PER CITY OF NOVI	10-07-2022
3.	REV. PER SESC PERMIT APP.	11-02-2022
4.	PER CITY OF NOVI	1-9-2023

UTILITY WARNING

UNDERGROUND UTILITY LOCATIONS AS SHOWN ON THE PLAN, WERE OBTAINED FROM UTILITY OWNER AND NOT FIELD LOCATED.

811 Know what's **below.** **Call** before you dig.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF AND/OR RELOCATION OF ALL UTILITIES THAT MAY INTERFERE WITH CONSTRUCTION.

DATE: 07-25-22 | DESIGNED BY: A.A. | JOB NUMBER: 19-088 | CHECKED BY: J.E. | DWG FILE: 19088-OA.dwg

OVERALL SITE PLAN-ALL PHASES

SEIBER KEAST LEHNER ENGINEERING | SURVEYING

SHEET 4

PLANNING REVIEW

PLAN REVIEW CENTER REPORT

February 9, 2023

Planning Review

Townes at Main Street

JSP 20-35

PETITIONER

Singh Development LLC

REVIEW TYPE

2nd Revised Final Site Plan

NOTE: The existing site plan in effect for this and surrounding parcels, as approved by the City on July 9, 2012, and associated easements are now reflected in the current plan. It is apparent that some of those easements and agreements will need to be amended. All comments in the current review letter are contingent on the applicant being able to amend those existing agreements/plans by all affected parties, and any final approval will be contingent on the agreements/easements actually being amended and approved by the City. It is our understanding that the City's attorney and applicant's attorney are working on those documents.

PROPERTY CHARACTERISTICS

Section	23	
Site Location	South of Grand River Avenue and east of Novi Road, along North and South of Main Street ; 22-23-176-035, 23-22-151-039 and 22-23-151-013;	
Site School	Novi Community School District	
Site Zoning	TC-1: Town Center One	
Adjoining	North	TC-1: Town Center One
	East	TC-1: Town Center One; RM-2 High Density Residential
	West	TC-1: Town Center One
	South	I-2 General Industrial
Current Site	Vacant	
Adjoining Uses	North	Commercial
	East	Commercial; Residential
	West	Commercial
	South	Industrial
Site Size	17.69	
Plan Date	January 9, 2023	

PROJECT SUMMARY

The subject property is approximately 17.69 acres and is located north and south of Main Street, east of Novi Road in the Town Center-1 District (Section 23). The applicant is proposing to develop the vacant parcels with 32 multi-family residential buildings with 192 townhome-style units. Parking would be provided in 2-car garages and driveway aprons, with a few visitor spaces in four small bays in the development. A central playscape area is shown in the southern cluster of buildings. A private street network is proposed to connect the development with Main Street, Trans-X Drive, and Grand River Avenue via Sixth Gate Drive.

RECOMMENDATION

Approval of revised Final Site Plan is **not recommended** at this time. **The applicant shall continue to work on the amendments to agreements with the City and/or adjacent property owners for review and approval prior to a full recommendation for approval. The applicant is requesting to appeal to City**

Council for a variance to allow required wetland mitigation to be achieved through the purchase of bank credits, as well as to abandon easements within the vacated Paul Bunyan Drive ROW. We will schedule a public hearing before the Planning Commission to make a recommendation to City Council. Planning, Engineering, Wetland reviews do not recommend approval at this time. Following Planning Commission and City Council action, please address the items noted in a 3rd revised Final Site Plan submittal.

CITY COUNCIL ACTION

On May 23, 2022, City Council approved the Preliminary Site Plan and associated items with the following motion:

Approval at the request of Singh Development LLC for JSP 20-35 Townes of Main Street, for the Preliminary Site Plan, Phasing Plan, Wetland Permit and Stormwater Management Plan based on and subject to the following:

1. *The applicant shall provide a fully signed and recordable amendment to the Main Street Area Reciprocal Parking, Access, Stormwater, and Public/Private Utilities Agreement, and any other documents identified by the City Attorney's office, in a form and manner acceptable to the City before or at the time of final site plan submittal to assure that all parties to those existing agreements are amenable to the changes proposed by the applicant. This preliminary site plan approval (and all related land development approvals) is null and void in the event such document(s) is not provided when and as required, and no final site plan will be approved by the City unless such document(s) is provided to the City.*
2. *City Council determination per Section 4.82.2.b. for allowing an increase of maximum number of rooms allowed (642 allowed, 960 proposed) based on the following findings:*
   i) That an increase in total number of rooms is compatible with adjacent uses of land in terms of location, size, character, and impact on adjacent property or the surrounding neighborhood.
   ii) That an increase in total number of rooms is compatible with adjacent uses of land in terms of location, size, character, and impact on adjacent property or the surrounding neighborhood.
3. *Waiver of the requirement to submit a Traffic Impact Statement, as the 2018 Traffic Impact Statement prepared by AECOM included this area in its assumptions.*
4. *A Section 9 waiver for the following deviations is hereby granted, as the overall appearance of the buildings would not be significantly improved by strict application of the percentage listed in the Ordinance, and the more prominent facades along Main Street will meet the standards:*
   a. *Not providing the minimum required brick and stone (50% required) on the front (43% proposed) and side (32% proposed) facades for Buildings 1-7 and 17-32 and rear (20% proposed) facades for all buildings.*
   b. *Exceeding the maximum allowed percentage of lap siding (50% allowed) on side (buildings 1-7 and 17-32 only) and rear (all buildings) facades (proposed: side – 60% and rear – 55%), provided vinyl siding is not permitted;*
   c. *Not providing the minimum required brick (30% required) on the front elevations for Buildings 1-7 and 17-32 (20% proposed).*
   d. *Not providing the minimum required brick (30% required) on the rear elevations for all buildings (20% proposed);*
5. *Landscape waiver from Section 5.5.3.B.ii for lack of berm between the site and adjacent commercial and industrial uses as the applicant proposes a brick wall to provided alternate screening;*
6. *Landscape waiver from Section 5.5.3.B.ii for reduction in required greenbelt width and number of trees along Trans-X Drive;*
7. *Landscape waiver from Section 5.5.3.B.ii for deficiency in required greenbelt trees along the south side of Main Street due to conflicts with underground utilities;*
8. *Landscape waiver from Section 5.5.3.F.ii to allow a reduction in the total number multifamily unit trees provided (576 required, 287 provided) with the condition that 15% of the total unit trees are substituted with fruiting/flowering shrubs (at a ratio of 6 shrubs/tree = 518 shrubs) are added to the plans*

9. *Landscape waiver from Section 5.5.3.D. for deficiency in foundation landscaping coverage along the interior drives as landscaping added to sides of buildings makes up for the shortage;*
10. *Landscape waiver from Section 5.5.3.E.ii. for the use of subcanopy trees up to 30% of the unit landscaping trees (25% maximum required) as there is limited room for canopy trees;*
11. *Waiver from Section 5.7.3.E. to allow an increase of average to minimum light level ratio for the site (4:1 maximum allowed, 4.81 provided).*
12. *Waiver from Section 5.7.3.K for not meeting the minimum light levels in various parking and walkway areas (0.2 foot candles required, some areas 0.0 foot candles);*
13. *The following require Zoning Board of Appeals variance approval, and this motion is subject to and conditioned upon the granting of such approvals or compliance with the applicable regulations:*
    a. *variance from Section 3.6.2.H to allow a 20-foot building setback adjacent to RM-2 District (117 feet required).*
    b. *variance from Section 5.10 to allow perpendicular parking on a major drive.*
14. *The findings of compliance with Ordinance standards in the staff and consultant review letters and the conditions and the items listed in those letters being addressed on the Final Site Plan.*

This motion is made because the plan is otherwise in compliance with Article 3, Article 4, and Article 5 of the Zoning Ordinance, and with Chapters 11 and 12 of the Code of Ordinances, and all other applicable provisions of the Ordinance.

ZONING BOARD OF APPEALS

On July 12, 2022, the Zoning Board of Appeals approved the requested variances from Section 3.6.2.H to allow a 20-foot building setback adjacent to the RM-2 District (117 feet required, variance of 97 feet); and Section 5.10 to allow perpendicular parking on a major drive, which is not permitted.

The list of waivers and variances granted have been updated on the coversheet.

ORDINANCE REQUIREMENTS

This project was reviewed for conformance with the Zoning Ordinance with respect to Article 3 (Zoning Districts), Article 4 (Use Standards), Article 5 (Site Standards), and any other applicable provisions of the Zoning Ordinance**. Please see the attached chart for information pertaining to ordinance requirements.** Items in **bold underline** below must be addressed and incorporated as part of the revised Final Site Plan submittal:

1. Town Center Amenities: The Town Center Area Study (TCAS) is incorporated by reference in Section 3.27.1.L. which requires the provision of "development amenities in the form of exterior lighting, paved activity nodes, street/sidewalk furniture, safety paths, screening walls and planters." The plans show a sidewalk network connecting the buildings to Main Street, and a play area in a central location of the southern cluster of buildings. Three benches have been added to the north side "promenade." A six-foot masonry screening wall is shown around much of the site perimeter in side and rear yards of the parcels. This is similar to other areas of the Town Center District, including the adjacent Main Street Village II, which have brick wall screens, as is specifically recommended in the design guidelines of the TCAS**.** Adjacent to the I-2 zoned parcel at the south of the property, the screening wall has been raised to 8 feet to increase the visual screening and noise buffering (see #7 below), and to match the height of the wall being constructed on the industrial parcel.

   Staff recommends the applicant add benches in key locations of the southern area, including around the play area and within the "Usable Open Spaces" shown near the pond. The applicant should also detail plans for the maintenance or replacement of any of the existing planters, and provide benches, along Main Street in accordance with the Exchange Agreement (L17028 P100).

   The brick privacy wall "by others" profile detail is now shown on sheet ND, including the face of the wall**.**

Benches have been added around the central play area and a gazebo with seating is proposed between Main Street and the pond. Sheet L-2 includes a detail for the gazebo, benches and trash receptacles.

The applicant states that maintenance/replacement of existing planters on Main Street in front of Buildings 8-11 and 12-15 (12 total planter beds) will be replaced with at-grade tree grates with new trees.

2. Phasing Plan: The applicant is proposing to phase the construction in three phases. Per sheet 3, the phases are listed as follows:

Phase 1 (South of Main St.)	**Phase 2 (Southern portion)**	**Phase 3 (North of Main Street)**
Buildings 12-22 and associated parking	Buildings 23-32 and associated parking	Buildings 1-11 and associated parking

Additional details of what improvements will be completed with each phase of development will be required at the time of Final Site Plan submittal, including streets, utilities, and landscaping. Each phase should be broken out to clearly show what will be completed by the time certificates of occupancy are granted for each phase. Each phase will be reviewed to determine if it can "stand on its own" in meeting Ordinance requirements if the later phases are not built.

The applicant was asked to include site plan sheet(s) that only show what improvements (pavement, buildings, landscaping, amenities, utilities, etc.) will be present at the completion of Phase 1. On sheet 5, the applicant has darkened the paving to show where the streets will end at the completion of Phase 1. Tolstoy Trail and Atwood Avenue now appear to meet the requirements for emergency vehicle use. The sidewalk loop around the play area is also shown to be entirely complete in Phase 1.

The city's inspectors will rely on this sheet to determine what will be present and available for inspection at the time of Phase 1 completion. See Engineering review regarding utility plan comments. Additional details and clarifications are needed to determine Phase 1 utility plans.

3. Wetland Impacts: Wetland delineation identified seven wetland areas on the site, ranging from 0.01 to 1.9 acres in size, with a total wetland area of 2.287 acres. These wetlands have been determined to be regulated by EGLE. The plan proposes permanent wetland impacts totaling 0.4 acre. The habitat quality is not high for the impacted areas, according to the City's wetland consultant. The Wetland and Watercourse Ordinance requires mitigation of all impacts over 0.25 acre. The applicant previously proposed to provide a conservation easement over an approximately 5-acre area on a parcel they own south of the Twelve Oaks Lake rather than constructing wetland mitigation. The justification for this request is that constructing wetland would require the removal of protected woodlands, and a greater land area would be preserved under their proposal. No land or tree survey of the area to be preserved had been provided, so no analysis of the benefit of this plan was completed. However, this alternative is not permitted by Chapter 12 of the Code.

The applicant now proposes purchase of wetland mitigation credits in order to fulfill both the EGLE and City requirements for mitigation. Chapter 12 of the Code of Ordinances requires mitigation be provided within the City. The City does not currently have any wetland banks within its jurisdiction. This request to deviate from that requirement cannot be granted by the Planning Commission. Any such authorization would require the approval of City Council.

There is a general provision in Chapter 12, Section 12-173(f) relating to "appeals" from the denial of a permit (which is what the Commission's action would necessarily be if the applicant continues to request off-site mitigation):

> **When a use permit application is approved, the permit shall not be issued until ten (10) calendar days following the date of the department,**

> **commission or council approval. *The applicant may request an appeal of the decision to deny a use permit to the council.* A request for appeal must be filed within ten (10) calendar days following the grant or denial. If an appeal is requested during such ten-day period, the issuance of any permit shall be suspended pending the outcome of the appeal. *The council, upon review, may reverse, affirm or modify the determination and/or permit issued.* *** (Emphasis added.)**

While the language in Section 12 does not specifically refer to "variance" authority, that authority could be implied by the emphasized language. If the Council determines that the language authorizes the proposed deviation and chooses to consider exercising that authority, staff would recommend that reference be made to Section 1.12 of the City Code—the "general appeal" section of the Code—which contains standards for considering variance relief:

1. **A literal application of the substantive requirement would result in exceptional, practical difficulty to the applicant;**
2. **The alternative proposed by the applicant will be adequate for the intended use and shall not substantially deviate from the performance that would be obtained by strict enforcement of the standards; and**
3. **The granting of the variance will not be detrimental to the public health, safety or welfare, nor injurious to adjoining or neighboring property, nor contrary to the overall purpose and goals of the chapter or article containing the regulation in question."**

Granting such variance would be unusual—there does not appear to be an instance of granting such relief outside of a PRO development (which this is not). This would not be an activity (purchasing credits outside the City) that staff supports except in highly unusual circumstances. If this process were used with any kind of frequency, the benefits that wetlands provide, including floodwater management, fish and wildlife habitat, open space, passive recreation, and filtering of runoff pollutants, would be diminished within the City. While the mitigation required in this case may be relatively small (0.581 acre), the overall impact could be much larger if the City "opens the door" to granting variances for mitigation outside the city .

In the opinion of staff, the applicant has not shown they carry more exceptional burden or practical difficulty than other developers in the city that are subject to the same requirements. In fact, the applicant acknowledges in the response letter that if the variance is denied they have alternative plans to construct mitigation within the city. The justification provided by the applicant states they will be required to purchase mitigation credits to comply with the EGLE wetland permit and therefore will be subject to "double-dipping." However, it has been the case in other projects that developers can fulfill EGLE mitigation requirements through the construction of mitigation in accordance with the City's requirements. As the applicant has the ability to comply with Code requirements, staff does not support the variance request.

4. Conservation Easements: Wetland mitigation areas are required to be permanently protected in a Wetland Conservation Easement. Draft conservation easements are required to be reviewed and executed prior to Final Stamping Set approval for off-site locations. If the above deviation is approved by City Council, such easements will not be necessary.

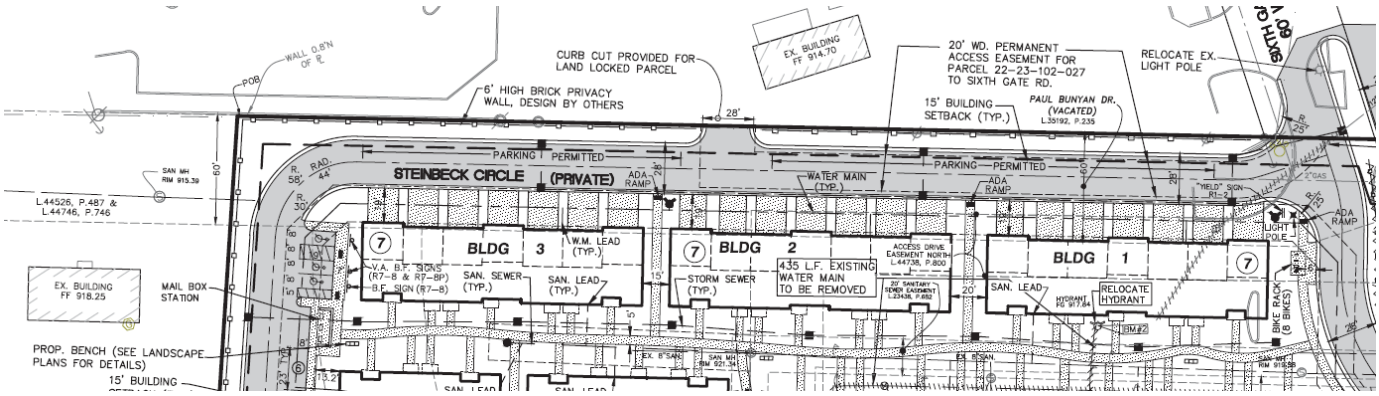
5. Property lines: The applicant notes that a condominium will be recorded over all the parcels with no remainder, which would replace the need for a parcel combination. A draft Master Deed has been submitted and is under review. **The Master Deed will need to be reviewed and approved prior to Final Stamping Set approval.**

6. Off-site concerns: Certain areas of the site have previously been developed as parking lots under shared parking agreements with adjacent properties. The plan shows that the parking lot improvements behind the businesses on the east of Novi Road will be retained, along with the existing

north/south drive connecting Trans-X to Main Street. Any modifications in this area, or other off-site improvements that would impact other property owners should be highlighted on the next submittal, and responsibilities for improvements or adjustments should be indicated. The applicant shall provide details of the changes to the City-owned parking lot near the fire station, including loss of spaces, changes to ingress/egress, etc., and indicate whether changes to the existing agreements will be required. **The applicant has provided a color-coded plan showing the existing easements and agreements on the property. Providing those agreements with the Final Site Plan submittal was a condition of approval by City Council. Final Site Plan approval cannot be recommended until fully signed and recordable amendments to those agreements are provided and accepted/approved by the City. The applicant's attorney has been in contact with the City attorney with draft documents, which are under review.**

7. Paul Bunyan Drive Easements: The previous land-locked parcel behind the auto supply store on Grand River has been resolved through land combination approved by the City and County. The applicant has therefore removed the access stub to provide vehicle access along the vacated Paul Bunyan Drive.

