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July 14, 2025

Margaret Crawford
Regulatory Branch, District Office
U.S. Army Corps of Engineers
1776 Niagara Street
Buffalo, NY 14207

Kevin M. Balduzzi
Regional Permit Administrator, Region 7
New York State Department of Environmental Conservation
Division of Environmental Permits
5786 Widewaters Parkway, Syracuse, NY

**RE: SUBMISSION OF A FINAL JOINT PERMIT APPLICATION FOR THE
PROPOSED MICRON SEMICONDUCTOR MANUFACTURING FACILITY
TOWN OF CLAY, ONONDAGA COUNTY, NEW YORK
LRB-2000-02198**

Dear Maggie and Kevin:

On behalf of Micron New York Semiconductor Manufacturing, LLC (Micron), WSP USA (WSP) is pleased to submit the attached permit application for potential impacts to wetlands resulting from the construction of the proposed Micron Semiconductor Facility located in Clay, NY. This document addresses comments provided by the NYSDEC in an email dated 11 July 2025.

If you have any questions, please do not hesitate to contact me at 732-377-0564.

Sincerely,

WSP USA, Inc.

A handwritten signature in cursive script, appearing to read 'Charles R. Harman'.

Charles R. Harman, SPWS
Vice-President, Biologist
Mid-Atlantic Region

Enc.

cc: U.S. Environmental Protection Administration
Micron



JOINT APPLICATION FORM

For Permits for activities affecting streams, waterways, waterbodies, wetlands, coastal areas, sources of water, and endangered and threatened species.

You must separately apply for and obtain Permits from each involved agency before starting work. Please read all instructions.

1. Applications To:

>NYS Department of Environmental Conservation ☒ Check here to confirm you sent this form to NYSDEC.

Check all permits that apply:

☐ Stream Disturbance

☐ Excavation and Fill in
Navigable Waters

☐ Docks, Moorings or
Platforms

☐ Dams and Impound-
ment Structures

☐ 401 Water Quality
Certification*

☒ Freshwater Wetlands

☐ Tidal Wetlands

☐ Wild, Scenic and
Recreational Rivers

☐ Coastal Erosion
Management

☐ Water Withdrawal

☐ Long Island Well

☒ Incidental Take of
Endangered /
Threatened Species

* See Instructions (page 3)

>US Army Corps of Engineers

☒ Check here to confirm you sent this form to USACE.

Check all permits that apply: ☒ Section 404 Clean Water Act

☐ Section 10 Rivers and Harbors Act

Is the project Federally funded? ☒ Yes ☐ No

If yes, name of Federal Agency: Department of Commerce

General Permit Type(s), if known:

Preconstruction Notification: Yes ☐ No ☐

>NYS Office of General Services

☒ Check here to confirm you sent this form to NYSOGS.

Check all permits that apply:

☐ State Owned Lands Under Water

☐ Utility Easement (pipelines, conduits, cables, etc.)

☐ Docks, Moorings or Platforms

>NYS Department of State

☒ Check here to confirm you sent this form to NYSDOS.

Check if this applies: ☐ Coastal Consistency Concurrence

2. Name of Applicant

Micron New York Semiconductor Manufacturing LLC

Taxpayer ID (if applicant is NOT an individual)

92-0692507

Mailing Address

8000 S Federal Way

Post Office / City

Boise

State

ID

Zip

83716

Telephone 208-368-4000

Email sngatzemeier@micron.com

Applicant Must be (check all that apply): ☐ Owner ☒ Operator ☐ Lessee

3. Name of Property Owner (if different than Applicant)

Onondaga County Industrial Development Agency

Mailing Address

333 W. Washington Street, Suite 130

Post Office / City

Syracuse

State

NY

Zip

13202

Telephone 315-435-3770

Email robertpetrovich@ongov.net

For Agency Use Only

Agency Application Number:

4. Name of Contact / Agent

Charles Harman

Mailing Address

285 Davidson Avenue

Post Office / City

Somerset

State Zip

NJ

08873

Telephone 732-377-0564

Email charles.harman@wsp.com

5. Project / Facility Name

White Pine Commerce Park

Property Tax Map Section / Block / Lot Number:

Multiple Parcels in the Town of Clay

Project Street Address, if applicable

5171 Route 31

Post Office / City

Clay

State Zip

NY

13041

Provide directions and distances to roads, intersections, bridges and bodies of water

Northwest corner of the intersection of Route 31 and Caughdenoy Road, Town of Clay; See Figure 7 (Street Map) in the attached Permit Narrative.

☒ Town
 Village City County Stream/Waterbody Name

Clay

Onondaga

Youngs Creek

Project Location Coordinates: Enter Latitude and Longitude in degrees, minutes, seconds:

Latitude: 43.190793 ° [] ' [] " Longitude: -76.157056 ° [] ' [] "

6. Project Description: Provide the following information about your project. Continue each response and provide any additional information on other pages. Attach plans on separate pages.**a. Purpose of the proposed project:**

Refer to Section 2.0 of the attached Project Narrative.

b. Description of current site conditions:

Refer to Section 3.0 of the attached Project Narrative.

c. Proposed site changes:

Refer to Section 4.0 of the attached Project Narrative.

d. Type of structures and fill materials to be installed, and quantity of materials to be used (e.g., square feet of coverage, cubic yards of fill material, structures below ordinary/mean high water, etc.):

Refer to Section 5.0 of the attached Project Narrative.

e. Area of excavation or dredging, volume of material to be removed, location of dredged material placement:

Refer to Section 6.0 of the attached Project Narrative.

f. Is tree cutting or clearing proposed? ☒ Yes If Yes, explain below. ☐ No

Timing of the proposed cutting or clearing (month/year): Outside of bat TOY restrictions in the fall of 2025

Number of trees to be cut: >1000 Acreage of trees to be cleared: 436

g. Work methods and type of equipment to be used:

Refer to Section 8.0 of the attached Project Narrative.

h. Describe the planned sequence of activities:

Refer to Section 9.0 of the attached Project Narrative.

i. Pollution control methods and other actions proposed to mitigate environmental impacts:

Refer to Section 10.0 of the attached Project Narrative.

j. Erosion and silt control methods that will be used to prevent water quality impacts:

Refer to Section 11.0 of the attached Project Narrative.

k. Alternatives considered to avoid regulated areas. If no feasible alternatives exist, explain how the project will minimize impacts:

Refer to Section 12.0 of the attached Project Narrative, and Appendix H, the 404(b)(1) Analysis

l. Proposed use: ☒ Private ☐ Public ☐ Commercial

m. Proposed Start Date: Estimated Completion Date:

n. Has work begun on project? ☒ Yes If Yes, explain below. ☐ No

Geotech work was conducted in 2023, 2024, and began again in January 2025.

o. Will project occupy Federal, State, or Municipal Land? ☒ Yes If Yes, explain below. ☐ No

The property is presently controlled by Onondaga County (OCIDA), but will be purchased by Micron prior to the start of construction.

p. List any previous DEC, USACE, OGS or DOS Permit / Application numbers for activities at this location:

Freshwater Wetlands - Under Article 24 Permit ID 7-3124-00575/00002

q. Will this project require additional Federal, State, or Local authorizations, including zoning changes?

☒ Yes If Yes, list below. ☐ No

| | |
|----------------------------|--|
| DEC Section 401 WQC | Stormwater Pollution Discharge Elimination System Permit |
| USEPA Title V air permit | Township of Clay Site Plan Approval |
| SWPPP | NYSDOT Highway Work Permit |
| Hazardous Chemical Storage | Township of Clay Building Permit |

7. Signatures.

Applicant and Owner (If different) must sign the application. If the applicant is the landowner, the **landowner attestation form** can be used as an electronic signature as an alternative to the signature below, if necessary. Append additional pages of this Signature section if there are multiple Applicants, Owners or Contact/Agents.

I hereby affirm that information provided on this form and all attachments submitted herewith is true to the best of my knowledge and belief.

Permission to Inspect - I hereby consent to Agency inspection of the project site and adjacent property areas. Agency staff may enter the property without notice between 7:00 am and 7:00 pm, Monday - Friday. Inspection may occur without the owner, applicant or agent present. If the property is posted with "keep out" signs or fenced with an unlocked gate, Agency staff may still enter the property. Agency staff may take measurements, analyze site physical characteristics, take soil and vegetation samples, sketch and photograph the site. I understand that failure to give this consent may result in denial of the permit(s) sought by this application.

False statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the NYS Penal Law. Further, the applicant accepts full responsibility for all damage, direct or indirect, of whatever nature, and by whomever suffered, arising out of the project described herein and agrees to indemnify and save harmless the State from suits, actions, damages and costs of every name and description resulting from said project. In addition, Federal Law, 18 U.S.C., Section 1001 provides for a fine of not more than \$10,000 or imprisonment for not more than 5 years, or both where an applicant knowingly and willingly falsifies, conceals, or covers up a material fact; or knowingly makes or uses a false, fictitious or fraudulent statement.

Signature of Applicant

Date

January 30, 2025

☐ Owner ☒ Operator ☐ Lessee

Applicant Must be (check all that apply):

Printed Name

Scott Gatzemeier

Title

CVP, Front End US Expansion

Signature of Owner (if different than Applicant)

Date

1/31/25

Printed Name

Robert M. Petrovich

Title

Executive Director

Signature of Contact / Agent

Date

01312025

Printed Name

Charles R. Harman, SPWS

Title

Charles R. Harman, SPWS

For Agency Use Only**DETERMINATION OF NO PERMIT REQUIRED**

Agency Application Number

(Agency Name) has determined that No Permit is required from this Agency for the project described in this application.

Agency Representative:

Printed Name

Title

Signature

Date

**MICRON SEMICONDUCTOR FABRICATION
CLAY, NY**

**USACE/NYSDEC JOINT PERMIT APPLICATION
PERMIT APPLICATION NARRATIVE**

FINAL PUBLIC COMMENT VERSION

APPLICATION NO: LRB-2000-02198

July 7, 2025

Ver. 6.00

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ABBREVIATIONS

| | |
|-----------------|--|
| CEQ | Council on Environmental Quality |
| CFR..... | Code of Federal Regulations |
| FEMA..... | Federal Emergency Management Agency |
| JD | Jurisdictional Determination |
| JPA..... | Joint Permit Application |
| NAD 83 | North America Datum 1983 |
| NEPA | National Environmental Policy Act |
| NHPA | National Historic Preservation Act |
| NRCS..... | Natural Resources Conservation Service |
| NWI | National Wetland Inventory |
| NYCRR | New York Codes, Rules and Regulations |
| NYS OPRHP | New York State Office of Parks, Recreation and Historic Preservation |
| NYS..... | New York State |
| NYSDEC | New York State Department of Environmental Conservation |
| NYSDOS | New York State Department of State |
| NYSOGS..... | New York State Office of General Services |
| OCDWEP | Onondaga County Department of Water Environment Protection |
| OCIDA | Onondaga County Industrial Development Agency |
| OCWA | Onondaga County Water Authority |
| SEQRA..... | New York State Environmental Quality Review Act |
| SHPO..... | State Historic Preservation Officer |
| USACE..... | U.S. Army Corps of Engineers |
| U.S.C. | United States Code |
| USFWS | U.S. Fish & Wildlife Service |
| USGS | U.S. Geological Survey |

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1 Introduction

On January 31, 2025, Micron New York Semiconductor Manufacturing LLC ("Micron") submitted a Final Joint Permit Application (JPA) to the U.S. Army Corps of Engineers (USACE) and the New York State Department of Environmental Protection (NYSDEC) to facilitate the construction of a semiconductor manufacturing campus (the Proposed Project) in the Town of Clay, New York. The Proposed Project will be constructed at the White Pine Commerce Park (WPCP), a \pm 1,400-acre industrial park, on parcels currently controlled by the Onondaga County Industrial Development Agency (OCIDA) ("the Micron Campus"). The northeastern portion of the site and an access driveway to Route 11 extend into the Town of Cicero (**Figure 1-1 below**)

In addition to the proposed Micron Campus development depicted in **Figure 1-1**, Micron is also developing a Rail Spur Site (**Figure 1-2**) and a Family Care Center near the Micron Campus (not included as part of this permit application. **Table 1** summarizes the permit requirements for the various parts of the Proposed Project.

Table 1: Summary of Permitting Activities for the Various Micron Impacts

| Permit/Plan/Consultation | | | | | |
|--------------------------|------------|-------------------|------------------------|-------------------------|-----------------|
| Project Site | 404 Permit | Article 24 Permit | Incidental Take Permit | Biological Assessment** | Mitigation Plan |
| Main Site | X | X | X | X | X |
| Rail Spur | X | X | | X | X |
| Family Care Center | | X* | X | X | |

*Separate Article 24 permit

**Submitted through Section 7 consultation

On May 23, 2025, Micron submitted a JPA Addendum 1 to address a Request for Information (RFI) that was provided by the USACE to Micron on February 12, 2025, following their initial review of the January 31, 2025 JPA. The JPA Addendum 1 also included additional information developed based on subsequent discussions with the USACE and other regulatory agencies, as well as information that was inadvertently omitted from the Final JPA.

Micron is now submitting this Final Public Comment Version JPA which incorporates the information provided in the prior two JPA submissions, together with updated additional information as requested by the agencies. This Final Public Comment Version incorporates all of the necessary information for public review and comment. Micron seeks authorization from USACE to impact federally regulated wetlands and other waters of the United States (WOTUS), including streams, located within the boundaries of the Micron Campus and Rail Spur for purposes of constructing the FABs and associated support facilities (see **Figure 2**).

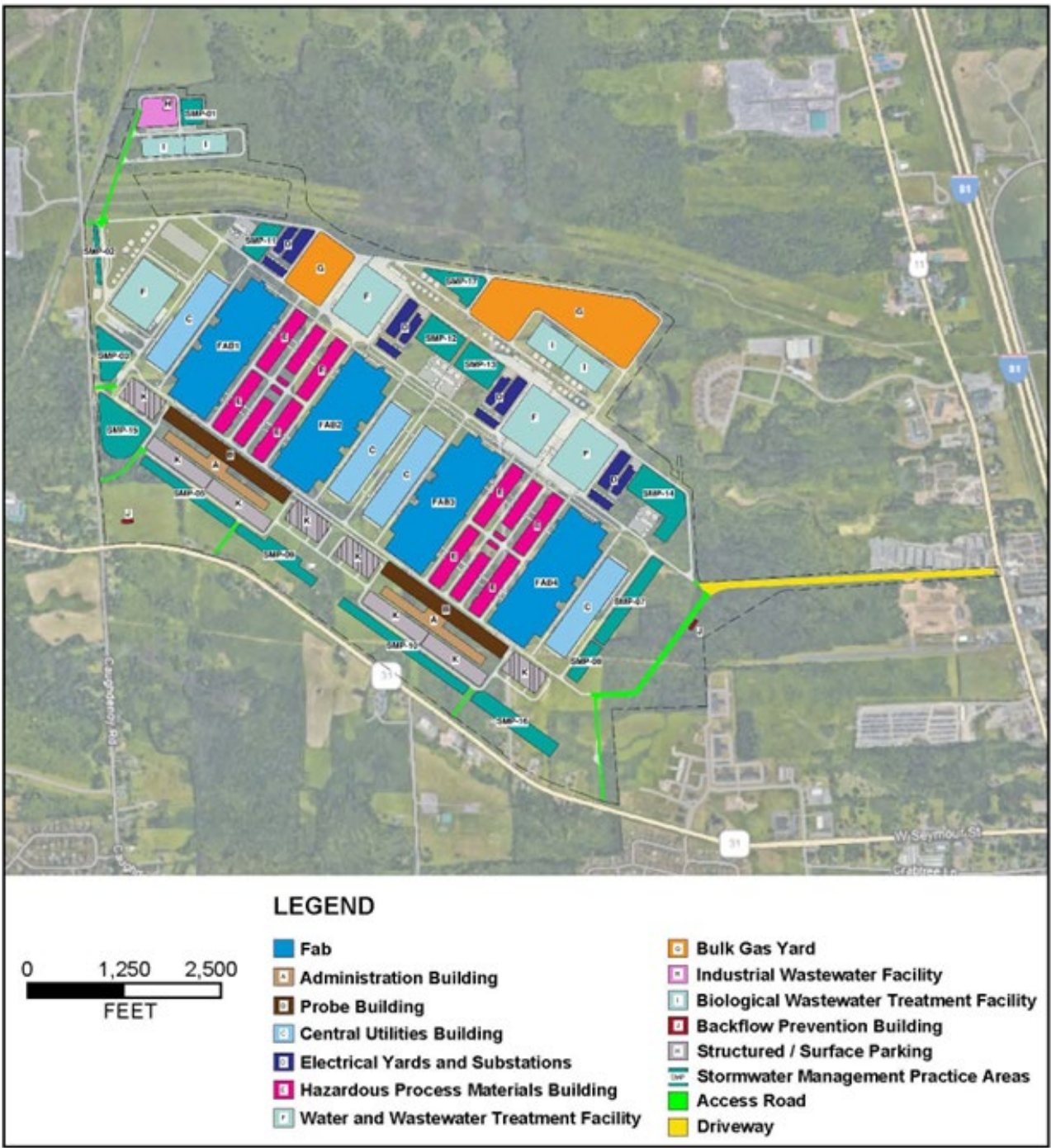


Figure 1-1: Micron Campus Layout

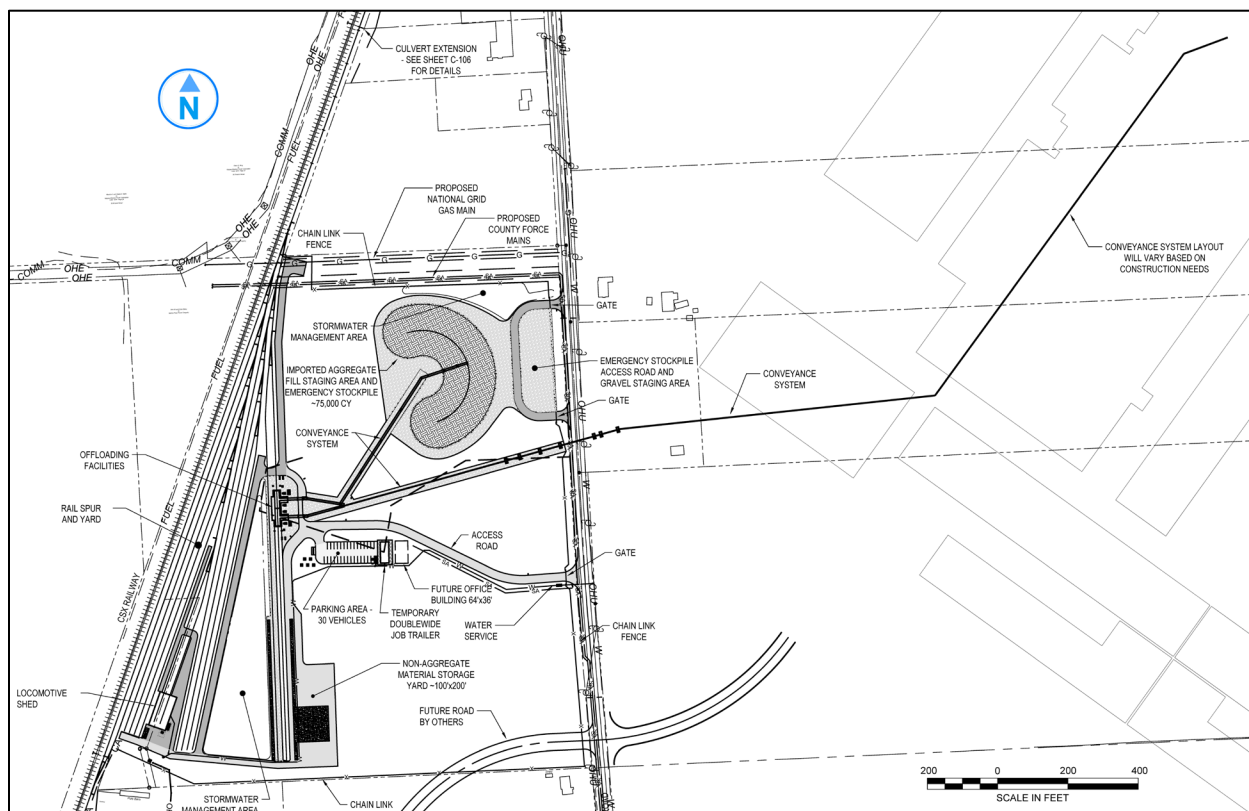


Figure 1-2: Rail Spur Layout

Authorization is requested from USACE and NYSDEC to impact federally and state-regulated wetlands and other federally regulated waters of the United States (WOTUS), including streams, within the boundaries of the Micron Campus and Rail Spur (there are no NYSDEC regulated wetlands on the Rail Spur) for purposes of constructing the FABs and associated support facilities at the Micron Campus. This request is made pursuant to the following permits required for the development of the Micron Campus and Rail Spur Sites:

- **USACE Individual Clean Water Act Section 404 Permit,**
- **NYSDEC Freshwater Wetlands Permit pursuant to Article 24 of the Environmental Conservation Law ("ECL"), NYSDEC Incidental Take Permit (6 NYCRR Part 182).**

A NYSDEC Clean Water Act Section 401 Water Quality Certification application, required for the Section 404 Permit, was submitted to the NYSDEC on June 27, 2025.

Additionally, Micron understands that the JPA Final Public Comment Version will provide support information the USACE permit approval for impacts to wetlands at the six wetland mitigation sites being developed by The Wetland Trust (TWT) for Micron. Those impacts would occur resulting

from the construction process in developing the mitigation wetlands. Information required for permitting the wetland mitigation sites is included in **Appendix T**.

1.1 PROJECT OVERVIEW

Micron proposes to construct a semiconductor manufacturing facility on the 1,376-acre WPCP that will consist of four FABs that will be built in phases over a 16-year period. The FABs would be built sequentially from west to east. When external construction of a FAB building is completed, internal construction will continue as semiconductor manufacturing equipment and tools are installed inside. While internal construction begins on one fab, external construction of the next FAB begins. This process would result in continuous construction activity on the Micron Campus from 2025 to 2041 as shown in **Table 2** below:

Table 2 Micron Campus Fab Construction Schedule

| Phase | Fab | Construction Start | Ready for Equipment | Construction End | Operations Start |
|----------|-------|--------------------|---------------------|------------------|------------------|
| Phase 1A | Fab 1 | Q4 2025 | Q2 2028 | Q2 2028 | Q1 2029 |
| Phase 1B | Fab 2 | Q3 2028 | Q3 2030 | Q4 2030 | Q4 2030 |
| Phase 2A | Fab 3 | Q3 2033 | Q3 2035 | Q4 2035 | Q4 2035 |
| Phase 2B | Fab 4 | Q2 2039 | Q2 2041 | Q3 2041 | Q3 2041 |

The Proposed Project also includes the Rail Spur site. A CSX rail line is located contiguous to the western site property boundary and traverses the site in the northwest corner. Micron is coordinating with CSX to construct a rail spur on land near the White Pine Commerce Park to the west of Caughdenoy Road (the "Rail Spur"). The spur tracks will connect to CSX's existing adjacent commercial rail line. The Rail Spur would be constructed on a 38.2-acre site comprised of two parcels (tax parcels 046.-02-03.2 and 046.-01-19.1). The Rail Spur is intended to receive materials, supplies, and equipment during construction, to reduce truck traffic and related impacts to area roadways.

Approximately 232.5 acres of jurisdictional wetlands will be avoided and protected on the site. In addition, approximately 2,000 lf of federally regulated streams will be avoided by the project. Micron has projected that the development of the Micron Campus will result in the following impacts to wetlands under Federal Jurisdiction and under NYSDEC jurisdiction (**Table 6** and **Table 7**).

Federal Impacts

- Total Permanent Impacts: 193.38 acres
- Total Temporary Impacts: 2.95 acres (does not include National Grid duct bank impacts)

NYSDEC Impacts

- Total Permanent Impacts: 174.77 acres
- Total Permanent Impacts (including forest conversation): 176.44
- Total Temporary Impacts: 1.28 acres
- Total Forest Conversation: 1.67 acres

Supplemental Figures have been added that show a detailed breakdown of permanent and temporary impacts across the Micron Site using both the Cowardin wetland classification system and the Edinger New York State plant community system.

Wetland impacts will occur sequentially across the Micron Campus with wetlands in the western portion of the Campus and the Rail Spur being impacted in the first clearing activities eastward to Burnet Road. The remaining wetlands are not expected to be affected by construction activities until **2033**. **Table 3** summarizes the temporal rate of impacts across the Micron Campus.

Table 3: Wetland Temporal Impact

| Micron Impacts | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 |
|-----------------------|--------------|------|------|------------|------|------|------|------|-------------|------|------|------|------|------|------------|------|------|
| Construction Phase | Phase 1 A | | | Phase 1 B | | | | | Phase 2 A | | | | | | Phase 2 B | | |
| Total Wetlands USACE | 112.62 acres | | | 8.37 acres | | | | | 69.83 acres | | | | | | 2.56 acres | | |
| Micron Campus | 103.71 acres | | | 8.37 acres | | | | | 69.83 acres | | | | | | 2.56 acres | | |
| Rail Spur | 8.91 acres | | | 0 | | | | | 0 | | | | | | 0 | | |
| Total Wetlands NYSDEC | 101.98 acres | | | 4.27 acres | | | | | 68.81 acres | | | | | | 1.38 acres | | |

Micron proposes to re-establish/restore 379.85 credits/acres and enhance/rehabilitate 111.05 acres (41.07 adjusted credits/acres) of wetlands across six properties. This would total approximately 420.92 adjusted acres of mitigation credit. Those properties include:

- Buxton Creek,
- Fish Creek,
- Upper Caughdenoy Creek,
- Lower Caughdenoy Creek,
- Six Mile Creek, and

- Oneida River

All the wetland mitigation sites listed above are located within the same Oneida River watershed (10-Digit HUC 0414020209) as the Micron Campus. This will offset impacts to 193.38 acres of federal jurisdictional wetlands and 176.44 acres of NYS jurisdictional wetlands impacted (including forest conversion) by the Proposed Project. Additionally, Micron proposes to re-establish approximately 14,030 linear feet of stream to offset impacts to 6,283 linear feet of streams impacted by the Proposed Project. Micron proposes stream mitigation on two of the six wetland mitigation sites (Fish Creek and Buxton Creek), creating wetland-stream complexes comparable to those impacted at the Micron Campus. This permit narrative provides supporting information for each of the individual blocks for Items 1 through 6 from the JPA form and for items 4 through 13 from the WQC-1 Supplement form for the Project.

This permit narrative provides supporting information for each of the individual blocks for Items 1 through 6 from the JPA form for the Project. This permit narrative includes several Appendices which provide additional information relevant to this permit application.

- **Appendix A** provides Micron's prior response to a USACE request for additional information. Updated responses and additional responses to all Agency comments are included in this appendix.
- **Appendix B & C provide** Micron's prior responses to NYSDEC Notices of Incomplete Application (NOIA)
- **Appendix D** provides Micron's prior responses to USEPA, USFWS, and Onondaga Nation comments on the USACE Permit Public Notice.
- **Appendix E** presents the Environmental Assessment Form (EAF) required by the Onondaga County Industrial Development Agency (OCIDA), as Lead Agency, to support the environmental review of the Proposed Project that is required pursuant to the New York State Environmental Quality Review Act, or SEQRA.
- **Appendix F** is the "Positive Declaration" issued by OCIDA on September 14, 2023, OCIDA declaring its intent to prepare an Environmental Impact Statement ("EIS") to assess potential significant adverse impacts and associated mitigation resulting from construction and operation of the Proposed Project.
- **Appendix G** is the SEQRA Scoping Document, which summarizes the content of the EIS.
- **Appendix H** includes the Jurisdictional Determination letters issued by the USACE approving the boundaries for Federally regulated wetlands and streams; and the NYSDEC approving the boundaries for state-regulated wetlands.

- **Appendix I** includes the correct wetlands delineation reports for the Micron Campus and Rail Spur.
- **Appendix J** provides the functional assessment of onsite wetlands. On November 27, 2024, Micron electronically provided the USACE, the NYSDEC, USEPA, and USFWS with an extensive package of information on the functional characteristics of the Federally regulated wetlands on the Micron Campus and the Rail Spur. This was provided in response to the 404Q letter issued by the and direct discussion with the USEPA and other regulatory agencies.
- **Appendix K** provides the results of a qualitative survey conducted for Youngs Creek (one of the associated waterways in the Micron Campus) that was conducted at the request of the NYSDEC and the U.S. Fish & Wildlife Service (USFWS).
- **Appendix L** presents the results of a subsequent quantitative survey that was conducted for Youngs Creek.
- **Appendix M** provides a Clean Water Act Section 404(b)(1) alternatives analysis of the Proposed Project.
- **Appendix N** provides the Compensatory Wetlands/stream Mitigation Plan outlining how proposed impacts to wetlands and streams on the Micron Campus and the Rail Spur will be mitigated, Offsite Compensatory Mitigation Project Overview of Stream/Wetland Compensation on Six Mitigation Sites, and Response to Comments received on both plans. As part of the Mitigation Plan, a Stream Mitigation Analysis has been included.
- **Appendix O** is a Wetlands Assessment and Monitoring Plan. This plan consists of four (4) parts: Monitoring Plan for Surface Water, Groundwater and Vegetation; Surface Water Report; Wetland Adaptive Management Plan; and Wetland Connectivity Memo.
- **Appendix P** was intended to include the Biological Assessment that is being prepared pursuant to the Endangered Species Act. This document is being prepared as there is a potential for onsite habitat to support Indiana bat (*Myotis sodalis*) and other threatened and/or endangered species. The BA has been removed from this JPA submission.
- **Appendix Q** provides supporting information to a State Incidental Take Permit (ITP) in response to proposed impacts to state-regulated grassland bird habitat. This includes a Net Conservation Benefit Plan. Comments received from the NYSDEC will be responded to later with a revised submission of the ITP.
- **Appendix R** provides status on consultation with the New York State Historic Preservation Office.

- **Appendix S** provides Micron's responses to public comments on the USACE Permit Public Notice. The Public Comment spreadsheet is now attached and submitted.
- **Appendix T** provides requested information relative to permit information for impacts to wetlands and other Waters of the U.S. at the sites being used to support mitigation projects for the Micron Campus. As temporary and permanent impacts to wetlands and other Waters of the United States at those sites, which are located remote from the actual Micron Campus, will be covered by this JPA Permit Application and any resulting permit, pertinent permit support information is included within **Appendix T**. That includes required maps and tables, and site information as to the amount and type of temporary and permanent impacts that will occur on the mitigation sites resulting from mitigation construction activities.
- **Appendix U** is the preliminary Soils/Materials Management Plan (SMMP) for the Site. The SMMP establishes a protocol for handling soil and other subsurface materials encountered during the proposed earthwork including excavation, stockpiling, loading, and off-site disposal. These procedures include handling of contaminated soil, if encountered.
- **Appendix V** is the invasive species management plan to be in place during onsite construction activities.
- **Appendix W** is the tree clearing plan for the first phase of construction at the Site.
- **Appendix X** is the NYSDEC Issuance Weighing Standards Report

1.2 PROJECT ENVIRONMENTAL REVIEW

Micron is seeking funding offered by the Creating Helpful Incentives to Produce Semiconductors and Science Act of 2022 (the "CHIPS Act"), as well as New York State Green CHIPS incentives, for the construction of the Proposed Project. The Proposed Project will require several Federal, state, and local discretionary permits. This funding and related approvals requires that the Proposed Project be evaluated pursuant to both the National Environmental Policy Act (NEPA) (42 United States Code (U.S.C.) § 4321 et seq.) and the Council on Environmental Quality's (CEQ) NEPA-implementing regulations (40 Code of Federal Regulations (CFR) §§ 1500-1508) and SEQRA (New York Environmental Conservation Law §§8-0101 et seq) and its implementing regulations (6 NYCRR Part 617). As contemplated by applicable federal and New York State regulations, Micron has developed a joint Draft Environmental Impact Statement (DEIS) that will conform with NEPA, as well as the laws and regulation methodologies established under SEQRA. The environmental review will consider potential adverse impacts from the Micron Campus, Rail Spur and other connected actions which are not included within this permit application.