   The City Council resolutions to vacate Paul Bunyan Drive (L35195 P235 and L44526 P487) included language that retains public ingress/egress and utility easements within the former 60-foot right of way. Therefore, the wall shown in this area should be removed so that the road can continue west to Novi Road. **The applicant's attorney requests the City of Novi abandon the public ingress/egress easements along the vacated road, with the reasoning that it is not needed as an alternative ingress/egress route between Novi Road and Sixth Gate is provided via Main Street and the proposed Salinger Circle. The applicant has not requested the utility easements be abandoned.**



8. Electrical Poles: Previous submittals for this area have indicated the presence of electrical poles that may need to be relocated. *The applicant indicates the electrical service lines will be relocated below grade and the poles removed.*

9. Planning Review Chart: **Please refer to Planning Review chart for additional comments that need to be addressed.**

OTHER REVIEWS

a. Engineering Review: **Engineering does not recommend approval at this time.** Additional comments to be addressed in a 2nd revised Final Site Plan submittal.
b. Landscape Review: Landscape previously recommended approval of the revised Final Site Plan. Additional comments to be addressed in the Electronic Stamping Set.
c. Wetlands Review: A Wetlands Permit is required for the proposed impacts to regulated wetland. The impacts exceed the 0.25 acre threshold for mitigation (0.4 acre proposed), which will require approximately 0.6 acre of wetland mitigation. The applicant has indicated they will seek City Council approval of a variance in order to fulfill mitigation requirements through the purchase of credits in a mitigation bank. **Wetlands does not recommend approval at this time.**

d. Woodlands Review: Not applicable. No regulated woodlands on site.
e. Traffic Review: Traffic recommends conditional approval. Additional comments to be addressed with Electronic Stamping Set.
f. Facade Review: Façade recommends approval of the revised façade design. The changes proposed bring the design in greater compliance with the ordinance, and previously granted Section 9 waivers cover any areas of non-compliance.
g. Fire Review: Fire recommends approval. The hydrant spacing does not meet the 300-foot maximum separation distance**.** Please contact the Fire Marshal at 248.735.5674 for clarification of the outstanding issues.

NEXT STEP: PLANNING COMMISSION MEETING

The revised Wetland Permit request will be scheduled to go before the Planning Commission for public hearing on **February 22, 2023**. Please provide the following via email or download link **by noon on February 16, 2023**:

1. A response letter specifically requesting the proposed wetland mitigation strategy and Paul Bunyan easement abandonment, including any conditions or justification, as you see fit.

CITY COUNCIL MEETING

The request will be placed on City Council's agenda as applicable.

3rd REVISED FINAL SITE PLAN SUBMITTAL

Additional instructions will be provided depending on the action taken by City Council.

ELECTRONIC STAMPING SET SUBMITTAL AND RESPONSE LETTER

After receiving Final Site Plan approval, please submit the following for Electronic stamping set approval:

1. Plans addressing the comments in all of the staff and consultant review letters in PDF format.
2. Response letter addressing all comments in ALL letters and ALL charts and **refer to sheet numbers where the change is reflected.**

STAMPING SET APPROVAL

Stamping sets are still required for this project. After having received all of the review letters from City staff the applicant should make the appropriate changes on the plans and submit **10 size 24" x 36" copies with original signature and original seals,** to the Community Development Department for final Stamping Set approval.

SITE ADDRESSING

A new address is required for this project. The applicant should contact the Building Division for an address prior to applying for a building permit. Building permit applications cannot be processed without a correct address. The address application can be found by clicking on this link.

Please contact the Ordinance Division 248.735.5678 in the Community Development Department with any specific questions regarding addressing of sites.

STREET AND PROJECT NAME

Project and the street names have been approved and confirmed. Please contact Ben Peacock (248-347-0579) in the Community Development Department for additional information. The address application can be found by clicking on this link.

PRE-CONSTRUCTION MEETING

A Pre-Construction meeting is required for this project. Prior to the start of any work on the site, Pre-Construction (Pre-Con) meetings must be held with the applicant's contractor and the City's consulting engineer. Pre-Con meetings are generally held after Stamping Sets have been issued and prior to the start of any work on the site. There are a variety of requirements, fees and permits that must be issued

before a Pre-Con can be scheduled. If you have questions regarding the checklist or the Pre-Con itself, please contact Sarah Marchioni [248.347.0430 or smarchioni@cityofnovi.org] in the Community Development Department.

CHAPTER 26.5

Chapter 26.5 of the City of Novi Code of Ordinances generally requires all projects be completed within two years of the issuance of any starting permit. Please contact Sarah Marchioni at 248-347-0430 for additional information on starting permits. The applicant should review and be aware of the requirements of Chapter 26.5 before starting construction.

If the applicant has any questions concerning the above review or the process in general, do not hesitate to contact me at 248.347.0484 or lbell@cityofnovi.org.

Lindsay Bell

Lindsay Bell, *AICP* – Senior Planner

WETLAND REVIEW

February 2, 2023

Ms. Lindsay Bell
City Planner
Department of Community Development
City of Novi
45175 W. Ten Mile Road
Novi, Michigan 48375

RE: Townes at Main Street; JSP20-0035
Wetland Review of 2nd Revised Final Site Plan
MSG Project No. N1030024

Dear Ms. Bell:

The Mannik & Smith Group, Inc. (MSG) reviewed the site plan set *Engineering Construction Plans for The Townes at Main Street* prepared by Seiber, Keast Engineering, LLC dated January 9, 2023 (the 2rFSP); the letter *JSP 20-35 The Townes at Main Street, Final Site Plan – Rev2* prepared by Seiber Keast Lehner dated January 13, 2023; and the *Wetland Delineation Report* prepared by Wilson Road Group dated September 30, 2022. The project site is located south of Grand River Avenue and east of Novi Road in Section 23. The parcel numbers associated with the project site are 50-22-23-151-013 (Parcel 1), 50-22-23-151-039 (Parcel 2), and 50-22-23-176-035 (Parcel 3). Collectively, Parcels 1, 2, and 3 are referred to as the Site in this document. The 2rFSP depicts redevelopment of the Site with multiple improvements including 32 multi-unit residential buildings and associated private roads.

Published Data

MSG reviewed The City of Novi Wetlands Maps and the Michigan Department of Environment, Great Lakes, and Energy (EGLE) Wetlands Map Viewer for the project site. The project site contains a portion of a City of Novi Regulated Wetland near the eastern-central limit of Parcel 2, where a storm water detention basin is located (Figure 1). Wetland (hydric) soils are also identified by EGLE on the Part 303 Wetlands Inventory at and around the storm water detention basin (Figure 2).

MSG Wetland Boundary Verification

The 2rFSP depicts the locations of five wetlands on the Site that are identified as Wetlands M through R. The 2rFSP also appears to identify the storm water detention basin as Wetland L. MSG visited the Site on April 22, 2021 to evaluate the Site. The observed conditions at the Site generally consisted of vacant land predominantly covered with herbaceous vegetation (mown grass) and sparse trees, with more densely wooded areas generally located in the eastern portions of Parcels 1 and 2 and the western portion of Parcel 3.

Proposed Impacts and MSG Recommendations

MSG summarized the area of wetland and buffer impact below, based on the documents referenced above.

2365 Haggerty Road South, Canton, Michigan 48188 Tel: 734.397.3100 Fax: 734.397.3131 www.MannikSmithGroup.com

Wetland ID	Type	Area (acre)	Wetland Impact Area (acre)	Wetland Impact Volume (cubic yards)	Buffer Disturbance (Impact) Area (acre)
L	Emergent	1.903	0.017	+17 (fill)	0.209
M	Emergent	0.011	0.011	+25 (fill)	0.144
N	Emergent/Scrub-Shrub	0.284	0.284	+602 (fill); -32 (cut)	0.446
O	Emergent	0.038	0.038	+22 (fill)	0.157
P	Scrub-Shrub/Forested*	0.008	0.008	+20 (fill)	0.092
Q	Scrub-Shrub/Forested*	0.018	0.018	-43 (cut)	0.141
R	Forested/Scrub-Shrub*	0.025	0.025	+32 (fill)	0.156
Total		**2.287**	**0.401**	**+643 (fill)**	**1.345**

* See 2rFSP Comment 5 below

The following comments were provided to the applicant on August 26, 2022 in response to the version of the plan set dated October 5, 2022 (the rFSP). The applicant's January 13, 2023 responses from the aforementioned letter are noted as "rFSP Response". Additional comments are noted as "2rFSP Comments".

rFSP Comment: EGLE typically regulates wetlands within 500-feet of an inland lake, pond, stream, or river, and isolated wetlands greater than 5 acres in size. Based on the City of Novi Wetlands Maps and the (Site plan), it appears the storm water detention basin (a.k.a. Wetland L) is directly connected to a tributary of the Walled Lake Branch of the Middle Rouge River. Based on MSG's review of historical aerial images of the Site, the detention basin is not a recently engineered feature. The current basin appears to be a natural formation that has been present and in communication with Walled Lake Branch of the Middle Rouge River since at least the 1940s. In addition, Wetlands M through Q are within 500 feet of the detention basin. Therefore, it appears likely all of the identified wetland areas would be regulated by EGLE.

MSG recommends that the applicant obtain verification from EGLE regarding state jurisdictional status. In the event EGLE determines the wetlands are not regulated by the State, MSG will evaluate the essentiality of the wetlands.

Given that a City Wetland permit cannot be issued for EGLE-regulated wetlands until EGLE has issued a wetland use permit, the applicant is advised both City and EGLE requirements would apply to a mitigation plan, if applicable

rFSP Response: A field walk with EGLE personnel was conducted on December 9, 2022. An EGLE Part 303 Wetland Protection Permit was applied for on December 13, 2022.

On December 9, 2022, members of EGLE conducted a pre-application site walk with our wetland's consultant. Our consultant pointed out the Wetland delineation boundary, extent of the areas of impact on existing wetlands and discussed the proposed approach for EGLE wetland mitigation. Members of EGLE expressed their verbal support of the Wetland delineation boundary, extent of the boundary of wetlands impact, and mitigation proposed. An EGLE Part 303 Wetland Permit was submitted to EGLE on 12/13/22 for their review.

With respect to the City Wetland mitigation plan, as noted above, the applicant has been discussing the possibility of a Wetland mitigation waiver with City staff. Similar waivers have been granted by the Novi City Council for other developments. With respect to EGLE requirements for mitigation, the applicant will be required to purchase wetland mitigation credits in the course of the EGLE wetland permit. We are hopeful to present to City Council in January, or February for the City Wetland mitigation requirement. If we are denied, we will immediately design of a wetland mitigation area within the City of Novi

2rFSP Comment 1: The purchase of EGLE wetland mitigation credits in lieu of City wetland mitigation requirements is not in alignment with the Novi Code of Ordinances. According to the City Ordinance Section 12-176 (Mitigation) "Mitigation shall be provided onsite where practical and beneficial to the wetland resources. If onsite mitigation is not practical and beneficial, mitigation in the immediate vicinity, within the same watershed, may be considered. Mitigation at other locations within the city will

only be considered when the above options are impractical." Mitigation plan details are found in this section of the Ordinance, available through this link:

https://library.municode.com/mi/novi/codes/code_of_ordinances?nodeId=PTIICOOR_CH12DRFLDAPR_ARTVWEWAPR_DIV2USPE_S12-176MI.

rFSP Comment: The associated wetland delineation report must be provided to support the assertion that wetland boundaries have changed since submittal of the FSP in August 2022. Re-inspection of the Site by MSG may be required to confirm wetland delineation boundaries have changed.

rFSP Response: The Wetland Delineation Report has been included in this submittal for review, as requested.

2rFSP Comment 2: Acknowledged.

rFSP Comment: Establishment of a woodlands and wetlands conservation easement at an existing lake instead of creating mitigation wetland area is not in accordance with the City of Novi Wetlands Ordinance. Further, this approach would result in a net loss of essential wetlands, which is also not in accordance with the City of Novi Wetlands Ordinance. Therefore, MSG, as the City's wetlands consultant, does not endorse Option #1. Insufficient information was provided regarding Option #2 ("Applicant has identified a 0.581 acre area on the Links of Novi property where we can create a wetland mitigation area") for MSG to evaluate its merits.

MSG reiterates a detailed mitigation wetland construction and maintenance plan is required to be included in Site plan sets.

rFSP Response: We acknowledge that the applicant's prior offer for an offsite woodlands and wetlands conservation easement was not supported by the City. As noted above, the applicant has been discussing with city staff the possibility of a waiver of the City wetland mitigation requirement. Similar waivers have been granted by the Novi City Council for other developments.

2rFSP Comment 3: MSG wishes to clarify that the Novi Code of Ordinances allows the creation of mitigation wetlands at off-site locations. Establishment of a conservation easement at existing woodlands/wetlands instead of creating mitigation wetland area is not in accordance with the City of Novi Wetlands Ordinance.

2rFSP Comment 4: MSG recommends the applicant consider if EGLE wetland mitigation requirements could be satisfied through creation of wetland mitigation area(s) within the City of Novi, instead of purchase of EGLE mitigation credits.

2rFSP Comment 5: Wetland mitigation ratios are based on the affected wetland type. Emergent wetlands and scrub-shrub wetlands are to be mitigated at a ratio of 1.5:1, whereas forested wetlands are to be mitigated at a ratio of 2:1. Wetlands P, Q, and R are identified as a mix of scrub-shrub and forested wetlands. The area of forested wetlands must be quantified to determine the appropriate mitigation ratio. If the wetland types are not adequately quantified, the most conservative value will be used (e.g. a wetland described only as "Scrub-Shrub/Forested" will require mitigation at a ratio of 2:1.

Permits and Regulatory Status

The project as proposed requires a City of Novi *Wetland Use Permit* as well as an *Authorization to Encroach into the 25-Foot Natural Features Setback* for proposed impacts. The City requires compensatory wetland mitigation for regulated impacts of 0.25-acre and greater, or contiguous to a lake, pond, river or stream. The proposed impacts appear to meet one or both of these thresholds, so mitigation is required according to the City's Wetland Ordinance.

Item	Required/Not Required/Not Applicable
Wetland Use Permit (specify Non-Minor or Minor)	Non-Minor permit required, fill exceeds 300 cubic yards
Wetland Mitigation	Required
Wetland Buffer Authorization	Required

Item	Required/Not Required/Not Applicable
EGLE Wetland Permit	Required
Wetland Conservation Easement	Required for wetland mitigation area

Because the plan set does not include a detailed mitigation wetland construction and maintenance plan, MSG does not recommend approval of the second revised Final Site Plan for Wetlands.

Sincerely,
The Mannik & Smith Group, Inc.

John A. Freeland, PhD, PWS
Senior Scientist

Douglas Repen, CDT
Project Manager
Certified Storm Water Management Operator

CC: Barbara McBeth, City of Novi Planner
Christian Carroll, City of Novi Planner
Ben Peacock, City of Novi Planner
Diana Shanahan, City of Novi Planning Assistant
Sarah Marchioni, City of Novi Project Coordinator
Rick Meader, City of Novi Landscape Architect

FIGURES

Figure 1	City of Novi Regulated Wetland & Woodland Map. Approximate Site boundary is shown in red. Regulated Wetland areas are shown in blue and Regulated Woodland areas are shown in green.

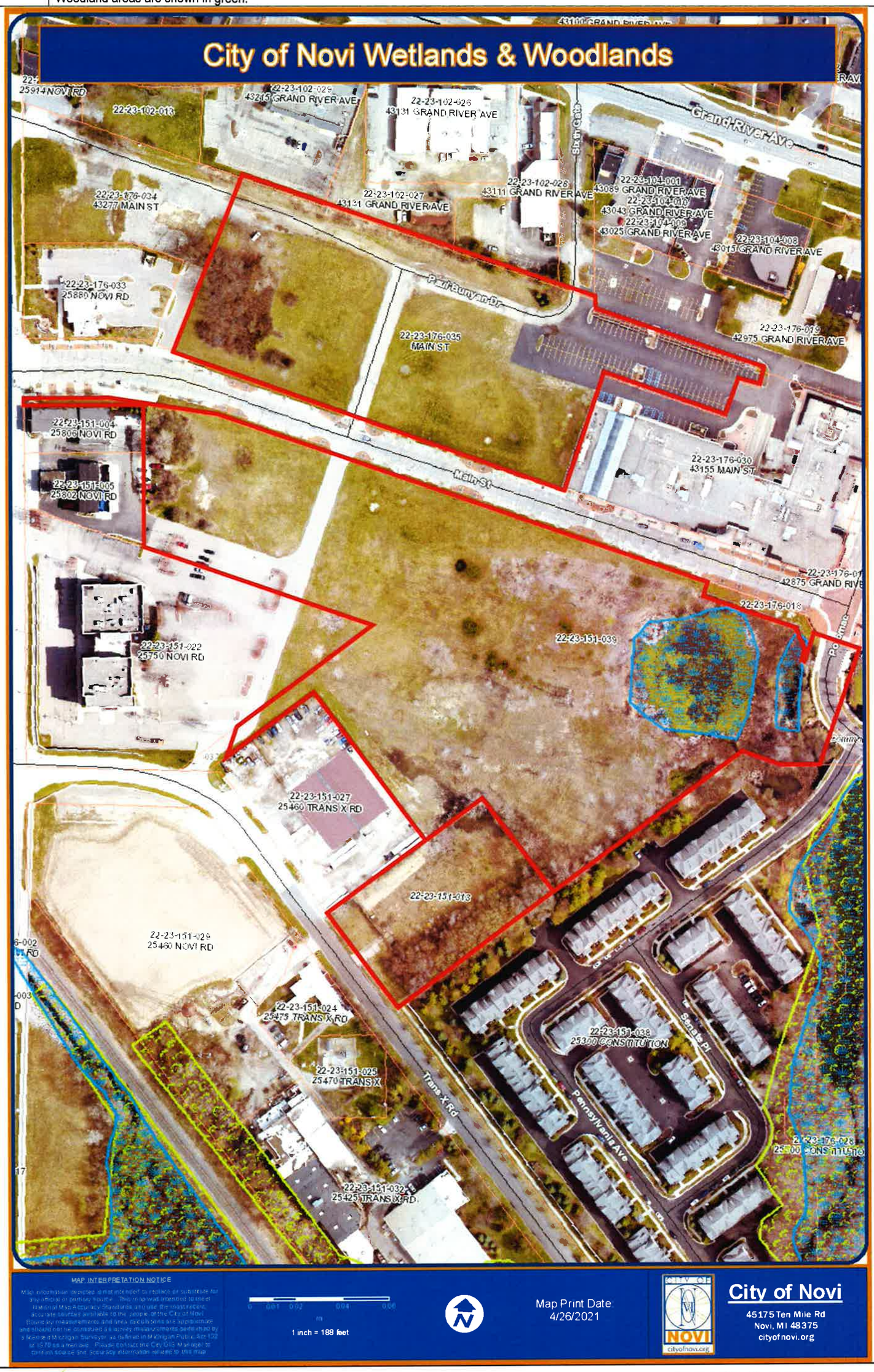


Figure 2	EGLE Wetlands Viewer Map. Approximate Site boundary is shown in red.

Wetlands Map Viewer

April 26, 2021

Part 303 Final Wetlands Inventory

- Wetlands as identified on NWI and MIRIS maps
- Soil areas which include wetland soils
- Wetlands as identified on NWI and MIRIS maps and soil areas which include wetland soils

1:4,188

0 0.04 0.07 0.14 mi

0 0.05 0.1 0.2 km

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Disclaimer: This map is not intended to be used to determine the specific

APPLICANT RESPONSE LETTER

SINGH
A Tradition Of Excellence ®
Real Estate - Developers - Builders - Investors – Management
Singh Development, L.L.C.
7125 Orchard Lake Road
Suite 200
West Bloomfield, MI 48322
Telephone: (248) 865-1614
Fax: (248) 865-1630
todd.rankine@singhmail.com
www.singhweb.com

February 17, 2023

Attn: Ms. Lindsay Bell
Senior Planner
City of Novi, MI

RE: The Townes at Main Street

Dear Ms, Bell,

In response to your Planning Review letter dated February 9, 2023, for the above reference project, I offer the following statements on our two variance requests being presented to the Planning Commission on February 22, 2023.