1.2.1 National Environmental Policy Act

NEPA applies to a wide range of federal actions that include, but are not limited to, federal grants, construction projects, plans to manage and develop federally owned lands, and federal licenses, and permits. NEPA requires federal agencies to consider the potential adverse environmental consequences of their discretionary actions, to consult with other cooperating and interested agencies, to document the analysis, and to make this information available to the public for comment before the implementation of the proposals. The U.S. Department of Commerce (DOC) has declared itself lead agency for the purpose of this NEPA review.

1.2.2 New York State Environmental Quality Review Act

SEQRA requires that all state and local government agencies undertaking a discretionary action regarding an undertaking identify and consider significant adverse environmental impacts associated with that undertaking, identify measures to minimize or mitigate such impacts, and balance such impacts and proposed mitigation against social, economic, and other essential considerations when applying its discretion to permit, fund, or implement such undertaking. The SEQRA lead for the Proposed Project is OCIDA.

OCIDA issued a positive declaration of significance that requires the preparation of an EIS for the Proposed Project. The Department of Commerce and OCIDA have decided to prepare a combined NEPA/SEQRA EIS for the Proposed Project that will comply with federal and New York State environmental review requirements. The Draft EIS (DEIS) has been noticed for public comment.

1.3 CHIPS ACT

The purpose of the Proposed Project is to further the United States' goals as embodied in the CHIPS Act to expand domestic memory chip manufacturing capacity and restore U.S. leadership in semiconductor manufacturing. In addition to supporting the national security goals of the CHIPS Act, the Proposed Project advances Micron's leading-edge position in the development and manufacturing of dynamic random-access memory chips.

The need for the Proposed Project, as well as for the overall CHIPS Act, is to reduce U.S. reliance on foreign production of both leading edge and older generation microelectronics. Semiconductors were invented in the U.S., and the U.S. semiconductor industry has historically dominated many parts of the international semiconductor supply chain, such as research and development (R&D), chip design and manufacturing. Yet the U.S. position within the semiconductor industry had been declining. In 1990, the U.S. accounted for around 40 percent of global semiconductor fabrication capacity. By 2019, that number had dropped to about 11 percent. The need for the Proposed Project is to reduce economic and national security risks by building domestic capacity, to establish a dynamic and collaborative network for

semiconductor research and innovation centers, and to improve competitiveness and strengthen regional supply chain industries. Micron provides a unique and essential role in domestic production of leading-edge memory chips that are essential and high-volume components of the semiconductor industry.

1.4 NYS GREEN CHIPS PROGRAM

With up to \$10 billion in economic incentives for environmentally friendly “Green CHIPS” semiconductor manufacturing, the New York State Green Chips program is a companion program to the federal CHIPS Act, seeking to balance the promotion of economic opportunity in New York State with environmental sustainability. The program will reduce the cost of constructing and operating chip FABs in New York and help attract thousands of jobs and billions of dollars to cement New York as the nation’s leader in the domestic reshoring of semiconductor manufacturing while helping address supply chain shortages and national security.

Micron’s investment will also meet the goals of the State of New York and OCIDA to enhance job growth in Central New York by promoting advanced manufacturing in the region. The Full Project is anticipated to generate nearly 50,000 jobs in Central New York over more than a 20-year period, including approximately 9,000 good-paying Micron jobs directly generated by the Proposed Project and over 40,000 additional jobs from suppliers, contractors and other businesses supporting the proposed chip manufacturing facility. Micron and the State of New York have announced a historic \$500 million investment in community and workforce development over a more than 20-year period. Micron will invest \$250 million in line with its commitment to the Green CHIPS Community Investment Fund. An additional \$250 million is expected to be invested, with \$100 million from New York, and \$150 million from local, other state and national partners. This fund is intended to expand and train the workforce in the region, including providing support for disadvantaged populations.

1.5 SITE DESCRIPTION

The following sections describe the Micron Campus and Rail Spur, and the six offsite locations to be used for mitigation purposes.

1.5.1 Campus and Rail Spur

The Micron Campus is located northeast of the intersection of NYS Route 31 and Caughdenoy Road in the Town of Clay, Onondaga County, New York (**Figure 1**, **Figure 2**, and **Figure 3**). The Micron Campus is approximately 7 miles north of the City of Syracuse and is approximately 1,400 acres in size. **Figure 2** depicts the extent of Federally regulated wetlands on the Micron Campus, while **Figure 3** depicts the extent of Federally regulated wetlands on the Rail Spur. **Figure 4** depicts the extent of State regulated wetlands. The **Supplemental Figures** depict permanent

and temporary impacts to wetlands across the entire Micron Campus, based on both Cowardin wetland types and Edinger New York State Plant Communities.

The Aerial Photo Map shows the Micron Campus located east of Caughdenoy Road and north of NYS Route 31 in the Town of Clay, Onondaga County, New York (**Figure 5**). A USGS topographic map (**Figure 6**) of the Micron Campus shows that the site is gently sloping, with elevations ranging from approximately 425 feet above mean sea level (msl) in the southeastern portion of the site to approximately 380 feet above msl in the northwestern part of the site (i.e., net drainage is generally to the north). **Figure 7** and **Figure 8** show a street map and a tax map for the project area, respectively. A Land Use Map and a FEMA map for the Micron Campus are provided as **Figure 9** and **Figure 10**, respectively. **Figure 11** shows the existing conditions site-specific topography for the Site.

Figure 12 depicts the soil characterization of the Micron Campus. According to the USFWS National Wetland Inventory (NWI) map for the Site (**Figure 13**), three potential federal wetland types occur on the Micron Campus. They are designated by the USFWS as palustrine, unconsolidated bottom, semi-permanently flooded, excavated (PUBFx); palustrine, forested, broad-leaved deciduous, temporarily flooded (PFO1A); and palustrine, scrub-shrub, broad-leaved deciduous, temporarily flooded (PSS1A) wetland cover types. A NYSDEC New York State Freshwater Wetlands map (**Figure 14**) shows mapped state regulated wetlands associated with the Micron Campus. The NYSDEC wetland north of the power transmission lines on the Micron Campus is classified as Class II; a small portion of which extends south of the powerlines in an area west of Burnet Road. There is another NYSDEC wetland, which is located north of the property along the embedded Youngs Creek (east of Burnet Road), which is Class III.

1.5.2 Mitigation Sites

The Wetland Trust, on behalf of Micron, has acquired six properties, totaling approximately 1,373 acres, on which wetlands will be re-established/restored/rehabilitated/enhanced to offset the permanent loss of 193.38 acres of wetlands at the Micron Campus. Streams will also be re-established on two of the six mitigation sites to offset the loss of 6,283 linear feet of streams. Those mitigation sites include:

- Fish Creek (wetland and stream mitigation)
- Buxton Creek (wetland and stream mitigation)
- Upper Caughdenoy Creek (wetland mitigation)
- Lower Caughdenoy Creek (Route 37) (wetland mitigation)
- Sixmile Creek (wetland mitigation)
- Oneida River (wetland mitigation)

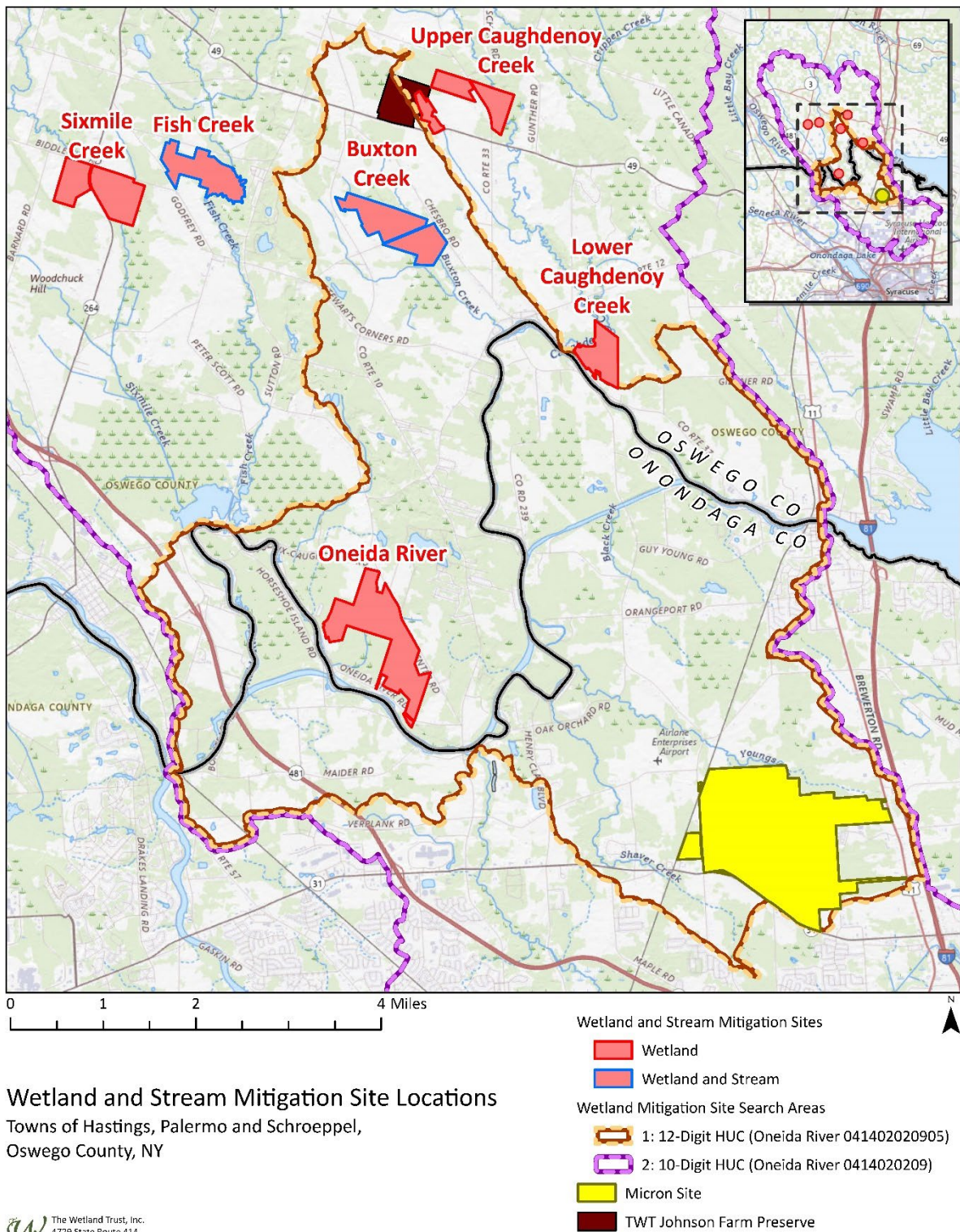


Figure 1-3: Wetland Mitigation Sites

2 Block 6a – Proposed Project

The objective of the Proposed Project, which principally but not exclusively consists of the construction of the Micron Campus and Rail Spur, is to construct and operate advanced semiconductor fabrication facilities ("FABs"), on a single, unified site in New York State to efficiently meet market demand and ensure competitiveness in the worldwide semiconductor market. Additionally, the Proposed Project will include the development of six properties for wetlands and stream mitigation efforts.

2.1 MICRON CAMPUS

Micron's proposed semiconductor manufacturing facility campus will be built over an approximate 16-year period. The Proposed Project consists of the construction of four FABs as well as construction of the Rail Spur. Micron expects that the FABs will be built in sequence, with construction of each Fab starting as the preceding Fab is being fit out and operations begin. This process will result in continuous construction activities on the Micron Campus over an approximate 16-year period, with a significant portion of the construction occurring inside the Fab buildings. Each Fab is expected to occupy approximately 1.2 million sf (approximately 27.5 acres) of land.

The Micron Campus and associated activities under consideration¹ will also have ancillary on-site elements including:

- Four Micron Campus substations would be connected to the expanded Clay Substation through eight underground duct banks each of which would accommodate one 345kV transmission circuit.
- Natural gas meter station
- Water and wastewater pre-treatment and storage
- Industrial gas and material storage areas
- Access/egress roads, including to Caughdenoy Rd, Route 31, and NYS Route 11
- Surface Parking areas and Parking Garages
- Wastewater pump station

¹ Due to the continuous construction activities, the Proposed Project includes the need for clearing/grubbing, and grading, as well as construction material staging and laydown areas (for current and subsequent phases).

- Stormwater extended detention ponds and bioretention areas
- Offices Administration Buildings
- Material staging and laydown areas including the long-term construction hub for full build-out of the project, which consists of the engineering, planning and construction delivery areas, contractor trailers, offices, storage, and parking.

Chip manufacturing is a complex process, which requires specific material inputs and flow distances, which ultimately dictate site design. The semiconductor industry utilizes a minimum flow-weighted distance ("min-distance") layout. In min-distance layout design, manufacturing inputs and processes are located close to each other to minimize the total distance of the material flow. **Table 4** below, identifies the main Micron Campus components and provides supporting documentation as to their locations and required proximity to other components on the White Pine Commerce Park site.

Table 4. Summary of Campus Project Components

| Component | Plan Marker (Figure 1) | Area | Description |
|------------------------------|------------------------|---------------------|---|
| Fabrication Buildings (4) | FAB | 4.8 million sq. ft. | Micron proposes to construct four FABs, each with an identical footprint of approximately 27.5 acres or 1.2 million sq. ft. (600,000 sq. ft. of cleanroom space and 600,000 sq. ft. for the supporting building infrastructure and utilities needed to operate the fab), for a total footprint for all four FABs of 4.8 million sq. ft. at full build-out in 2041. By constructing the FABs sequentially in phases, Micron would be able to begin chip manufacturing at the Micron Campus as soon as Fab 1 becomes operational. The four FABs would be constructed in close proximity to each other with the same layout, orientation, and finished floor elevation, and would be successively connected as they are constructed to form the "spine" of the manufacturing facility, to maximize efficiencies and flows across the FABs and the production efficiency of the facility as a whole. Each fab would have a typical height of approximately 148 ft., with the tallest roof penthouses reaching a height of 160 ft. Operations at each fab would include raw material receiving, memory chip manufacturing, and final product storage and shipping. Manufacturing operations would commence upon completion of construction and equipment installation and testing. |
| Administration Buildings (4) | A | 478,000 sq. ft. | Four administration buildings to the south of the probe buildings (see below), each approximately 105 ft. tall with a 119,500 sq. ft. footprint, would provide office space |

| | | | |
|---|---|----------------------|--|
| | | | supporting the estimated 2,000 manufacturing employees at each fab. |
| Probe Buildings (4) | B | 730,400 sq. ft. | Four probe buildings to conduct electrical testing on manufactured chips before they are shipped would each have an approximately 182,600 sq. ft. (4.2 acre) footprint and approximately 85,000 sq. ft. of cleanroom space on the upper floor (for a total 340,000 sq. ft. of cleanroom space). |
| Central Utilities Buildings (4) | C | 1.8 million sq. ft. | Four central utility buildings (CUBs), one dedicated to each fab, would house the systems required to deliver the utilities necessary to produce the chips, including HVAC, electrical transmission equipment, water purification and recycling, and chemical/specialty gas delivery systems. Each CUB would be 73 ft. tall with a 441,210 sq. ft. (10.1 acre) footprint consisting of multiple individual utility plant modules to house the heating, cooling, compressed air, electrical equipment, and emergency generators serving the surrounding buildings associated with each fab. |
| Electrical Yards and Substations (4) | D | 700,000 sq. ft. | Four electrical yards and substations, one for each fab, each with a 175,000 sq. ft. (4 acre) footprint, would be constructed on the north sides of the FABs, and would supply the electrical needs for full fab operations. |
| Hazardous Process Materials Buildings (8) | E | 2.1 million sq. ft. | Eight hazardous process materials buildings, each with a 525,000 sq. ft. (12 acre) footprint, would store and dispense specialized chemicals and gases for manufacturing and would be arranged as four groupings of two buildings each, with identical footprints and configurations, located between FABs 1 and 2 and FABs 3 and 4. |
| Water and Wastewater Treatment (WWT) Facilities (6) | F | 2.46 million sq. ft. | Six WWT facilities would be constructed in four identified WWT locations, each with a 615,000 sq. ft. (14.1 acre) footprint, one for each fab and BIO facility (see below), and would ensure that incoming water meets Micron's high-purity specifications for manufacturing, provide treatment for on-site reuse, and ensure that outgoing wastewater meets quality requirements for treatment at the <u>wastewater</u> treatment and renewal facility. |
| Bulk Gas Yards (4) | G | 1.88 million sq. ft. | Four bulk gas yards, each with an approximately 455,000 sq. ft. (10.5 acre) footprint, 185 ft. tall columns, and cold box units, would be constructed north of the fab buildings. The gas yards would be used to isolate oxygen, argon, and nitrogen from the ambient air for use in the fabrication process, which is more efficient than trucking in gases. |
| Industrial Wastewater Facility (1) | H | 216,554 sq. ft. | An on-site industrial wastewater facility and pump station would provide an alternative collection area for incoming treated and reclaimed water from the OCDWEP IWWTP that does not meet specifications or if outgoing water chemistry or volume exceeds Micron's standards for delivery to the IWWTP. |

| | | | |
|---|---------|----------------------|---|
| Biological Wastewater Treatment Facility (4) | I | 731,808 sq. ft. | Four biological treatment (BIO) facilities, each with a 182,952 sq. ft. (4.2 acre) footprint, would remove dissolved organic contaminants and nutrients from wastewater prior to sending the wastewater to the IWWTP. |
| Backflow Prevention Building (2) | J | 15,000 sq. ft. | Two 7,500 sq. ft. backflow prevention buildings would ensure that site water could not flow back into the OCWA water mains. One would be located at the southwest corner where the water mains enter the site near the intersection of NYS Route 31 and Caughdenoy Road, supporting FABs 1 and 2, and the second would be located on the southeast corner to support FABs 3 and 4. |
| Surface Parking (4), Structured Parking (4), and Access Roads (7) | K | 1.36 million sq. ft. | 11,600 parking spaces, ² four bus stops, and seven access roads would be constructed on the campus, including four 500-space surface parking lots south of the administration and probe buildings and four 2,400-space structured parking areas (indicated with a diagonal hatch on Figure 2.1-4), totaling 8.19 million sq. ft. (188 acres) of new impervious area associated with paved surface parking and site access roadways. Each parking garage will be 5 levels with a 6 th precast level/roof with solar panels. Three of the access roads would enter the campus from Caughdenoy Road near the Rail Spur Site, three from NYS Route 31, and one from U.S. Route 11 on the east side of the campus, traversing land area within the Town of Cicero. As the construction phases progress from west to east and fab operations begin, the use of the access roads would shift from construction to permanent employee access. Micron would implement site traffic plans to ensure safety during construction phases of the campus build-out. |
| Rooftop Solar Energy | N/A | N/A | Micron would install approximately 4 MW of solar panels on the roofs of the parking garages, WWT buildings, and BIO buildings. |
| Stormwater Management Practice Areas (15) | SMP (#) | 2.9 million sq. ft. | Stormwater management practice (SMP) areas would be constructed throughout the campus to detain and treat stormwater runoff from its approximately 645 acres of newly created impervious surfaces. SMPs would include wet extended detention ponds (SMPs 01, 03, 11, 12, 13, 14, 15, and 17 in Figure 2.1-4) and filtration bioretention (SMPs 02, 05, 07, 08, 09, 10, and 16). The SMPs would be built in phases along with the campus construction phases and would be sized according to hydrologic and hydraulic modeling conducted for the site. |

2.2 RAIL SPUR

A component of the Proposed Project is the Rail Spur, which is an approximately 38-acre adjacent parcel on the west side of Caughdenoy Road, between Caughdenoy Road and CSX

railroad tracks, (Town of Clay tax parcel 046.- 02-03.2) The Rail Spur will be used to facilitate a more efficient construction timeline, minimize the need to rely on transportation of construction material by truck over the Proposed Project's 16-year construction period, and avoid or minimize the environmental effects such truck transportation would cause, particularly effects relating to increased transportation emissions, noise, and traffic congestion.

2.3 MITIGATION SITES

The Wetland Trust, on behalf of Micron, has acquired six properties, totaling approximately 1,373 acres, on which wetlands will be re-established/restored/rehabilitated/enhanced to offset the permanent loss of 193.38 acres of wetlands at the Micron Campus. Streams will also be re-established on two of the six mitigation sites to offset the loss of 6,283 linear feet of streams. The specific properties are briefly described below in section 3.5. Plans for each property, which show existing topography and work areas where wetlands will be re-established/restored or rehabilitated/enhanced and streams will be re-established, are included in the **Compensatory Wetlands/Stream Mitigation Plan (CWSMP)** included as Appendix N. Each of the mitigation sites are actively used for agriculture and exhibit evidence of hydrology that has been significantly altered from its natural state to support agricultural activities. At some of the mitigation sites, natural streams historically traversed the areas but have been redirected to drainage ditches, effectively altering the natural hydrologic and hydraulic patterns.

Micron, in coordination with TWT, has designed a CWSMP that incorporates stream/wetland/upland complexes that include a variety of habitats to compensate for the impacted functions and values at the Micron Campus. The associated streams and wetlands are expected to be hydrologically connected to NYSDEC-jurisdictional resources and/or within 50-feet of the adjacent resources. Further, the land within the parcels where mitigation will occur will be protected in perpetuity via conservation easements that will be reviewed by the involved agencies. For these reasons, the CWSMP is consistent with 6NYCRR Part 663.

Features like vernal pools that, by definition, cannot be hydrologically connected to either on-site or off-site aquatic resources, will be incorporated into the design where appropriate without consideration of acreage.

3 Block 6b – Description of Current Campus Site Conditions

The Micron Campus is in the Town of Clay, Onondaga County, New York. The Site is approximately 1400± acres. The Site is generally bounded by NYS Route 31 to the south; Caughdenoy Road and an active rail line (CSX) to the west; the Clay-Cicero town line and NYS Route 11 to the east; and undeveloped and agricultural properties to the north. The Site is partially bisected east to west by Burnet Road. A major overhead electric utility corridor (right-of-way), occupied by National Grid and NYS Power Authority high voltage electric lines, occurs on the northern portion of the site and is generally oriented west to east, and a municipal water main (Onondaga County Water Authority) and accompanying right-of-way occurs on the southern portion of the Site and is generally oriented west to east. There are several residential buildings (many already vacant) on the Project Site that have been and/or will be demolished in advance of the project. Residential properties are located on the Project Site along Caughdenoy, NYS Route 31 and Burnet Road (see **Figure 7**)

The Site is predominantly undeveloped consisting of old inactive and recently inactive agricultural land; successional scrub-shrub and woods; mature deciduous and evergreen forest; and mixed wetland habitats.

3.1 MICRON CAMPUS ECOLOGICAL COMMUNITIES

Land-cover types within the Micron Campus were characterized and quantified using the most recent version (2021) of the U.S. Geological Survey's National Land Cover Database (NLCD). It is noted that wetland cover types identified by NLCD are not jurisdictional, as such, the values represented by these cover types are different than those listed in other sections of this permit application with respect to the number of jurisdictional wetlands. These land-cover types and their approximate acreages are shown in **Table 5**.

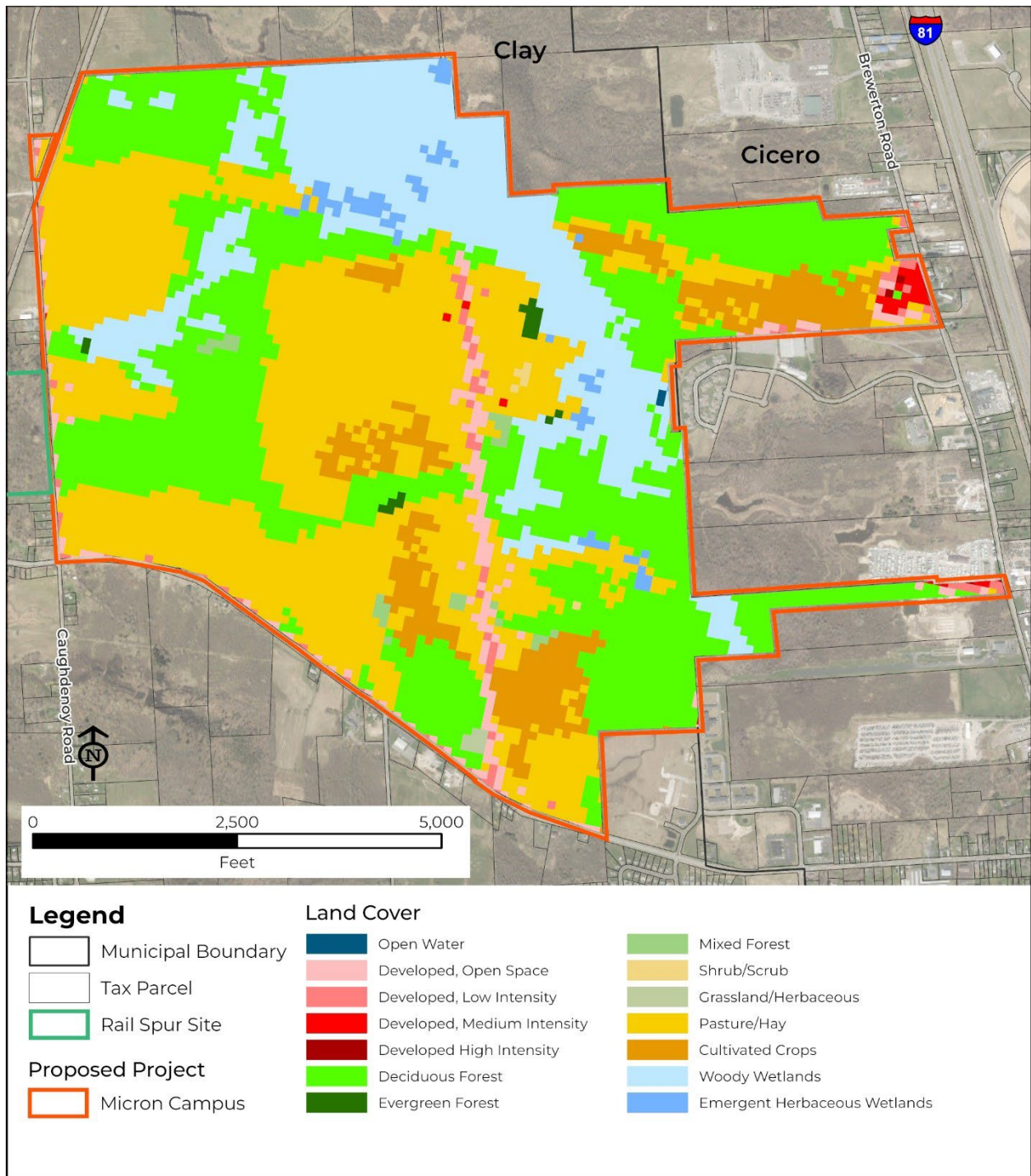
TABLE 5. PRE- AND POST-CONSTRUCTION ACREAGES OF NLCD COVER TYPES ON THE MICRON CAMPUS

| Ecological Community | Micron Campus | |
|----------------------|------------------|-------------------|
| | Pre-Construction | Post-Construction |
| Pasture/Hay | 487.5 | 47.9 |
| Deciduous Forest | 466.3 | 120.4 |
| Woody Wetlands | 239.5 | 152.1 |
| Cultivated Crops | 99.3 | 36.0 |

| Ecological Community | Micron Campus | |
|-------------------------------------|------------------|-------------------|
| | Pre-Construction | Post-Construction |
| Developed, Open Space | 32.1 | 4.4 |
| Emergent Herbaceous Wetlands | 16.8 | 11.2 |
| Developed, Low Intensity | 14.3 | 3.1 |
| Mixed Forest | 7.3 | 0.0 |
| Developed, Medium Intensity | 5.7 | 4.4 |
| Evergreen Forest | 4.2 | 0.0 |
| Grassland/Herbaceous | 1.8 | 0.0 |
| Shrub/Scrub | 1.3 | 0.0 |
| Developed High Intensity | 0.5 | 0.5 |
| Open Water | 0.4 | 0.4 |
| Barren Land | -- | -- |
| Total | 1377.2 | 380.4 |

The Micron Campus is in a largely agricultural landscape with some residential development. The surrounding landscape composition is a matrix of agricultural land, forest, and urban sprawl, intersected by interstate, state, and local roads. The site has high connectivity to other natural areas to the north and west while it is bordered mostly by roads and dense residential development to the south and east. The closest forested state or federal lands to the site are the NYSDEC Cicero Wildlife Management Area and Hamlin Wildlife Management Area, approximately seven miles to the east and approximately four miles to the southwest, respectively.

There are 14 NLCD cover types, occupying almost 1400 acres, associated with the Micron Campus (following figure presents the NLCD cover types for the campus). As listed in **Table 5**, the dominant NLCD cover type is Pasture/Hay (487.5 acres), followed by Deciduous Forest (466.3 acres) and Woody Wetlands (239.5 acres). Together these cover types account for more than 85 percent of the Micron Campus. Due to years of inactivity, many of the fields that are mapped as Pasture/Hay and Cultivated Crops by the 2021 NLCD have succeeded into old field or shrubland. In total, approximately 712 acres of NLCD woodland cover types are present within the Micron Campus (i.e., Deciduous Forest, Woody Wetlands, Mixed Forest, and Evergreen Forest).



World Imagery: New York State, Maxar

Figure 3-1: NLCD Cover Type Map for the Micron Campus

The site reconnaissance investigation conducted between July 31 and August 2, 2023, identified specific ecological communities and dominant vegetation (Edinger et al. 2014) that occur within the NLCD land cover types on the Micron Campus. Most of the abundant ecological communities are or were once farmland. These ecological communities are best characterized as cropland/field crops, successional old field, and successional shrubland, and represent different successional stages. Of these ecological communities, cropland/field crop ecological communities are those that have been most recently disturbed through mowing and haying. The cropland/field crop ecological communities on the Micron Campus are dominated by timothy grass, orchard grass, black knapweed, and goldenrod species. In general, vegetation within these areas is limited to the herbaceous stratum and lacks vegetation in the tree, shrub, and vine strata.

Successional old field ecological communities are in early stages of succession due to disturbance associated with prior mowing. These habitats contain a high abundance of invasive species. Trees documented within these habitats were primarily saplings. This community is dominated by eastern cottonwood (*Populus deltoides*), European buckthorn (*Rhamnus cathartica*), gray dogwood (*Cornus racemosa*), assorted goldenrod species, black knapweed (*Centurea nigra*), and arrowwood viburnum (*Viburnum dentatum*). Within the southern portion of the Micron Campus, abandoned farmland has reverted into successional shrubland. These habitats contain a greater abundance of vegetation within the shrub stratum than the cropland/field crops and successional old field ecological communities to the north, and the maturity of vegetation suggest that these habitats have not been recently mowed. These areas are dominated by quaking aspen (*Populus tremuloides*), European buckthorn, multiflora rose (*Rosa multiflora*), gray dogwood, and blackberry (*Rubus allegheniensis*).

In addition to cropland/field crops, successional old field, and successional shrubland, some softwood plantations were documented adjacent to farmland. These softwood plantations are best characterized as spruce/fir plantation. The spruce/fir plantation ecological communities are generally monocultures, with the dominant tree species being either Norway spruce (*Picea abies*) or white spruce (*Picea glauca*). Vegetation within the understory of these plantations varies from stand to stand, with some plantations containing little to no understory, while others contain green ash saplings and goldenrods.

A National Grid transmission line right-of-way traverses the northern portion of the Micron Campus, from Caughdenoy Road to Brewerton Road. Habitat throughout the transmission line right-of-way is best characterized as mowed roadside/pathway. Dominant species noted within the mowed roadside/pathway ecological community include green ash (*Fraxinus pennsylvanica*), European buckthorn, gray dogwood, goldenrod, and arrowwood viburnum. The green ash noted within the mowed roadside/pathway were primarily saplings. Vehicle and ATV tracks, signs of mowing, and lack of mature trees suggest the mowed roadside/pathway ecological community has been recently maintained.

Habitat north of the transmission line right-of-way is primarily forested, with varying species composition based on hydrology. The largest of these communities is best characterized as red maple-hardwood swamp. This area is dominated by red maple, green ash, shagbark hickory, American elm, northern spicebush (*Lindera benzoin*), Virginia knotweed (*Persicaria virginiana*), and sensitive fern. Closer to the floodplains of Youngs Creek, the red maple-hardwood swamp transitions into floodplain forest, with similar dominant vegetation but a denser understory composed of spicebush and green ash saplings. Signs of disturbance noted in these areas were limited to tree mortality from the invasive emerald ash borer (*Agrilus planipennis*). Mature trees were noted within these ecological communities, which suggests a fully mature forest. Within the northwestern corner of the Micron Campus, a portion of the forest is best characterized as successional northern hardwoods due to the prevalence of early successional and invasive species. Dominant species within the successional northern hardwoods include eastern cottonwood, black willow (*Salix nigra*), green ash, European buckthorn, sensitive fern (*Onoclea sensibilis*), and poison ivy (*Toxicodendron radicans*). Due to the high percentage of first successional species and average size of trees in the canopy, this area appears to have been recently disturbed.

Located between the transmission line right-of-way and forested ecological communities to the north is shallow emergent marsh and common reed marsh. Dominant vegetation noted within the shallow emergent marsh ecological community included red maple, green ash, narrowleaf cattail (*Typha angustifolia*), common reed (*Phragmites australis*), goldenrod, purple loosestrife (*Lythrum salicaria*), and reed canary grass (*Phalaris arundinacea*). Within the shallow emergent marsh, monocultures of common reed were noted and classified as the common reed marsh ecological community. Disturbance within shallow emergent marsh and common reed marsh was limited to invasive species and frequent flooding.

The marshland transitions into a forested swamp south of the transmission line right-of-way and extends offsite to the east. South of the transmission line right-of-way and west of Burnett Road, red maple-hardwood swamps and floodplain forests transition into different forested ecological communities, generally becoming more fragmented by farmland. The most prevalent of these ecological communities is successional southern hardwoods. Dominant species within the successional southern hardwoods include green ash, black cherry (*Prunus serotina*), shagbark hickory (*Carya ovata*), European buckthorn, and poison ivy. Successional southern hardwoods were disturbed, with the shrub stratum being primarily invasive European buckthorn and few mature trees making up the canopy. In addition, mature green ash trees were noted as declining because of the emerald ash borer.

The area south of the western-most floodplain forest is best classified as beech-maple mesic forest. Dominant species include sugar maple, American beech (*Fagus grandifolia*), yellow birch (*Betula alleghaniensis*), poison ivy, and Virginia creeper (*Parthenocissus quinquefolia*). Signs of disturbance noted within the beech-maple mesic forest include ATV tracks and a hunting stand

within a thin strip of trees utilized as a wind screen between farmlands; however, mature trees in the canopy suggest limited disturbance. In addition to successional southern hardwoods and beech-maple mesic forest, maple-basswood rich mesic forest and successional northern hardwoods were noted west of Burnett Road. The maple-basswood rich mesic forest is dominated by shagbark hickory, pignut hickory (*Carya glabra*), black cherry, European buckthorn, green ash, and goldenrod. Successional northern hardwoods had a similar species composition to successional northern hardwoods found north of the transmission line right-of-way. These ecological communities are small relative to the size of the Micron Campus and occur along the edge of habitats characterized as successional old field. Mature trees were noted within the maple-basswood rich mesic forest canopy, suggesting that this area has not been recently disturbed. The average size of the trees in the canopy of successional northern hardwoods suggest this habitat has been recently disturbed.

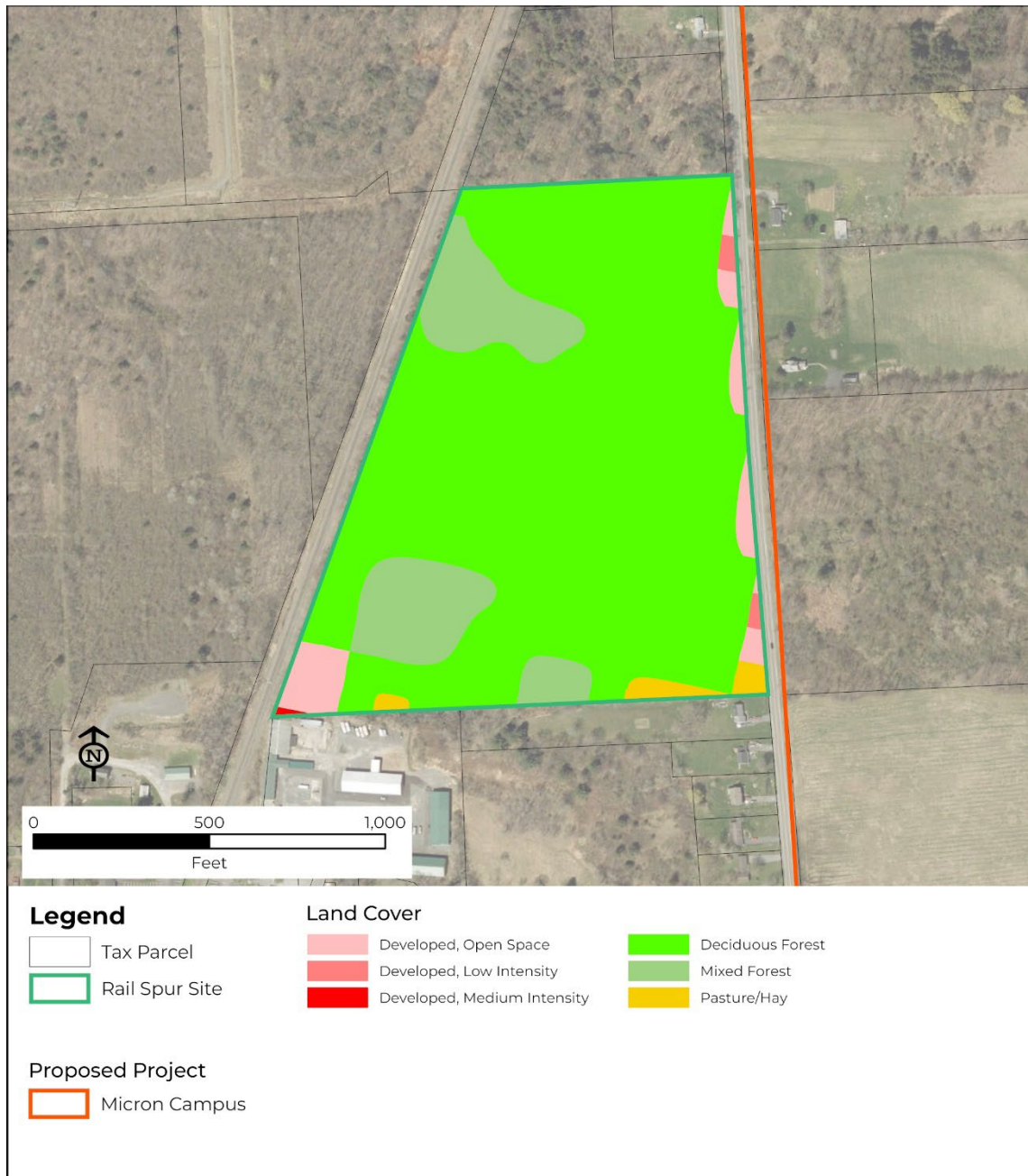
South of the transmission line right-of-way and east of Burnett Road, a number of beaver dams along the historic Youngs Creek channel have created a mix of forested swamps and emergent wetland. The forested swamp is best characterized as silver maple-ash swamp. Dominant species include silver maple (*Acer saccharinum*), green ash, and Virginia knotweed. Mature declining trees were noted within the canopy, which can be attributed to frequent flooding and the presence of the emerald ash borer. The emergent portions are dominated by reed canary grass, panicked aster (*Symphiotrichum lanceolatum*), and moneywort (*Lysimachia nummularia*).

To the southeast of the silver maple-ash swamp, the forest is better categorized as rich mesophytic forest. Dominant species include shagbark hickory, American beech, American elm (*Ulmus americana*), red maple (*Acer rubrum*), poison ivy, and Virginia creeper. The mature tree canopy suggests no recent disturbance.

3.2 RAIL SPUR ECOLOGICAL COMMUNITIES

For the Rail Spur, there are five NLCD cover types, occupying approximately 37 acres, that have been identified. The dominant NLCD cover type is Deciduous Forest (29.6 acres), followed by Mixed Forest (5.2 acres) and Developed, Open Space (2.6 acres). In total, approximately 34.8 acres of NLCD woodland cover types are present within the Rail Spur Site (i.e., Deciduous Forest and Mixed Forest). The remainder of the Rail Spur Site is comprised of Developed areas (2.6 acres) and Pasture/Hay (.6 acre).

The northern and largest portion of the Rail Spur Site is best characterized as a hemlock-northern hardwood forest ecological community. This area is dominated by sugar maple, shagbark hickory, eastern hemlock (*Tsuga canadensis*), green ash, and goldenrod (*Solidago* sp.). The average size of the trees in the canopy suggests that this forest is not fully mature. Signs of disturbance are limited in this area.



World Imagery: New York State, Maxar

Figure 3-2: NLCD Cover Type Map for the Rail Spur Site

The inundated area located in the eastern/central portion of the Rail Spur Site is best characterized as a common reed marsh ecological community. This area is dominated by common reed (*Phragmites australis*). The prevalence of invasive common reed suggests a disturbed community.

The southern portion of the Rail Spur Site is best characterized as a successional shrubland ecological community. This area is dominated by European buckthorn (*Rhamnus cathartica*), gray dogwood (*Cornus racemosa*), Tartarian honeysuckle (*Lonicera tatarica*), green ash, red maple, and American elm. The species composition (including the prevalence of invasive species), limited canopy cover, and the small size of existing trees suggests recent disturbance and a community in the earlier stages of succession.

3.3 MICRON CAMPUS AND RAIL SPUR WETLANDS

The Micron Campus was field evaluated for the potential presence of wetlands and other waters, as regulated by the USACE and NYSDEC. The delineation was conducted by Ramboll wetland biologists trained in wetlands identification and delineation in the fall of 2021, summer of 2022 and spring, summer, and fall of 2023 in accordance with the USACE *Wetlands Delineation Manual* (Y-81-1, 1987) and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (USACE 2012). In addition, site visits were conducted in the spring, summer and fall of 2023 with USACE Buffalo District and NYSDEC Region 7 personnel, and winter of 2024 with USACE personnel to observe, verify and supplement delineations conducted by Ramboll. In February, March, and May 2024, the USACE and NYSDEC provided jurisdictional determinations for wetlands and other waters at the Project Site based on Ramboll field delineations and agency field observations. **Figures 2, 3, 4, and 16** depict waters of the United States (WOTUS – USACE jurisdictional wetlands, streams, and ponds) and NYS Freshwater Wetlands (NYSFW), respectively, at the Project Site as determined by the agencies. **Table 6** and **Table 7** provides a listing of the federal and state jurisdictional wetlands with acreages and assigned cover types as well as impact acreages. Supplemental Figures have been added that show a detailed breakdown of permanent and temporary impacts across the Micron Site. **Table 8** provides a listing of stream impacts.

Hydrologic flow within wetlands and streams at the Micron Campus and Rail Spur is generally from south to north with discharge to the Youngs Creek and Shaver Creek systems, portions of which occur on the Project Site.

Jurisdictional determination letters for the Micron Campus from the USACE and NYSDEC, and a jurisdictional determination letter for the Rail Spur from the USACE are included as **Appendix H** of this permit application. There are no NYSDEC jurisdictional wetlands on the Rail Spur site.

The Micron Campus and Rail Spur wetlands are a mix of forested, scrub-shrub, emergent and open water habitat consisting of several old farm ponds as well as active and inactive beaver ponds. Based on review of historical aerial photographs from the 1930s, 1950s, 1970, 1980s and 2000s, the Micron Campus has historically been in agricultural production until as recent as the early 2020s. Based on the presence of observed clay drain tile and apparent ditched areas, Project Site wetlands have likely been influenced by agriculture activities.

TABLE 6: PROJECTED IMPACTS OF INDIVIDUAL FEDERALLY REGULATED WETLANDS BY COVER TYPE

| Wetland ID | Cover Type | USACE Jurisdictional Wetland by Cover Type (acres) | Total Acres by Wetland | Project Impacts by Phase (acres)* | | | | | | | | Total Impacts by Cover Type (acres) ¹ - Permanent | Total Impacts by Cover Type (acres) ¹ - Temporary | Total Impacts (acres) ¹ |
|------------|------------|--|------------------------|-----------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|--|--|------------------------------------|
| | | | | Phase 1A - Permanent | Phase 1A - Temporary | Phase 1B - Permanent | Phase 1B - Temporary | Phase 2A - Permanent | Phase 2A - Temporary | Phase 2B - Permanent | Phase 2B - Temporary | | | |
| W1 | PEM | 5.75 | 18.34 | 5.75 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.75 | 0.00 | 18.34 |
| | PFO | 10.55 | | 10.55 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.55 | 0.00 | |
| | POW | 0.03 | | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.00 | |
| | PSS | 2.01 | | 2.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.01 | 0.00 | |
| W2 | PEM | 12.35 | 38.53 | 5.17 | 0.32 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.17 | 0.32 | 26.80 |
| | PFO | 25.66 | | 21.09 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 21.09 | 0.03 | |
| | POW | 0.19 | | 0.19 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.19 | 0.00 | |
| | PSS | 0.33 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| W3 | PEM | 5.47 | 5.96 | 4.65 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 4.65 | 0.00 | 5.14 |
| | PFO | 0.49 | | 0.49 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.49 | 0.00 | |
| W5 | PEM | 2.39 | 7.75 | 2.39 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.39 | 0.00 | 7.75 |
| | PFO | 0.21 | | 0.21 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.21 | 0.00 | |
| | POW | 0.31 | | 0.31 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.31 | 0.00 | |
| | PSS | 4.84 | | 4.84 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 4.84 | 0.00 | |
| W6a | PFO | 0.38 | 0.38 | 0.38 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.38 | 0.00 | 0.38 |
| W11 | PEM | 17.57 | 19.20 | 17.57 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 17.57 | 0.00 | 19.2 |
| | PFO | 1.32 | | 1.32 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.32 | 0.00 | |
| | POW | 0.24 | | 0.24 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.24 | 0.00 | |
| | PSS | 0.07 | | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 0.00 | |

| Wetland ID | Cover Type | USACE Jurisdictional Wetland by Cover Type (acres) | Total Acres by Wetland | Project Impacts by Phase (acres)* | | | | | | | | Total Impacts by Cover Type (acres) ¹ - Permanent | Total Impacts by Cover Type (acres) ¹ - Temporary | Total Impacts (acres) ¹ |
|-----------------|------------|--|------------------------|-----------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|--|--|------------------------------------|
| | | | | Phase 1A - Permanent | Phase 1A - Temporary | Phase 1B - Permanent | Phase 1B - Temporary | Phase 2A - Permanent | Phase 2A - Temporary | Phase 2B - Permanent | Phase 2B - Temporary | | | |
| W12 | PEM | 0.20 | 0.50 | 0.05 | 0.00 | 0.00 | 0.00 | 0.15 | 0.00 | 0.00 | 0.00 | 0.20 | 0.00 | 0.5 |
| | PSS | 0.30 | | 0.30 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.30 | 0.00 | |
| W13 | PEM | 0.43 | 0.81 | 0.32 | 0.00 | 0.00 | 0.00 | 0.11 | 0.00 | 0.00 | 0.00 | 0.43 | 0.00 | 0.81 |
| | PSS | 0.38 | | 0.38 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.38 | 0.00 | |
| W14 | PSS | 0.35 | 0.35 | 0.33 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 | 0.35 | 0.00 | 0.35 |
| W26 | PEM | 0.81 | 1.30 | 0.00 | 0.00 | 0.81 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.81 | 0.00 | 1.3 |
| | PSS | 0.49 | | 0.00 | 0.00 | 0.49 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.49 | 0.00 | |
| W28 | PFO | 0.49 | 0.49 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.49 | 0.00 | 0.49 | 0.00 | 0.49 |
| W29 | PFO | 1.08 | 1.08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.24 | 0.00 | 0.84 | 0.00 | 1.08 | 0.00 | 1.08 |
| W34 | PEM | 77.37 | 109.71 | 0.12 | 0.00 | 5.82 | 0.00 | 48.54 | 0.00 | 0.00 | 0.00 | 54.48 | 0.00 | 76.36 |
| | PFO | 15.17 | | 0.23 | 0.00 | 0.36 | 0.00 | 10.09 | 0.00 | 0.96 | 0.00 | 11.64 | 0.00 | |
| | POW | 0.93 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.93 | 0.00 | 0.00 | 0.00 | 0.93 | 0.00 | |
| | PSS | 16.24 | | 0.00 | 0.00 | 0.44 | 0.00 | 8.87 | 0.00 | 0.00 | 0.00 | 9.31 | 0.00 | |
| W35 | PEM | 92.77 | 181.86 | 1.36 | 0.95 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.36 | 0.95 | 24.50 |
| | PFO | 87.32 | | 20.54 | 1.64 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 20.54 | 1.64 | |
| | PSS | 1.77 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| W40 | PEM | 0.88 | 0.88 | 0.00 | 0.00 | 0.00 | 0.00 | 0.88 | 0.00 | 0.00 | 0.00 | 0.88 | 0.00 | 0.88 |
| W49 (Rail Spur) | PFO | 16.61 | 17.27 | 8.42 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 8.42 | 0.00 | 8.91 |
| | POW | 0.40 | | 0.40 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.40 | 0.00 | |
| | PSS | 0.26 | | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | |
| W53 | PEM | 0.35 | 4.78 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |

| Wetland ID | Cover Type | USACE Jurisdictional Wetland by Cover Type (acres) | Total Acres by Wetland | Project Impacts by Phase (acres)* | | | | | | | | Total Impacts by Cover Type (acres) ¹ - Permanent | Total Impacts by Cover Type (acres) ¹ - Temporary | Total Impacts (acres) ¹ |
|--|------------|--|------------------------|-----------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|--|--|------------------------------------|
| | | | | Phase 1A - Permanent | Phase 1A - Temporary | Phase 1B - Permanent | Phase 1B - Temporary | Phase 2A - Permanent | Phase 2A - Temporary | Phase 2B - Permanent | Phase 2B - Temporary | | | |
| | PFO | 4.43 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| W54 | PEM | 6.45 | 8.26 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| | PSS | 1.81 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| W55 | PFO | 4.71 | 4.71 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| W61 | PFO | 1.61 | 1.97 | 1.16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.27 | 0.00 | 1.43 | 0.00 | 1.79 |
| | PSS | 0.36 | | 0.36 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.36 | 0.00 | |
| W62 | PSS | 0.95 | 0.95 | 0.95 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.95 | 0.00 | 0.95 |
| W63 | PSS | 0.33 | 0.33 | 0.33 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.33 | 0.00 | 0.33 |
| W69 | PSS | 0.07 | 0.07 | 0.00 | 0.00 | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 0.00 | 0.07 |
| W70 | PEM | 0.23 | 0.38 | 0.00 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.23 | 0.00 | 0.38 |
| | PFO | 0.15 | | 0.00 | 0.00 | 0.15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.15 | 0.00 | |
| W71 | PEM | 0.02 | 0.02 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | 0.02 |
| SUMMARY BY COVER TYPE | PEM | 223.04 | | 37.40 | 1.28 | 6.86 | 0.00 | 49.68 | 0.00 | 0.00 | 0.00 | 93.94 | 1.28 | 95.21 |
| | PFO | 170.18 | | 64.39 | 1.67 | 0.51 | 0.00 | 10.33 | 0.00 | 2.56 | 0.00 | 77.79 | 1.67 | 79.46 |
| | POW | 2.10 | | 1.17 | 0.00 | 0.00 | 0.00 | 0.93 | 0.00 | 0.00 | 0.00 | 2.10 | 0.00 | 2.10 |
| | PSS | 30.56 | | 9.66 | 0.00 | 1.00 | 0.00 | 8.89 | 0.00 | 0.00 | 0.00 | 19.55 | 0.00 | 19.55 |
| TOTALS | | 425.88 | | 112.62 | 2.95 | 8.37 | 0.00 | 69.83 | 0.00 | 2.56 | 0.00 | 193.38 | 2.95 | 196.33 |
| *Temporary Impacts include construction laydown areas and areas of ground disturbance to be returned to pre-disturbance conditions. Permanent Impacts include building envelopes and areas of site grading. | | | | | | | | | | | | | | |
| ¹ Phased Total Impacts by Cover Type, Total Impacts, and Summary by Cover Type values are rounded from the computed GIS values and therefore may differ slightly from reported phase Total when summed. | | | | | | | | | | | | | | |

Table 7: Projected Impacts of Individual State Regulated Wetlands by Edinger Cover Type

| Wetland ID | Cover Type | NYSDEC Jurisdictional Wetland by Cover Type (acres) | Total Acres by Wetland | Project Impacts by Phase (acres)* | | | | | | | | | | | | Total Impacts by Cover Type (acres) ¹ - Permanent | Total Impacts by Cover Type (acres) ¹ - Temporary | Total Impacts by Cover Type (acres) ¹ - Forest Conversion | Total Impacts (permanent and temp) (acres) ¹ |
|------------|---------------------------|---|------------------------|-----------------------------------|----------------------|------------------------------|----------------------|----------------------|------------------------------|----------------------|----------------------|------------------------------|----------------------|----------------------|------------------------------|--|--|--|---|
| | | | | Phase 1A - Permanent | Phase 1A - Temporary | Phase 1A - Forest Conversion | Phase 1B - Permanent | Phase 1B - Temporary | Phase 1B - Forest Conversion | Phase 2A - Permanent | Phase 2A - Temporary | Phase 2A - Forest Conversion | Phase 2B - Permanent | Phase 2B - Temporary | Phase 2B - Forest conversion | | | | |
| W1 | Farm Pond/Artificial Pond | 0.03 | 18.34 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.00 | 0.00 | 18.34 |
| | Red Maple-Hardwood Swamp | 10.55 | | 10.55 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.55 | 0.00 | 0.00 | |
| | Shallow Emergent Marsh | 5.75 | | 5.75 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.75 | 0.00 | 0.00 | |
| | Shrub Swamp | 2.01 | | 2.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.01 | 0.00 | 0.00 | |
| W2 | Farm Pond/Artificial Pond | 0.19 | 38.98 | 0.19 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.19 | 0.00 | 0.00 | 27.25 |
| | Floodplain Forest | 0.28 | | 0.28 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.28 | 0.00 | 0.00 | |
| | Hemlock-Hardwood Swamp | 3.14 | | 3.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.04 | 0.00 | 0.00 | |
| | Red Maple-Hardwood Swamp | 22.52 | | 18.14 | 0.00 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 18.14 | 0.00 | 0.03 | |
| | Shallow Emergent Marsh | 12.29 | | 5.01 | 0.32 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.01 | 0.32 | 0.00 | |
| | Shrub Swamp | 0.56 | | 0.23 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.23 | 0.00 | 0.00 | |
| W3 | Floodplain Forest | 0.49 | 5.96 | 0.49 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.49 | 0.00 | 0.00 | 5.14 |
| | Shallow Emergent Marsh | 4.58 | | 4.58 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 4.58 | 0.00 | 0.00 | |
| | Shrub Swamp | 0.89 | | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 0.00 | 0.00 | |
| W5 | Farm Pond/Artificial Pond | 0.31 | 7.75 | 0.31 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.31 | 0.00 | 0.00 | 7.75 |
| | Floodplain Forest | 0.21 | | 0.21 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.21 | 0.00 | 0.00 | |
| | Shallow Emergent Marsh | 2.39 | | 2.39 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.39 | 0.00 | 0.00 | |

| Wetland ID | Cover Type | NYSDEC Jurisdictional Wetland by Cover Type (acres) | Total Acres by Wetland | Project Impacts by Phase (acres)* | | | | | | | | | | | | Total Impacts by Cover Type (acres) ¹ - Permanent | Total Impacts by Cover Type (acres) ¹ - Temporary | Total Impacts by Cover Type (acres) ¹ - Forest Conversion | Total Impacts (permanent and temporary) (acres) ¹ |
|------------|---------------------------|---|------------------------|-----------------------------------|----------------------|------------------------------|----------------------|----------------------|------------------------------|----------------------|----------------------|------------------------------|----------------------|----------------------|------------------------------|--|--|--|--|
| | | | | Phase 1A - Permanent | Phase 1A - Temporary | Phase 1A - Forest Conversion | Phase 1B - Permanent | Phase 1B - Temporary | Phase 1B - Forest Conversion | Phase 2A - Permanent | Phase 2A - Temporary | Phase 2A - Forest Conversion | Phase 2B - Permanent | Phase 2B - Temporary | Phase 2B - Forest conversion | | | | |
| | Shrub Swamp | 4.84 | | 4.84 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 4.84 | 0.00 | 0.00 | |
| W6a | Hemlock-Hardwood Swamp | 0.04 | 0.38 | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.00 | 0.00 | 0.38 |
| | Red Maple-Hardwood Swamp | 0.34 | | 0.34 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.34 | 0.00 | 0.00 | |
| W11 | Deep Emergent Marsh | 0.24 | 19.2 | 0.24 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.24 | 0.00 | 0.00 | 19.2 |
| | Floodplain Forest | 1.32 | | 1.32 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.32 | 0.00 | 0.00 | |
| | Shallow Emergent Marsh | 17.57 | | 17.57 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 17.57 | 0.00 | 0.00 | |
| | Shrub Swamp | 0.07 | | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 0.00 | 0.00 | |
| W28 | Floodplain Forest | 0.04 | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.00 | 0.00 | 0.04 | 0.00 | 0.00 | 0.04 |
| W29 | Floodplain Forest | 0.38 | 0.38 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.38 | 0.00 | 0.00 | 0.38 | 0.00 | 0.00 | 0.38 |
| W34 | Deep Emergent Marsh | 60.26 | 106.43 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 40.73 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 40.74 | 0.00 | 0.00 | 73.06 |
| | | | | | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | 0.00 | | | | |
| | | | | | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | 0.00 | | 0.00 | 0.00 | | | | |
| | Farm Pond/Artificial Pond | 0.13 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.13 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.13 | 0.00 | 0.00 | |
| | Floodplain Forest | 6.94 | | 0.00 | 0.00 | 0.00 | 0.36 | 0.00 | 0.00 | 3.99 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 4.35 | 0.00 | 0.00 | |
| | Red Maple-Hardwood Swamp | 8.23 | | 0.23 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 6.09 | 0.00 | 0.00 | 0.96 | 0.00 | 0.00 | 7.28 | 0.00 | 0.00 | |
| | Shallow Emergent Marsh | 15.07 | | 0.12 | 0.00 | 0.00 | 3.45 | 0.00 | 0.00 | 8.12 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 11.69 | 0.00 | 0.00 | |
| | Shrub Swamp | 15.8 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 8.87 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 8.87 | 0.00 | 0.00 | |
| W35 | Deep Emergent Marsh | 91.43 | 181.86 | 0.03 | 0.95 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.95 | 0.00 | 24.50 |
| | Floodplain Forest | 75.59 | | 10.61 | 0.00 | 1.48 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.61 | 0.00 | 1.48 | |

| Wetland ID | Cover Type | NYSDEC Jurisdictional Wetland by Cover Type (acres) | Total Acres by Wetland | Project Impacts by Phase (acres)* | | | | | | | | | | | | Total Impacts by Cover Type (acres) ¹ - Permanent | Total Impacts by Cover Type (acres) ¹ - Temporary | Total Impacts by Cover Type (acres) ¹ - Forest Conversion | Total Impacts (permanent and temporary) (acres) ¹ |
|-----------------------|---------------------------|---|------------------------|-----------------------------------|----------------------|------------------------------|----------------------|----------------------|------------------------------|----------------------|----------------------|------------------------------|----------------------|----------------------|------------------------------|--|--|--|--|
| | | | | Phase 1A - Permanent | Phase 1A - Temporary | Phase 1A - Forest Conversion | Phase 1B - Permanent | Phase 1B - Temporary | Phase 1B - Forest Conversion | Phase 2A - Permanent | Phase 2A - Temporary | Phase 2A - Forest Conversion | Phase 2B - Permanent | Phase 2B - Temporary | Phase 2B - Forest conversion | | | | |
| | Red Maple-Hardwood Swamp | 11.73 | | 9.93 | 0.00 | 0.17 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 9.93 | 0.00 | 0.17 | |
| | Shrub Swamp | 3.11 | | 1.34 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.34 | 0.00 | 0.00 | |
| W40 | Shallow Emergent Marsh | 0.88 | 0.88 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.88 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.88 | 0.00 | 0.00 | 0.88 |
| W53 | Floodplain Forest | 4.43 | 4.78 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| | Shallow Emergent Marsh | 0.35 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| W54 | Shallow Emergent Marsh | 6.45 | 8.26 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| | Shrub Swamp | 1.81 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| W55 | Floodplain Forest | 4.71 | 4.71 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| W63 | Shrub Swamp | 0.33 | 0.33 | 0.33 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.33 | 0.00 | 0.00 | 0.33 |
| W69 | Shrub Swamp | 0.07 | 0.07 | 0.00 | 0.00 | 0.00 | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 0.00 | 0.00 | 0.07 |
| W70 | Floodplain Forest | 0.15 | 0.38 | 0.00 | 0.00 | 0.00 | 0.15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.15 | 0.00 | 0.00 | 0.38 |
| | Shallow Emergent Marsh | 0.23 | | 0.00 | 0.00 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.23 | 0.00 | 0.00 | |
| W71 | Shallow Emergent Marsh | 0.02 | 0.02 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 | 0.02 |
| SUMMARY BY COVER TYPE | Deep Emergent Marsh | 151.93 | | 0.27 | 0.95 | 0.00 | 0.01 | 0.00 | 0.00 | 40.73 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 41.01 | 0.95 | 0.00 | 41.96 |
| | Farm Pond/Artificial Pond | 0.66 | | 0.53 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.13 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.66 | 0.00 | 0.00 | 0.66 |
| | Floodplain Forest | 94.54 | | 12.91 | 0.00 | 1.48 | 0.51 | 0.00 | 0.00 | 3.99 | 0.00 | 0.00 | 0.42 | 0.00 | 0.00 | 17.83 | 0.00 | 1.48 | 19.31 |
| | Hemlock-Hardwood Swamp | 3.18 | | 3.08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.08 | 0.00 | 0.00 | 3.08 |
| | Red Maple-Hardwood Swamp | 53.37 | | 39.19 | 0.00 | 0.20 | 0.00 | 0.00 | 0.00 | 6.09 | 0.00 | 0.00 | 0.96 | 0.00 | 0.00 | 46.24 | 0.00 | 0.20 | 46.43 |
| | Shallow Emergent Marsh | 65.58 | | 35.44 | 0.32 | 0.00 | 3.68 | 0.00 | 0.00 | 9.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 48.12 | 0.32 | 0.00 | 48.45 |

| Wetland ID | Cover Type | NYSDEC Jurisdictional Wetland by Cover Type (acres) | Total Acres by Wetland | Project Impacts by Phase (acres)* | | | | | | | | | | | | Total Impacts by Cover Type (acres) ¹ - Permanent | Total Impacts by Cover Type (acres) ¹ - Temporary | Total Impacts by Cover Type (acres) ¹ - Forest Conversion | Total Impacts (permanent and temp) (acres) ¹ |
|--|-------------|---|------------------------|-----------------------------------|----------------------|------------------------------|----------------------|----------------------|------------------------------|----------------------|----------------------|------------------------------|----------------------|----------------------|------------------------------|--|--|--|---|
| | | | | Phase 1A - Permanent | Phase 1A - Temporary | Phase 1A - Forest Conversion | Phase 1B - Permanent | Phase 1B - Temporary | Phase 1B - Forest Conversion | Phase 2A - Permanent | Phase 2A - Temporary | Phase 2A - Forest Conversion | Phase 2B - Permanent | Phase 2B - Temporary | Phase 2B - Forest conversion | | | | |
| | Shrub Swamp | 29.49 | | 8.89 | 0.00 | 0.00 | 0.07 | 0.00 | 0.00 | 8.87 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 17.83 | 0.00 | 0.00 | 17.83 |
| TOTALS | | 398.75 | | 100.31 | 1.28 | 1.67 | 4.27 | 0.00 | 0.00 | 68.81 | 0.00 | 0.00 | 1.38 | 0.00 | 0.00 | 174.77 | 1.28 | 1.67 | 177.72 |
| *Temporary Impacts include construction laydown areas and areas of ground disturbance to be returned to pre-disturbance conditions. Permanent Impacts include building envelopes and areas of site grading. | | | | | | | | | | | | | | | | | | | |
| ¹ Phased Total Impacts by Cover Type, Total Impacts, and Summary by Cover Type values are rounded from the computed GIS values and therefore may differ slightly from reported phase Total when summed. | | | | | | | | | | | | | | | | | | | |
| ² Phase impact to W35 Deep Emergent Marsh is 0.001 AC, but is reported as 0 as impacts are only reported to the hundredth of an acre. | | | | | | | | | | | | | | | | | | | |