Variance request #1 Wetland Mitigation:

Novi Staff Comment:

- Wetland Impacts: Wetland delineation identified seven wetland areas on the site, ranging from 0.01 to 1.9 acres in size, with a total wetland area of 2.287 acres. These wetlands have been determined to be regulated by EGLE. The plan proposes permanent wetland impacts totaling 0.4 acre. The habitat quality is not high for the impacted areas, according to the City's wetland consultant. The Wetland and Watercourse Ordinance requires mitigation of all impacts over 0.25 acre. The applicant previously proposed to provide a conservation easement over an approximately 5-acre area on a parcel they own south of the Twelve Oaks Lake rather than constructing wetland mitigation. The justification for this request is that constructing wetland would require the removal of protected woodlands, and a greater land area would be preserved under their proposal. No land or tree survey of the area to be preserved had been provided, so no analysis of the benefit of this plan was completed. However, this alternative is not permitted by Chapter 12 of the Code.
  The applicant now proposes purchase of wetland mitigation credits in order to fulfill both the EGLE and City requirements for mitigation. Chapter 12 of the Code of Ordinances requires mitigation be provided within the City. The City does not currently have any wetland banks within its jurisdiction. This request to deviate from that requirement cannot be granted by the Planning Commission. Any such authorization would require the approval of City Council.

  Applicant Response:
  - We respectfully request that a variance to the City of Novi requirement for Wetland Mitigation be granted. We believe the justification to be the following; a waiver is warranted to avoid "double-dipping" the applicant. The applicant will be required to purchase wetland mitigation credits through the course of the EGLE wetland permit.

Requiring a second mitigation for the same impact would not be fair to the applicant. Additionally, it is the professional opinion of our Wetlands Consultant, Jeffrey Hurly, Director of Ecological & Environmental Services, with Wilson Road Group, Inc., that the wetlands being impacted are of low quality and should not be mis-characterized as "City Essential" wetlands, or to be confused with wetland systems which characteristically exhibit any quality, function or value which should be avoided an/or preserved, and to be represented for what they are, remnants of previous man-made cars/conditions from the property's industrial past. Efforts made to reconstruct 0.4 acres of man-made wetland, for exceeding the City of Novi's limits of wetland impact by 0.15 acres, seem beyond the intent of the Ordinance to persevere City Essential, quality, naturally forming wetlands.

Variance request #2 Vacation of Paul Bunyan Drive ingress/egress easement:

Novi Staff Comment

- Paul Bunyan Drive Easements - The previous land-locked parcel behind the auto supply store on Grand River has been resolved through land combination approved by the City and County. The applicant has therefore removed the access stub to provide vehicle access along the vacated Paul Bunyan Drive.
  The City Council resolutions to vacate Paul Bunyan Drive (L35195 P235 and L44526 P487) included language that retains public ingress/egress and utility easements within the former 60-foot right of way. Therefore, the wall shown in this area should be removed so that the road can continue west to Novi Road.

  Applicant Response:
  - We respectfully request the City of Novi to abandon the retainment of the ingress/egress route down the former Paul Bunyan ROW. Access from Novi Road to Sixth Gate will still be provided via Main Street and Salinger Circle, as illustrated on our proposed site plan. Salinger Circle is the internal street which will be constructed as part of the townhouse development.

I thank you for your assistance. Please don't hesitate to contact me directly should you need anything further.

Sincerely,

Todd J. Rankine, RA
Director, Architecture and Planning

Cc:

WETLAND DELINEATION REPORT

WILSON ROAD GROUP, INC.

WETLAND DELINEATION REPORT

For

The Townes at Main Street

City of Novi

Oakland County, Michigan

PREPARED FOR:

Mr. Todd Rankine
Singh Development, LLC
7125 Orchard Lake Road, Suite 200
West Bloomfield, Michigan 48322

September 30, 2022

WRG Project Number: 023-1510038-1

56383 Hayes Road • Shelby Township, Michigan 48315
Phone: 810-895-1219 • WilsonRoadGroup.com

TABLE OF CONTENTS

APPENDICES

WETLAND
DELINEATION REPORT
For the
Townes at Main Street
Located within the City of Novi's Town Center District,
Oakland County, Michigan

1.0 - Introduction

Wilson Road Group, Inc., (WRG) was contracted by Singh Development, LLC to perform a wetland delineation for the 17.69-acre (+/-) property located east of Novi Road and south of Grand River Avenue, and occupies parcels located both north and south of Main Street, within the City of Novi's Town Center district, Oakland County, Michigan (Section 23, T1N, R8E). The purpose of WRG's site investigation is to evaluate the subject property for the potential presence of wetlands or watercourses and if found, delineate (flag) each systems boundary to determine their size, location and jurisdictional status of Michigan's Department of Environment, Great Lakes and Energy (EGLE). Upon completion of our assessment WRG has prepared this wetland delineation report which documents our findings.

In general, wetlands in Michigan may fall under the jurisdiction of the Michigan Department of Environment, Great Lakes & Energy (EGLE) by Part 303, Wetlands Protection, of the *Natural Resources and Environmental Protection Act, 1994 PA 451* (NREPA) as amended, and/or the U.S. Army Corps of Engineers (USACE). USACE wetland participating authority is often associated with the Great Lakes and their connecting waterways and is authorized by Section 404 of the *Federal Water Pollution Control Act of 1972 (Clean Water Act)*.

A wetland is considered regulated by the EGLE if it is 5 acres in size or larger, and/or if it is connected to or located within 500 feet of a lake, pond, river, or stream. Watercourses (rivers or streams) are regulated by the EGLE under Part 301, Inland Lake or Streams, of the NREPA, if the body of water contains defined banks, a bed, and visible evidence of continued flow or continued occurrence of water. *The State definition of lake, pond, river and stream is found in Parts 301 and 303 of PA 631 of Public Acts of 2018, amending NREPA, 1994 PA 451.*

In addition, an artificial or natural lake, pond, impoundment or wetland that is regulated under the current federal Waters of the United States (WOTUS) Rule is also considered regulated by EGLE. This includes features that meet any of the following criteria:

- A pond or wetland located within the 100-year floodplain of a tributary and within 1,500 feet of the ordinary high-water mark of that tributary.

- A pond or wetland located within 1,500 feet of the ordinary high-water mark of the Great Lakes.
- A pond or wetland located within the 100-year floodplain of a Section 10 or Interstate water and has a case-specific significant nexus to a Section 10 or Interstate water.
- A pond or wetland located within 4,000 feet of the ordinary high-water mark of a tributary or Section 10 or Interstate water and has a case-specific significant nexus to a Section 10 or Interstate water.
- A pond or wetland that is an Interstate water.

The federal definition of WOTUS is found in the *U.S. Code of Federal Regulations Title 33. Navigation and Navigable Waters. Chapter II. Corps of Engineers, Dept. of the Army, Dept. of Defense, Part 328. Definition of Waters of the United States. Section 328.3. Definitions (CFR § 328.3 - Definitions.)*. The definition of tributary is also included in this section.

Watercourses that meet the requirements of Part 301, Inland Lakes and Streams, of the NREPA, fall under the jurisdiction of EGLE and floodplains fall under the jurisdiction of EGLE by Part 31, Water Resources Protection, of the NREPA. Activities that may impact regulated or protected wetlands or watercourses must be permitted or cleared by authorizing agencies prior to project activities taking place. When a project requires federal oversight, EGLE forwards the permit application to federal agencies such as the United States Environmental Protection Agency (USEPA), United States Army Corps of Engineers (USACE), and the United States Fish and Wildlife Service (USFWS). EGLE does not typically issue permits for projects objected by the USEPA unless specific concerns are resolved. This report summarizes the natural features found within the subject property and any permits that may be required prior to the commencement of project activities.

WRG also conducted a preliminary and threatened and endangered species (TES) habitat assessment for the site. This assessment will help to determine if the site contains habitat suitable for supporting TES and to determine the likely presence or absence of listed TES on the Site. To complete the TES review, the USFWS Information for Planning and Conservation (IPaC) and the Michigan Natural Features Inventory (MNFI) databases were reviewed followed by an on-site visit to assess the Site for potential TES habitat and potential occurrence of TES. The results of the wetland delineation and TES site visit conducted on September 8, 2022 are outlined below.

2.0 - Site Description

The subject property consists of three separate parcels, when combined total 17.69-acre (+/-) acres. The northwestern parcel is rectangular shaped hillside parcel, located on the north side of Main Street and west of Paul Bunyan Drive. This parcel is bisected by an existing service drive and bordered to the east by an existing parking lot. The main or largest parcel is located along the south side of Main Street, is somewhat irregularly shaped and similarly as above, its western

portion is bisected by the existing service drive. The southern parcel fronts Trans X Road, is rectangularly shaped and connects to the southeastern boundary of the main parcel. A *Site Location Map* and *Site Map* are presented in *Appendix I.* A review of aerial photography and site reconnaissance were conducted to characterize the Site and surrounding area. The property is located within a dense metropolitan/urban landscape. The surrounding land use consists primarily of commercial (retail/office) and light industrial developments to the north, west and south. Multi-family residential developments border the site to the east and southeast. The Site currently consists of open, maintained grass fields, an open water pond within the main parcel's northeastern corner, with scattered trees and shrub vegetation throughout much of its perimeter. The non-manicured/maintained upland areas within the Site are dominated by herbaceous species including dandelion, Canada goldenrod (*Solidago canadensis*), shrubby cinquefoil (*Potentilla fruticose*), wild strawberry (*Fragaria virginiana*), teasle (*Dipsacus fullonum*), common burdock (*Arctium minus*), pokeweed (*Phytolacca americana),* and Queen Anne's-Lace (*Daucus carota*).

3.0 - Methods

Prior to any conducting any field work, WRG conducted an extensive desktop review of existing information and imagery, including aerial photographs, United States Geological Service (USGS) topographic maps, U.S. Fish and Wildlife National Wetland Inventory (NWI) maps, EGLE wetland inventory maps, USDA county soil survey maps, Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs), and threatened and endangered species (TES) information. The results of the desktop review were used to focus field evaluation efforts on protected natural resources that may occur within the subject property. An on-site reconnaissance of the subject property, including a wetland delineation and site assessment, were then conducted to locate, verify, or ascertain the probability of protected resources.

3.1 – Aerial Photograph Review

WRG conducted aerial photograph interpretation of Google Earth aerial photograph dated 1999 through 2022 and EGLE Wetlands Map Viewer aerial imagery dated 1998, 2005, 2009, 2010, 2012, 2014, 2016 and 2018. WRG used this aerial imagery to outline land cover characteristics within the subject property. Copies of the *1998-2018 Aerial Photographs* are presented in Appendix II.

3.2 – USGS Topographic Map Review

The Northville USGS 7.5-minute series Topographic Quadrangle maps was reviewed for over-all topography, natural features, and additional site characteristics of the site. The topography of the site can be characterized as slightly rolling to relatively flat and sloping slightly to the east, southeast. The approximate elevation of the site ranges between 906 and 914 feet above sea level, with the highest areas located in the northwestern portion of the property.

3.3 – Wetland Inventory Map Review

A review of the NWI maps and the EGLE final county wetland inventory maps for Oakland County were conducted to determine the likely presence, location, size, and type of wetlands that may be located on the subject property. The U.S. Fish and Wildlife Service (USFWS) produced NWI maps through aerial photograph interpretation. The EGLE produced county wetland inventory maps for the State of Michigan on a county-by-county basis through compilation of data from NWI, land cover, and soil survey data. The results of WRG's review revealed approximately one (1) wetland complex within the Site. Copies of the *NWI and EGLE Wetland Inventory Maps* are presented in Appendix III.

3.4 – USDA Soil Map Review

The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil data was reviewed for the subject property to obtain an overall sense of the soil types, conditions and moisture levels likely to be encountered at the subject site.

Hydric soils are conducive to the growth and regeneration of hydrophytic (i.e., wetland) vegetation by their ability to hold water for extended periods of time. A copy of the *NRCS Soil Map* is presented in Appendix IV.

3.5 – Floodplain Map Review

FEMA-FIRM maps show floodplain areas along rivers and their tributaries. These maps record the following data: 100-year floodplains (1% chance of annual flooding) and 500-year floodplains (0.2% annual chance of flooding), the base flood elevation, and the risk to premium areas developed across a floodplain. Review of the FEMA FIRMs for City of Novi, Oakland County (Panel – 26125C0626F) was conducted to determine the existence, location, and zone of any 100-year floodplain that may be located within the site. The Site does not appear to be located within a FEMA Zone A floodplain. A copy of the *FEMA FIRMette Map* is presented in Appendix V.

3.6 – On-Site Landscape Assessment

An on-site assessment of the subject property was conducted to ascertain and verify landscape and land use characteristics. WRG staff traversed the subject property, noting primary and overall land use types, topography, soil characteristics and land cover types. These were compared/contrasted with topographic maps and aerial photograph reviews. Potential environmental challenges or regulatory requirements were noted if encountered.

3.7 – On-Site Wetland Assessment

The on-site wetland determination was performed in accordance with the *Midwest Interim Regional Supplement to the 1987 U.S. Army Corps of Engineers Wetland Delineation Manual* and the Regional Supplement to the USACE Wetland Delineation Manual: Midwest Region (USACE 1987; USACE 2012). The delineation of any wetland depends on three basic, inter-related

parameters: (1) the presence of hydrophytic vegetation or plants adapted to living in saturated soils; (2) the presence of hydric soils meaning; distinctive soil types that develop under saturated conditions, and (3) the presence of wetland hydrology or the presence of water at or near the surface for a specific period of time. Seven (7) wetlands were identified and recorded on the subject property.

3.8 – On-Site Watercourse Assessment

Potentially protected watercourses if encountered were identified and recorded based upon stream morphological characteristics such as the presence of a defined bed, banks and evidence of continued flow or occurrence of water. The site visit did not identify any watercourses within the subject site.

4.0 – Results, Findings and Discussions

WRG performed our initial desktop review of the subject property on August 31, 2022. WRG performed a field assessment and delineation activities on September 8, 2022. The weather at the time of our field activities was sunny and the temperature was 63°F. A *photographic log* is presented in Appendix VI for review purposes.

4.1 – Overall Landscape

The subject property consists of three parcels of land, totaling 17.69 acres in size, set within an urban landscape, surrounded by multi-family residential, commercial/retail and light industrial developments largely open with maintained fields, scattered trees, streets, sidewalks, and wetland areas.

4.2 - Upland

Common upland vegetation within the Site consisted of typical perennial grasses, dandelion, Canada goldenrod, shrubby cinquefoil, wild strawberry, teasle, staghorn sumac, common burdock, pokeweed, and Queen Anne's-Lace.

4.3 - Wetlands and Watercourses

A total of seven (7) wetlands (Wetlands L-R) were identified and delineated within the Site. Due to their size, location, and/or proximity to other off-site natural systems, all the identified on-site wetlands appear to be regulated by Part 303, Wetlands Protection, of the NREPA, 1994 PA 451, as amended, and are therefore anticipated to fall under the jurisdiction of EGLE. A *Wetland Boundary Map* is presented in Appendix VII for review purposes. *Wetland Data Forms* for each system are presented in Appendix VIII.

A *Wetland Summary Table* is provided below for review purposes.

Wetland Summary Table:

Wetland Name	Type	Size	Regulatory Status
Wetland L	PEM	1.90	Likely EGLE Regulated
Wetland M	PEM	0.01	Likely EGLE Regulated
Wetland N	PEM/SS	0.28	Likely EGLE Regulated
Wetland O	PEM	0.04	Likely EGLE Regulated
Wetland P	PSS/FO	0.01	Likely EGLE Regulated
Wetland Q	PSS/FO	0.02	Likely EGLE Regulated
Wetland R	PFO/SS	0.03	Likely EGLE Regulated
Total		**2.287**	**Acres**

4.3.1 – Emergent Wetlands

Wetland L is located within the northeastern corner of the main parcel. Wetland L is be considered an open-water pond with an emergent wetland fringe perimeter. Several outcroppings of trees also line portions of the pond's perimeter. The wetland perimeter is primarily dominated by common reed (*Phragmites australis*; FACW). reed canary grass (*Phalaris arundinacea*; FACW). However, stands of cattails (*Typha angustifolia*; OBL), cottonwood (*Populus deltoides*; FAC), black willow (*Salix nigra*; OBL), common buckthorn (*Rhamnus cathartica*; FAC) and purple loosestrife (*Lythrum salicaria*; OBL) are also present within and around the wetland. These vegetation types have wetland indicator statuses of FAC, FACW and OBL indicate they are typically found within wetlands. WRG observed wetland hydrological indicators including watermarks, saturation and inundation. The soils present within this wetland, appear to be Houghton and Adrian Mucks which are also identified on the NRCS national hydric soils list. Please refer to the relevant *Wetland Data Forms*.

Wetland M consists of a narrow swale, dominated with a mixture of reed canary grass (FACW), Canadian goldenrod (*Solidago altissima*; FACU) and barnyard grass (*Echinochloa crus-galli*; FAC). These species have indicator statuses of FACU, FAC and FACW, indicating they are typically found in wetlands and/or uplands which may border wetlands areas. WRG observed wetland hydrological indicators including water-stained leaves, watermarks, and seasonal inundation. The soils present within this wetland appears to be Blount loam respectively. This soil type is identified typically as non-hydric on the NRCS national hydric soils list. However, based on multiple soil test pits, the field indicators appear to indicate hydric soils. Please refer to the relevant *Wetland Data Forms*.

Wetland O consists of a mixture of reed canary grass, pathrush (*Juncus tenuis*; FAC), barnyard grass, meadow foxtail (*Alopecurus pratensis*; FAC) and yellow nutsedge (*Cyperus esculentus*; FACW). These species have indicator statuses of FACU, FAC and FACW, indicating they are typically found in wetlands and/or uplands which may border wetland areas. WRG observed wetland hydrological indicators including water-stained leaves, watermarks, and seasonal inundation. The soils present within this wetland appears to be Blount loam respectively. This soil

type is identified typically as non-hydric on the NRCS national hydric soils list. However, based on multiple soil test pits, the field indicators appear to indicate hydric soils. Please refer to the relevant *Wetland Data Forms*.

4.3.2 – Emergent/Scrub-Shrub Wetlands

Wetland N was determined to be multi-classified emergent and scrub-shrub wetland. Wetland N occupies the west/central portion of the parcel, transitioning from an emergent system within its western half, then converting to scrub-shrub before transitioning back to emergent system near the central portion of the parcel. The western, emergent portion consists of sandbar willow (*Salix interior*; FACW), pathrush (FAC), purplestem beggarticks (*Bidens connata*; FAC), yellow nutsedge (FACW), phragmites (FACW), reed canary grass (FACW), barnyard grass (FAC), meadow foxtail grass (FAC). Whereas the central and eastern portions are dominated by common buckthorn, and cottonwood (FAC) and common reed (FACW). These wetland indicator statuses of FAC to FACW, and indicate they are typically found in wetlands. WRG observed wetland hydrological indicators including water-stained leaves, watermarks, and seasonal inundation. The soils present within this wetland appears to be classified as Urban Land respectively. This soil type is identified typically as non-hydric on the NRCS national hydric soils list. However, based on multiple soil test pits, the field indicators appear to indicate hydric soils. Please refer to the relevant *Wetland Data Forms*.