Table 8: Proposed Impacts to Federal Jurisdictional Streams (LF)

| Stream ID | Cowardin Classification/ Flow Regime | Length (LF) / OHW ¹ Width (LF) | Impacts on Federal Jurisdictional Streams (LF) | | | | | | | | | | Total Impacts |
|--------------------------|--|---|--|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|------------------------------|-------------------------|---|---|------------------|
| | | | Phase 1A – Temporary | Phase 1A – Permanent | Phase 1B – Temporary | Phase 1B – Permanent | Phase 2A – Temporary | Phase 2A – Permanent | Phase 2B – Tempor- ary | Phase 2B – Permanent | Total Phased Impacts – Temporary | Total Phased Impacts – Permanent | |
| IS1 | Intermittent/Riverine Stream Bed (R4SB) | 1,411 / 10 | 0 | 1411 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1411 | 1411 |
| IS2 | Intermittent/Riverine Stream Bed (R4SB) | 1,532 / 25 | 8 | 607 | 0 | 0 | 0 | 0 | 0 | 0 | 79 | 607 | 686 |
| IS3 | Intermittent/Riverine Stream Bed (R4SB) | 1,355 / 70 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 51 | 0 | 51 |
| IS4 | Intermittent/Riverine Stream Bed (R4SB) | 337 / 5 | 0 | 0 | 0 | 0 | 0 | 337 | 0 | 0 | 0 | 337 | 337 |
| IS4A | Intermittent/Riverine Stream Bed (R4SB) | 150 / 2 | 0 | 0 | 0 | 0 | 0 | 150 | 0 | 0 | 0 | 150 | 150 |
| ES6 | Ephemeral/R6 | 324 / 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 321 | 0 | 321 | 321 |
| ES8 | Ephemeral/R6 | 1,045 / 2 | 0 | 130 | 0 | 0 | 0 | 915 | 0 | 0 | 0 | 1045 | 1045 |
| ES8a | Ephemeral/R6 | 134 / 3 | 0 | 0 | 0 | 0 | 0 | 134 | 0 | 0 | 0 | 134 | 134 |
| ES11 | Ephemeral/R6 | 490 / 2 | 0 | 0 | 0 | 0 | 0 | 466 | 0 | 0 | 0 | 466 | 466 |
| ES15 | Ephemeral/R6 | 298 / 2 | 0 | 0 | 0 | 0 | 0 | 298 | 0 | 0 | 0 | 298 | 298 |
| ES16 | Ephemeral/R6 | 430 / 5 | 0 | 430 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 430 | 430 |
| ES20 | Ephemeral/R6 | 795 / 5 | 0 | 795 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 795 | 795 |
| ES21 | Ephemeral/R6 | 209 / 3 | 0 | 209 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 209 | 209 |
| PS1 (Youngs Creek) | Perennial/Upper Perennial Unconsolidated Bottom (R3UB) | 120 / 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| RD4A | Intermittent/Riverine Stream Bed (R4SB) | 72 / 2 | 0 | 43 | 0 | 0 | 0 | 29 | 0 | 0 | 0 | 72 | 72 |
| RD4B | Intermittent/Riverine Stream Bed (R4SB) | 8 / 2 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 8 | 8 |

| Stream ID | Cowardin Classification/ Flow Regime | Length (LF) / OHW ¹ Width (LF) | Impacts on Federal Jurisdictional Streams (LF) | | | | | | | | | | |
|----------------------------------|---|---|--|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|--------------------------------|-------------------------|---|---|------------------|
| | | | Phase 1A – Temporary | Phase 1A - Permanent | Phase 1B - Temporary | Phase 1B - Permanent | Phase 2A - Temporary | Phase 2A - Permanent | Phase 2B - Tempor ary | Phase 2B - Permanent | Total Phased Impacts - Temporary | Total Phased Impacts - Permanent | Total Impacts |
| Totals | | 8,730 | 130 | 3625 | 0 | 0 | 0 | 2337 | 0 | 321 | 130 | 6283 | 6413 |
| ¹ Ordinary High Water | | | | | | | | | | | | | |

Based on review of the aerial photographs and field observations, a significant portion of the identified wetlands occur on lands that at one time were in agricultural production and are now in a successional stage of development.

Using *Classification of Wetlands and Deepwater Habitats of the United States* (1979) and *Ecological Communities of New York State, Second Edition* (2014), the wetlands found on the Project Site are generally classified as palustrine in nature. Palustrine wetlands include all nontidal wetlands dominated by trees, shrubs, persistent emergent plants, and emergent mosses or lichens. More specific classifications include Palustrine Forested wetlands (typified by red maples, green ash, and American elms); Palustrine Shrub/Scrub wetlands (typified by various dogwood species); and Palustrine emergent wetlands (typified by goldenrods, asters, purple loosestrife, and ferns. **Figures 2, 3 and 4**, as well as the **Supplemental Figures**, also identify the assigned cover types of both federal and state jurisdictional wetlands and **Tables 6 and 7** identify federal and state jurisdictional wetlands and acreages by cover type per the above referenced documents for the Project Site wetlands.

A functional assessment of the freshwater wetland resources which may be impacted by the development of the Project Site was performed in accordance with the USACE Highway Methodology Workbook Supplement (USACE 1999) and is included as **Appendix J**. This assessment method was designed to highlight ecologically and socially significant wetland attributes, if present. The functions assessed using this method included: Groundwater Recharge/Discharge; Floodflow Alteration; Fish and Shellfish Habitat; Sediment/Toxicant Retention; Nutrient Removal; Production Export; Sediment/Shoreline Stabilization; Wildlife Habitat; Recreation; Educational Scientific Value; Uniqueness/Heritage; Visual Quality/Aesthetics; and Endangered Species Habitat. The functional assessment also provides additional descriptive information for each identified jurisdictional wetland including observed species.

Based on the results of the functional assessment, the principal functions for the wetlands identified at the Project Site are Wildlife Habitat, Floodflow Alteration, and Sediment/Toxicant Retention. Wetlands at the Project Site are utilized by songbirds, birds of prey, waterfowl, amphibians, reptiles, and mammals including two federally listed bat species, the Indiana bat (*Myotis sodalist*), and the northern long-eared bat (*Myotis septentrionalis*), and several State-listed bird species. The remaining principal functions are based on the presence of larger wetlands, located on the northern and eastern portions of the Project Site, that have diffuse boundaries and a mix of open water and dense vegetation that receive the majority of runoff from Project Site uplands and wetlands.

3.3.1 Wooding Site

As shown on **Figure 15**, a wetlands mitigation easement can be found on tax parcel 48.-01-23.1 (Military Lot #28) within the boundaries of the Micron Campus. The easement, approximately 20.34 acres in size was developed by Niagara Mohawk Power Corporation (doing business as

National Grid) as a wetlands mitigation project to accomplish compensatory mitigation for the Clay-DeWitt Line 3 & Clay-Teall Line 10 Rebuild and Reconnector project. The project, authorized by the Public Service Commission as Article VII case number 15-T-0305, was the selective relocation, rebuilding and reconductoring of its 115kV Line 3 that ran approximately 13 miles between the Clay Substation and Structure 389.5 and its 115kV Line 10 that ran approximately 15.53 miles between the Clay Substation and the Teall Avenue Substation.

On June 14, 2017, the Buffalo District of the USACE issued Permit Number LRB-2016-00616 to National Grid. The permit authorized the discharge of fill material to Waters of the United States associated with Rebuild and Reconductor Project. Specifically, the permit authorized:

- The discharge of 2.29 acres of fill to Waters of the United States (1.75 acres emergent wetlands, 0.08 acres of scrub-shrub wetlands, and 0.46 acre of forested wetlands) associated with work to reconductor and reconstruct two existing 115kV overhead transmission lines consisting of approximately 12.95 miles of the Clay-DeWitt Line 3 and 15.5 miles of the Clay-Teall Line 10.

National Grid provided wetland mitigation as described in the Wooding Property Wetland Mitigation Plan (ESS 2019) to offset unavoidable impacts to areas subject to the jurisdiction of the New York State Department of Environmental Conservation (NYSDEC) under the Freshwater Wetlands Act (ECL Article 24) in accordance with NYSDEC's Freshwater Wetlands Regulation Guidelines on Compensatory Mitigation (the mitigation guidelines). The plan called for mitigation of lost wetland acreage for the project to be replaced using a minimum ratio of 2:1. Forest conversion mitigation was based on a based on a 1:1 mitigation ratio. The National Grid Mitigation Plan called for wetlands mitigation in the following amounts:

| | |
|--|-------------|
| • Forest Wetland Enhancement | 1.6 acres |
| • Wetland Creation | 1.0 acres |
| • Forest Wetland Preservation | 2.86 acres |
| • Scrub/Shrub Wetland Preservation | 0.83 acres |
| • Upland Buffer Enhancement - Forest | 4.02 acres |
| • Upland Buffer Preservation - Forest | 9.31 acres |
| • Upland Buffer Preservation - Scrub/Shrub | 0.72 acres |
| • Total Approved in 2019 | 20.34 acres |

Wetland enhancement and creation was completed in fall 2020.

As approved by NYSDEC, this easement will be removed as a part of the project development. The compensatory wetland area will be replaced as part of the project mitigation program as outlined in **Appendix N**.

3.4 MICRON CAMPUS STREAMS

In addition to the delineated wetlands, several federally jurisdictional streams have been identified at the Project Site. These streams are generally associated with the Site-delineated wetlands. **Figure 16** depicts the locations of these onsite streams and **Table 8** provides a listing of jurisdictional streams with hydrologic regime and jurisdictional LF on the Project Site.

In the fall of 2023 and spring of 2024, Ramboll biologists conducted qualitative and quantitative environmental surveys of Youngs Creek within the Micron Campus. The results of these surveys (**Appendix K and Appendix L** January 31, 2025 Final JPA) indicate that a majority of the Youngs Creek system within the Micron Campus has been altered by historic agricultural, utilities, road corridors and recent and past beaver activities. Channelization and draining and ponding of the creek and its tributaries has diffused or flooded the main channel of Youngs Creek as mapped on the Environmental Resource Mapper, resulting in a system functioning primarily as a wetland habitat. Stream channels that remain are either intermittent or ephemeral with a small portion of perennial stream channel (main channel of Youngs Creek) located within the overhead electric utility right-of-way on the northeastern portion of the Micron Campus.

Ramboll conducted biological sampling of fish and aquatic macroinvertebrates along multiple sections of Youngs Creek and its associated tributaries within the confines of the Micron property from June 5 through June 7, 2024. This effort focused on the reaches identified as potentially supporting benthic macroinvertebrates and fishes based on information provided in the Micron Semiconductor Fabrication Facility (Clay, NY), Aquatic Resources Supplemental Delineation Report (Ramboll 2023) and the Qualitative Environmental Survey of Youngs Creek technical memorandum prepared in February 2024 (Ramboll 2024).

The fish and benthic macroinvertebrate communities documented in the sampled reaches within the Youngs Creek system were consistent with those often associated with low energy streams and shallow ponded habitats (lentic habitats). Fish communities were dominated by brook stickleback and central mudminnow, both of which are tolerant of hypoxic or low oxygen conditions (Klinger et al. 1982; Stewart et al. 2007) such as those observed within the ponded wetland area. Communities consisted solely of insectivorous forage species at all locations except for the perennial stream portion of the Youngs Creek system, where juvenile northern pike and green sunfish were observed. Stream channels that remain rare either intermittent or ephemeral with a small portion of perennial stream channel (main channel of Youngs Creek) located within the overhead electric utility right-of-way on the northeastern portion of the Project Site. Active and inactive beaver dams continue to change the dynamics of portions of Youngs Creek on the Main Campus.

3.5 MITIGATION SITES

The following is a description of each of the six mitigation sites. A more detailed description of each of the parcels is as follows:

Buxton Creek

The Buxton Creek site is located at the intersection of County Route 10 and Bell Road in the Town of Schroepfel, Oswego County, New York (Parcels 274.00-02-04.06 and 274.00-02-04.09), approximately 7.75 miles northwest of the Micron Campus. The combined acreage of the parcels TWT acquired is 254 acres. Most of this site is currently active agricultural land (row crops), and the remainder of the property is existing wetlands, successional upland fields, and forests. A tributary to Buxton Creek flows through the western portion of the parcel north of Bell Road while the main stem of Buxton Creek flows through the parcel south of Bell Road. The on-site reaches of both Buxton Creek and its tributary have been extensively modified (moved, straightened, and channelized). The existing Buxton Creek channel is approximately 20 feet wide x 5 feet deep with vertical banks and flows under Bell Road through a 10-ft concrete box culvert. The existing tributary to Buxton Creek is approximately 8 feet wide x 3 feet deep and flows under Bell Road in a 4-foot diameter corrugated plastic pipe.

Fish Creek

The Fish Creek site is located near the intersection of Perry Road and Godfrey Road in the Town of Schroepfel, Oswego County, New York (Parcels 256.00-04-14 and 256.00-04-14.01), approximately 9 miles northwest of the Micron Campus. The combined acreage of the parcels acquired by TWT is approximately 185 acres. Most of the Fish Creek site is currently active agricultural land, and the remainder of the property is existing wetlands, successional upland fields and forest, and mature forest. A tributary extends through the Fish Creek site that has been excavated to an average depth of 7-ft to receive discharge from agricultural drainage tiles that influence the hydrology in the adjacent fields. This unnatural condition has significantly destabilized the channel, disconnected it from the adjacent floodplain, and minimized its habitat quality.

Upper Caughdenoy Creek

The Upper Caughdenoy Creek site is located along Route 33 near the intersection of Route 33 and Goettel Road in the Town of Hastings, Oswego County, New York (Parcel 257.00-02-05.02), approximately 8.5 miles northwest of the Micron Campus. TWT acquired approximately 165 acres. This site is currently active agricultural land. This site is approximately 900 feet west of Caughdenoy Creek.

Lower Caughdenoy Creek (Route 37)

The Lower Caughdenoy Creek site is located along County Route 37 south of County Route 12 in the Town of Hastings, Oswego County, New York (Parcels 292.00-01-02 and 292.00-01.10), approximately 5 miles north of the Micron Campus. TWT acquired 118 acres. Most of this site is currently active agricultural land, and the remainder of the property is existing wetlands and successional upland fields and forests. Caughdenoy Creek forms the northwestern boundary of this site and crosses the northeastern portion of this site, and the Oneida River is approximately 200 feet west of this site.

Sixmile Creek

The Sixmile Creek site is located west and east of NY - 264 near the intersection of Biddlecum Road in the Town of Schroepfel, Oswego County, New York (Parcels 272.00-02-01, 273.00-01-02, 273.00-01-01.03, and part of 256.00-04-28), approximately 9 miles northwest of the Micron Campus. The combined acreage of the parcels is approximately 239 acres. Most of this site is currently active agricultural land with extensive floodplain wetlands and ponds through the middle of the property associated with Sixmile Creek from the southeast to the northwest.

Oneida River

The Oneida River site is located at the intersection of Oneida River Road and Center Road in the Town of Schroepfel, Oswego County, New York (Parcels 315.00-01-39, 315.00-01-29, 315.00-01-03, 315.00-01-04, 315.00-04-17.01), approximately 4 miles northwest of the Micron Site. TWT acquired 411 acres. Most of the site is currently active agricultural land, and the remainder of the property is existing wetlands and successional upland fields, shrubs, and forests. The Oneida River is approximately 400 feet west of the site.

4 Block 6c – Proposed Campus Site Changes

The Micron Campus consists of four memory fabrication facilities (FABs) to be used to manufacture semiconductor microchips (chips). Each Fab is expected to occupy approximately 1.2 million square feet (sf) of land and contain approximately 600,000 sf of clean room space, 290,000 sf of clean room support space, and 119,500 sf of administrative space. Each Fab would be supported by approximately 441,210 sf of central utility buildings, and 182,600 sf of product testing space housed in separate buildings.

4.1 MICRON CAMPUS AND RAIL SPUR

The Micron Campus would be built over an approximate 16-year period, encompassing the construction of four FABs. Micron expects that the FABs would be built in sequence, with construction of each Fab starting as the preceding Fab is being fit out and operations begun. This process would result in continuous construction activities on the Micron Campus over the approximate 16-year period, with a significant portion of that construction occurring inside the previously constructed Fab buildings. Fab construction will be grouped into two phases for construction purposes, with each phase comprising two FABs. Construction of the Micron Campus would be expected to begin in 2025, with Phase 1a and 1b (FABs 1 and 2) operational by approximately 2030. Phase 2a and 2b (FABs 3 and 4) would be operational by 2041.

Drawings PMTC0-0510, PMTC0-0511, PMTC0-0512, and PMTC0-0513 show the extent of construction and associated wetland impacts for each of the four phases.

The activities covered by this permit application include:

- Clearing, grading, and construction of the Micron Campus, which will include four semiconductor memory fabrication buildings (FABs), ancillary support facilities, driveways, and parking, as well as the Rail Spur.
- This permit application covers the impacts to the Wooding Mitigation Site, a wetlands mitigation project that National Grid built as part of the Clay-DeWitt Line 3 & Clay-Teall line 10 Rebuild and Reconductor project Article VII PSC Case Number 15-T-305). The Wooding Mitigation Site parcel is approximately 20.34 acres in size, the majority of which is not jurisdictional wetlands.

Approximately 232.5 acres of jurisdictional wetlands and approximately 2,000 linear feet (lf) of federally regulated streams will be avoided on the site. The development activities associated with the Proposed Project will result in the following impacts to wetland resources:

Federal Impacts (see **Figure 2** and **Figure 3** and **Table 6**)

- Total Permanent Impacts: 193.38 acres
- Total Temporary Impacts: 2.95 acres (does not include National Grid duct bank impacts)

NYSDEC Impacts (see **Figure 4** and **Table 7**)

- Total Permanent Impacts: 174.77 acres
- Total Permanent Impacts (including forest conversation): 176.44
- Total Temporary Impacts: 1.28 acres
- Total Forest Conversation: 1.67 acres

There are temporary impacts associated with the development of the duct bank area by National Grid as part of bringing power to the FABs. Those temporary impacts will be addressed in a separate Individual Permit being developed for the National Grid Substation Expansion and Duct Bank construction efforts but are quantified in **Table 6 and 7**.

This JPA does not cover any improvements to utilities off the Micron Campus. Improvements to offsite infrastructure will be the responsibility of the individual utility and as such, will be permitted separately by the individual utilities.

The USACE and NYSDEC have verified the wetland delineations and issued Jurisdictional Determinations for the Main Campus and Rail Spur. The proposed project will permanently impact approximately 6,283 linear feet of federally regulated streams. All the streams are categorized as intermittent or ephemeral. Perennial streams have been avoided. No streams on the Micron Campus are protected under Article 15 of the ECL (6 NYCRR Part 608).

4.2 MITIGATION SITES

The construction associated with the mitigation efforts at each of the mitigation sites will result in permanent and temporary impacts to existing wetlands. Details of the impacts can be found in the CWSMP included as **Appendix N** to this permit application, as well as in **Appendix T**.

The following impacts (**Table 8**) are projected to occur because of the construction of mitigation measures at the six mitigation sites.

TABLE 8. TEMPORARY AND PERMANENT WETLAND IMPACTS FOR THE SIX MITIGATION SITES

| Mitigation Sites | Temporary Impacts Acres (Wetlands) | Permanent Impacts Acres (Wetlands) | |
|-------------------------------|---------------------------------------|---------------------------------------|-------|
| | | Linear Feet | Acres |
| Buxton Creek | 6.52 | 1,559.61 | 0.72 |
| Upper Caughdenoy Creek | 1.04 | 335.29 | 0.15 |
| Fish Creek | 1.64 | 622.11 | 0.28 |
| Sixmile Creek | 0.40 | 1,645.13 | 0.76 |
| Lower Caughdenoy | 1.51 | 358.11 | 0.16 |
| Oneida River | 13.32 | 10,020.09 | 4.60 |
| Totals | 24.42 | 14,540.34 | 6.68 |

5 Block 6d – Type of Structures and Fill Materials

Each Fab building will have several supporting buildings with various building types. The Fab building will be a combination of steel frame and concrete. Each Fab building is constructed with a concrete core (support columns, foundations, floors, shear walls) for structural support and vibration dissipation. The exterior of the building is surrounded by a steel frame and steel roof structure. Supporting buildings including Hazardous Production Materials (HPM), Central Utility Building (CUB), and Wastewater Treatment (WWT) will be steel framed or concrete buildings on poured foundations.

The administration building will be a steel framed building on poured foundations. A separate building will be dedicated to product testing (Probe) and will be a concrete structure to minimize/dissipate vibration. Parking will include a combination of surface parking and above-grade parking garages.

There will be approximately 9 million cubic yards of fill required to support the construction of the site. The fill type will depend on the structural requirements but will be composed of sand, stone, and non-organic soils.

For the proposed Rail Spur Site, construction would start in Q4 2025 and take approximately seven months, concluding in Q2 2026 with operations also starting in Q2 2026. Construction would require approximately 22 acres of tree clearing, approximately 24 acres of ground disturbance, the excavation and removal of 85,000 CY of soil, the import of 150,000 CY of fill, the laying of 4.3 acres of impervious surface, and the construction of approximately 7,300 sq. ft. of new building space. Micron would re-use excavated soil and fill material in construction of the site, and transport unusable or excess material for off-site reuse, to the greatest extent practicable, subject to relevant approvals and disposal site capacity. Should spoil be staged onsite, it will be placed in upland areas away from any wetland boundaries.

All construction staging and activity would be contained within the Rail Spur Site property boundaries except for those elements of the conveyance system that would extend east across Caughdenoy Road onto the Micron Campus. Site clearing and associated construction activities would not commence until Micron has obtained all applicable permits and approvals.

For the mitigation sites, there will not be any structures. The construction efforts to develop mitigation measures will consist of ecological restoration measures that rely on the movement of soil, and the installation of plant material.

6 Block 6e – Area of Excavation or Dredging

The FAB 1 and FAB 2 area is approximately 340 acres. More than half of the area is 5 to 15 feet below the proposed finished floor elevation for the FAB 1 and 2 buildings. The finished floor elevation for the production and support buildings is 400 feet above sea level (ASL) for calculation purposes. Some ancillary buildings are currently at 395 or 390 feet ASL. Preliminary cut/fill analysis modeling shows that total import fill for the FAB 1 and 2 areas is around 4 million cubic yards and around 9 million cubic yards in total for the project.

The cut of the site is expected to be minimal for organic topsoil removal. Minimal cuts that will occur are estimated at 5% of the Micron Campus. The volume of topsoil to be removed for FAB 1 and 2 areas is around 735,000 cubic yards and 1.5 million cubic yards for the entire site. Cut material will be leveraged to the extent possible for non-structural fill needs such as landscaping and will not reduce the quantity of imported fill for the site. Further description of the handling of site materials can be found in the attached **Preliminary Soil Materials Management Plan (Appendix U)** and **FAB 1 Cross Sectional Drawing**.

The source(s) of the fill material have not been identified at this time. Geotechnical Investigation continues to analyze if and how cut material can be leveraged to the extent possible on the project.

7 Block 6f – Tree Clearing

The Proposed Project will remove approximately 436 acres of wooded areas onsite. Micron is currently coordinating with the Department of Commerce and the USFWS with regards to appropriate mitigation with respect to the use of the wooded areas by the endangered Indiana Bat. Micron proposes to begin tree clearing upon the issuance of this permit and clearance by the USFWS. It is anticipated that the trees will be removed between November 2025 and February 2026.

During Phase 1a of the project, tree clearing of the site is expected to take approximately 4 months. Two separate crews will be working simultaneously to clear the portion of the Micron campus encompassed by the first phase of construction. One crew will begin in the Southwest corner of the parcel working their way to the North, clearing the building areas. The second crew will begin in the middle of the parcel and work their way East, clearing the staging area.

Trees will be cut down using a combination of feller bunchers and chainsaws, depending on size and type of tree. Stumps left behind will be removed by grinding or extracting. The project will be supported by a range of heavy equipment including skid steers, excavators, stump grinders and mulchers. All heavy equipment will be stored within a designated storage location onsite when not in use. Cleared trees will be mulched onsite. Until the appropriate end use of any mulched/wood chips is determined, wood chips may be stored onsite in upland areas well away from any wetland boundary. Any waste will be disposed of according to federal and state environmental regulations, including an Invasive Species Management Plan.

A generalized scope of work for the first portion of the tree clearing is as follows:

Scope of work:

Tree Clearing for Phase 1a includes felling, stump removal, mulching, and disposal of all debris

Stump removal:

- All Stumps will be ground down or removed as part as the clearing process

Equipment used:

- Feller bunchers and chainsaws for tree cutting
- Stump grinders for stump removal
- Mulchers for debris processing
- Skid steers and excavators for moving debris

Crews and work areas

- Two separate crews will be working simultaneously in different areas.
 - One crew will begin in the Southwest corner working their way to the North, clearing the building area.
 - The second crew will begin in the middle of the parcel and work their way East, clearing the staging area

Disposal

- All wood debris will be disposed of per environmental regulations including an Invasive Species Management Plan. Mulch may be repurposed onsite.

Estimated Timeline

- Phase 1a is estimated to take approximately 4 months complete

Equipment storage:

- Any equipment will be stored within a designated storage location onsite when it is not in use

Additional information, more specifically related to tree clearing and potential bat impacts can be found in the Biological Assessment, which is included as Appendix P. A full Tree Clearing Removal Plan will be provided prior to the start of construction, but further information can be found in the attached **Preliminary Tree Clearing Plan (Appendix W)** and **Invasive Species Management Plan (Appendix V)**.

8 Block 6g – Work Methods and Types of Equipment to be Used

The following table summarizes work methods and types of equipment expected to be used in each construction phase for the construction of each individual FAB. Construction activities will be completed pursuant to the SWPPP.