Wetland P was dominated by common buckthorn (FAC), common reed (FACW), reed canary grass (FACW), and barnyard grass (FAC), and boxelder (*Acer negundo*; FAC). These wetland indicator statuses of FAC, and FACW indicating they are typically found in wetlands. WRG observed wetland hydrological indicators including water-stained leaves, watermarks, saturation, and seasonal inundation. The soils present within Wetland P appears to Blount loam respectively. This soil type is identified typically as non-hydric on the NRCS national hydric soils list. However, based on multiple soil test pits, the field indicators appear to indicate hydric soils.

Wetland Q was dominated by common buckthorn (FAC), common reed (FACW), reed canary grass (FACW), and barnyard grass (FAC). These have wetland indicator statuses of FAC and FACW indicating they are typically found in wetlands. WRG observed wetland hydrological indicators including water-stained leaves, watermarks, saturation, and seasonal inundation. The soils present within Wetland Q appears to Blount loam respectively. This soil type is identified typically as non-hydric on the NRCS national hydric soils list. However, based on multiple soil test pits, the field indicators appear to indicate hydric soils. Please refer to the relevant *Wetland Data Forms*.

Wetland R was determined to be a lightly wooded and scrub-shrub wetland. Wetland R occupies the east/central portion of the parcel, consisting of a narrow, somewhat linear lightly wooded, scrub-shrub system which lies between a historic, large spoils pile and old chain-link fence line.

The wetland predominantly consists of cottonwood (FAC), common buckthorn (FAC), Virginia Creeper (FACU) and Phragmites (FACW). WRG observed wetland hydrological indicators including water-stained leaves, watermarks, saturation, and seasonal inundation. The soils present within Wetland P appears to Blount loam respectively. This soil type is identified typically as non-hydric on the NRCS national hydric soils list. However, based on multiple soil test pits, the field indicators appear to indicate hydric soils.

4.3.3 - Floodplains

FEMA FIRMs were reviewed to determine if the Site is located within areas of mapped floodplains, floodways, or other flood prone areas, and to determine the presence, extent, location, and zone of floodplains on-site. Part 31, Water Resources Protection, of NREPA regulates activities within the 100-year floodplain and floodway of rivers, streams, drains, and watercourses that have upstream drainage areas of two square miles or larger.

Based a review of the FEMA FIRM Panel – 26125C0626F, (eff. 9/29/2006), the site is located within Zone X – Area of minimal flood hazard. No FEMA Zone A 100-year floodplain is located on the Site. Additionally, it is unlikely the Site contains EGLE regulated 100-year floodplains.

4.3.4 – Soils

A review of the U.S. Department of Agriculture (USDA) NRCS Web Soil Survey, illustrates that four (4) soil series to be located on the subject property and include the following:

Soil Type	Soil Symbol	NRCS Hydric Rating
Marlette Sandy Loam, 1-6%	10B	No
Houghton and Adrian Muck	27	Yes
Urban Land	59	No
Blount Loam, 0-4%	BntadB	No

The Houghton and Adrian Muck soil types have hydric components. Hydric soils are conducive to the growth and regeneration of hydrophytic vegetation by their ability to hold water for extended periods of time (USDA-NRCS 2010). The remainder of the identified soils on the subject property are not considered hydric.

4.3.5 – Threatened and Endangered Species Review

Federally listed species are protected by federal law under the Endangered Species Act (ESA) of 1973 (16 U.S.C §1531-1544). In Michigan, Part 365, Endangered Species Protection, of the NREPA confers legal protection to state listed species, including plants and animals.

WRG reviewed the USFWS IPaC database for a preliminary list of federally TES for the site. IPaC results list five (5) threatened or endangered species (refer to *Appendix IX* for the *IPaC and MNFI Results*):

- Indiana bat (*Myotis sodalis*; federally and state endangered)
- northern long-eared bat (*Myotis septentrionalis*; federally threatened and state special concern)
- eastern massasauga rattlesnake (*Sistrurus catenatus*; federally threatened and state special concern)
- snuffbox mussel (*Epioblasma triquetra;* federally and state endangered)
- Monarch Butterfly (*Danaus piexippus*; federally candidate species).

WRG also reviewed the MNFI database for a preliminary list of state TES for the Site. The MNFI results listed three (3) threatened or endangered species (refer to *Appendix IX* for the *IPaC and MNFI Results*):

- Green violet (*Hybanthus concolor*; special concern).
- Nodding mandarin (*Prosartes maculata*; presumed extirpated).
- Showy orchis (*Galearis spectabilis*; state threatened)

Based on the field visit, WRG has determined that the preferred habitat for the eastern massasauga rattlesnake, snuffbox mussel, monarch butterfly, green violet, nodding mandarin and showy orchis do not appear to be present within the site. These TES tend to prefer habitat types including open fens, mudflats, rich deciduous forested areas, tall grass prairie, sedgy meadows, alkaline fens, streams with sandy substrates and/or fast-moving water, and open wetlands. Based on WRG's site visit, these habitat types do not appear to be located within the subject site therefore, the lack of potentially suitable habitat required to support these species, the development of the site should not have negative impacts to these TES or preferred habitats.

The site is within the range of both the Indiana bat and northern long-eared bat, which utilize trees for roosting and/or maternity sites. Both of these bat species hibernate colonially during winter in caves or abandoned mines and during summer months roost underneath loose bark and/or in cavities of both dead and live trees. Although Indiana bats generally roost underneath loose, peeling bark of dead trees, they have also been observed utilizing live trees, such as shagbark hickory and white oak, which have exfoliating bark and crevices ideal for habitation (USFWS 2007). It is recognized that the northern long-eared bat has been observed occupying a broader range of habitats than the Indiana bat, as it more frequently utilizes live trees for roosting (Kurta 2008a).

Indiana bats typically select semi-open forested areas with open understories, forest edges, and riparian areas for foraging habitat (USFWS 2007); however, research indicates that upland forests, old fields, wooded fencerows, and open pastures with isolated trees may also provide foraging habitat (Menzel et al. 2001). The Indiana bat prefers not to cross large, open expanses (USFWS 2007); but research suggests that foraging over open fields or bodies of water does occur, although

less commonly than in forested sites or along forest edges (Menzel et al. 2001; USFWS 2007). In Michigan, savanna habitats adjacent to riparian corridors may have been historically important for roost sites, because Indiana bats are thought to favor sun-exposed trees for warmth at the northern limit of their range (USFWS 2007). Northern long-eared bats appear to be more flexible than Indiana bats when selecting roost trees, selecting trees ranging in size from very small ($\geq$ 3 inches diameter at breast height [dbh]) to large and roosting in crevices or cavities more often than Indiana bats (USFWS 2014). However, in Michigan, this species is more common in northern Michigan, where abundant forests and potential hibernation sites are relatively close to each other (Kurta 2008a).

No maternity colonies or other summer records of Indiana bats have been documented in Oakland County (USFWS 2007; Kurta 2008b; MNFI 2018); however, one maternity colony has been documented to the west in nearby Livingston and Washtenaw counties (USFWS 2007). The location is not publicly available. The nearest known northern long-eared bat roost trees located in Pittsfield Township, Washtenaw County and Putnam Township, Livingston County (USFWS 2016a); however, the exact locations and types of roosts are not publicly available.

The site does contain trees larger than three inches DBH along its perimeter that are within approximately 1,000 feet of open water and potential foraging areas. The site does likely contain potentially suitable foraging and roosting habitat for the both the Indiana and northern long-eared bats.

The USFWS commend that if the proposed project includes tree clearing activities within suitable Indiana bat habitat, then tree clearing activities should be conducted between October 1 and March 31 to avoid potential impacts to the species. If tree clearing impacts more than 10% of the existing forested habitat within the site and a half-mile buffer, EGLE may red file the project during the water resources State permitting process.

The northern long-eared bat is listed as federally threatened by the USFWS, primarily due to the threat posed by the white-nose syndrome (WNS), a fungal disease that has affected several bat populations (USFWS 2016b). The decision to list the bat as threatened with a 4(d) rule provides sufficient protection to address conservation needs of this bat species. The major provisions of the 4(d) rule prohibit the purposeful "take" (defined under the federal Endangered Species Act as harming, harassing, or killing) of this species throughout its range. In areas not yet affected by WNS, there are no prohibitions on incidental take resulting from lawful activities. In counties/districts that have confirmed WNS records or in U.S. counties located within 150 miles of confirmed WNS records, incidental take is prohibited under the following circumstances:

- If it occurs within a hibernaculum.
- If it results from tree removal activities and
    - The activity occurs within 0.25-mile of a known, occupied hibernaculum; or

- The activity cuts or destroys a known, occupied maternity roost tree or other trees within a 150-foot radius from the maternity roost tree during the pup season from June 1 through July 31(USFWS 2016b).

WNS records have been documented in Michigan, primarily in northern Lower Michigan and in the Upper Peninsula, and all Michigan counties lie within the 150-mile white nose-syndrome buffer zone per the final 4(d) rule (USFWS 2018b).

The project is not proposed within or near a known northern long-eared bat hibernaculum or roost trees and will not alter the entrance or environment of a hibernaculum. The project does not involve removing a northern long-eared bat known occupied maternity roost tree or any trees within 150 feet of a known occupied maternity roost tree from June 1 through July 31; and does not involve removing any trees within 0.25 miles of a known northern long-eared bat hibernaculum at any time of year. Based on this, the development of the Site is not subject to incidental take prohibitions under the final 4(d) rule for the northern-long eared bat and that the proposed project is not likely to impact this species.

The eastern massasauga rattlesnake (EMR) is federally threatened and a State species of special concern. The EMR is known to occur throughout Michigan's Lower Peninsula. The EMR can be found in a variety of wetland habitats, some are typically found in open, shallow wetlands, particularly prairie fens. Other wetland habitat types include bogs, shrub swamps, wet meadows, marshes, moist grasslands, wet prairies, and floodplain forests (Lee and Legge 2000). In many areas, the EMR also use adjacent uplands during the summer (USFWS 1999), including grasslands, old fields, and forest openings (Lee and Legge 2000). The snake hibernates in wetlands and poorly drained areas including hummocks of sphagnum and shrubs, burrows, and/or tree roots close to the groundwater level and emerges in the spring as water level rises. Suitable sites appear to be characterized by mixed sunny and shaded areas for thermoregulation, a water table near the surface for hibernation, and variable elevations between adjoining lowland and upland habitats (Lee and Legge 2000). Home ranges of this species have been found to range between 3 to 41 acres for individual snakes (Lee and Legge 2000). Massasaugas usually are active from mid-March or April to October or early November (MNFI 2007).

The subject site is not within the known range of the EMR, and not identified as containing Tier 2 habitat (USFWS 2018a). Tier 2 habitat is defined as areas with high potential habitat and that may be occupied by the eastern massasauga. Based the wetland delineation, TES habitat assessment, and review of available USFWS data, none of the on-site wetlands are located within identified Tier 2 habitat.

In 2017, the USFWS Michigan Ecological Services Field Office published a screening tool for the EMR for projects that could potentially affect this species in Michigan. The screening tool includes a set of general BMPs recommended for work within suitable EMR habitat as well as activity

specific BMPs recommended for work within Tier 2 habitat. The screening tool indicates that a project is not likely to adversely affect EMR if all of the following apply: the project does not impact more than one acre of wetland habitat and includes all applicable activity specific BMPs, the project will not appreciably affect hydrology, and the project includes all general BMPs (USFWS 2017c).

Utilization of the following BMPS recommended by the USFWS should reduce the negative impact to the EMR.
General BMPs:

- Use wildlife-safe materials for erosion control and site restoration. Eliminate use of erosion control products containing plastic mesh netting or other similar material that could entangle EMR.
- To increase human safety and awareness of EMR, those implementing the project should first watch MDNR's "60-Second Snakes: The Eastern Massasauga Rattlesnake" video (available at https://www.youtube.com/watch?v=-PFnXe_e02w), or review the EMR factsheet (available) at https://www.fws.gov/midwest/endangered/reptiles/eama/pdf/EMRFactSheetSept2016.pdf or by calling 517-351-2555.
- Require reporting of any EMR observations, or observation of any other listed threatened or endangered species, during project implementation to the USFWS within 24 hours.

The USFWS recommends activity specific BMPs to avoid and minimize adverse impacts to this species for work within the Tier 2 areas. Work within Tier 2 habitat should be minimized to the maximum extent practicable, and the potential for disturbance to EMRs during project activities should also be minimized to the maximum extent practicable. Adherence to the following activity specific BMPs within all areas of mapped Tier 2 (Wetland A) habitat is recommended to reduce impacts to the EMR:

- Ground disturbing activities: when operating in potential hibernation areas (i.e., EMR wetlands [Wetland A] and adjacent areas), work should be conducted well within the active season (June-August) when snakes are not likely to be near hibernation sites and can escape disturbance. Grading: When working during EMR active season (April-October), use exclusionary fencing (i.e., silt fence) to separate EMR habitat from the work site and areas of fill to prevent EMR from accessing the disturbance area. Do not use fencing materials that can entangle or injure snakes. Any areas with exclusionary fencing should first be "cleared" by a qualified individual (i.e. someone who has received training in the identification and life history of EMR) before beginning construction activities. Exclusionary fencing should be inspected weekly.

- Revegetate all disturbed Tier 2 habitat with native species or other suitable non-invasive species present on site prior to disturbance.
- Reduce travel speeds to help give vehicle operators more time to identify and avoid EMRs and other wildlife.
- Limit vehicle activity, equipment uses, and tree clearing to the inactive season (November-March) when the ground is frozen, if possible. When possible, use low-impact equipment such as light weight rack mounted vehicles with low ground pressure. Strictly control and minimize vehicle activity to the extent possible. During EMR active season (April-October), speed limits should be <15 MPH.
- Inspect and clean equipment and vehicles between work sites to avoid spread of invasive species.
- Avoid trenching in EMR wetlands (Wetland A) when possible.
- Ditching should be conducted well within the active season (June-August) when snakes are not likely to be near hibernation sites and can escape disturbance.
- Ensure fill material is free from contaminants or invasive species.
- Construction crews should be prepared with spill prevention and response plans for oils/fluids. If feasible, site staging areas for equipment, fuel, materials, and personnel at least 100 feet from waterways.
- Do not use large equipment or perform earth-moving activities, water withdrawal and discharge for hydrostatic testing, or other activities that substantially affect the ground or water levels in potential EMR hibernacula areas (Wetland A).
- Water levels should be allowed to flow naturally and not be artificially stabilized.

If the proposed development does not propose impact to more than one acre of wetland habitat, does not change the hydrology in Tier 2 habitat areas, and follows the above listed general and activity specific BMPs, adverse effects to the EMR and its habitat are not anticipated.

5.0 - Conclusions and Recommendations

WRG has completed a wetland determination and delineation for the 17.69-acre site known as The Townes at Main Street, located east of Novi Road and south of Grand River Avenue, and occupies parcels located both north and south of Main Street, within the City of Novi's Town Center district, Oakland County, Michigan (Section 23, T1N, R8E). The Site currently consists of open, maintained grass fields, an open water pond within the main parcel's northeastern corner, with scattered trees and shrub vegetation throughout much of its perimeter.

WRG's wetland specialist identified seven (7) separate wetland systems within the subject property. Under Part 303, a wetland is regulated by the EGLE if it is five (5) acres or larger in size and/or under Part 301 Inland Lakes & Streams if it is connected to or located within 500-feet of a lake, pond, river, stream, or ditch, or located within 1,000 feet of a floodplain. Part 301 Inland Lakes and Streams defines a watercourse as having a definitive bed, banks, and a continuous

occurrence of flow. It is WRG's opinion, based on the results of the site review and delineation activities all the on-site wetlands appear to be regulated under Part 303 by EGLE and the site does not appear to contain any watercourses as defined by Part 301.

Additionally, the subject property does not appear to contain the preferred habitat for most of the above identified TES. The site does contain trees larger than three inches in DBH and is within 1,000 feet of a watercourse which could potentially serve as roosting and/or foraging habitat for Indiana bats and/or northern long-eared bats. If tree clearing for this project takes place between October 1 and March 31 and tree clearing impacts are not more than 10% of the existing forested habitat within the Site and a half-mile buffer, the proposed project is not likely to impact Indiana bats or northern long-eared bats. Due to the final 4(d) rule for the northern-long eared bat the development of the site is not subject to incidental take prohibitions and the proposed project should not have reasonable potential to affect the federally listed northern long-eared bat.

Should you have any questions regarding this or any other matter, please feel free to contact our office at (810) 895-1219.

Wilson Road Group Project Number: 093-1010055-1

Data assembly and report preparation by:

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WILSON ROAD GROUP, INC.

6.0 – References

Kurta, Allen. 2008a. *Bats of Michigan*. Indiana State University, Center for North American Bat Research and Conservation. ———. 2008b. *Bats of Michigan*. Publication No. 2. Indiana State University Center for North American Bat Research and Conservation.

Menzel, Michael A., Jennifer M. Menzel, Timothy C. Carter, W. Mark Ford, and John Edwards. 2001. "Review of the Forest Habitat Relationships of the Indiana Bat (Myotis Sodalis)." General Technical Report NE-284. USDA Forest Service.

MNFI. 2009. "Michigan's Rare Animals." Michigan Natural Features Inventory. 2009.
———. 2019. "Michigan Natural Features Inventory." Web Database Search. 2019. http://mnfi.anr.msu.edu/search/login.cfm.

Moore JA, Gillingham JC. 2006. Spatial Ecology and Multi-Scale Habitat Selection by a Threatened Rattlesnake: The Eastern Massasauga (*Sistrurus catenatus catenatus*). Copeia. 4:742–751.

USACE. 2012. "Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)." ERDC/ EL TR-12-1. U.S. Army Engineer Research and Development Center. http://www.usace.army.mil/missions/civilworks/regulatoryprogramandpermits/reg_supp.aspx.

USDA-NRCS. 2010. "Field Indicators of Hydric Soils in the United States (Version 7.0)." http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1046970.pdf.

USFWS. 1999. Eastern Massasauga Rattlesnake - Fact Sheet.
———. 2007. "Indiana Bat (Myotis Sodalis) Draft Recovery Plan: First Revision." Fort Snelling, Minnesota, USA: U.S. Fish and Wildlife Service. http://www.fws.gov/midwest/endangered/mammals/inba/pdf/inba_fnldrftrecpln_apr07.pdf.

———. 2014. "Northern Long-Eared Bat Interim Conference and Planning Guidance." U.S. Fish and Wildlife Service. https://www.fws.gov/northeast/virginiafield/pdf/NLEBinterimGuidance6Jan2014.pdf.

———. 2015. "Proposed 4(d) Rule for the Northern Long-Eared Bat: Questions and Answers (Revised June 17, 2015)." U.S. Fish and Wildlife Service.
———. 2016a. "Northern Long-Eared Bat 4(d) Rule and Private Landowners in Michigan." U.S. Fish and Wildlife Service. https://www.fws.gov/midwest/EastLansing/te/nleb/pdf/MINLEBFactSheet22July2016.pdf.

———. 2016b. *Endangered and Threatened Wildlife and Plants; Threatened Species Status for the Northern Long-Eared Bat With 4(d) Rule. 50 CFR Part 17 Vol. 81 No. 9.* https://www.fws.gov/midwest/endangered/mammals/nleb/pdf/FRnlebFinal4dRule14Jan2016.pdf
.

———. 2019a. "IPaC - Information for Planning and Consultation." Environmental Conservation Online System. 2019. http://ecos.fws.gov/ipac/.

———. 2018b. "Northern Long-Eared Bat Final 4(d) Rule: White-Nose Syndrome Buffer Zone Around WNS/Pd Positive Counties/Districts." https://www.fws.gov/Midwest/endangered/mammals/nleb/pdf/WNSZone.pdf.

Yates D, Ingalls M, Eaton L, Pau N. 2014. Home range analysis and roost tree selection of northern long-eared (*Myotis septentrionalis*) and Eastern small-footed bats (*Myotis leibii*) at Great Bay NWR, NH.

APPENDIX I

SITE LOCATION MAP

SITE MAP

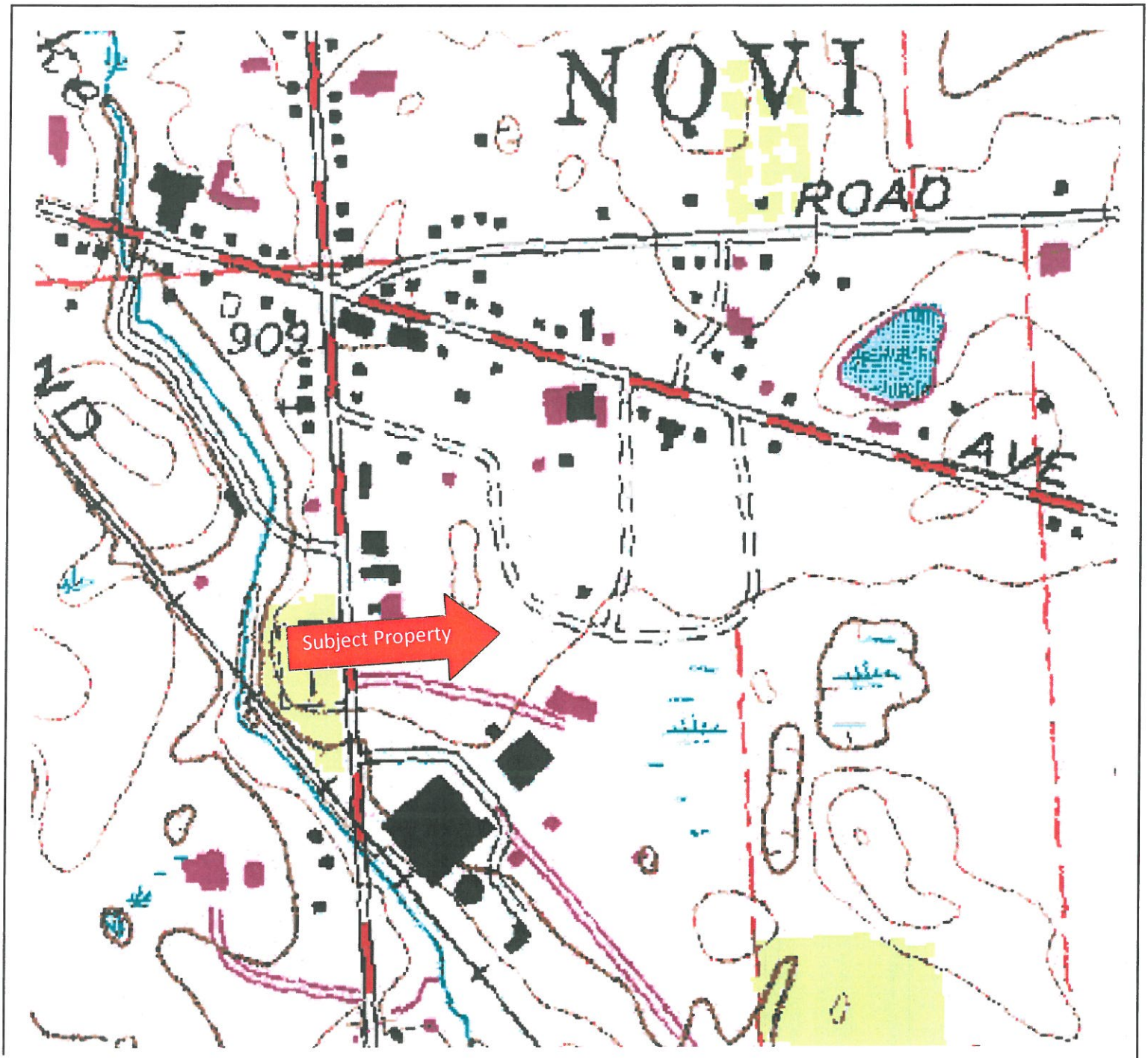


FIGURE 1: SITE LOCATION MAP
THE TOWNES AT MAIN STREET
CITY OF NOVI
OAKLAND COUNTY, MICHIGAN

WRG PROJECT NO. 023-1510038-1	DATE: OCT 2022 DRAWN: NJH CHECKED: JDH	**WRG** **WILSON ROAD GROUP, INC.** 56383 HAYES ROAD ENVIRONMENTAL ECOLOGICAL SHELBY TOWNSHIP, MICHIGAN 483 810-895-1219

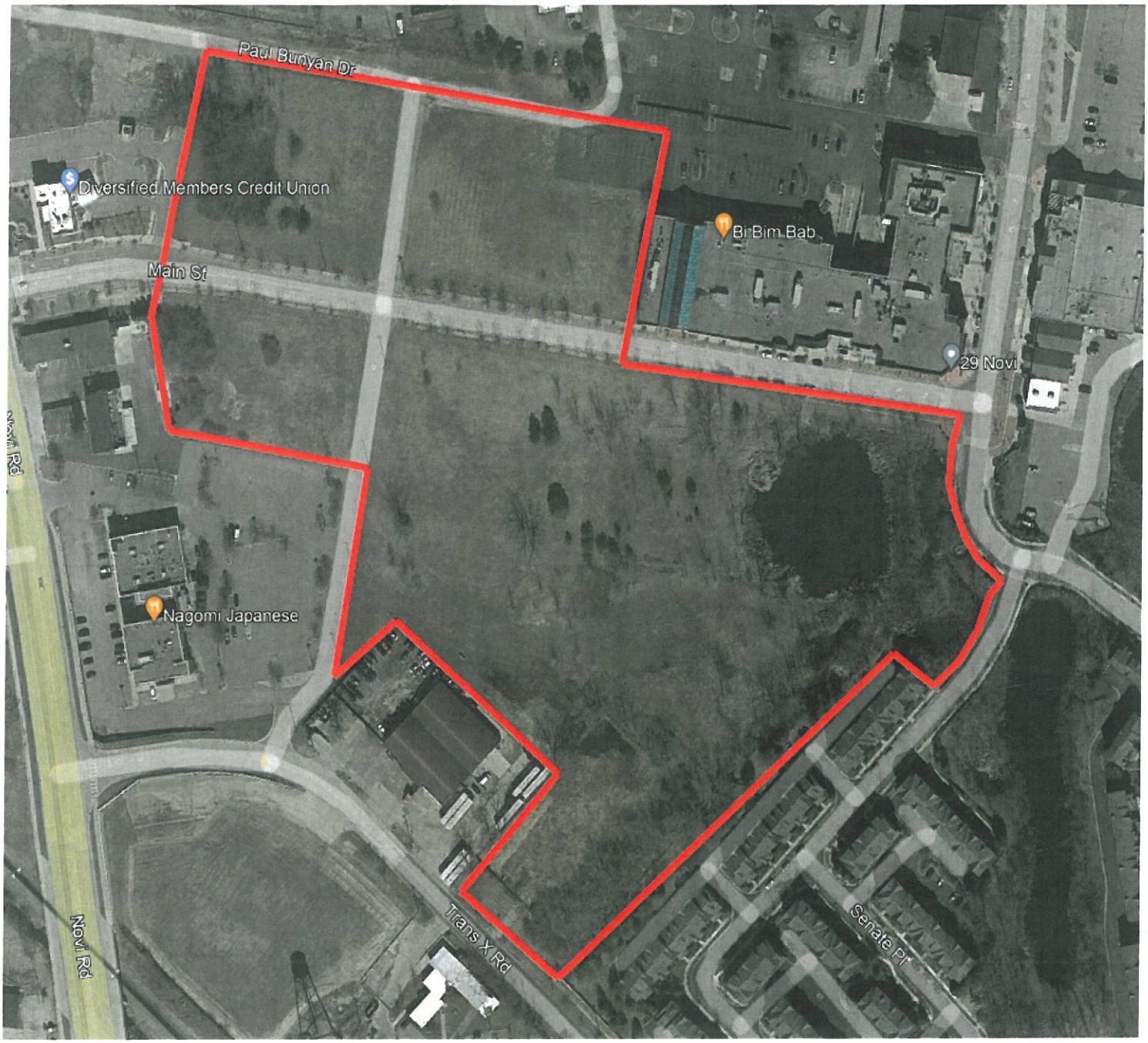


FIGURE 2: SITE MAP
THE TOWNES AT MAIN STREET
CITY OF NOVI
OAKLAND COUNTY, MICHIGAN

WRG PROJECT NO. 023-1510038-1	DATE: OCT 2022 DRAWN: NJH CHECKED: JDH	**WRG** **WILSON ROAD GROUP, INC.** 56383 HAYES ROAD ENVIRONMENTAL ECOLOGICAL SHELBY TOWNSHIP, MICHIGAN 483 810-895-1219

APPENDIX II

AERIAL PHOTOGRAPHS

1998 - 2018

Wetlands Map Viewer

August 31, 2022

1:4,788

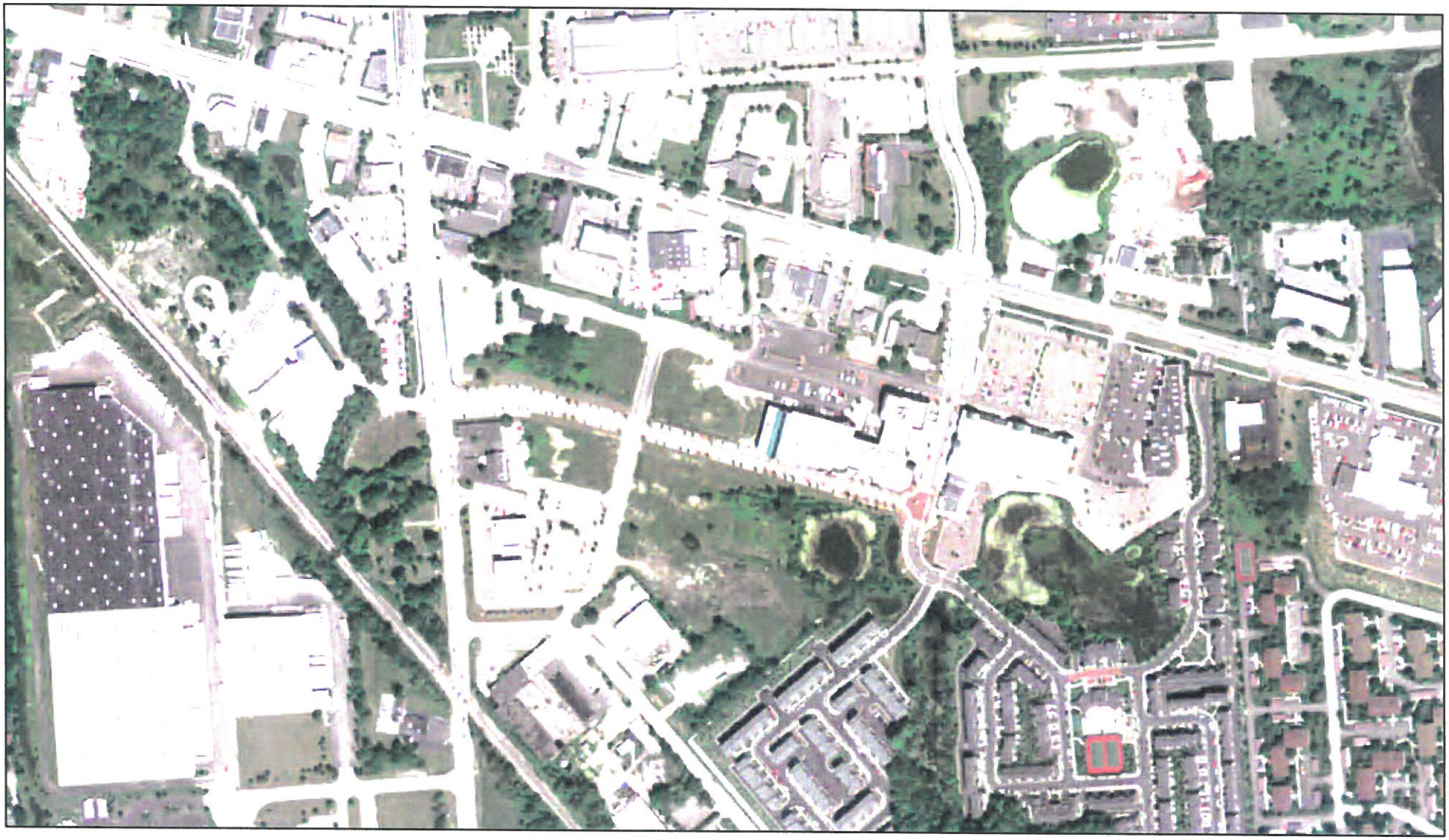
0 0.04 0.08 0.16 mi

0 0.05 0.1 0.2 km

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Disclamer: This map is not intended to be used to determine the specific