TABLE 9: EQUIPMENT BY CONSTRUCTION PHASE

Fab1

| Phase | General Activity | Duration in Months | Calendar Time Period | Mobile Equipment (Max Vehicles/ Day) to/from site | On Site Utilized Equipment |
|-------|--|--------------------|----------------------|---|--|
| 1 | Site Establishment / Mass Excavation | 6 | 11/25 – 5/26 | 550 - (Assumes ~1.2M Cu Yds) | Dump Trucks (40) Motor Graders (3) Trenchers (1) Crusher/Screener (1) Bulldozers / Loaders (8) Scrapers (3) Excavators (6) |
| 2 | Underground Utilities start of foundation work | 6 | 3/26 – 9/26 | 550 | Dump Trucks (20) Trenchers (1) Pile drivers (3) Gas powered generators (10) Gas powered compressors (10) Crusher/Screener (1) Mobile lifts (10) Bulldozers / Loaders (8) Drilling Rigs for caisson (10) Excavators (6) Welders (8) Conveyer system (1) |
| 2 | Foundations | 8 | 8/26 – 4/27 | 250 | Concrete Batch Plant (1) Excavators (6) Drilling Rigs for caisson (10) Gas powered generators (10) Gas powered compressors (10) Conveyer system (1) Mobile lifts (10) Concrete Trucks (10) Dump Trucks (15) Welders (8) Pile drivers (3) Bulldozers / Loaders (8) Tower Cranes (6) |
| 3 | Building Erection | 18 | 12/26 – 6/28 | 200 | Concrete Batch Plant (1) Excavators (4) Mobile Crawler Cranes (10) Compressors (10) Welders (8) Mobile lifts (10) Concrete Trucks (15) Dump Trucks (10) Generators (10) Tower Cranes (6) Conveyer system (1) |
| 4 | Final Site Work | 5 | 4/28 – 9/28 | 100 | Concrete Batch Plant (1) Loaders (2) Paver Machines (2) Conveyer system (1) Concrete Trucks (4) Dump Trucks (5) Asphalt Rollers (2) |

FAB2

| Phase | General Activity | Duration in Months | Calendar Time Period | Mobile Equipment (Max Vehicles/Day) | Utilized Equipment |
|-------|--------------------------------------|--------------------|----------------------|-------------------------------------|--|
| 1 | Site Establishment / Mass Excavation | 4 | 9/28 – 1/29 | 200 | Dump Trucks (40) Motor Graders (3) Trenchers (1) Conveyer system (1) Crusher/Screenner (1) Bulldozers / Loaders (8) Scrapers (3) Excavators (6) |
| 2 | Underground Utilities | 3 | 12/28-2/29 | 200 | Dump Trucks (20) Trenchers (1) Pile drivers (3) Gas powered generators (10) Gas powered compressors (10) Mobile lifts (10) Crusher/Screenner (1) Bulldozers / Loaders (8) Drilling Rigs for caisson (10) Excavators (6) Welders (8) Conveyer system (1) |
| 2 | Foundations | 8 | 1/29-8/29 | 200 | Concrete Batch Plant (1) Excavators (6) Drilling Rigs for caisson (10) Gas powered generators (10) Gas powered compressors (10) Conveyer system (1) Mobile lifts (10) Concrete Trucks (10) Dump Trucks (15) Welders (8) Pile drivers (3) Bulldozers / Loaders (8) Tower Cranes (6) |
| 3 | Building Erection | 18 | 4/29- 11/30 | 200 | Concrete Batch Plant (1) Excavators (4) Mobile Crawler Cranes (10) Compressors (10) Welders (8) Mobile lifts (10) Concrete Trucks (15) Dump Trucks (10) Generators (10) Tower Cranes (6) Conveyer system (1) |
| 4 | Final Site Work | 5 | 9/30- 2/31 | 100 | Concrete Batch Plant (1) Loaders (2) Paver Machines (2) Conveyer system (1) Concrete Trucks (4) Dump Trucks (5) Asphalt Rollers (2) |

FAB3

| Phase | General Activity | Duration in Months | Calendar Time Period | Mobile Equipment (Max Vehicles/Day) | Utilized Equipment | |
|-------|--------------------------------------|--------------------|----------------------|-------------------------------------|---|---|
| 1 | Site Establishment / Mass Excavation | 5 | 9/33 – 2/34 | 200 | Dump Trucks (40) Motor Graders (3) Trenchers (1) Conveyer system (1) Crusher/Screener (1) | Bulldozers / Loaders (8) Scrapers (3) Excavators (6) |
| 2 | Underground Utilities | 3 | 12/33– 3/34 | 200 | Dump Trucks (20) Trenchers (1) Pile drivers (3) Gas powered generators (10) Gas powered compressors (10) Mobile lifts (10) Crusher/Screener (1) | Bulldozers / Loaders (8) Drilling Rigs for caisson (10) Excavators (6) Welders (8) Conveyer system (1) |
| 2 | Foundations | 8 | 1/34 – 8/34 | 200 | Concrete Batch Plant (1) Excavators (6) Drilling Rigs for caisson (10) Gas powered generators (10) Gas powered compressors (10) Conveyer system (1) Mobile lifts (10) | Concrete Trucks (10) Dump Trucks (15) Welders (8) Pile drivers (3) Bulldozers / Loaders (8) Tower Cranes (6) |
| 3 | Building Erection | 18 | 5/34 - 11/35 | 200 | Concrete Batch Plant (1) Excavators (4) Mobile Crawler Cranes (10) Compressors (10) Welders (8) Mobile lifts (10) | Concrete Trucks (15) Dump Trucks (10) Generators (10) Tower Cranes (6) Conveyer system (1) |
| 4 | Final Site Work | 5 | 10/35- 3/36 | 100 | Concrete Batch Plant (1) Loaders (2) Paver Machines (2) Conveyer system (1) | Concrete Trucks (4) Dump Trucks (5) Asphalt Rollers (2) |

FAB4

| Phase | General Activity | Duration in Months | Calendar Time Period | Mobile Equipment (Max Vehicles/Day) | Dump Trucks (40) | |
|-------|--------------------------------------|--------------------|----------------------|-------------------------------------|---|---|
| 1 | Site Establishment / Mass Excavation | 5 | 8/39 – 1/40 | 200 | Dump Trucks (40) Motor Graders (3) Trenchers (1) Conveyer system (1) Crusher/Screener (1) | Bulldozers / Loaders (8) Scrapers (3) Excavators (6) |
| 2 | Underground Utilities | 3 | 12/39-3/40 | 200 | Dump Trucks (20) Trenchers (1) Pile drivers (3) Gas powered generators (10) Gas powered compressors (10) Mobile lifts (10) Crusher/Screener (1) | Bulldozers / Loaders (8) Drilling Rigs for caisson (10) Excavators (6) Welders (8) Conveyer system (1) |
| 2 | Foundations | 8 | 1/40-9/40 | 200 | Concrete Batch Plant (1) Excavators (6) Drilling Rigs for caisson (10) Gas powered generators (10) Gas powered compressors (10) Conveyer system (1) Mobile lifts (10) | Concrete Trucks (10) Dump Trucks (15) Welders (8) Pile drivers (3) Bulldozers / Loaders (8) Tower Cranes (6) |
| 3 | Building Erection | 18 | 6/40- 12/41 | 200 | Concrete Batch Plant (1) Excavators (4) Mobile Crawler Cranes (10) Compressors (10) Welders (8) Mobile lifts (10) | Concrete Trucks (15) Dump Trucks (10) Generators (10) Tower Cranes (6) Conveyer system (1) |
| | Final Site Work | 5 | 11/41- 4/42 | 100 | Concrete Batch Plant (1) Loaders (2) Paver Machines (2) Conveyer system (1) | Concrete Trucks (4) Dump Trucks (5) Asphalt Rollers (2) |

For the mitigation sites, there will not be any structures. The construction efforts to develop mitigation measures will consist of ecological restoration measures that rely on the movement of soil, and the installation of plant material.

For the mitigation sites, wetland construction will largely consist of removing or disabling existing drainage tiles, filling, blocking, and disabling ditches, restoring natural wetland basins and rims, restoring microtopography, and loosening compacted soil. These methods will ensure the target hydrology is met and ensure a diverse community of hydrophytic vegetation.

Complete stream channel grading per construction drawings included in the Buxton and Fish Creek plans, generally working from the downstream end to upstream end. Flow shall not be directed into the proposed channel until the proposed channel is stabilized.

Equipment operators will include local construction and farming personnel, including those currently farming the mitigation sites, and TWT staff. The on-site experience of farming and local knowledge of the operators will maximize productivity and work quality. Prior to construction, work areas will be mowed and/or crops harvested to increase visibility. A parking and staging area for heavy equipment and vehicles will be constructed or designated for each mitigation site. Work will be conducted pursuant to the site-specific SWPPPs. TWT staff will be onsite every day to direct and oversee construction. Should any tree removal be necessary, it will only occur after November 1st.

9 Block 6h – Planned Sequence of Activities

Each FAB building will be constructed in approximately four steps. Each step is described below identifying the major construction equipment to be used in each step (see **Table 9**).

Step 1

Step 1 work will include site establishment and mass excavation. Site establishment will include the establishment of erosion and sediment control measures, site clearing and grubbing, establishing site entry points for construction, and site construction roads, and the installation of construction power and other site construction infrastructure. Mass excavation will include rough grading of the site with cut/fill activities that establish rough building grades for the Fab and support buildings as well as the beginning of the installation of the stormwater management system including the rough grading for the stormwater ponds and the supporting infrastructure. It is expected that this phase would take about 6 months.

Step 2

Step 2 work will include installation of underground utilities within the footprint of the buildings, installing foundation piers within the Fab footprints and foundations for the support buildings. Continued work for the stormwater management system including underground piping and supporting infrastructure. It is expected that this phase will take about 11 months.

Step 3

Step 3 work will include erection of the Fab and supporting structures including all structural and architectural components of the buildings and installation of all mechanical/electrical/plumbing (MEP) services to the buildings. Continued site work will include the completion of the stormwater management system, final grading for roads, installation of sidewalks and exterior lighting. It is expected that this phase will take about 18 months.

Step 4

Step 4 work will include installing production equipment, final site grading, paving, and landscaping. It is expected that this phase would take about 6 months.

For the proposed Rail Spur Site, construction would start in Q4 2025 and take approximately seven months, concluding in Q2 2026 with operations also starting in Q2 2026. Construction would require approximately 22 acres of tree clearing, approximately 24 acres of ground disturbance, the excavation and removal of 85,000 CY of soil, the import of 150,000 CY of fill, the laying of 4.3 acres of impervious surface, and the construction of approximately 7,300 sq. ft. of new building space. Micron would re-use excavated soil and fill material in construction of the

site, and transport unusable or excess material for off-site reuse, to the greatest extent practicable, subject to relevant approvals and disposal site capacity. All construction staging and activity would be contained within the Rail Spur Site property boundaries except for those elements of the conveyance system that would extend east across Caughdenoy Road onto the Micron Campus. Site clearing and associated construction activities would not commence until Micron has obtained all applicable permits and approvals.

For the mitigation sites, there will not be any structures. The construction efforts to develop mitigation measures will consist of ecological restoration measures that rely on the movement of soil, and the installation of plant material.

Construction will occur in phases due to the size of the Project; the wetland and stream mitigation effort will follow a similar approach consistent with regulatory requirements (see 33 C.F.R. § 332.3(m) "Implementation of the compensatory mitigation project shall be, to the maximum extent practicable, in advance of or concurrent with the activity causing the authorized impacts."). Site preparation, grading, and planting of each mitigation site is anticipated to be completed concurrently with the construction of Phase 1 of the Micron Project. The timing of the proposed wetland mitigation site construction/development should be completed within six (6) to seven (7) years of permit issuance and within the 10-year construction window available for mitigation before Micron Phase 2 construction begins. All mitigation will be completed before the Phase 2 construction begins. The following is an approximate timing for the individual wetland/stream mitigation sites:

- 2026 Buxton Creek – *wetland/stream complex*
- 2026 Oneida River – *wetlands*
- 2026 Lower Caughdenoy Creek - *wetlands*
- 2027 Fish Creek – *wetland/stream complex*
- 2028 Upper Caughdenoy Creek - *wetlands*
- 2029 Sixmile Creek - *wetlands*
- 2029+ Potential for other additional site(s) or additional work on above sites

Staggered mitigation site construction such as this is preferable for the large project size as it allows for an adaptive management framework, ensuring that lessons learned from earlier phases can be applied to later ones, improving overall ecological success. Phased construction can better align with seasonal planting windows and monitoring requirements, ultimately enhancing the long-term viability of mitigation efforts.

Sequencing within each construction site follows the pattern shown in **Table 8**. Most sites will be constructed in one year (Onieda is expected to take more than one year) with the following spring dedicated to planting that will initiate the 10-year monitoring and maintenance window to meet success criteria.

Table 10. Example of construction sequence for one site*

| Activity | Timing | Phase |
|--|---------------|---|
| Work area layout and preparation, SWPPP implementation. | Spring Year 1 | Pre-construction |
| Invasive species management. | Spring Year 1 | Pre-construction |
| Groundwater dam installation, erosion control seeding. | Summer Year 1 | Construction Phase I: Earthwork |
| Final grading to develop microtopography, loosening of soil as necessary, placing woody debris | Summer Year 1 | Construction Phase II: Topography Enhancement |
| Seeding, planting, and mulching per planting plan and SWPPP | Spring Year 2 | Construction Phase III: Seeding & Planting |
| Removal of construction materials. | Spring Year 2 | Post-construction |

*This table provides the typical sequence for Buxton Creek, which is anticipated to be the first site developed. Each subsequent site will follow the same sequence on a yearly schedule.

10 Block 6i – Pollution Control Methods

The most recent version of General Permit for Discharges of Stormwater from Construction Activities is found at 9VAC25-880-70, effective July 1, 2019. The general permit includes provisions for development of a Stormwater Pollution Prevention Plan (SWPPP) to maximize the potential benefits of pollution prevention and sediment and erosion control measures at construction sites. The NYSDEC has issued a State Pollution Discharge Elimination System (SPDES) General Permit for Stormwater Discharges for Construction (GP- 0-25-001), effective January 29, 2025, to which construction activities onsite will adhere. The SWPPP is subject to the review and approval by both the Town of Clay and the NYSDEC.

Development, implementation, and maintenance of the SWPPP will provide the construction manager, general contractor and its subcontractors with the framework for reducing soil erosion and minimizing pollutants in stormwater during construction of the Micron Campus and Rail Spur. The SWPPP and associated design practices will meet the performance criteria in the New York State Stormwater Management Design Manual ("Design Manual"), dated January 2024. Erosion and sediment control (ESC) facilities will be installed and maintained throughout construction pursuant to the *New York State Standards and Specifications for Erosion and Sediment Control (Blue Book)*, November, 2016 to minimize erosion and off-site sedimentation.

Required space for each phase will include all site support, utility facilities and the construction logistics spaces including trailer, staging, and craft parking yards. The Proposed Project will be submitted in a series of packages through phased construction that will amend the SWPPP, which will identify the required control measures that must be followed during each phase. The SWPPP will be submitted through a Notice of Intent to the NYSDEC with additional Notice of Modifications through phased construction. The Civil construction package, including stormwater drawings and the SWPPP will be submitted to the Town of Clay Planning Department and Planning Board in accordance with Site Plan Review and the Town of Clay municipal separate storm sewer system (MS4). In addition, the SWPPP will identify responsible personnel and duties required to implement and maintain the SWPPP, including the Construction Manager, General and sub-contractors and Micron personnel.

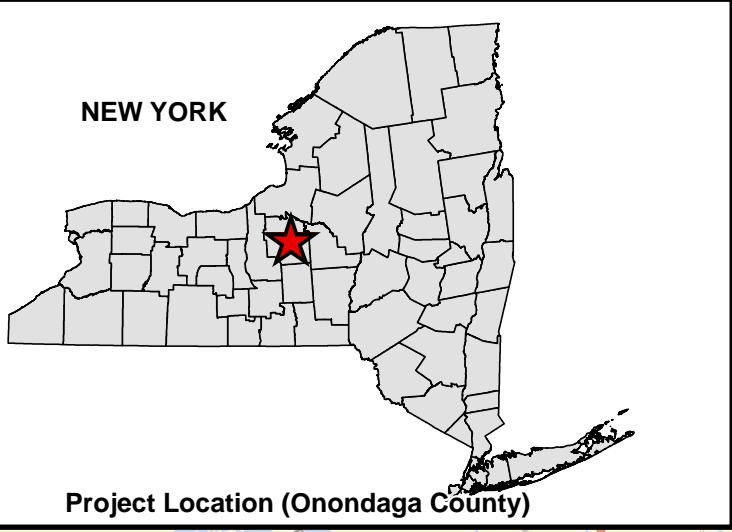
11 Block 6j – Erosion and Silt Control Methods

For the Micron Campus and Rail Spur, development, implementation, and maintenance of the erosion and sediment control (ESC) methods in the Construction SWPPP will provide the General Contractor and its subcontractors with the framework for reducing soil erosion and minimizing pollutants in stormwater during construction of the FABs and the other buildings, utilities and other structures associated with the Proposed Project. Civil Construction plans will be submitted in a series of packages including a SWPPP document that will identify the required control measures for each structure constructed on the Micron Campus. In addition, the SWPPP will identify responsible personnel and duties required to implement and maintain the SWPPP, including the Construction Manager, General Contractor and subcontractors and Micron personnel. All SWPPP inspectors will be properly trained and certified in accordance with NYSDEC regulations. For the mitigation sites, all erosion and sediment control practices will be installed as specified by the sites' Stormwater Pollution Prevention Plan (SWPPP) prior to any ground disturbance. The limits of disturbance and the spoil deposition areas will be clearly marked to ensure ground disturbances are minimized. Temporary ESC measures in and around mitigation sites will be properly maintained at all times throughout construction. Spoil and sediment collected will be removed and placed upland in a manner that prevents erosion and transport to a waterway or wetland. All ESC devices and structures will be removed once adequate stabilization is achieved.

12 Block 6k – Alternatives to Avoid Regulated Areas

A 404(b)(1) analysis is attached as **Appendix M**. A NYSDEC Issuance Weighing Standards Report is attached as **Appendix X**. The 404(b)(1) evaluates the various alternatives considered for the Micron Campus layout with respect to potential impacts to wetlands and WOTUS. Approximately 232.5 acres of jurisdictional wetlands will be avoided on the site, most of which are located north of the transmission line right-of-way.

Figures

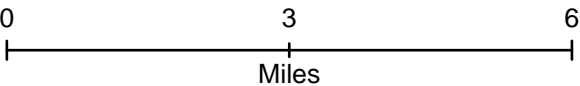


Legend

Site Boundary

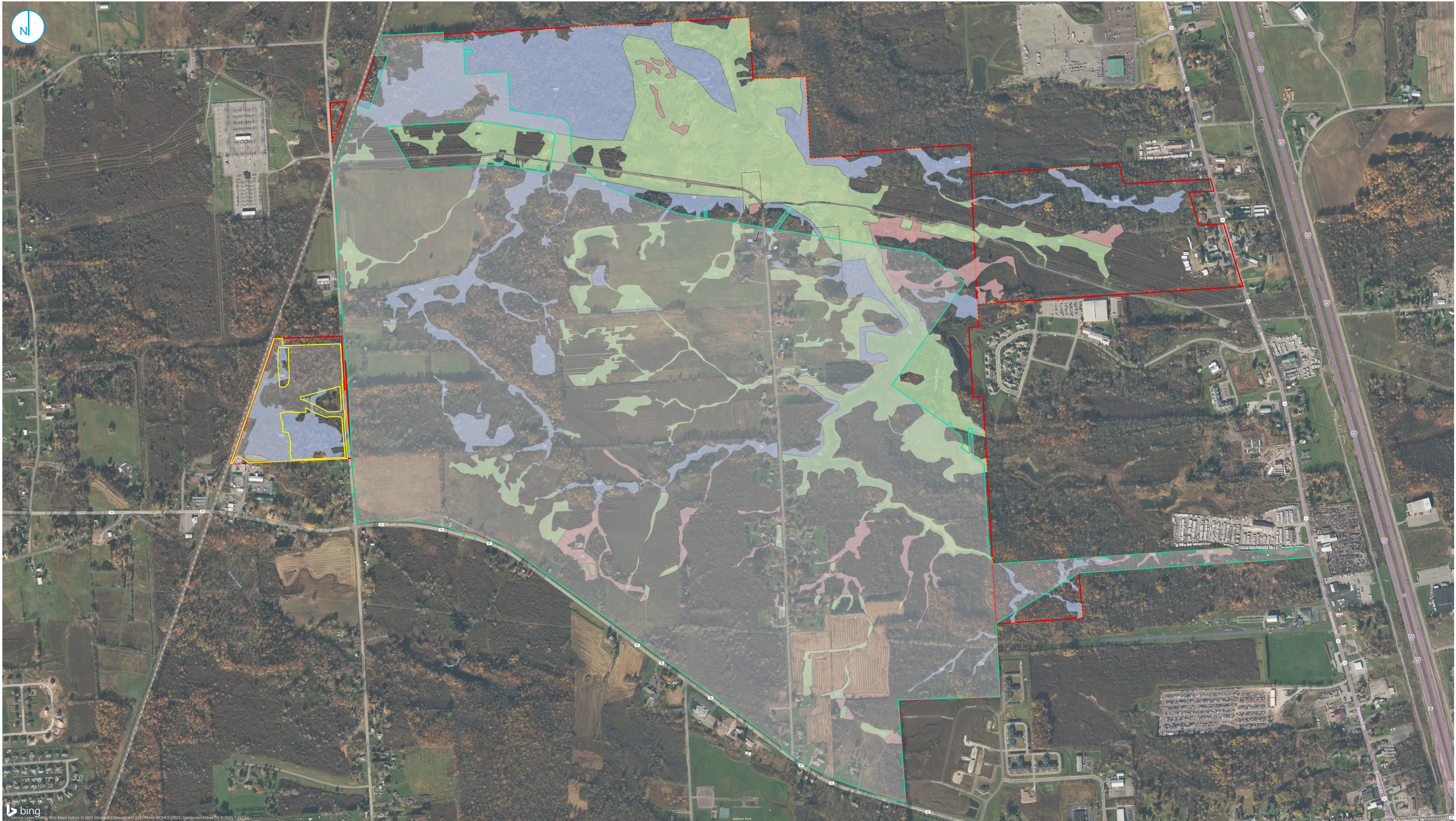
Approximate Center of Site:

43.190494, -76.151430
State Plane NY:
935,387.468 E,
1,162,799.968 N Feet



FINAL JPA
FIGURE 1 - SITE LOCATION MAP
TOWN OF CLAY, ONONDAGA COUNTY, NEW YORK

| | | | | | | | |
|-------------|----|-------|------------|-------------|--------------|------------|---|
| CHECKED BY: | PP | DATE: | 01/28/2025 | PROJECT NO: | 31000524.001 | FIGURE NO: | 1 |
|-------------|----|-------|------------|-------------|--------------|------------|---|



- Wetland Extends Beyond Site Boundary
- USACE Jurisdictional Wetland Cover Type
- PEM
 - PFO
 - POW
 - PSS
 - PUB
- Main Site LOD (12/16/24)
- Rail Spur LOD (01/24/25)
- Site Boundary / Limits of JD Request

Notes

- W6a represents an UPL/WET mosaic area (15% WET).
- Jurisdiction based on USACE determination letters dated February 12, 2024, May 17, 2024, and October 11, 2024.

LOD IMPACTS TO USACE JURISDICTIONAL WETLANDS COVER TYPES (COWARDIN ET AL. 1979)

Micron Semiconductor Fabrication Facility
Clay, New York

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY



FIGURE 02

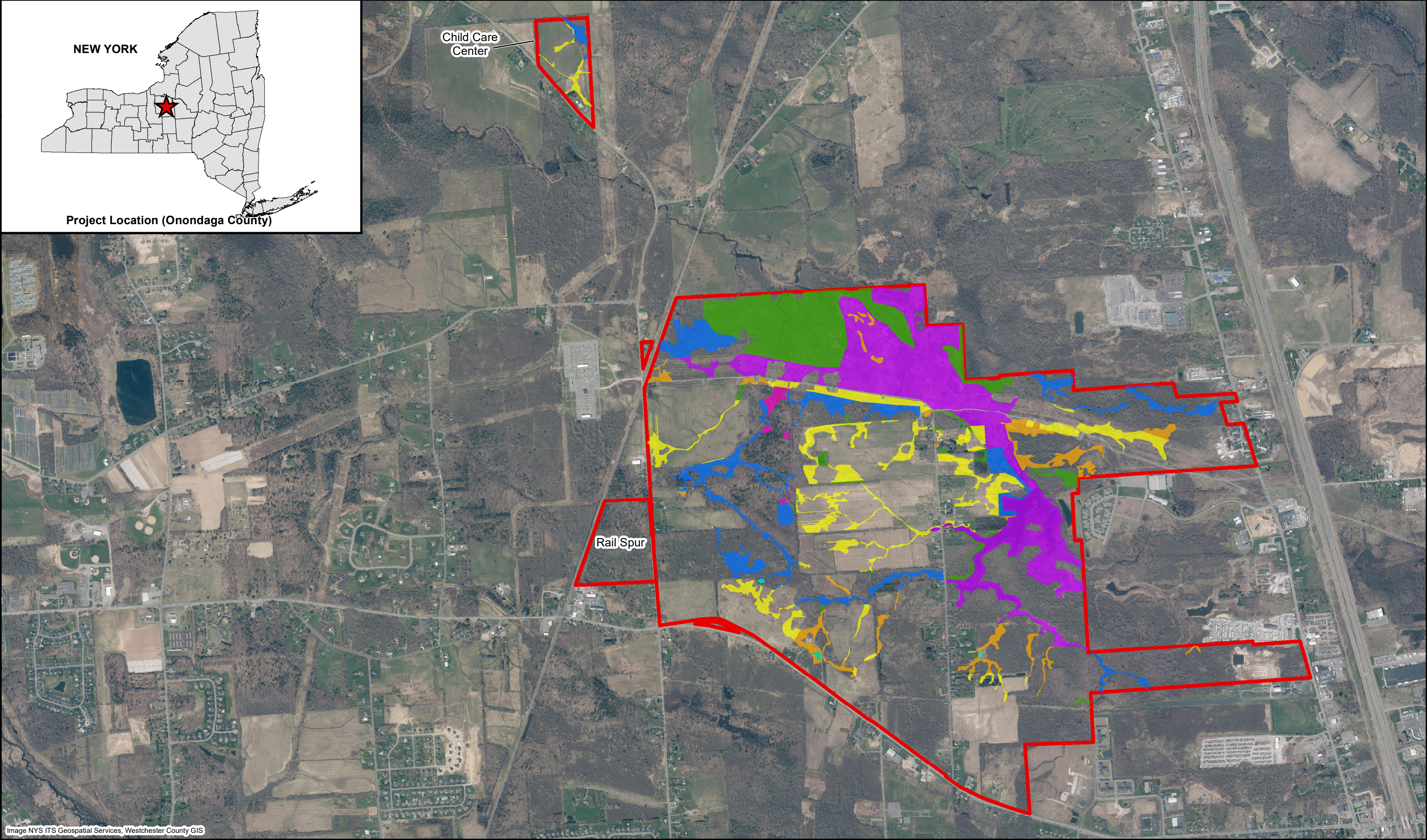
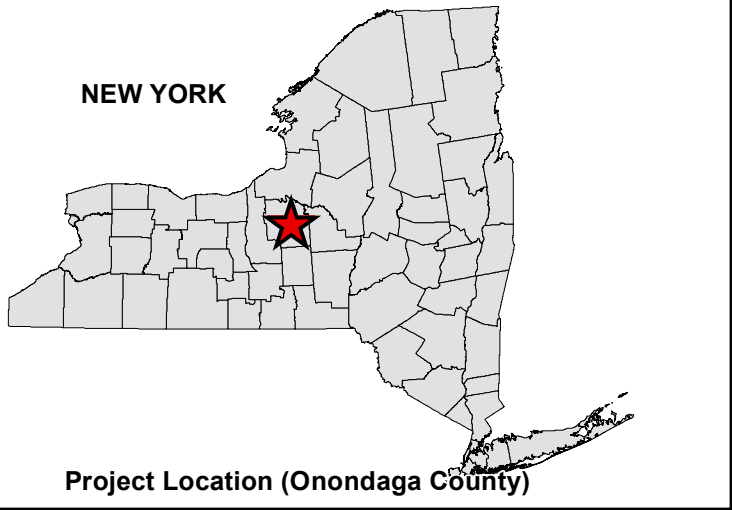


Image NYS ITS Geospatial Services, Westchester County GIS



Legend

Site Boundary

Delineated Wetlands - Edinger Type

Deep Emergent Marsh

Farm Pond/Artificial Pond

Floodplain Forest

Hemlock-Hardwood Swamp

Red Maple-Hardwood Swamp

Shallow Emergent Marsh

Shrub Swamp

N



0

2,200

4,400

Feet

FINAL JPA
FIGURE 4 - NYSDEC JURISDICTIONAL WETLANDS MAP
TOWN OF CLAY, ONONDAGA COUNTY, NEW YORK

CHECKED BY:

PP

DATE:

01/28/2025

PROJECT NO:

31000524.001

FIGURE NO:

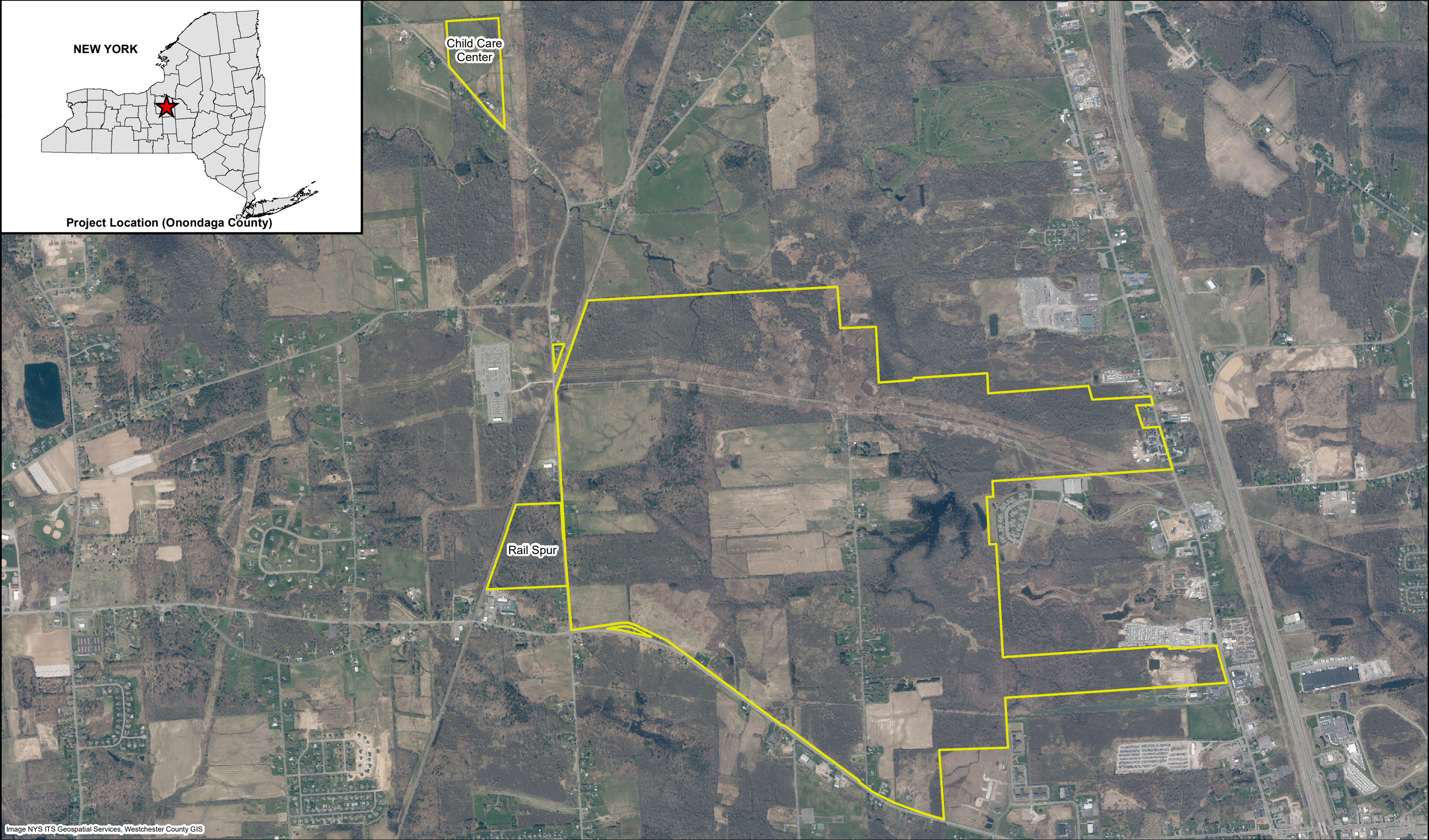
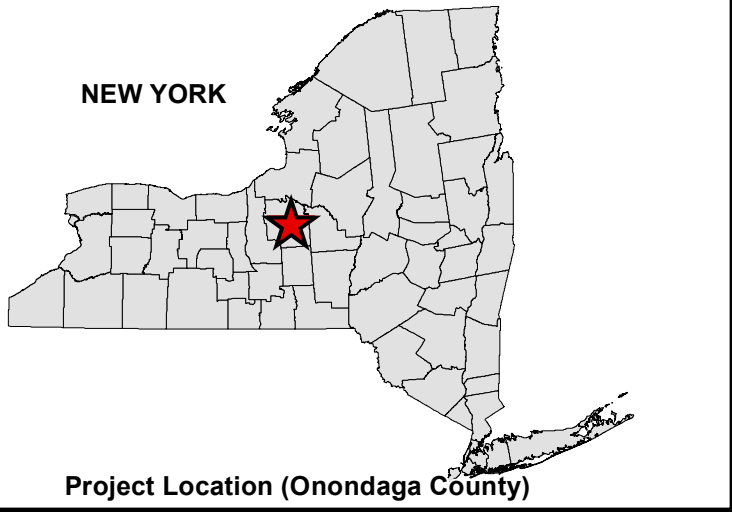