Wetlands Map Viewer



August 31, 2022

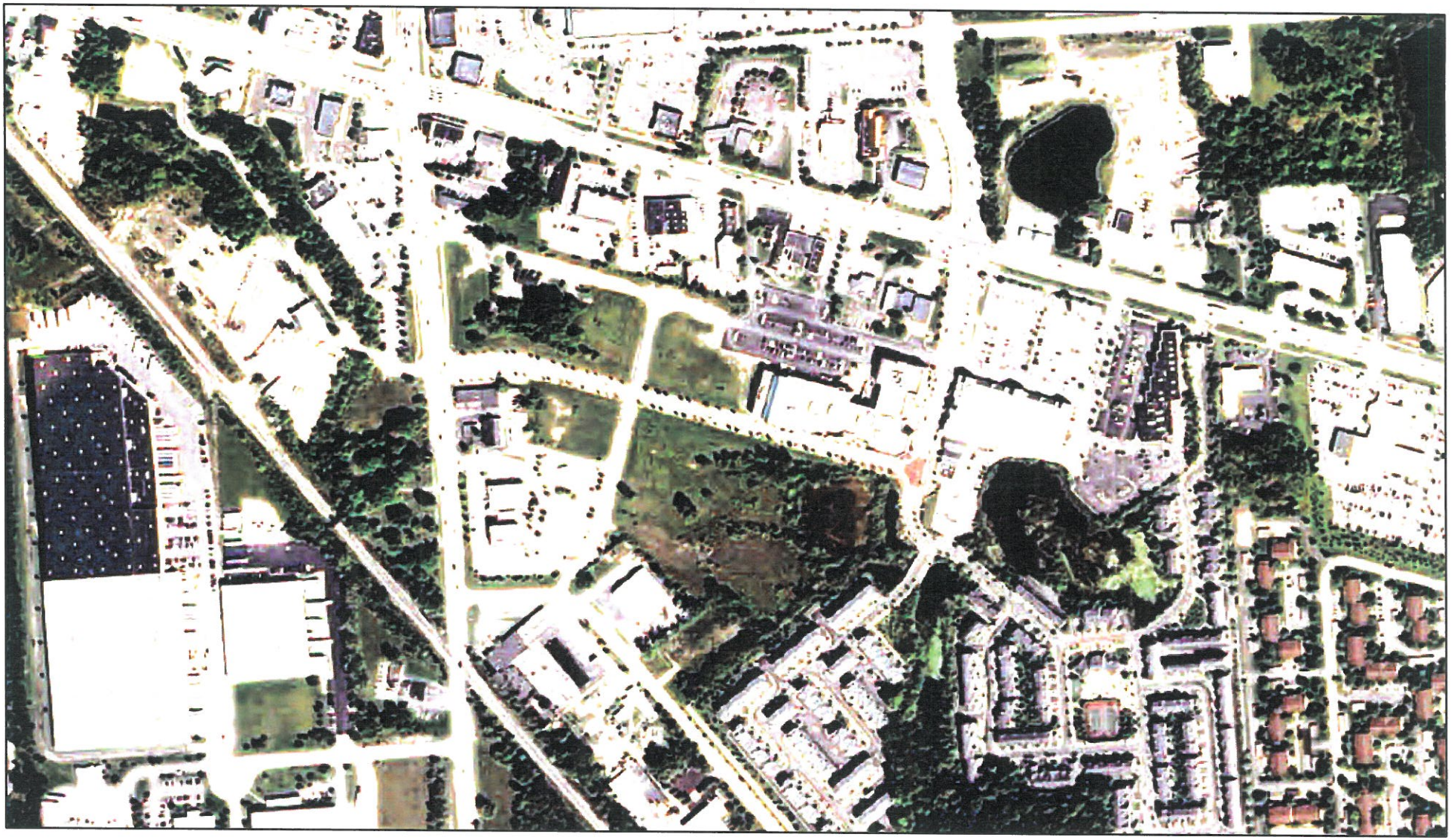
1:4,783

0 0.04 0.08 0.16 mi

0 0.05 0.1 0.2 km

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Wetlands Map Viewer



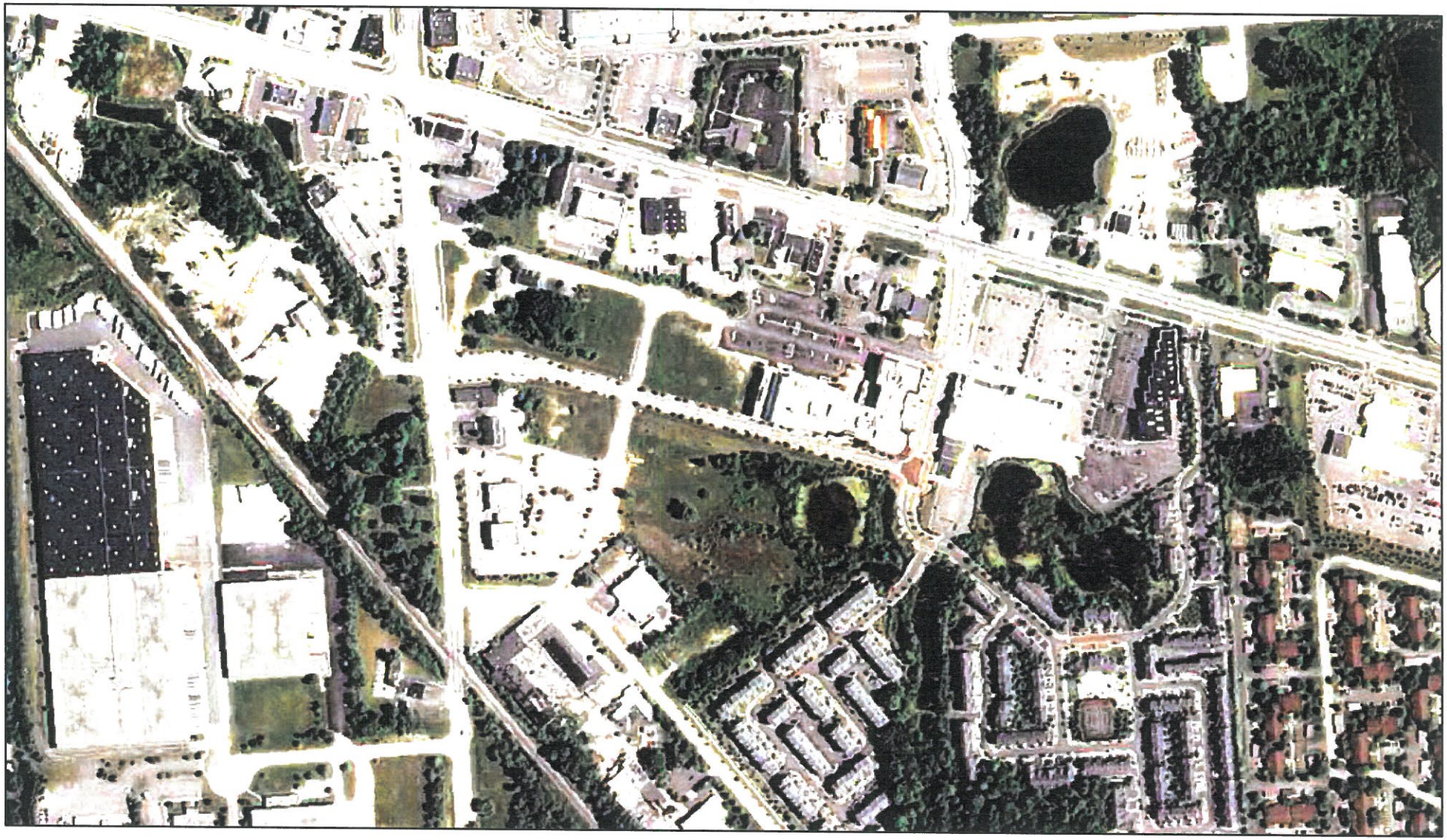
August 31, 2022

1:4,783

0 0.04 0.08 0.16 mi

0 0.05 0.1 0.2 km

Wetlands Map Viewer



August 31, 2022

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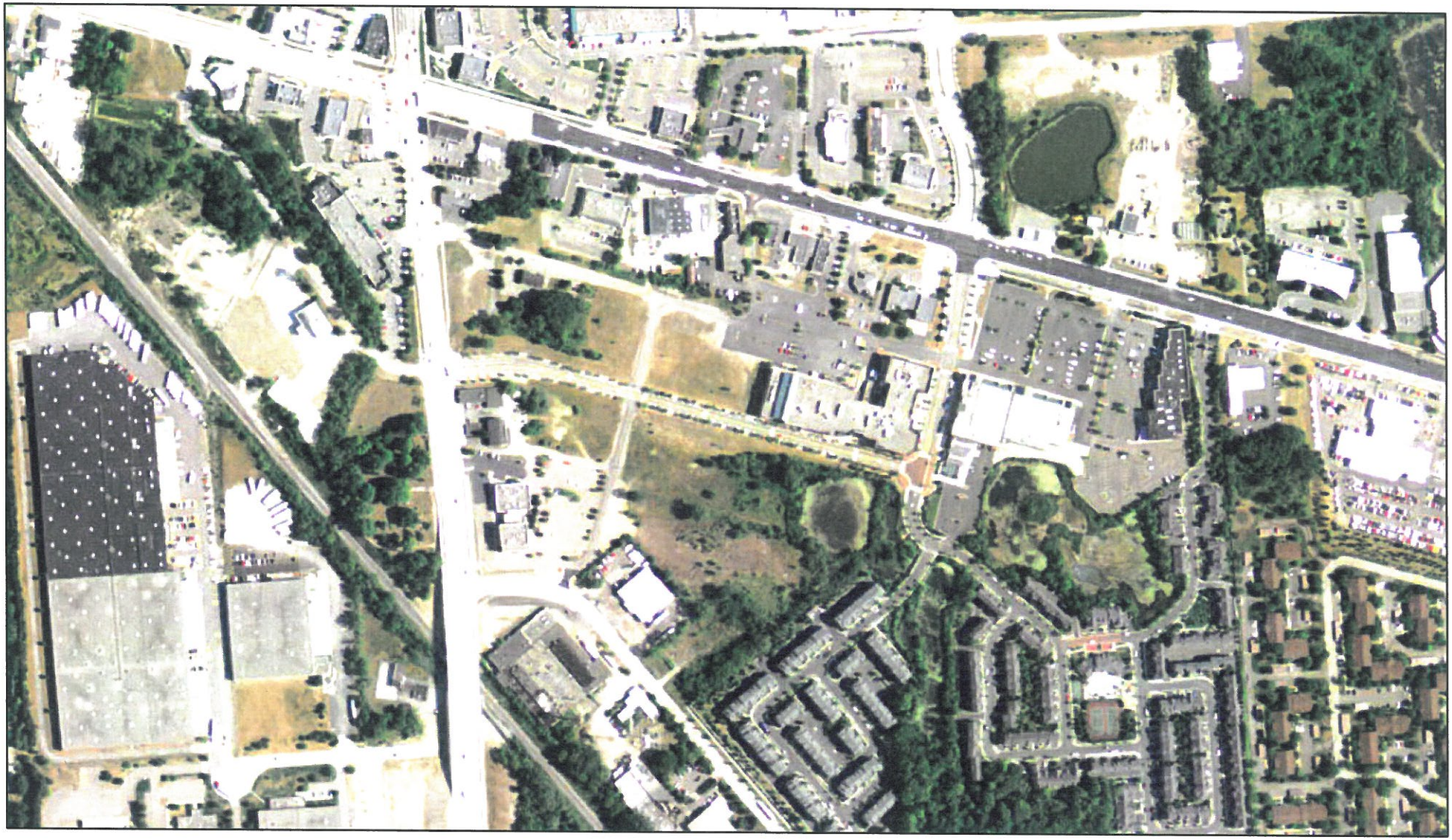
0 0.05 0.1 0.2 km

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Disclaimer: This map is not intended to be used to determine the specific

Wetlands Map Viewer



August 31, 2022

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0 0.04 0.08 0.16 mi

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Wetlands Map Viewer

August 31, 2022

1:4,783

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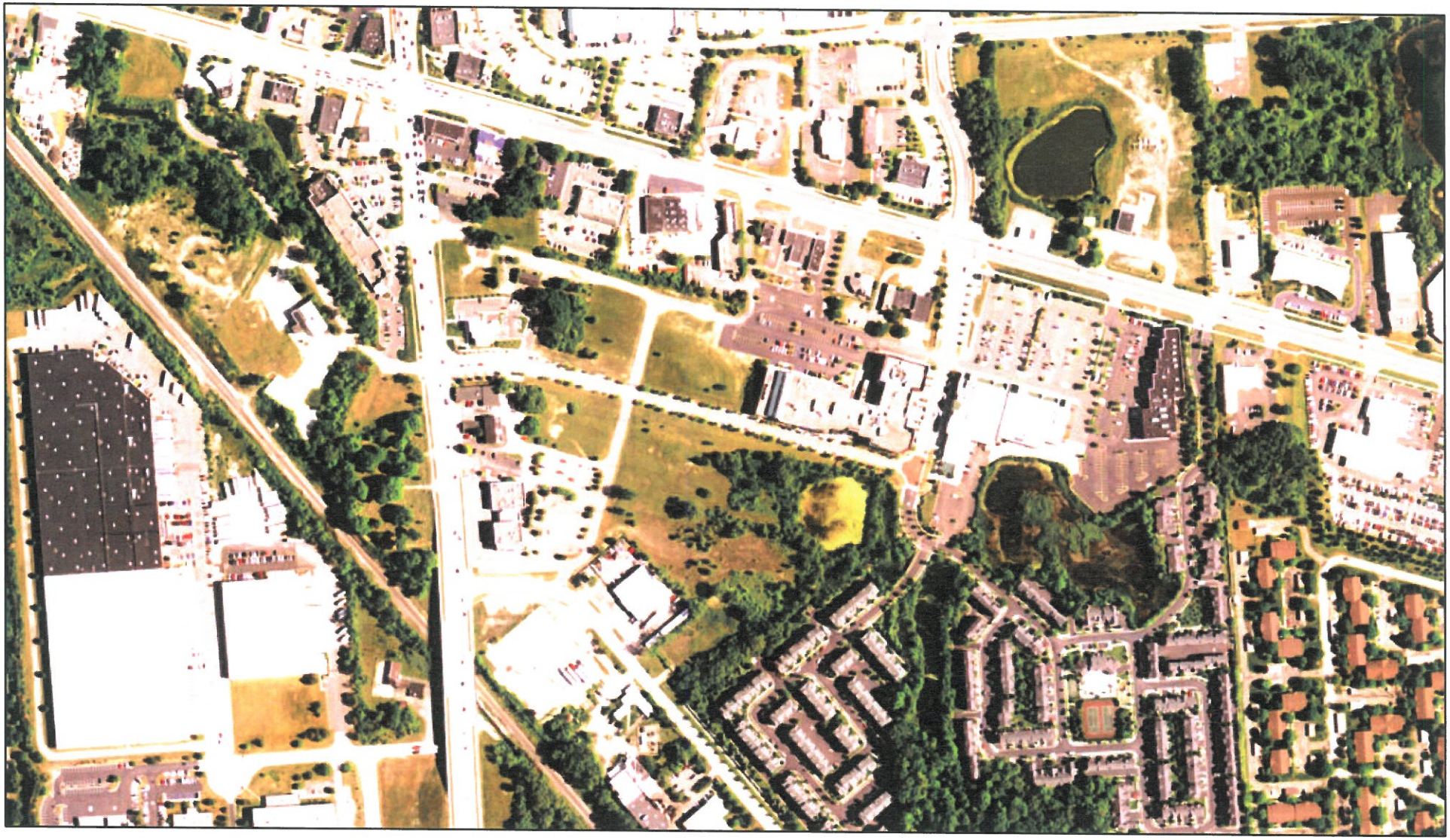
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Wetlands Map Viewer



August 31, 2022

1:4,783

0 0.04 0.08 0.16 mi

0 0.05 0.1 0.2 km

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Wetlands Map Viewer

August 31, 2022

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APPENDIX III

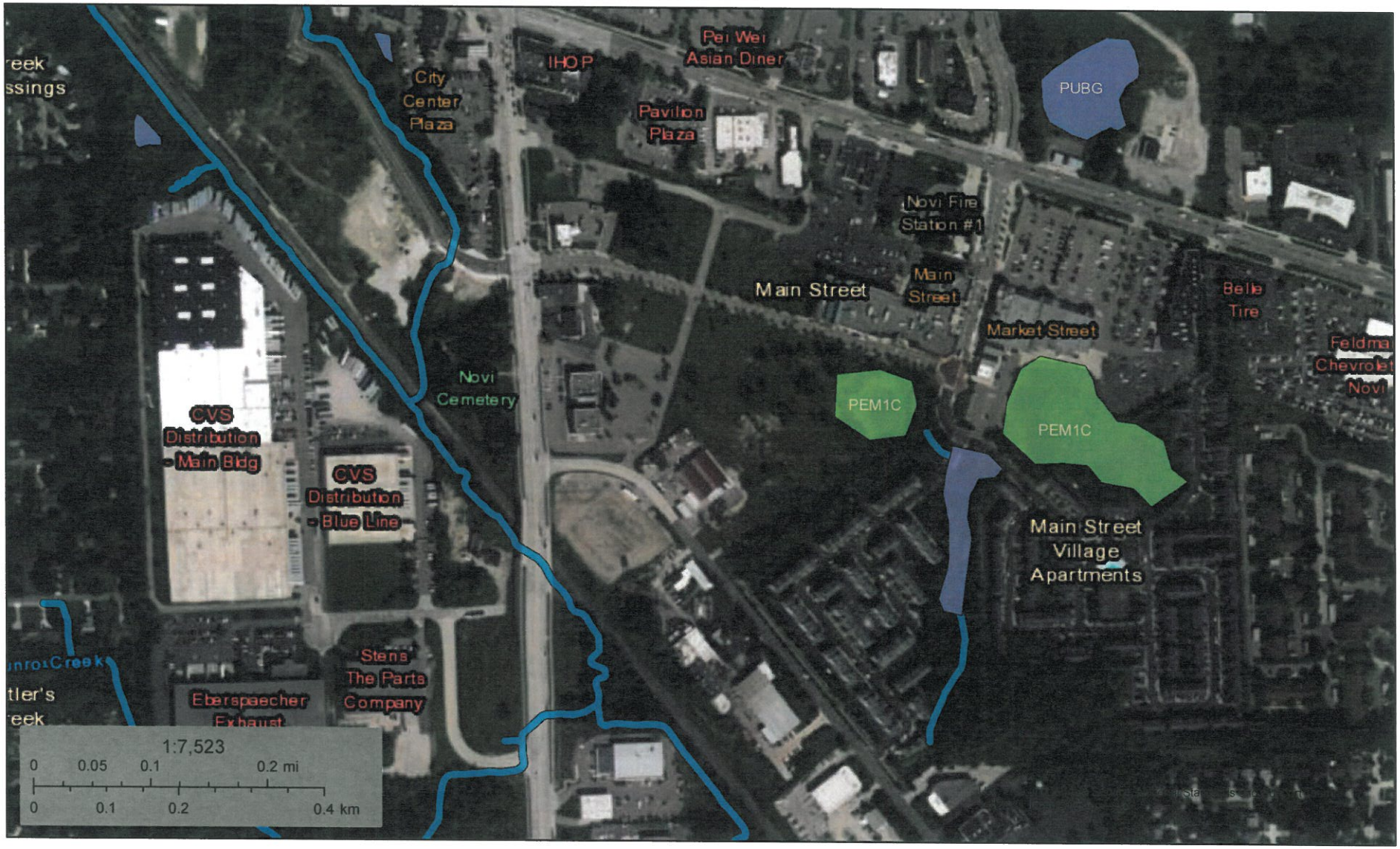
NATIONAL WETLAND INVENTORY MAP

EGLE WETLAND INVENTORY MAP

U.S. Fish and Wildlife Service

National Wetlands Inventory

Wetlands

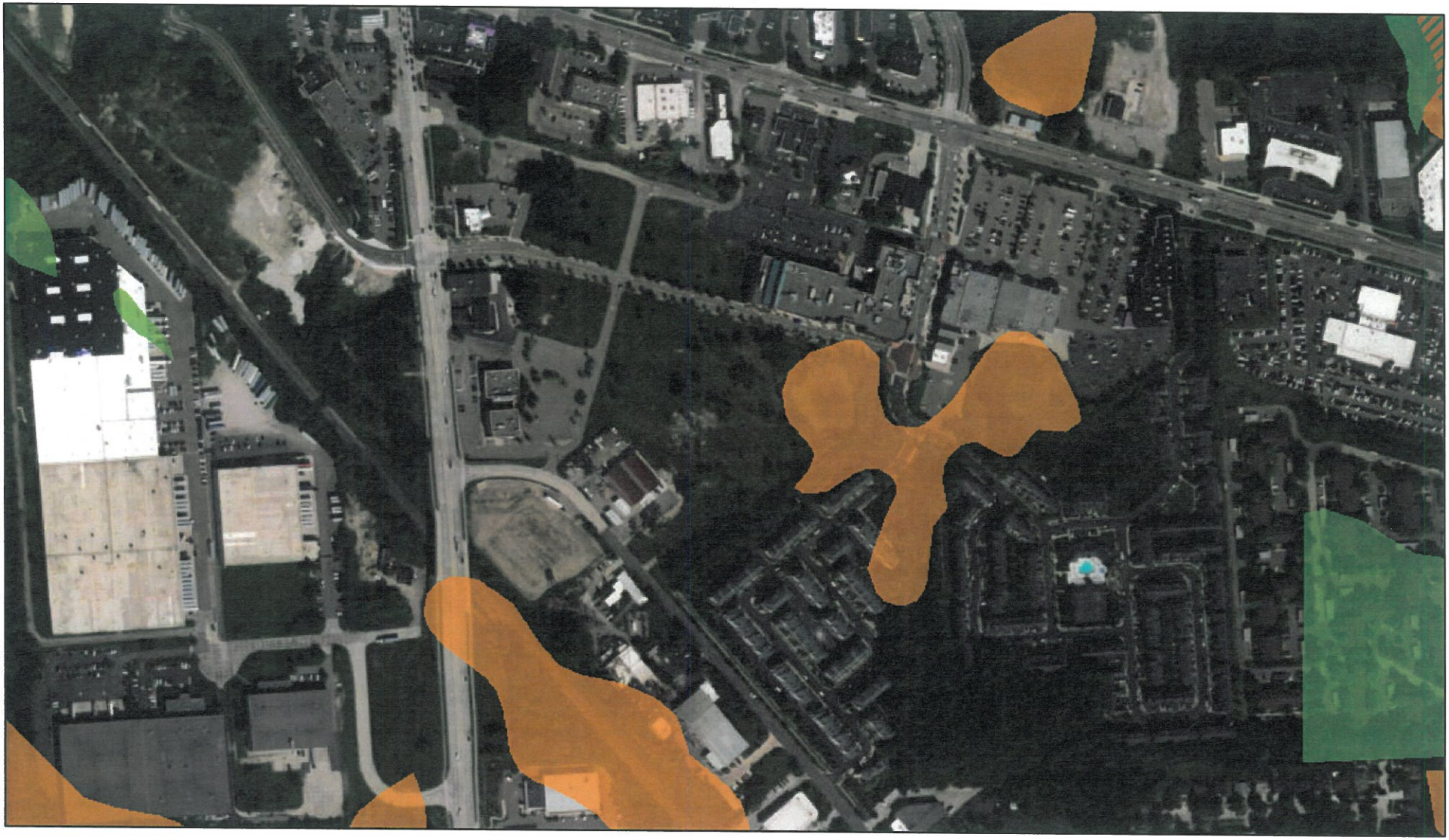


August 26, 2022

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

Wetlands Map Viewer



August 26, 2022

Part 303 Final Wetlands Inventory

- Wetlands as identified on NWI and MIRIS maps
- Soil areas which include wetland soils
- Wetlands as identified on NWI and MIRIS maps and soil areas which include wetland soils

1:4,788

0 0.04 0.08 0.16 mi

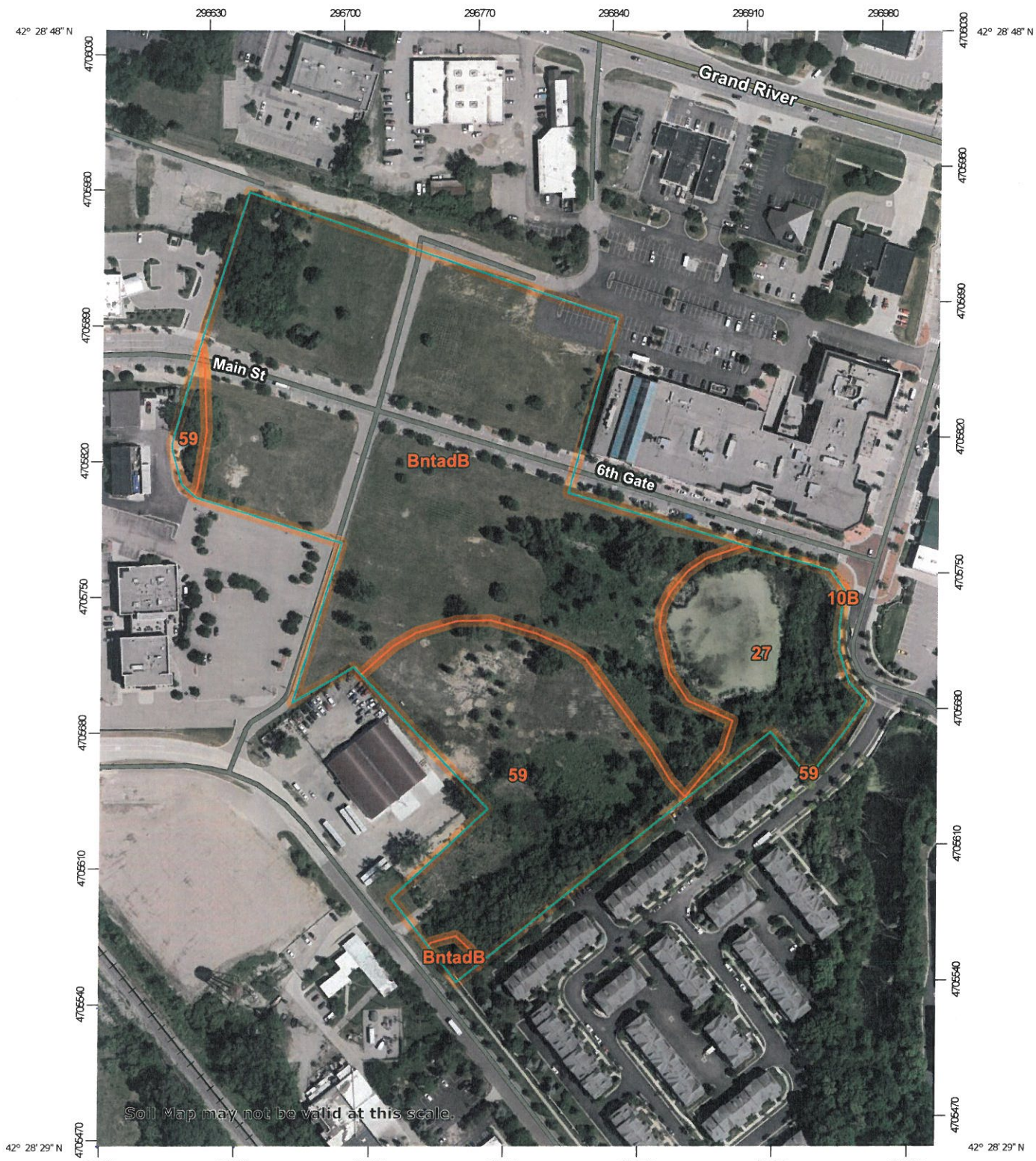
0 0.05 0.1 0.2 km

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Disclamer: This map is not intended to be used to determine the specific

APPENDIX IV

NRCS SOIL MAP



Map Scale: 1:2,810 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 40 80 160 240

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
10B	Marlette sandy loam, 1 to 6 percent slopes	0.0	0.0%
27	Houghton and Adrian mucks	2.1	12.3%
59	Urban land	4.2	24.7%
BntadB	Blount loam, 0 to 4 percent slopes	10.7	63.0%
Totals for Area of Interest		**17.1**	**100.0%**

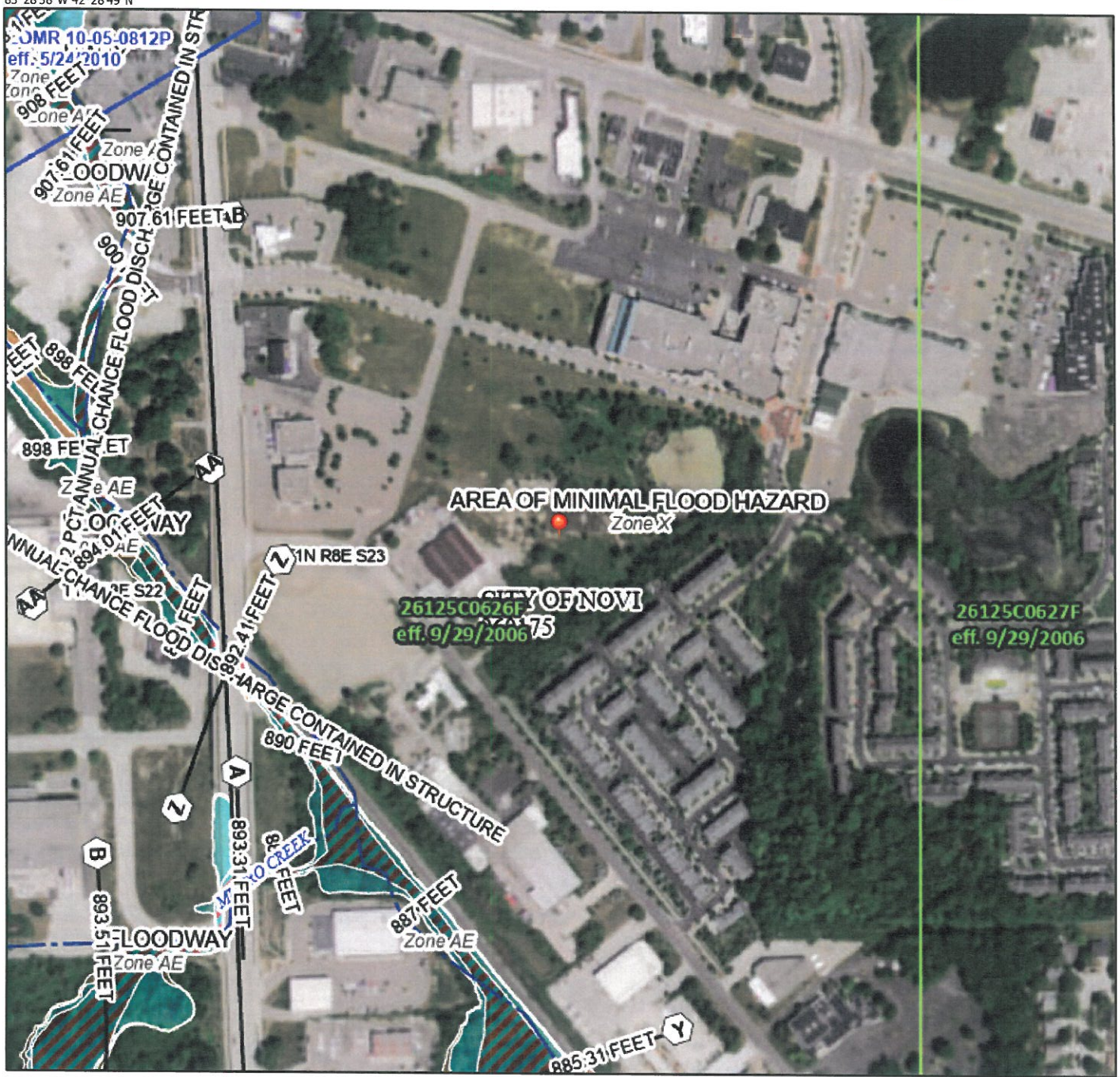
APPENDIX V

FEMA MAP

National Flood Hazard Layer FIRMette

FEMA

83°28'38"W 42°28'49"N



83°28'1"W 42°28'23"N

0 250 500 1,000 1,500 2,000 Feet 1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 8/26/2022 at 1:24 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

APPENDIX VI

SITE PHOTO LOG

Site Photographs

THE TOWNES AT MAIN STREET
Between Novi Road and Town Center Drive,
City of Novi, Oakland County, MI
Project #023-1510038-1

Photo #1- View looking eastward across the main, southeastern parcel from Tolken Lane, September 2022.

Photo # 2- Similarly, looking eastward across the main, southeastern parcel from Tolken Lane, September 2022.

Site Photographs

THE TOWNES AT MAIN STREET
Between Novi Road and Town Center Drive,
City of Novi, Oakland County, MI
Project #023-1510038-1

Photo #3- View looking south across the main, southeastern parcel from Tolken Lane, September 2022.

Photo #4- View looking west across Tolken Lane at the western parcel, September 2022.

Site Photographs

Photo #5- View looking west across the northwestern parcel located on the northside of Main Street, September 2022.

Photo #6- View looking east across the northwestern parcel, along the northside of Main Street. September 2022.

Site Photographs

Photo #7- View looking east, northeast across pond area (Wetland L) within the main parcel. September 2022.

Photo #8 – View looking north across pond area (Wetland L), September 2022.

Site Photographs

Photo #9- View looking west along the lineal Wetland R. September 2022.

Photo #10- View looking north, of old building foundation and the central portion of Wetland N. September 2022.

Site Photographs

Photo #11- View of western edge of Wetland N. September 2022.

Photo #12- View of Wetland P, located within the southern lobe of the main parcel. September 2022.

Site Photographs

Photo #13- View looking south along Wetland Q within the southern portion of site. September 2022.

Photo #14- Wetland Q abruptly ends at the southern fence line of the site. September 2022.

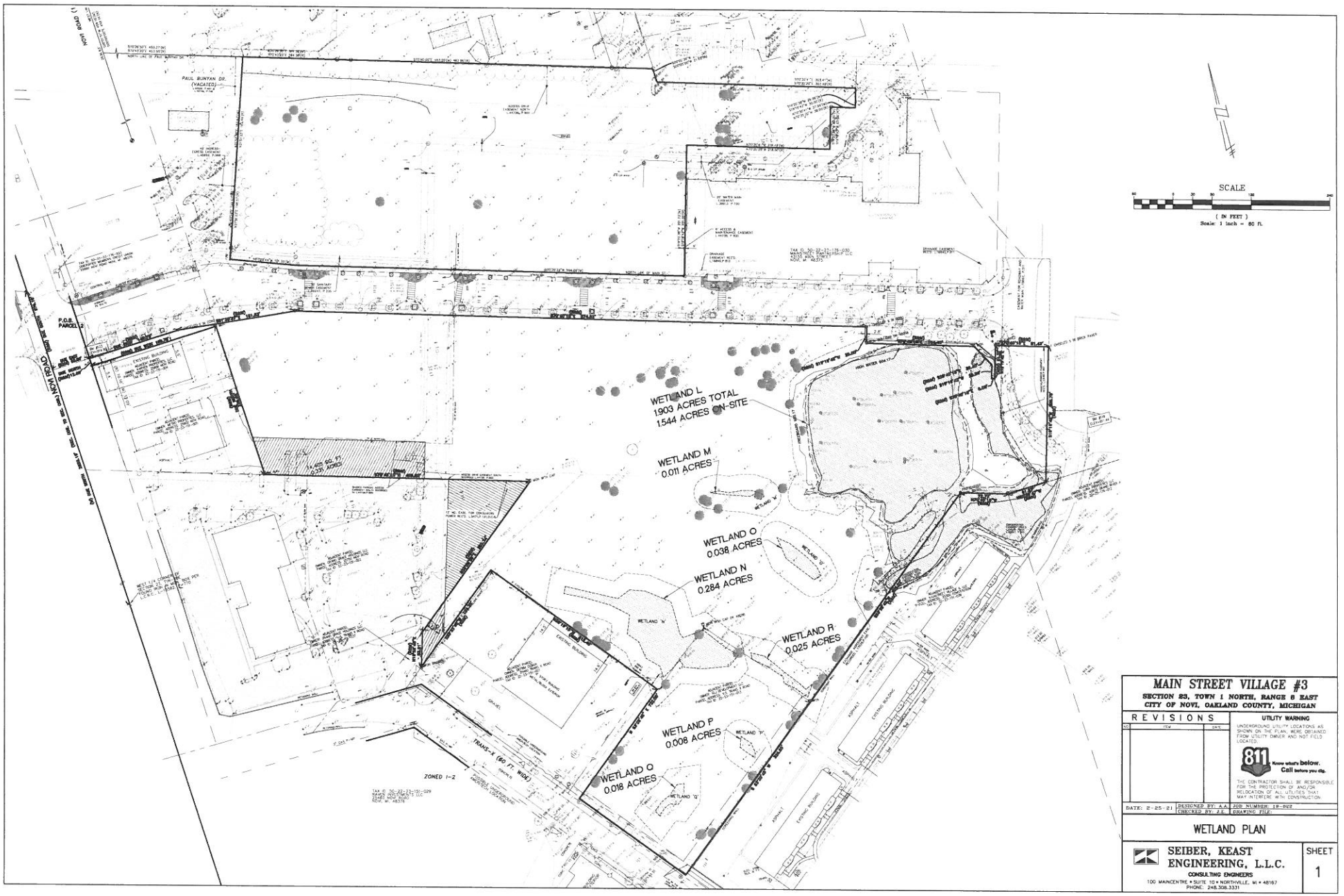
Site Photographs

Photo #15- View of Wetland M, looking east. September 2022.

Photo #16- View of Wetland O, which is somewhat centrally located within the main parcel. September 2022.

APPENDIX VII

WETLAND BOUNDARY MAP



MAIN STREET VILLAGE #3

SECTION 23, TOWN 1 NORTH, RANGE 8 EAST
CITY OF NOVI, OAKLAND COUNTY, MICHIGAN

REVISIONS

NO.	ITEM	DATE

UTILITY WARNING

UNDERGROUND UTILITY LOCATIONS AS SHOWN ON THE PLAN WERE OBTAINED FROM UTILITY OWNER AND NOT FIELD LOCATED.

811 Know what's below. Call before you dig.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF AND/OR RELOCATION OF ALL UTILITIES THAT MAY INTERFERE WITH CONSTRUCTION.

DATE: 2-25-21 | DESIGNED BY: A.A. | JOB NUMBER: 19-022
CHECKED BY: J.L. | DRAWING FILE:

WETLAND PLAN

SEIBER, KEAST ENGINEERING, L.L.C.
CONSULTING ENGINEERS
100 MAINCENTRE • SUITE 10 • NORTHVILLE, MI • 48167
PHONE: 248.308.3331

SHEET 1

APPENDIX VIII

WETLAND DATA FORMS

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: **Townes at Main Street** City/County: **Novi/Oakland** Sampling Date: **9/8/22**
Applicant/Owner: State: **MI** Sampling Point: **WL-L**
Investigator(s): **Jeff Hurley WRG** Section, Township, Range: **Section 23.T1N R8E**
Landform (hillslope, terrace, etc.): **Depressional** Local relief (concave, convex, none): **concave**
Slope (%): **1-2%** Lat.: **42. 28' 38.26"** Long.: **82. 28' 16.77"** Datum: **NAD83**
Soil Map Unit Name **Houghton and Adrian Mucks** NWI Classification: **PEM/OW**
Are climatic/hydrologic conditions of the site typical for this time of the year? **YES** (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? **No** Are "normal
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? **No** circumstances" present? **Yes**
(If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? **Y**
Hydric soil present? **Y**
Wetland hydrology present? **Y**
Is the sampled area within a wetland? **Y**
If yes, optional wetland site ID: **Wetland L**

Remarks: (Explain alternative procedures here or in a separate report.)
Wetland L

HYDROLOGY

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

- X Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- X 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)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ 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)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- x Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Microtopographic Relief (D4)

Field Observations:

Surface water present?	Yes ____	No	X	Depth (inches):	____
Water table present?	Yes ____	No	X	Depth (inches):	____
Saturation present? (includes capillary fringe)	Yes ____	No	X	Depth (inches):	____

Wetland hydrology present? **Y**

Descrive recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants

Sampling Point: **Wetland L**

Tree Stratum	Plot Size (30 ft)	Absolute % Cover	Dominant Species	Indicator Staus
1	***Populus deltoides***	**4**	**Y**	**FAC**
2	***Salix nigra***	**1**	**N**	**OBL**
3				
4				
5				
6				
7				
8				
9				
10				
		5	**= Total Cover**	

Sapling/Shrub Stratum	Plot Size (15 ft)	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
		0	**= Total Cover**	

Herb Stratum	Plot Size (5 ft)	Absolute % Cover	Dominant Species	Indicator Staus
1	***Phragmites australis***	**80**	**Y**	**FACW**
2	***Phalaris arundinacea***	**10**	**N**	**FACW**
3	***Lythrum salicaria***	**5**	**N**	**OBL**
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		95	**= Total Cover**	

Woody Vine Stratum	Plot Size (30 ft)	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
		0	**= Total Cover**	

	20%	50%
Tree Stratum	1	3
Sapling/Shrub Stratum	0	0
Herb Stratum	19	48
Woody Vine Stratum	0	0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: **2** (A)

Total Number of Dominant Species Across all Strata: **2** (B)

Percent of Dominant Species that are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	**2**	**x 1 =**	**2**	
FACW species	**2**	**x 2 =**	**4**	
FAC species	**1**	**x 3 =**	**3**	
FACU species	**0**	**x 4 =**	**0**	
UPL species	**0**	**x 5 =**	**0**	
Column totals	**5**	**(A)**	**9**	(B)

Prevalence Index = B/A = **1.8**

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- **Y** Dominance test is >50%
- **Y** Prevalence index is ≤3.0*
- ___ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

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

Hydrophytic vegetation present? **Y**

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

SOIL Sampling Point: **WL-L**

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-12	**5YR 2/1**	**100**					**Muck**	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- **X** Histisol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Suface (A11)
- **X** Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

- **X** 2 cm Muck (A10) (**LRR K, L, MLRA 149B**
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: N/A
Depth (inches): ___

Hydric soil present? **Y**

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: **Townes at Main Street** City/County: **Novi/Oakland** Sampling Date: **9/8/22**
Applicant/Owner: State: **MI** Sampling Point: **WL-M**
Investigator(s): **Jeff Hurley WRG** Section, Township, Range: **Section 23.T1N R8E**
Landform (hillslope, terrace, etc.): **Depressional** Local relief (concave, convex, none): **concave**
Slope (%): **0-1%** Lat.: **42. 28' 37.61"** Long.: **82. 28' 18.40"** Datum: **NAD83**
Soil Map Unit Name **Blount Loam 0-4%** NWI Classification: **PEM**
Are climatic/hydrologic conditions of the site typical for this time of the year? **YES** (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? **No** Are "normal
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? **No** circumstances" present? **Yes**
(If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? **Y**
Hydric soil present? **Y**
Wetland hydrology present? **Y**
Is the sampled area within a wetland? **Y**
If yes, optional wetland site ID: **Wetland M**

Remarks: (Explain alternative procedures here or in a separate report.)
Wetland M

HYDROLOGY

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- X Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial
- X Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ 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)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- x Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Microtopographic Relief (D4)