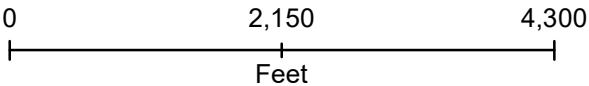
Image NYS ITS Geospatial Services, Westchester County GIS



Legend

 Site Boundary

Approximate Center of Site:
43.190494, -76.151430
State Plane NY:
935,387.468 E,
1,162,799.968 N Feet



FINAL JPA
FIGURE 5 - AERIAL PHOTO MAP
TOWN OF CLAY, ONONDAGA COUNTY, NEW YORK

| | | | | | | | |
|-------------|----|-------|------------|-------------|--------------|------------|---|
| CHECKED BY: | PP | DATE: | 03/15/2024 | PROJECT NO: | 31000524.001 | FIGURE NO: | 5 |
|-------------|----|-------|------------|-------------|--------------|------------|---|

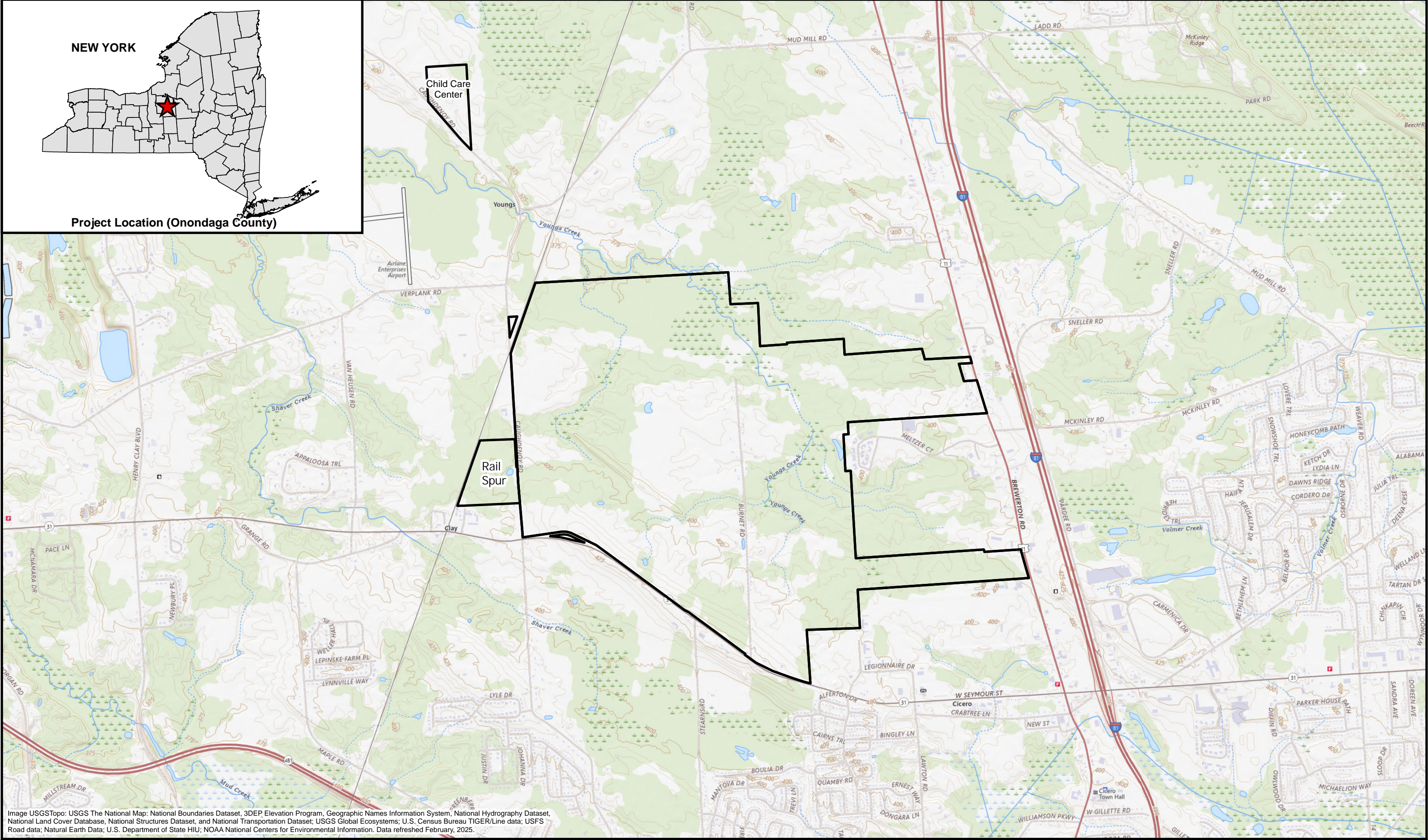


Image USGSTopo: USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road data; Natural Earth Data; U.S. Department of State HIU; NOAA National Centers for Environmental Information. Data refreshed February, 2025.



Legend



Site Boundary

Approximate Center of Site:

43.190494, -76.151430

State Plane NY:

935,387.468 E,

1,162,799.968 N Feet

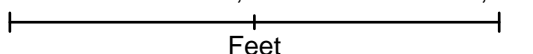
N



0

2,500

5,000



Feet

FINAL JPA

FIGURE 6 - USGS MAP

TOWN OF CLAY, ONONDAGA COUNTY, NEW YORK

CHECKED
BY:

PP

DATE:

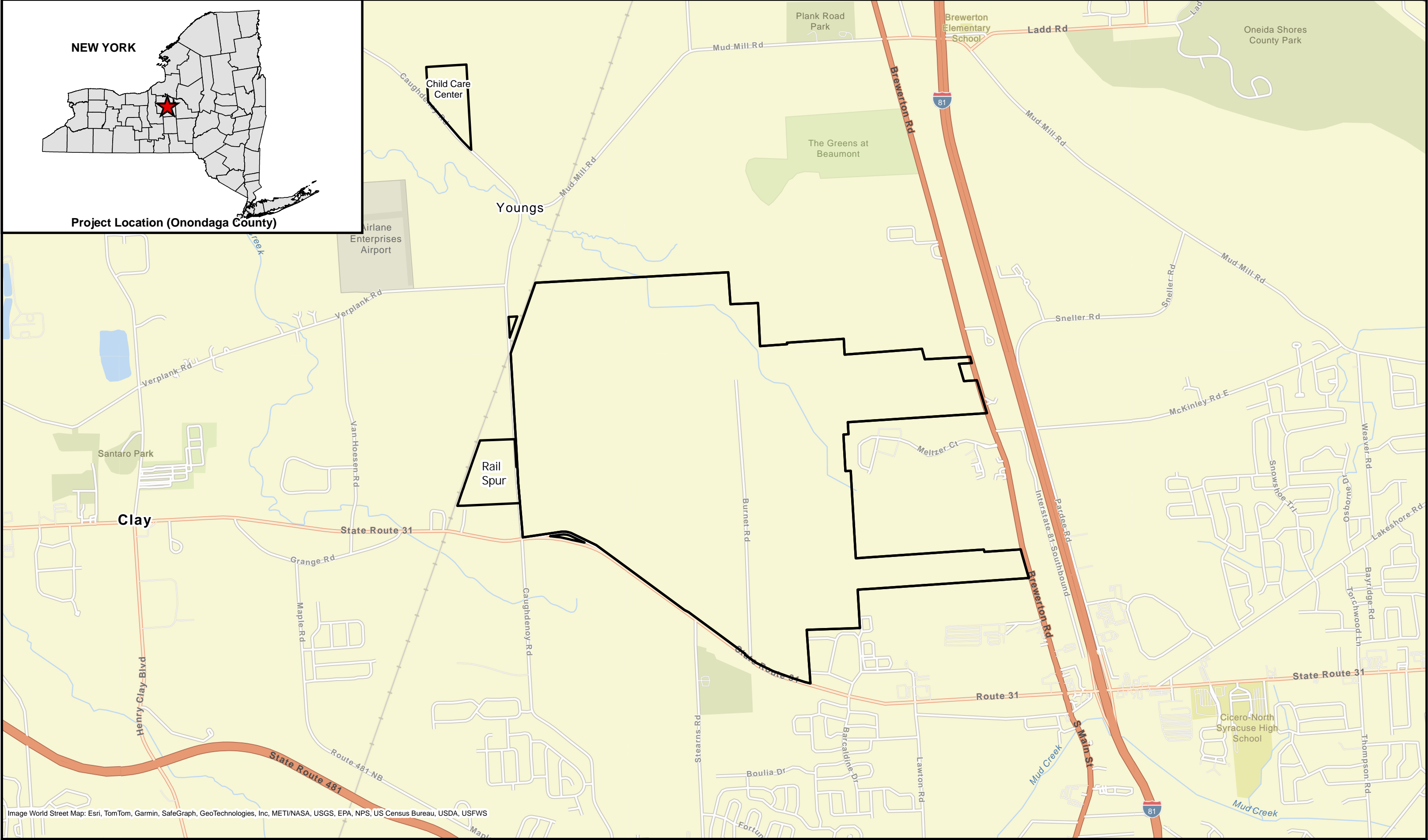
03/15/2024


PROJECT NO:

31000524.001


FIGURE NO:

6






Legend

 Site Boundary

Approximate Center of Site:
43.190494, -76.151430
State Plane NY:
935,387.468 E,
1,162,799.968 N Feet

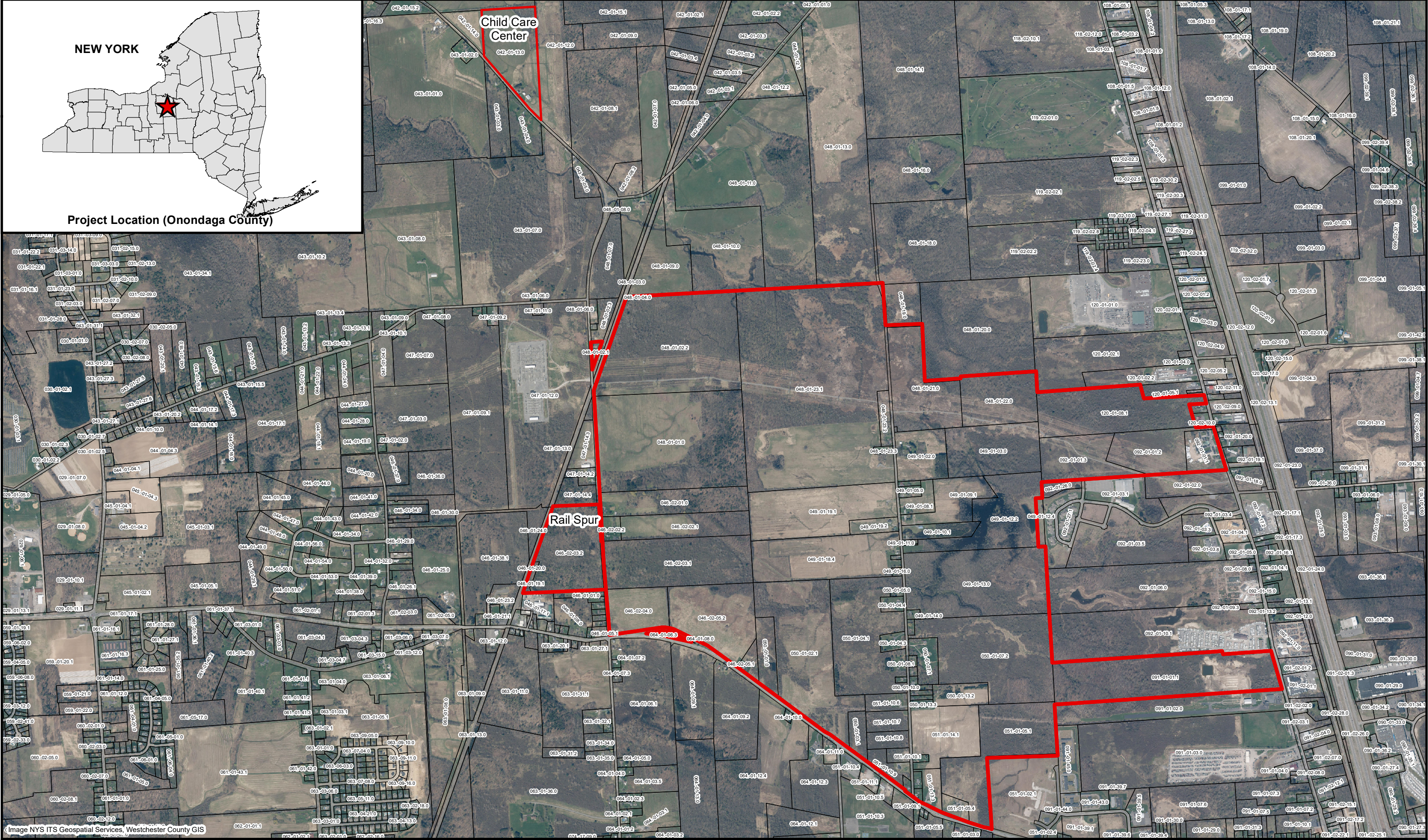
N




0 2,500 5,000
Feet



FINAL JPA
FIGURE 7 - STREET MAP
TOWN OF CLAY, ONONDAGA COUNTY, NEW YORK


| | | | | | | | |
|-------------|----|-------|------------|-------------|--------------|------------|---|
| CHECKED BY: | PP | DATE: | 03/15/2024 | PROJECT NO: | 31000524.001 | FIGURE NO: | 7 |
|-------------|----|-------|------------|-------------|--------------|------------|---|





Legend

-  Site Boundary
-  Tax Parcel



02,0004,000
Feet

CHECKED BY:

PP

DATE:

03/15/2024

PROJECT NO:

31000524.001

FIGURE NO:

8

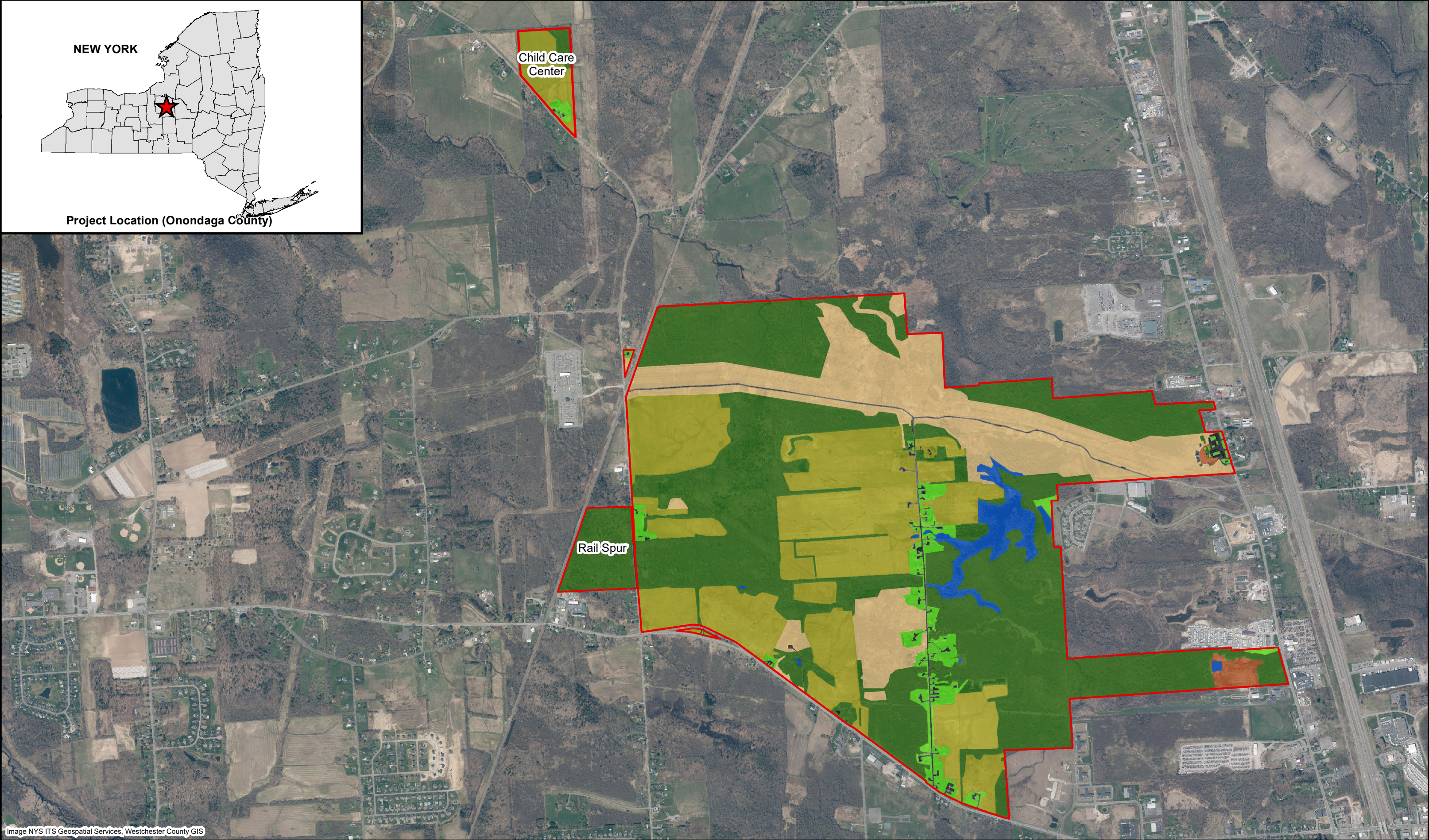
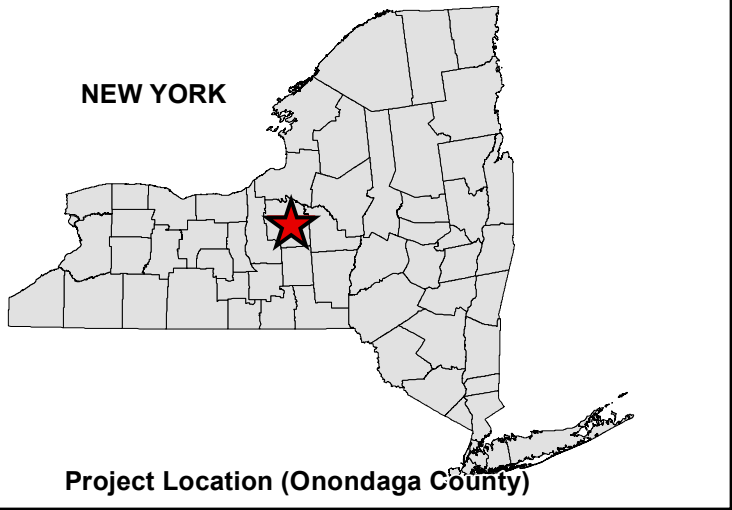


Image NYS ITS Geospatial Services, Westchester County GIS



Legend

- | | | |
|---------------|------------|-------|
| Site Boundary | Dirt | Water |
| Agriculture | Impervious | Woods |
| Brush/Shrub | Grass/Lawn | |



0 2,150 4,300
Feet

FINAL JPA
FIGURE 9 - LAND USE MAP
TOWN OF CLAY, ONONDAGA COUNTY, NEW YORK

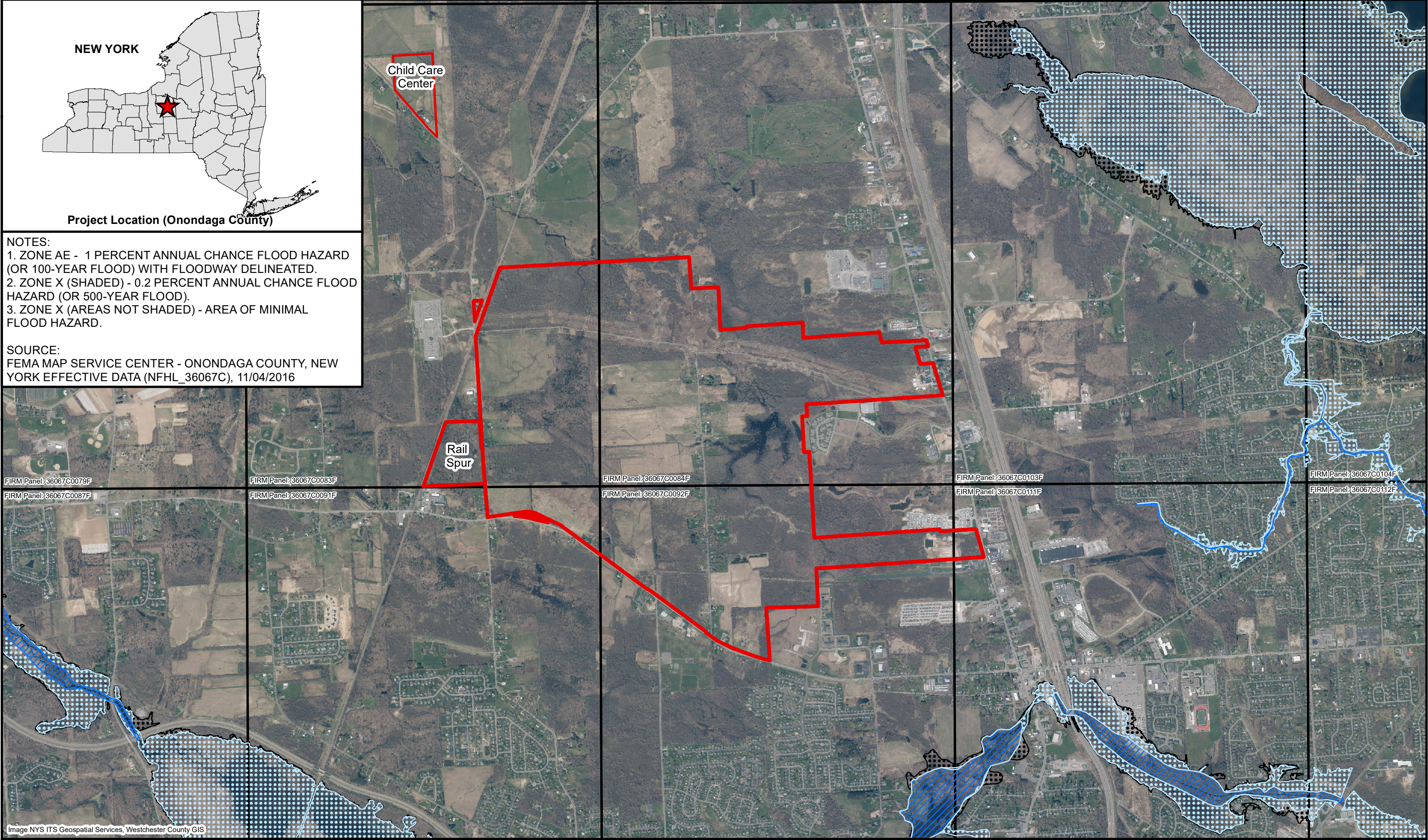
| | | | | | | | |
|-------------|----|-------|------------|-------------|--------------|------------|---|
| CHECKED BY: | PP | DATE: | 03/15/2024 | PROJECT NO: | 31000524.001 | FIGURE NO: | 9 |
|-------------|----|-------|------------|-------------|--------------|------------|---|

NEW YORK

Project Location (Onondaga County)

NOTES:
1. ZONE AE - 1 PERCENT ANNUAL CHANCE FLOOD HAZARD (OR 100-YEAR FLOOD) WITH FLOODWAY DELINEATED.
2. ZONE X (SHADED) - 0.2 PERCENT ANNUAL CHANCE FLOOD HAZARD (OR 500-YEAR FLOOD).
3. ZONE X (AREAS NOT SHADED) - AREA OF MINIMAL FLOOD HAZARD.

SOURCE:
FEMA MAP SERVICE CENTER - ONONDAGA COUNTY, NEW YORK EFFECTIVE DATA (NFHL_36067C), 11/04/2016



Legend

FLOODWAY

Site Boundary

ZONE AE

FIRM Panel Boundary

ZONE X

N

0

3,000

6,000

Feet

FIGURE 10 - FEMA MAP

FINAL JPA

TOWN OF CLAY, ONONDAGA COUNTY, NEW YORK

CHECKED BY: PP

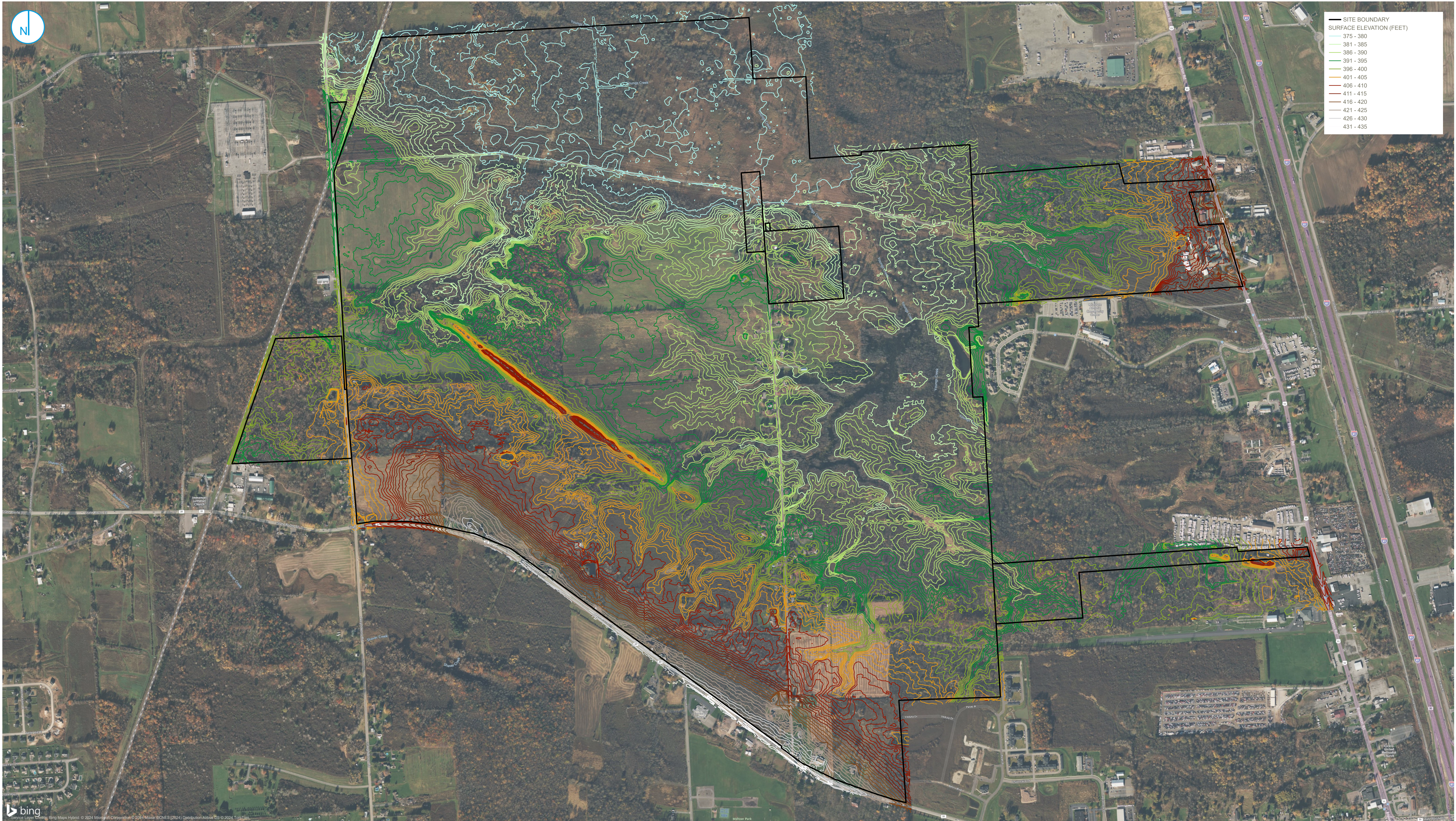
DATE: 03/15/2024

PROJECT NO: 31000524.001

FIGURE NO: 10

C:\Users\SSOULE\OneDrive - Ramboll\Desktop\Projects\Micron\PHOTO\White_Pine_Micron_Shelby\White_Pine_Micron_Shelby\Figure_14-Topo_Survey

PROJECT: 1950100716-001 | DATED: 5/22/2024 | DESIGNER: SSOULE



Notes

- Topographic contour interval is 1 foot.
- Surveyed by Thew Associates on 4/20/2023 and 6/15/2023.

CURRENT CONDITIONS TOPOGRAPHIC SURVEY

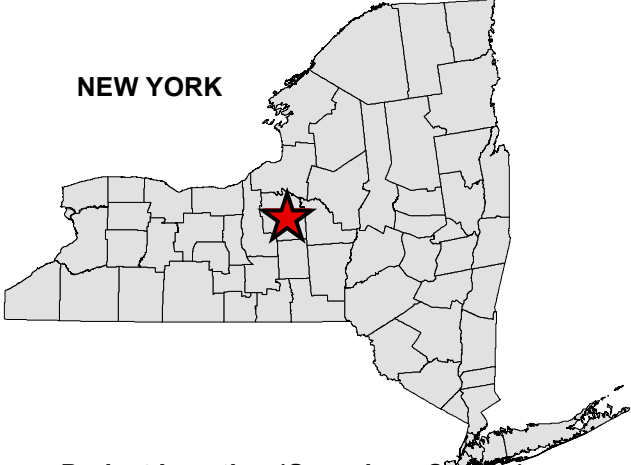
FIGURE 11

Micron Semiconductor Fabrication Facility
Clay, New York

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY



NEW YORK



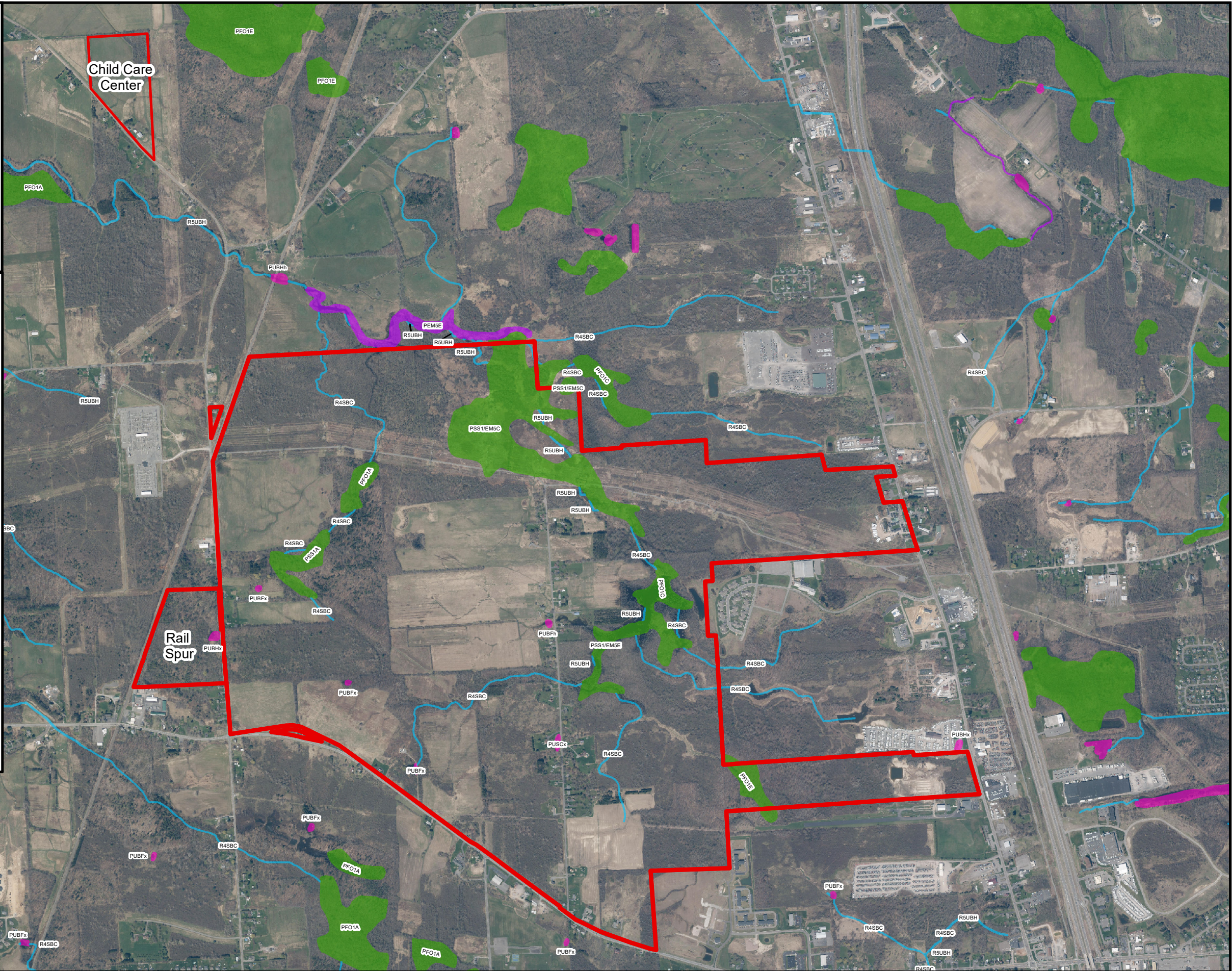
Project Location (Onondaga County)


- NOTES:
- 1. PEM5E - Palustrine, Emergent, Phragmites australis, Seasonally Flooded/Saturated
 - 2. PFO1A - Palustrine, Forested, Broad-Leaved Deciduous, Temporary Flooded
 - 3. PFO1C - Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded
 - 4. PFO1E - Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded/Saturated
 - 5. PSS1/EM5C - Palustrine, Scrub-Shrub, Broad-Leaved Deciduous/Emergent, Phragmites australis, SeasonallyFlooded
 - 6. PSS1/EM5E - Palustrine, Scrub-Shrub, Broad-Leaved Deciduous/Emergent, Phragmites australis, Seasonally Flooded/Saturated
 - 7. PSS1A - Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Temporary Flooded
 - 8. PUBFh - Palustrine, Unconsolidated Bottom, Semipermanently Flooded, Diked/Impounded
 - 9. PUBFx - Palustrine, Unconsolidated Bottom, Semipermanently Flooded, Excavated
 - 10. PUBHx - Palustrine, Unconsolidated Bottom, Permanently Flooded, Excavated
 - 11. PUSCx - Palustrine, Unconsolidated Shore, Seasonally Flooded, Excavated
 - 12. R4SBC - Riverine, Intermittent, Streambed, Seasonally Flooded
 - 13. R5UBH - Riverine, Unknown Perennial, Unconsolidated Bottom, Permanently Flooded

SOURCE:
U.S. Fish and Wildlife Service - National Wetlands Inventory




Image NYS ITS Geospatial Services, Westchester County GIS








Legend


 Site Boundary

NWI Wetland Type


 Freshwater Forested/Shrub Wetland

 Freshwater Pond

 Freshwater Emergent Wetland

 Riverine

N



0

2,150

4,300

Feet

FINAL JPA

FIGURE 13 - NWI MAP

TOWN OF CLAY, ONONDAGA COUNTY, NEW YORK

CHECKED BY:

PP

DATE:

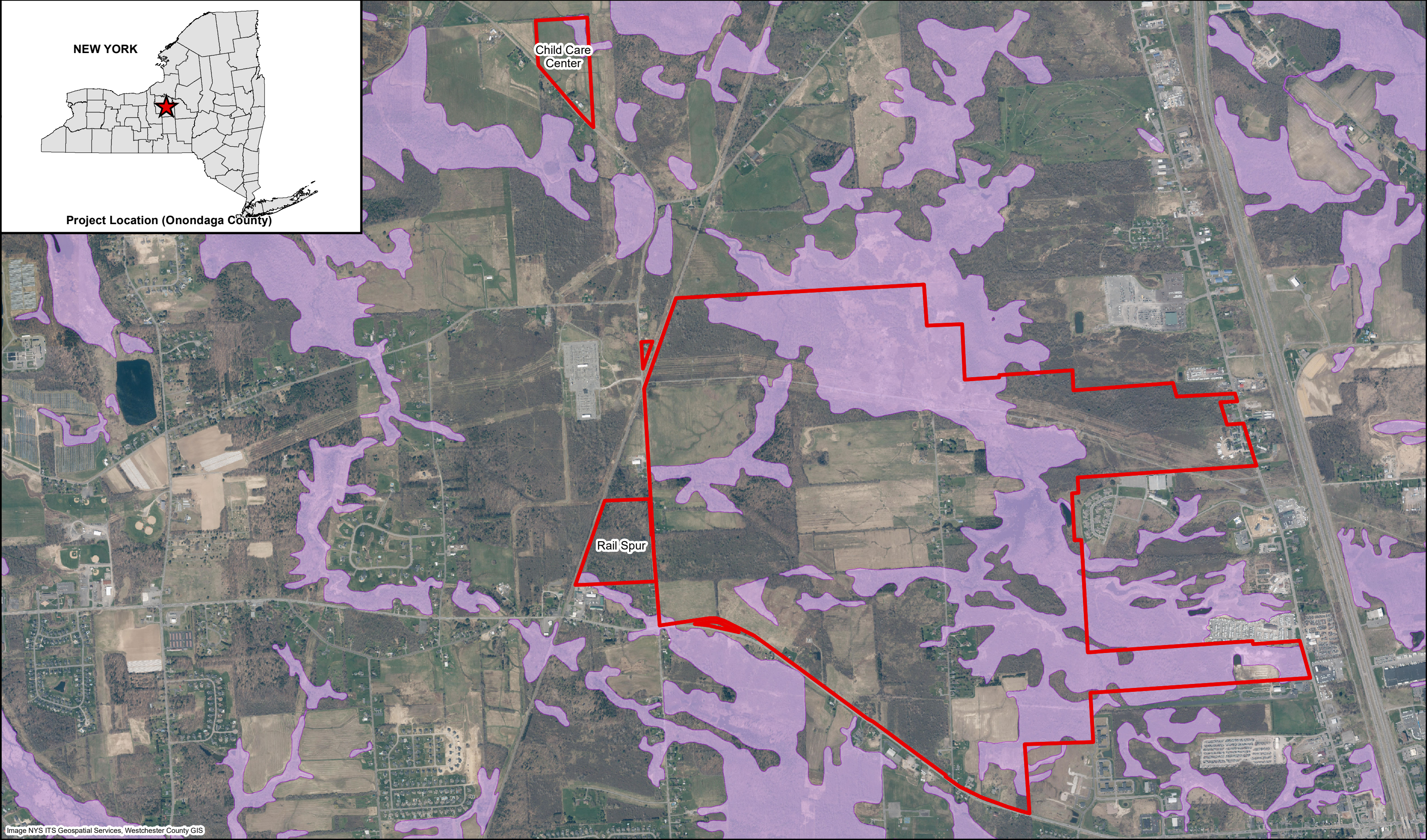
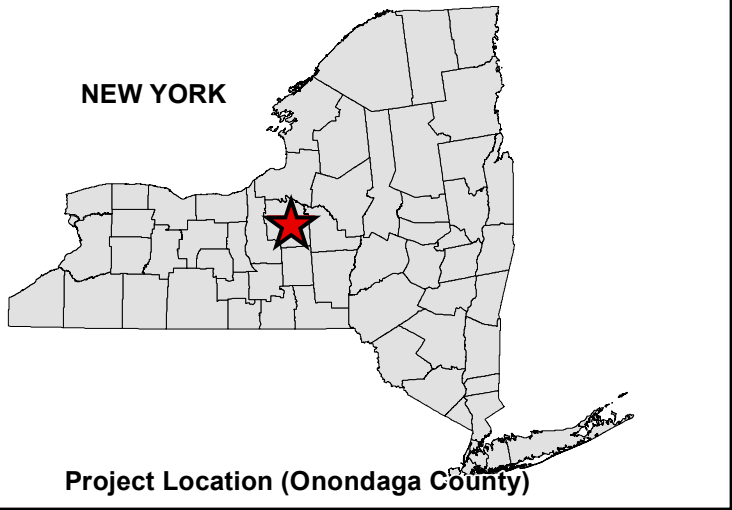
03/15/2024


PROJECT NO:

31000524.001



FIGURE NO:

13






Legend

-  Informational Freshwater Wetlands
-  Site Boundary

N



02,2004,400

—|—|—

Feet

FIGURE 14 - NYSDEC WETLANDS MAP

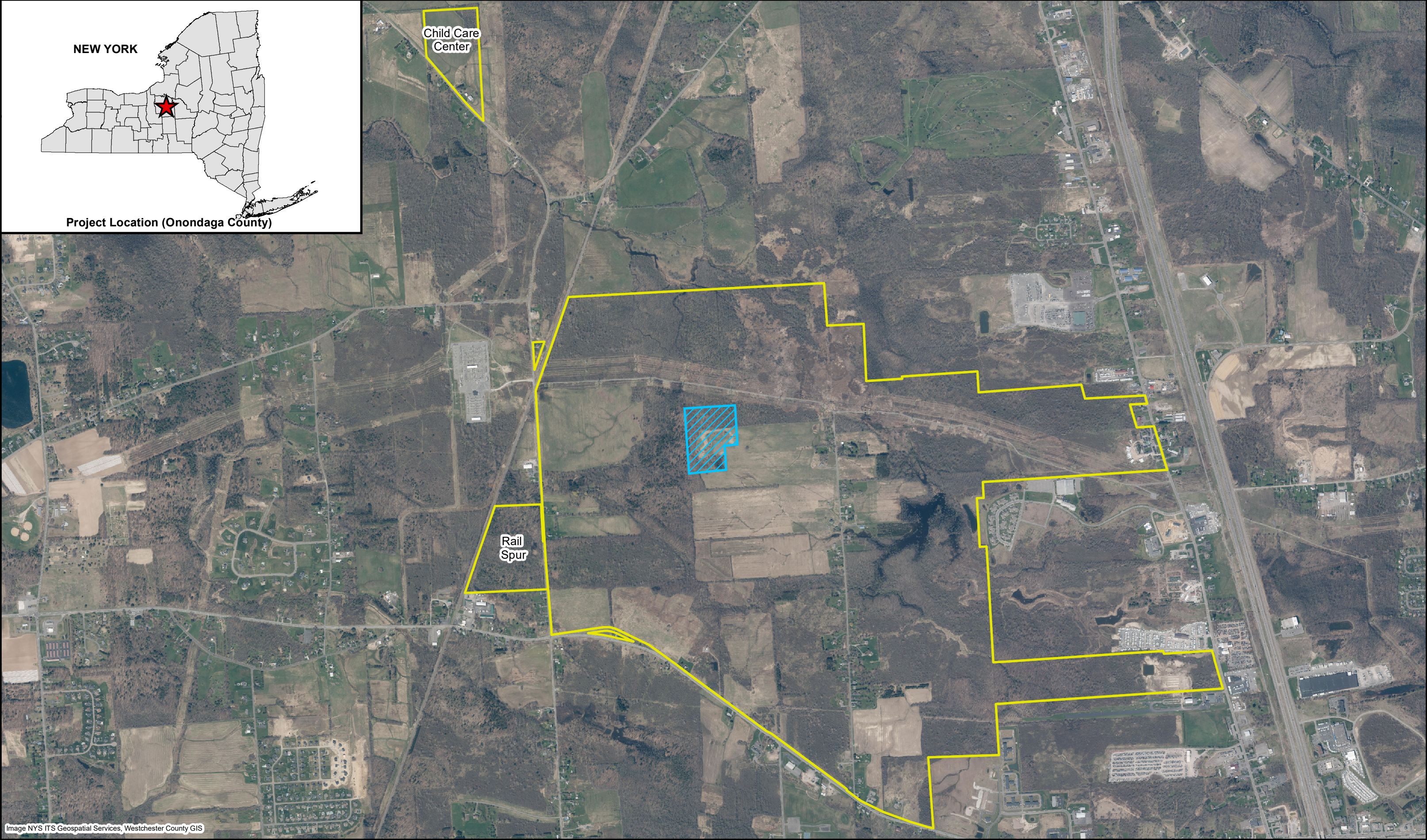
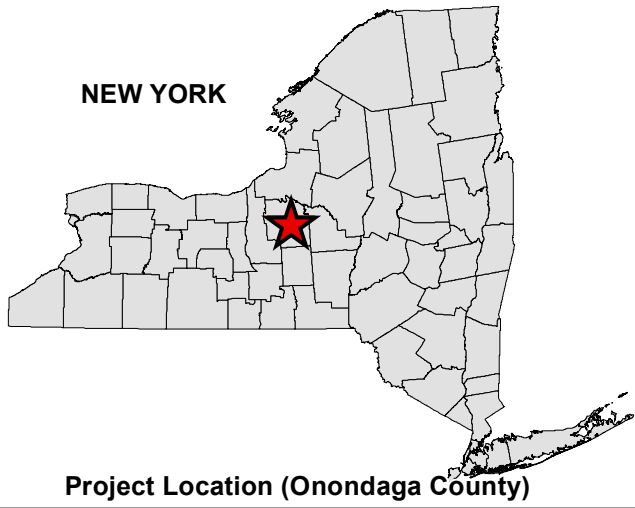
TOWN OF CLAY, ONONDAGA COUNTY, NEW YORK

CHECKED BY:PP



DATE:01/28/2025

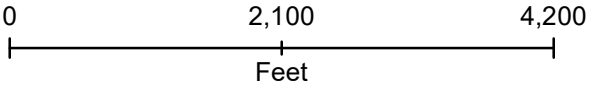
PROJECT NO:31000524.001

FIGURE NO:14



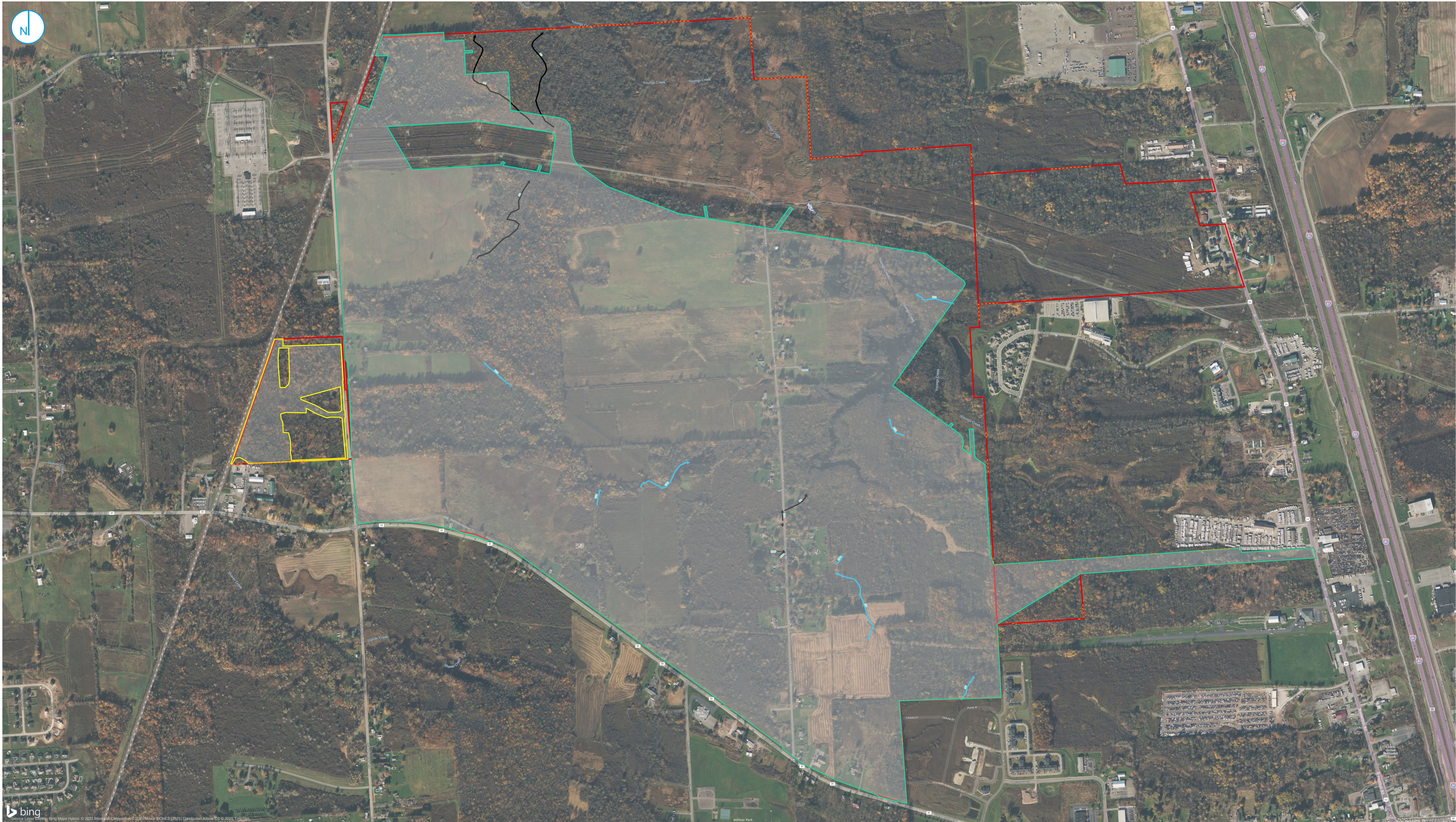
Legend

-  Wooding Mitigation Site
-  Site Boundary



FINAL JPA
FIGURE 15 - NATIONAL GRID WOODING MITIGATION SITE
TOWN OF CLAY, ONONDAGA COUNTY, NEW YORK

| | | | | | | | |
|-------------|----|-------|------------|-------------|--------------|------------|----|
| CHECKED BY: | PP | DATE: | 04/08/2024 | PROJECT NO: | 31000524.001 | FIGURE NO: | 15 |
|-------------|----|-------|------------|-------------|--------------|------------|----|



- Delineated Stream Flow Direction

Ephemeral Stream

Intermittent Stream

Perennial Stream
- Rail Spur LOD (01/24/25)

Main Site LOD (12/16/24)

Site Boundary / Limits of JD Request

Notes
- Jurisdiction based on USACE determination letters dated February 12, 2024, May 17, 2024, and October 11, 2024.

LOD IMPACTS TO USACE JURISDICTIONAL STREAMS

FIGURE 16

Micron Semiconductor Fabrication Facility
Clay, New York

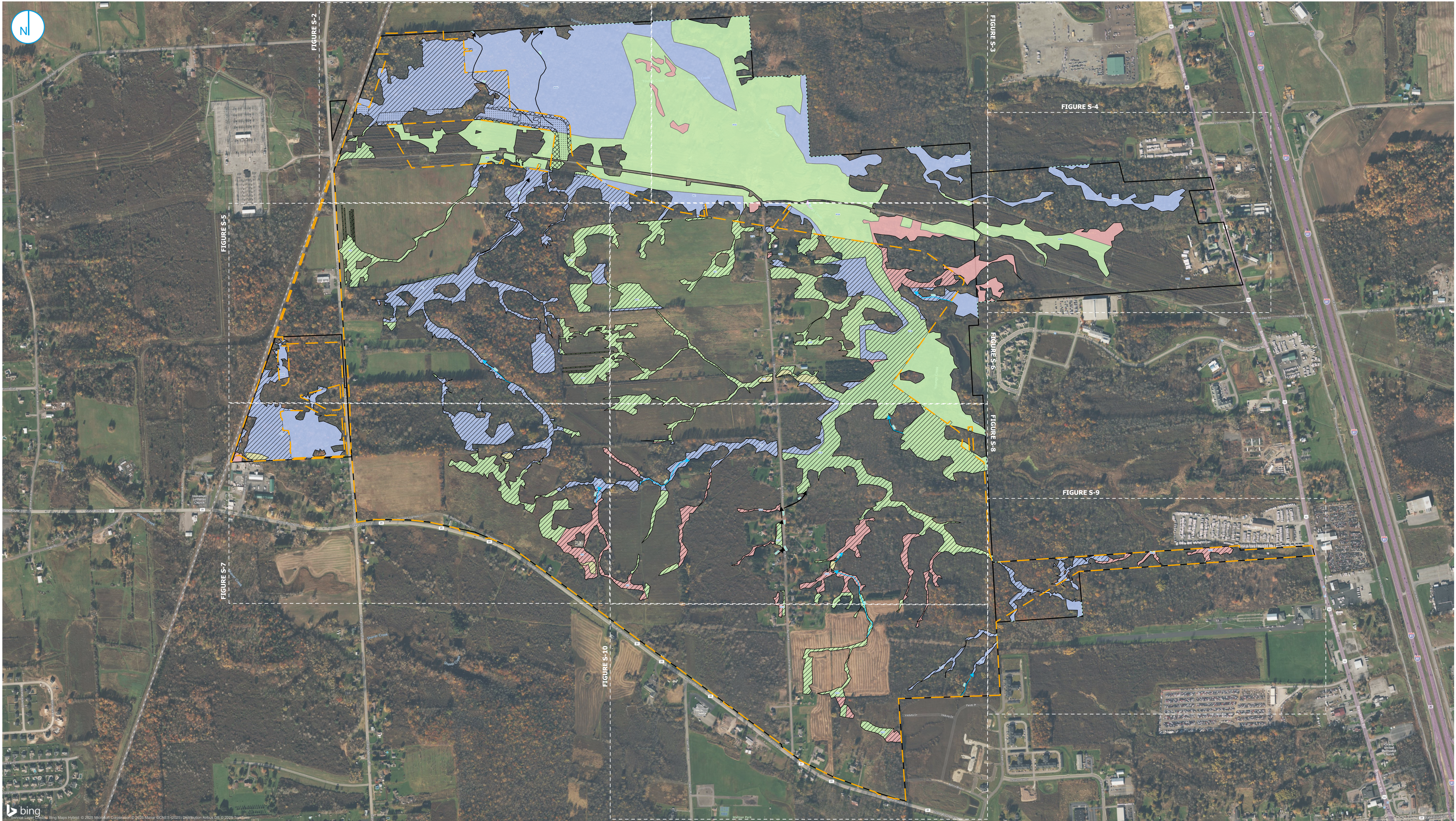
RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY



Supplemental Figures

C:\Projects\Micron\FROMMicron_Grid_Figures.aprx|Figure_03-Wetland_Delineation_Cover_Type_Impacts_Overview

PROJECT: 1950100716-001 | DATED: 7/9/2025 | DESIGNER: SSJOLE



USACE JURISDICTIONAL WETLAND AND STREAM IMPACTS

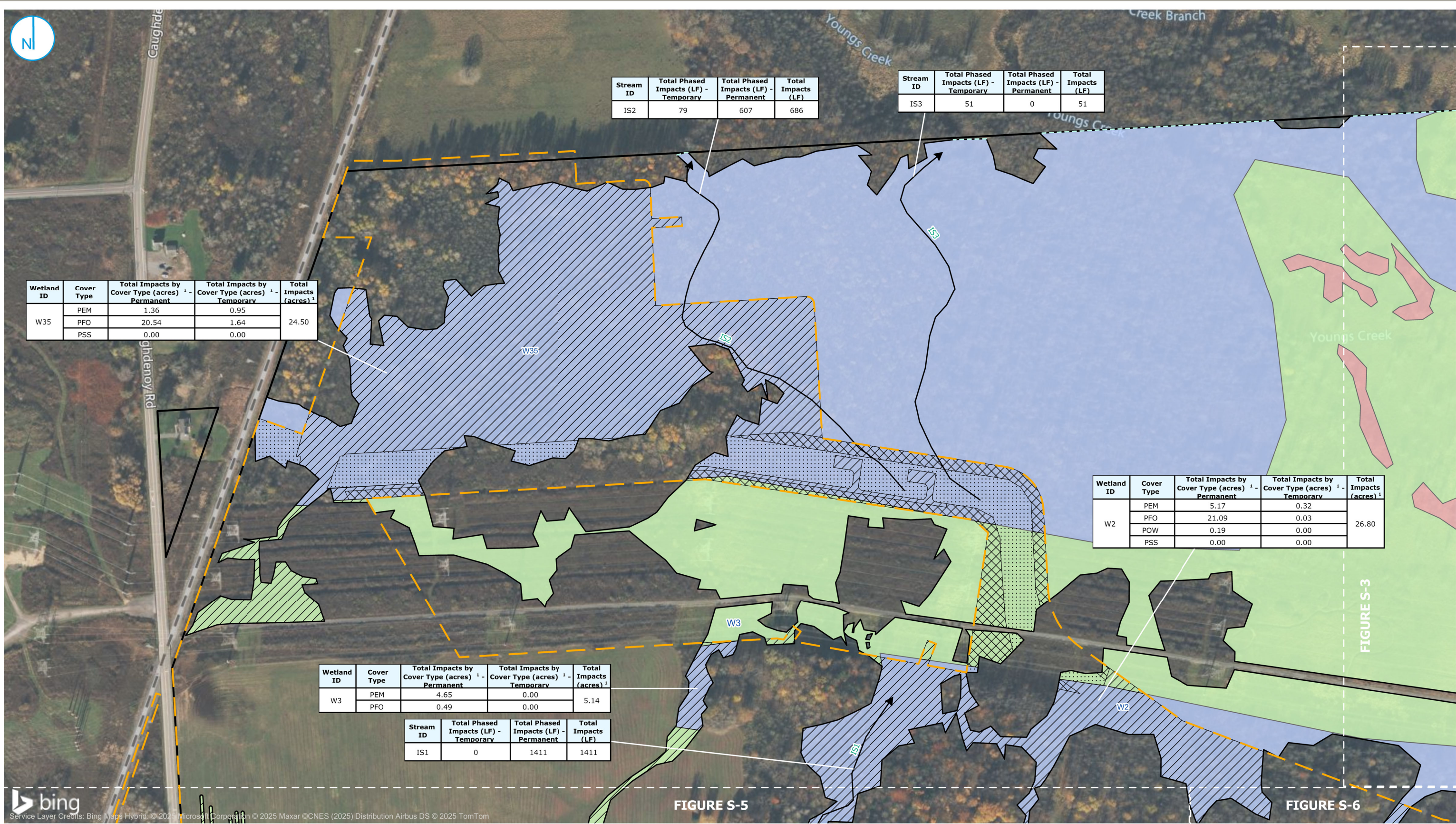
Notes
- W6a represents an UPL/WET mosaic area (15% WET).

Micron Semiconductor Fabrication Facility
Clay, New York

FIGURE S-1

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY

RAMBOLL



USACE Jurisdictional Wetland Cover Type

- Palustrine Emergent (PEM)
- Palustrine Forested (PFO)
- Palustrine Shrub Scrub (PSS)

USACE Jurisdictional Stream Flow Direction

- Intermittent Stream
- Wetland Extends Beyond Site Boundary
- Permanent Impact

Legend

- Temporary Impact
- National Grid Impact (Under Separate Permit)
- Limits of Disturbance (As of 12/16/2024)
- Site Boundary

Notes

- Impacts shown on tables represent impacts to entire wetland or stream, not just the portion shown on this figure.
- Temporary Impacts include construction laydown areas and areas of ground disturbance to be returned to pre-disturbance elevations.
- Permanent Impacts include building envelopes and areas of site grading.
- ¹Total Impacts by Cover Type, Total Impacts, and Summary by Cover Type values are rounded from the computed GIS values and therefore may differ slightly from reported phase Total when summed.

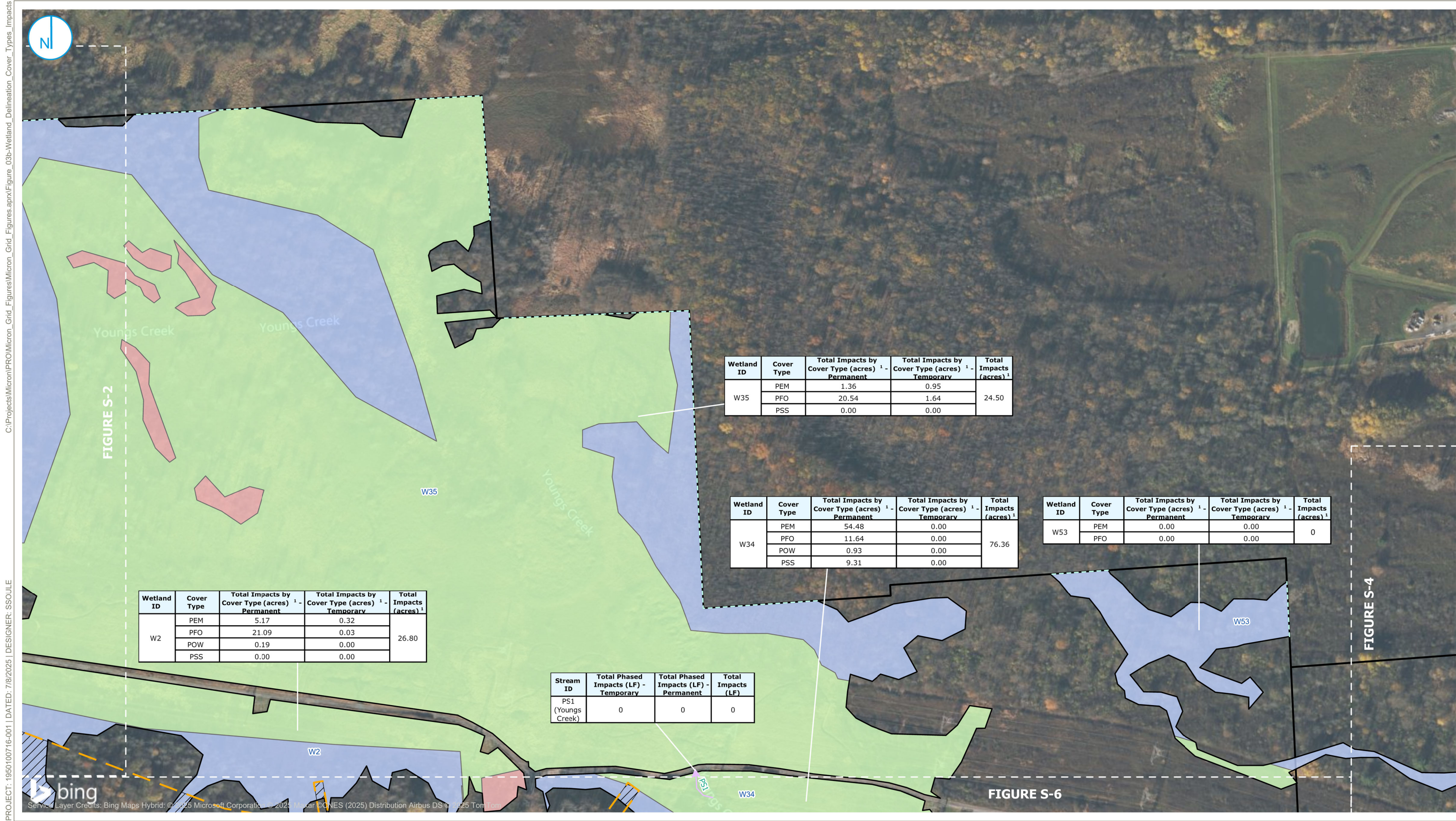
USACE JURISDICTIONAL WETLAND AND STREAM IMPACTS

Micron Semiconductor Fabrication Facility
Clay, New York

FIGURE S-2

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY

RAMBOLL



USACE Jurisdictional Wetland Cover Type

- Palustrine Emergent (PEM)
- Palustrine Forested (PFO)
- Palustrine Shrub Scrub (PSS)

USACE Jurisdictional Stream Flow Direction

- Perennial Stream
- Wetland Extends Beyond Site Boundary
- Permanent Impact

Limits of Disturbance (As of 12/16/2024)

- Site Boundary

0 150 300 Feet

Notes

- Impacts shown on tables represent impacts to entire wetland or stream, not just the portion shown on this figure.
- Temporary Impacts include construction laydown areas and areas of ground disturbance to be returned to pre-disturbance elevations.
- Permanent Impacts include building envelopes and areas of site grading.
- ¹Total Impacts by Cover Type, Total Impacts, and Summary by Cover Type values are rounded from the computed GIS values and therefore may differ slightly from reported phase Total when summed.