Field Observations:
Surface water present? Yes ____ No X Depth (inches): ____
Water table present? Yes ____ No X Depth (inches): ____
Saturation present? Yes ____ No X Depth (inches): ____
(includes capillary fringe)

Wetland hydrology present? **Y**

Descrive recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants

Sampling Point: **Wetland M**

Tree Stratum	Plot Size (30 ft)	Absolute % Cover	Dominant Species	Indicator Staus
1	***Populus deltoides***	**5**	**N**	**FAC**
2				
3				
4				
5				
6				
7				
8				
9				
10				
		5	**= Total Cover**	

Sapling/Shurb Stratum	Plot Size (15 ft)	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
		0	**= Total Cover**	

Herb Stratum	Plot Size (5 ft)	Absolute % Cover	Dominant Species	Indicator Staus
1	***Echinochloa crus-galli***	**50**	**Y**	**FAC**
2	***Phalaris arundinacea***	**35**	**N**	**FACW**
3	***Solidago altissima***	**10**	**N**	**FACU**
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		95	**= Total Cover**	

Woody Vine Stratum	Plot Size (30 ft)	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
		0	**= Total Cover**	

	20%	50%
Tree Stratum	1	3
Sapling/Shrub Stratum	0	0
Herb Stratum	19	48
Woody Vine Stratum	0	0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: **1** (A)

Total Number of Dominant Species Across all Strata: **1** (B)

Percent of Dominant Species that are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	**0**	**x 1 =**	**0**
FACW species	**1**	**x 2 =**	**2**
FAC species	**2**	**x 3 =**	**6**
FACU species	**1**	**x 4 =**	**4**
UPL species	**0**	**x 5 =**	**0**
Column totals	**4**	**(A)**	**12** (B)

Prevalence Index = B/A = **3**

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- **Y** Dominance test is >50%
- **Y** Prevalence index is ≤3.0*
- ___ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

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

Hydrophytic vegetation present? **Y**

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

SOIL Sampling Point: **WL-M**

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-12	**10YR 4/1**	**100**					**Clay Loam**	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ___ Histisol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Suface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- **X** Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: N/A
Depth (inches): ___

Hydric soil present? **Y**

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: **Townes at Main Street** City/County: **Novi/Oakland** Sampling Date: **9/8/22**
Applicant/Owner: State: **MI** Sampling Point: **WL-N**
Investigator(s): **Jeff Hurley WRG** Section, Township, Range: **Section 23.T1N R8E**
Landform (hillslope, terrace, etc.): **Depressional** Local relief (concave, convex, none): **concave**
Slope (%): **0-1%** Lat.: **42. 28' 35.87"** Long.: **82. 28' 20.80"** Datum: **NAD83**
Soil Map Unit Name **Urban Land** NWI Classification: **PEM**
Are climatic/hydrologic conditions of the site typical for this time of the year? **YES** (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? **No** Are "normal
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? **No** circumstances" present? **Yes**
(If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? **Y**
Hydric soil present? **Y**
Wetland hydrology present? **Y**

Is the sampled area within a wetland? **Y**
If yes, optional wetland site ID: **Wetland N**

Remarks: (Explain alternative procedures here or in a separate report.)
Wetland N

HYDROLOGY

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- X Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial
- X Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ 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)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- x Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Microtopographic Relief (D4)

Field Observations:

Surface water present?	Yes ____	No	X	Depth (inches):	____
Water table present?	Yes ____	No	X	Depth (inches):	____
Saturation present? (includes capillary fringe)	Yes ____	No	X	Depth (inches):	____

Wetland hydrology present? **Y**

Descrive recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants

Sampling Point: **Wetland N**

Tree Stratum	Plot Size (30 ft)	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
		0	**= Total Cover**	

Sapling/Shurb Stratum	Plot Size (15 ft)	Absolute % Cover	Dominant Species	Indicator Staus
1	***Salix interior***	**20**	**Y**	**FACW**
2				
3				
4				
5				
6				
7				
8				
9				
10				
		20	**= Total Cover**	

Herb Stratum	Plot Size (5 ft)	Absolute % Cover	Dominant Species	Indicator Staus
1	***Echinochloa crus-galli***	**10**	**N**	**FAC**
2	***Phalaris arundinacea***	**10**	**N**	**FACW**
3	***Juncus tenuis***	**5**	**N**	**FAC**
4	***Phragmites australis***	**20**	**Y**	**FACW**
5	***Alopecurus pratensis***	**5**	**N**	**FAC**
6	***Cyperus esculentus***	**10**	**N**	**FACW**
7	***Bidens connata***	**20**	**N**	**FAC**
8				
9				
10				
11				
12				
13				
14				
15				
		80	**= Total Cover**	

Woody Vine Stratum	Plot Size (30 ft)	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
		0	**= Total Cover**	

	20%	50%
Tree Stratum	0	0
Sapling/Shrub Stratum	4	10
Herb Stratum	16	40
Woody Vine Stratum	0	0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: **2** (A)

Total Number of Dominant Species Across all Strata: **2** (B)

Percent of Dominant Species that are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	**0**	**x 1 =**	**0**
FACW species	**4**	**x 2 =**	**8**
FAC species	**4**	**x 3 =**	**12**
FACU species	**0**	**x 4 =**	**0**
UPL species	**0**	**x 5 =**	**0**
Column totals	**8**	**(A)**	**20** (B)

Prevalence Index = B/A = **2.5**

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- **Y** Dominance test is >50%
- **Y** Prevalence index is ≤3.0*
- ___ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

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

Hydrophytic vegetation present? **Y**

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

SOIL Sampling Point: **WL-N**

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-12	**10YR 4/1**	**100**					**Silty Clay Loam**	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ___ Histisol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Suface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- **X** Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: N/A
Depth (inches): ___

Hydric soil present? **Y**

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: **Townes at Main Street** City/County: **Novi/Oakland** Sampling Date: **9/8/22**
Applicant/Owner: State: **MI** Sampling Point: **WL-O**
Investigator(s): **Jeff Hurley WRG** Section, Township, Range: **Section 23.T1N R8E**
Landform (hillslope, terrace, etc.): **Depressional** Local relief (concave, convex, none): **concave**
Slope (%): **0-1%** Lat.: **42. 28' 36.36"** Long.: **82. 28' 17.19"** Datum: **NAD83**
Soil Map Unit Name **Blount Loam 0-4%** NWI Classification: **PEM**
Are climatic/hydrologic conditions of the site typical for this time of the year? **YES** (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? **No** Are "normal
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? **No** circumstances" present? **Yes**
(If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? **Y**
Hydric soil present? **Y**
Wetland hydrology present? **Y**
Is the sampled area within a wetland? **Y**
If yes, optional wetland site ID: **Wetland O**

Remarks: (Explain alternative procedures here or in a separate report.)
Wetland O

HYDROLOGY

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
- X Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ 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)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- x Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Microtopographic Relief (D4)

Field Observations:
Surface water present? Yes ____ No **X** Depth (inches): ____
Water table present? Yes ____ No **X** Depth (inches): ____
Saturation present? Yes ____ No **X** Depth (inches): ____
(includes capillary fringe)

Wetland hydrology present? **Y**

Descrive recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants

Sampling Point: **Wetland O**

Tree Stratum	Plot Size (30 ft)	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
		0	**= Total Cover**	

Sapling/Shurb Stratum	Plot Size (15 ft)	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
		0	**= Total Cover**	

Herb Stratum	Plot Size (5 ft)	Absolute % Cover	Dominant Species	Indicator Staus
1	***Echinochloa crus-galli***	**20**	**N**	**FAC**
2	***Phalaris arundinacea***	**30**	**Y**	**FACW**
3	***Juncus tenuis***	**15**	**N**	**FAC**
4	***Alopecurus pratensis***	**25**	**N**	**FAC**
5	***Cyperus esculentus***	**10**	**N**	**FACW**
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		100	**= Total Cover**	

Woody Vine Stratum	Plot Size (30 ft)	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
		0	**= Total Cover**	

	20%	50%
Tree Stratum	0	0
Sapling/Shrub Stratum	0	0
Herb Stratum	20	50
Woody Vine Stratum	0	0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: **1** (A)

Total Number of Dominant Species Across all Strata: **1** (B)

Percent of Dominant Species that are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	**0**	**x 1 =**	**0**
FACW species	**2**	**x 2 =**	**4**
FAC species	**3**	**x 3 =**	**9**
FACU species	**0**	**x 4 =**	**0**
UPL species	**0**	**x 5 =**	**0**
Column totals	**5**	**(A)**	**13** (B)

Prevalence Index = B/A = **2.6**

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- **Y** Dominance test is >50%
- **Y** Prevalence index is ≤3.0*
- ___ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

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

Hydrophytic vegetation present? **Y**

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

SOIL Sampling Point: **WL-O**

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-12	**10YR 4/1**	**100**					**Clay Loam**	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ___ Histisol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Suface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- **X** Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: N/A
Depth (inches): _____

Hydric soil present? **Y**

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: **Townes at Main Street** City/County: **Novi/Oakland** Sampling Date: **9/8/22**
Applicant/Owner: State: **MI** Sampling Point: **WL-P**
Investigator(s): **Jeff Hurley WRG** Section, Township, Range: **Section 23.T1N R8E**
Landform (hillslope, terrace, etc.): **Depressional** Local relief (concave, convex, none): **concave**
Slope (%): **0-1%** Lat.: **42. 28' 33.98"** Long.: **82. 28' 20.05"** Datum: **NAD83**
Soil Map Unit Name **Urban Land** NWI Classification: **PEM/SS**
Are climatic/hydrologic conditions of the site typical for this time of the year? **YES** (If no, explain in remarks)
Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? **No** Are "normal
Are vegetation _____, soil _____, or hydrology _____ naturally problematic? **No** circumstances" present? **Yes**
(If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? **Y**
Hydric soil present? **Y**
Wetland hydrology present? **Y**
Is the sampled area within a wetland? **Y**
If yes, optional wetland site ID: **Wetland P**

Remarks: (Explain alternative procedures here or in a separate report.)
Wetland P

HYDROLOGY

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
- X Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ 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)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- x Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Microtopographic Relief (D4)

Field Observations:
Surface water present? Yes ___ No **X** Depth (inches): ___
Water table present? Yes ___ No **X** Depth (inches): ___
Saturation present? Yes ___ No **X** Depth (inches): ___
(includes capillary fringe)

Wetland hydrology present? **Y**

Descrive recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants

Sampling Point: **Wetland P**

Tree Stratum	Plot Size (30 ft)	Absolute % Cover	Dominant Species	Indicator Staus
1	***Acer negundo***	**5**	**Y**	**FAC**
2				
3				
4				
5				
6				
7				
8				
9				
10				
		5	**= Total Cover**	

Sapling/Shurb Stratum	Plot Size (15 ft)	Absolute % Cover	Dominant Species	Indicator Staus
1	***Rhamnus carthartica***	**45**	**Y**	**FAC**
2				
3				
4				
5				
6				
7				
8				
9				
10				
		45	**= Total Cover**	

Herb Stratum	Plot Size (5 ft)	Absolute % Cover	Dominant Species	Indicator Staus
1	***Phalaris arundinacea***	**25**	**Y**	**FACW**
2	***Phragmites australis***	**15**	**N**	**FACW**
3	***Echinochloa crus-galli***	**10**	**N**	**FAC**
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		50	**= Total Cover**	

Woody Vine Stratum	Plot Size (30 ft)	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
		0	**= Total Cover**	

	20%	50%
Tree Stratum	1	3
Sapling/Shrub Stratum	9	23
Herb Stratum	10	25
Woody Vine Stratum	0	0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: **3** (A)

Total Number of Dominant Species Across all Strata: **3** (B)

Percent of Dominant Species that are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	**0**	**x 1 =**	**0**
FACW species	**2**	**x 2 =**	**4**
FAC species	**2**	**x 3 =**	**6**
FACU species	**0**	**x 4 =**	**0**
UPL species	**0**	**x 5 =**	**0**
Column totals	**4**	**(A)**	**10** (B)

Prevalence Index = B/A = **2.5**

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- **Y** Dominance test is >50%
- **Y** Prevalence index is ≤3.0*
- ___ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

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

Hydrophytic vegetation present? **Y**

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

SOIL Sampling Point: **WL-P**

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-12	**10YR 4/1**	**100**					**Silty Clay Loam**	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ___ Histisol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Suface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- **X** Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: N/A
Depth (inches): _____

Hydric soil present? **Y**

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: **Townes at Main Street** City/County: **Novi/Oakland** Sampling Date: **9/8/22**
Applicant/Owner: State: **MI** Sampling Point: **WL-Q**
Investigator(s): **Jeff Hurley WRG** Section, Township, Range: **Section 23.T1N R8E**
Landform (hillslope, terrace, etc.): **Depressional** Local relief (concave, convex, none): **concave**
Slope (%): **0-1%** Lat.: **42. 28' 33.40"** Long.: **82. 28' 21.80"** Datum: **NAD83**
Soil Map Unit Name **Blount Loam 0-4%** NWI Classification: **PEM/SS**
Are climatic/hydrologic conditions of the site typical for this time of the year? **YES** (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? **No** Are "normal
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? **No** circumstances" present? **Yes**
(If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? **Y**
Hydric soil present? **Y**
Wetland hydrology present? **Y**
Is the sampled area within a wetland? **Y**
If yes, optional wetland site ID: **Wetland Q**

Remarks: (Explain alternative procedures here or in a separate report.)
Wetland Q

HYDROLOGY

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
- X Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ 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)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- x Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Microtopographic Relief (D4)

Field Observations:
Surface water present? Yes ____ No **X** Depth (inches): ____
Water table present? Yes ____ No **X** Depth (inches): ____
Saturation present? (includes capillary fringe) Yes ____ No **X** Depth (inches): ____

Wetland hydrology present? **Y**

Descrive recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants

Sampling Point: **Wetland Q**

Tree Stratum	Plot Size (30 ft)	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
		0	**= Total Cover**	

Sapling/Shrub Stratum	Plot Size (15 ft)	Absolute % Cover	Dominant Species	Indicator Staus
1	***Rhamnus cathartica***	**40**	**Y**	**FAC**
2				
3				
4				
5				
6				
7				
8				
9				
10				
		40	**= Total Cover**	

Herb Stratum	Plot Size (5 ft)	Absolute % Cover	Dominant Species	Indicator Staus
1	***Phragmites australis***	**30**	**Y**	**FACW**
2	***Echinochioa crus-galli***	**10**	**N**	**FAC**
3	***Phalaris arundinacea***	**20**	**N**	**FACW**
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		60	**= Total Cover**	

Woody Vine Stratum	Plot Size (30 ft)	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
		0	**= Total Cover**	

	20%	50%
Tree Stratum	0	0
Sapling/Shrub Stratum	8	20
Herb Stratum	12	30
Woody Vine Stratum	0	0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: **2** (A)

Total Number of Dominant Species Across all Strata: **2** (B)

Percent of Dominant Species that are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	**0**	**x 1 =**	**0**
FACW species	**2**	**x 2 =**	**4**
FAC species	**2**	**x 3 =**	**6**
FACU species	**0**	**x 4 =**	**0**
UPL species	**0**	**x 5 =**	**0**
Column totals	**4**	**(A)**	**10** (B)

Prevalence Index = B/A = **2.5**

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- Y Dominance test is >50%
- Y Prevalence index is ≤3.0*
- ___ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

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

Hydrophytic vegetation present? **Y**

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

SOIL Sampling Point: **WL-Q**

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-12	**10YR 4/1**	**100**					**Clay Loam**	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ___ Histisol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Suface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- **X** Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: N/A
Depth (inches): ___

Hydric soil present? **Y**

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: **Townes at Main Street** City/County: **Novi/Oakland** Sampling Date: **9/8/22**
Applicant/Owner: State: **MI** Sampling Point: **WL-R**
Investigator(s): **Jeff Hurley WRG** Section, Township, Range: **Section 23.T1N R8E**
Landform (hillslope, terrace, etc.): **Depressional** Local relief (concave, convex, none): **concave**
Slope (%): **0-1%** Lat.: **42. 28' 34.98"** Long.: **82. 28' 18.61"** Datum: **NAD83**
Soil Map Unit Name **Blount Loam 0-4%** NWI Classification: **PEM/SS**
Are climatic/hydrologic conditions of the site typical for this time of the year? **YES** (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? **No** Are "normal
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? **No** circumstances" present? **Yes**
(If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? **Y**
Hydric soil present? **Y**
Wetland hydrology present? **Y**

Is the sampled area within a wetland? **Y**
If yes, optional wetland site ID: **Wetland R**

Remarks: (Explain alternative procedures here or in a separate report.)
Wetland R

HYDROLOGY

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)
- X Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ 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)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- x Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Microtopographic Relief (D4)

Field Observations:

Surface water present?	Yes ____	No	X	Depth (inches): ____	
Water table present?	Yes ____	No	X	Depth (inches): ____	
Saturation present? (includes capillary fringe)	Yes ____	No	X	Depth (inches): ____	Wetland hydrology present? **Y**

Descrive recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants

Sampling Point: **Wetland R**

Tree Stratum	Plot Size (30 ft)	Absolute % Cover	Dominant Species	Indicator Staus
1	***Populus deltoides***	**50**	**Y**	**FAC**
2				
3				
4				
5				
6				
7				
8				
9				
10				
		50	**= Total Cover**	

Sapling/Shurb Stratum	Plot Size (15 ft)	Absolute % Cover	Dominant Species	Indicator Staus
1	***Rhamnus cathartica***	**35**	**Y**	**FAC**
2				
3				
4				
5				
6				
7				
8				
9				
10				
		35	**= Total Cover**	

Herb Stratum	Plot Size (5 ft)	Absolute % Cover	Dominant Species	Indicator Staus
1	***Phragmites australis***	**5**	**N**	**FACW**
2	***Parthenocissus quinquefolia***	**10**	**Y**	**FACU**
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		15	**= Total Cover**	

Woody Vine Stratum	Plot Size (30 ft)	Absolute % Cover	Dominant Species	Indicator Staus
1				
2				
3				
4				
5				
		0	**= Total Cover**	

	20%	50%
Tree Stratum	10	25
Sapling/Shrub Stratum	7	18
Herb Stratum	3	8
Woody Vine Stratum	0	0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: **2** (A)

Total Number of Dominant Species Across all Strata: **3** (B)

Percent of Dominant Species that are OBL, FACW, or FAC: **67%** (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	**0**	**x 1 =**	**0**
FACW species	**1**	**x 2 =**	**2**
FAC species	**2**	**x 3 =**	**6**
FACU species	**1**	**x 4 =**	**4**
UPL species	**0**	**x 5 =**	**0**
Column totals	**4**	**(A)**	**12** (B)

Prevalence Index = B/A = **3**

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- **Y** Dominance test is >50%
- **Y** Prevalence index is ≤3.0*
- ___ Morphogical adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

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

Hydrophytic vegetation present? **Y**

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

SOIL Sampling Point: **WL-R**

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-12	**10YR 4/1**	**100**					**Clay Loam**	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ___ Histisol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Suface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- **X** Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
Type: N/A
Depth (inches): ___

Hydric soil present? **Y**

Remarks:

APPENDIX IX

IPAC/MNFI RESULTS

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Oakland County, Michigan

Local office

Michigan Ecological Services Field Office

(517) 351-2555
(517) 351-1443