USACE JURISDICTIONAL WETLAND AND STREAM IMPACTS

Micron Semiconductor Fabrication Facility
Clay, New York

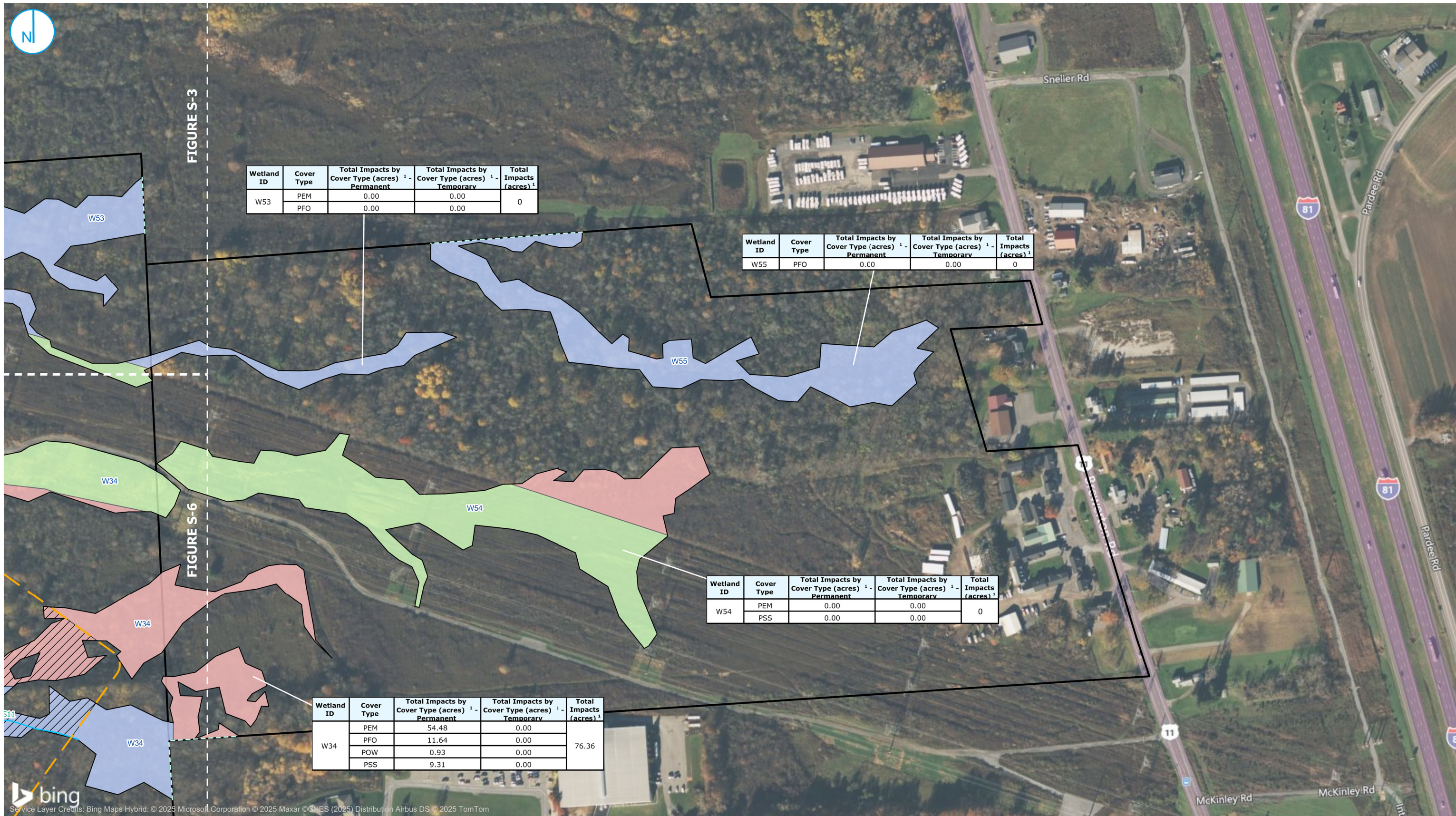
FIGURE S-3

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY

RAMBOLL

C:\Projects\Micron\PRO\Micron_Grid_Figures\micron_Grid_Figures.aprx|Figure_03c-Wetland_Delineation_Cover_Types_impacts

PROJECT: 1950100716-001 | DATED: 7/8/2025 | DESIGNER: SSOULE



USACE Jurisdictional Wetland Cover Type

- Palustrine Emergent (PEM)
- Palustrine Forested (PFO)
- Palustrine Shrub Scrub (PSS)

USACE Jurisdictional Stream Flow Direction

- Ephemeral Stream
- Wetland Extends Beyond Site Boundary
- Permanent Impact

Limits of Disturbance (As of 12/16/2024)

- Site Boundary

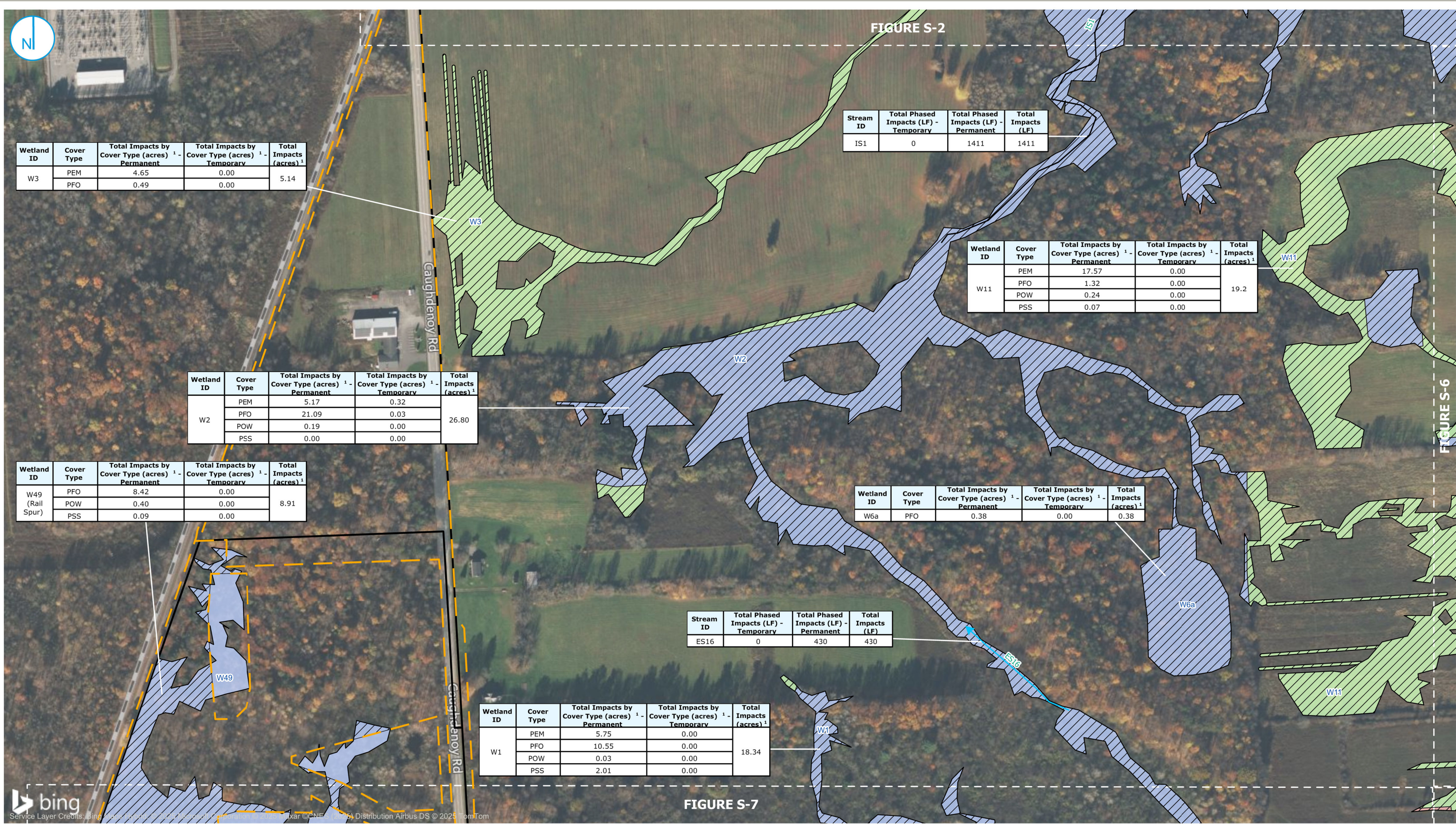
0 150 300 Feet

Notes

- Impacts shown on tables represent impacts to entire wetland or stream, not just the portion shown on this figure.
- Temporary Impacts include construction laydown areas and areas of ground disturbance to be returned to pre-disturbance elevations.
- Permanent Impacts include building envelopes and areas of site grading.
- ¹Total Impacts by Cover Type, Total Impacts, and Summary by Cover Type values are rounded from the computed GIS values and therefore may differ slightly from reported phase Total when summed.

USACE JURISDICTIONAL WETLAND AND STREAM IMPACTS

Micron Semiconductor Fabrication Facility
Clay, New York



USACE Jurisdictional Wetland Cover Type

- Palustrine Emergent (PEM)
- Palustrine Forested (PFO)
- Palustrine Shrub Scrub (PSS)

USACE Jurisdictional Stream Flow Direction

- Ephemeral Stream
- Intermittent Stream
- Permanent Impact

Limits of Disturbance (As of 12/16/2024)

- Site Boundary

Notes

- W6a represents an UPL/WET mosaic area (15% WET).
- Impacts shown on tables represent impacts to entire wetland or stream, not just the portion shown on this figure.
- Temporary Impacts include construction laydown areas and areas of ground disturbance to be returned to pre-disturbance elevations. Permanent Impacts include building envelopes and areas of site grading.
- ¹Total Impacts by Cover Type, Total Impacts, and Summary by Cover Type values are rounded from the computed GIS values and therefore may differ slightly from reported phase Total when summed.

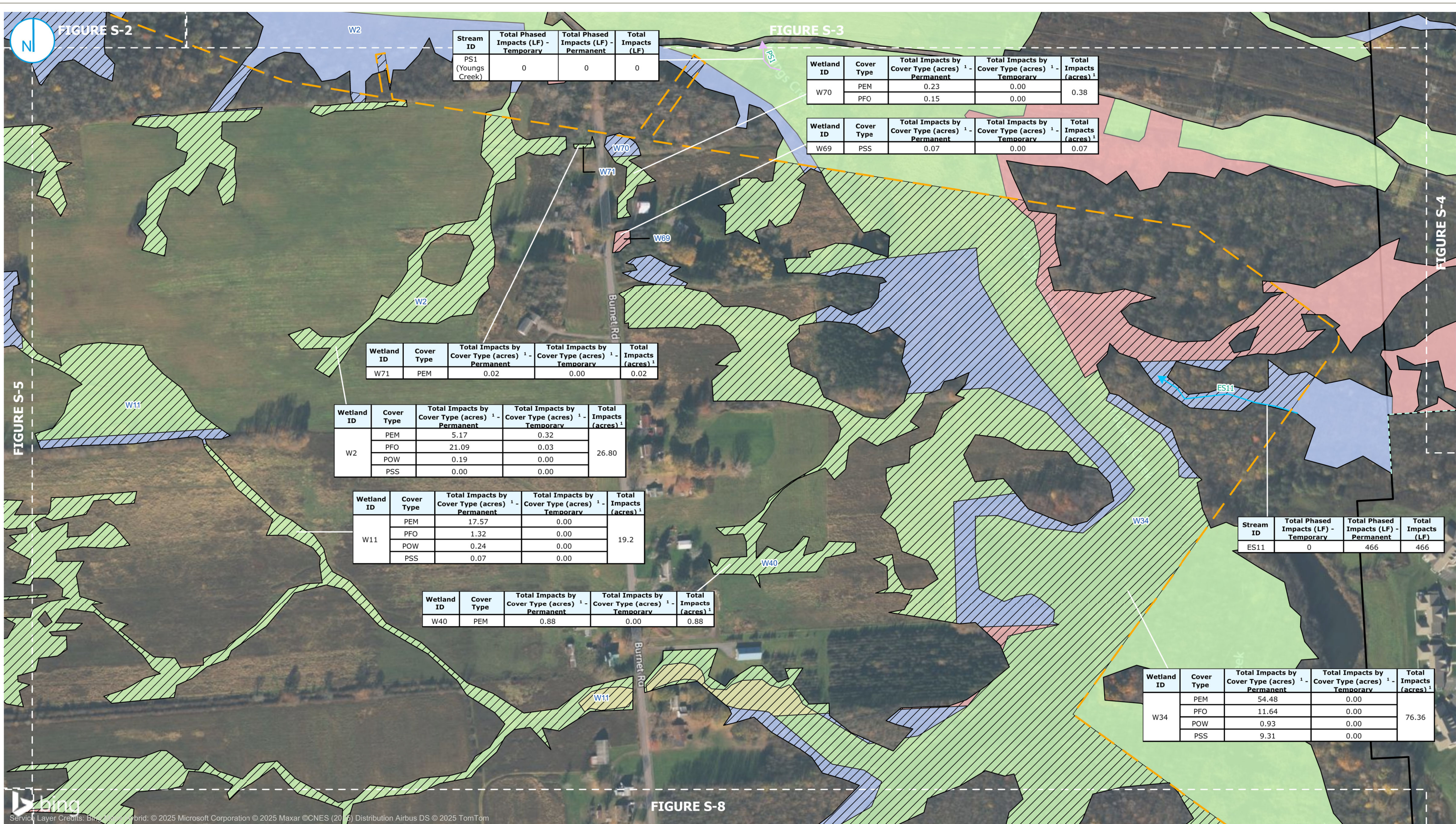
USACE JURISDICTIONAL WETLAND AND STREAM IMPACTS

Micron Semiconductor Fabrication Facility
Clay, New York

FIGURE S-5

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY





USACE Jurisdictional Wetland Cover Type

- Palustrine Emergent (PEM)
- Palustrine Forested (PFO)
- Palustrine Open Water (POW)

Palustrine Shrub Scrub (PSS)

USACE Jurisdictional Stream Flow Direction

- Ephemeral Stream
- Perennial Stream

Wetland Extends Beyond Site Boundary

- Permanent Impact
- Limits of Disturbance (As of 12/16/2024)
- Site Boundary

Notes

- Impacts shown on tables represent impacts to entire wetland or stream, not just the portion shown on this figure.

- Temporary Impacts include construction laydown areas and areas of ground disturbance to be returned to pre-disturbance elevations. Permanent Impacts include building envelopes and areas of site grading.

- ¹Total Impacts by Cover Type, Total Impacts, and Summary by Cover Type values are rounded from the computed GIS values and therefore may differ slightly from reported phase Total when summed.

USACE JURISDICTIONAL WETLAND AND STREAM IMPACTS

Micron Semiconductor Fabrication Facility
Clay, New York

FIGURE S-6

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY

RAMBOLL

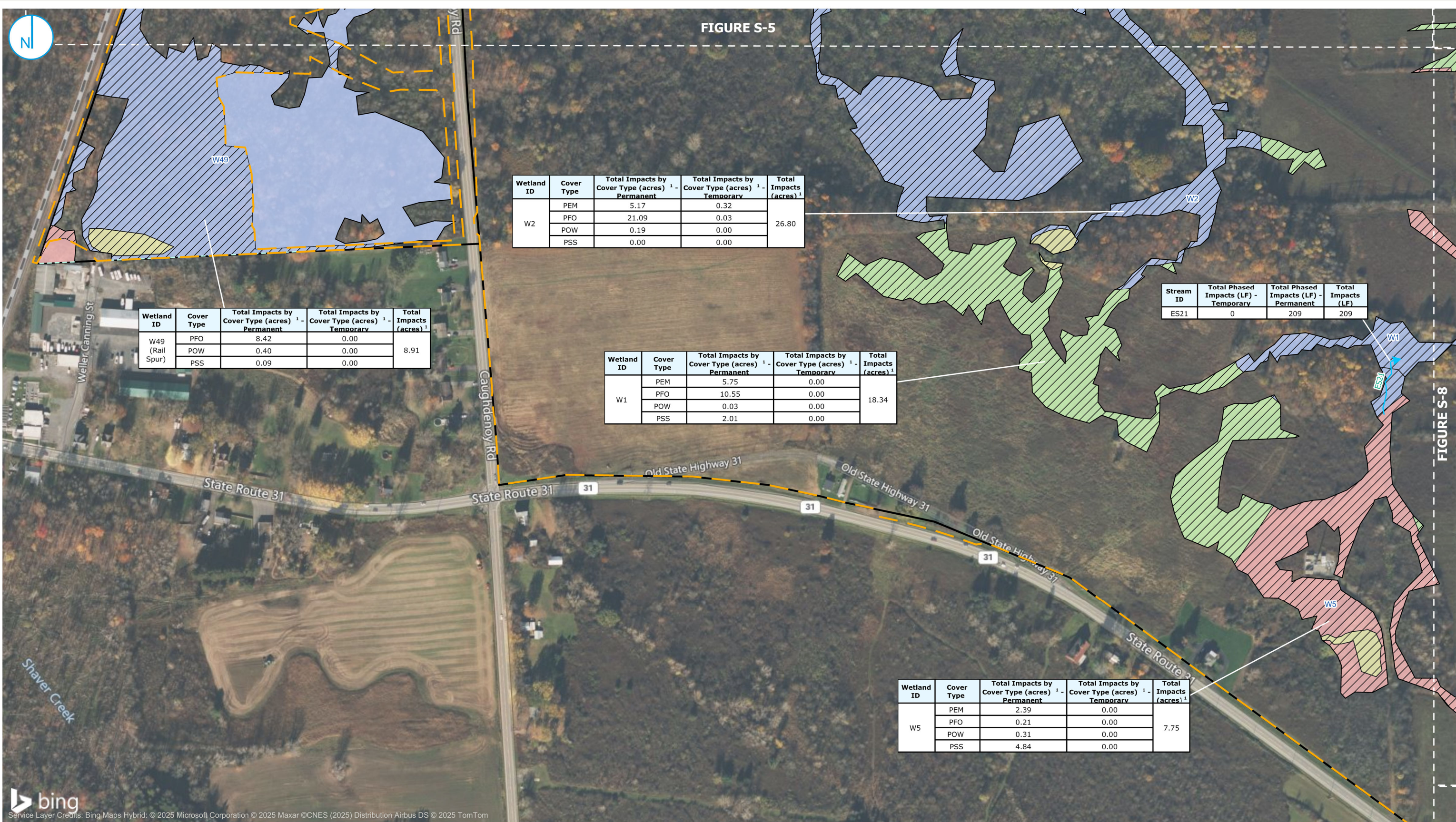
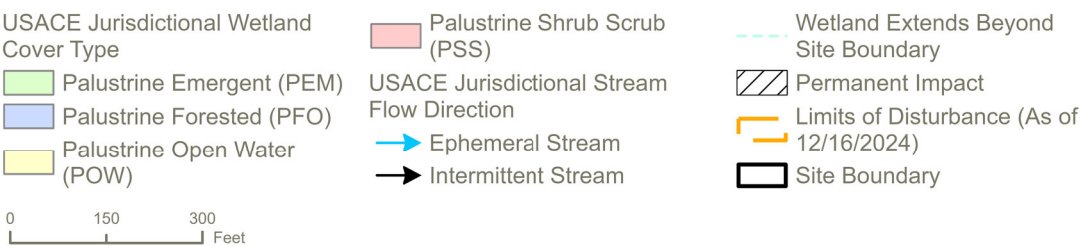


FIGURE S-8



- Impacts shown on tables represent impacts to entire wetland or stream, not just the portion shown on this figure.
- Temporary Impacts include construction laydown areas and areas of ground disturbance to be returned to pre-disturbance elevations. Permanent Impacts include building envelopes and areas of site grading.
- Total Impacts by Cover Type, Total Impacts, and Summary by Cover Type values are rounded from the computed GIS values and therefore may differ slightly from reported phase Total when summed.

Micron Semiconductor Fabrication Facility
Clay, New York

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY

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PROJECT: 1950100716-001 | DATED: 7/8/2025 | DESIGNER: SSOJLE



USACE Jurisdictional Wetland Cover Type

- Palustrine Emergent (PEM)
- Palustrine Forested (PFO)
- Palustrine Shrub Scrub (PSS)

USACE Jurisdictional Stream Flow Direction

- Ephemeral Stream
- Wetland Extends Beyond Site Boundary

- Permanent Impact
- Limits of Disturbance (As of 12/16/2024)
- Site Boundary

0 150 300 Feet

Notes

- Impacts shown on tables represent impacts to entire wetland or stream, not just the portion shown on this figure.
- Temporary Impacts include construction laydown areas and areas of ground disturbance to be returned to pre-disturbance elevations.
- Permanent Impacts include building envelopes and areas of site grading.
- ¹Total Impacts by Cover Type, Total Impacts, and Summary by Cover Type values are rounded from the computed GIS values and therefore may differ slightly from reported phase Total when summed.

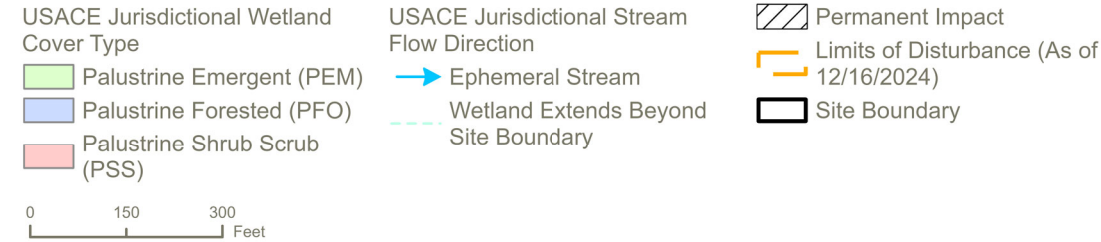
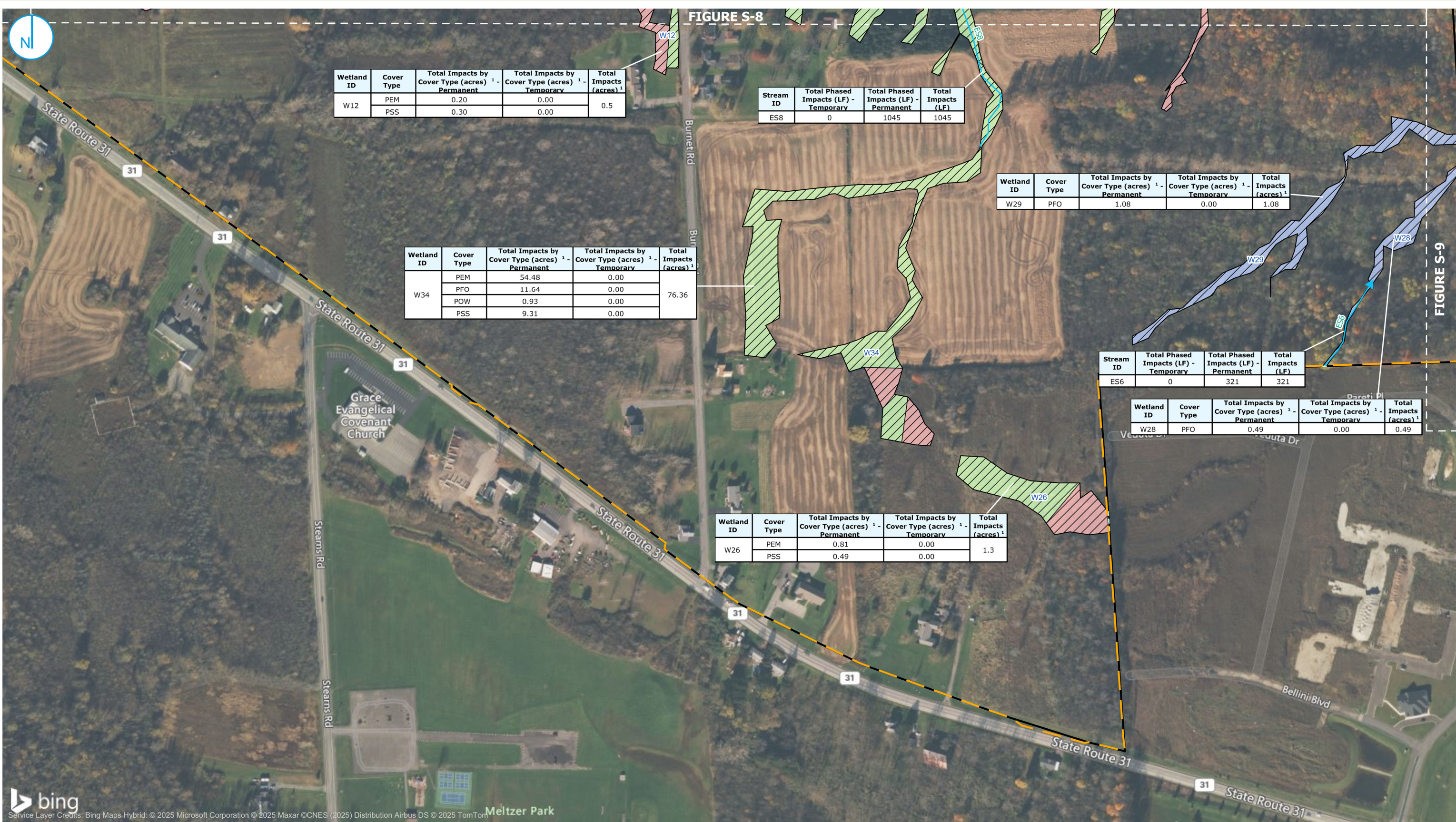
USACE JURISDICTIONAL WETLAND AND STREAM IMPACTS

Micron Semiconductor Fabrication Facility
Clay, New York

FIGURE S-9

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY





Notes

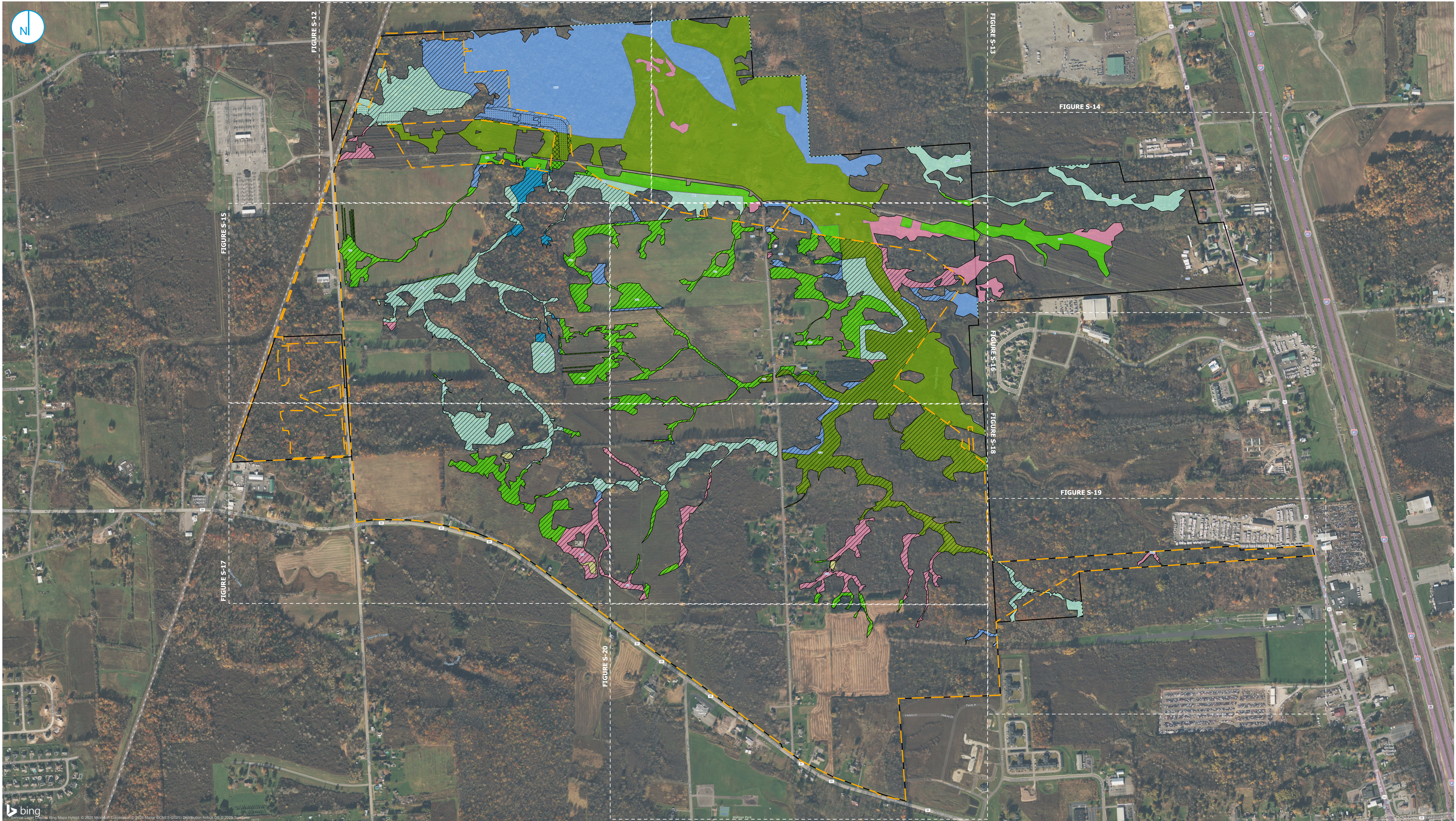
- Impacts shown on tables represent impacts to entire wetland or stream, not just the portion shown on this figure.
- Temporary Impacts include construction laydown areas and areas of ground disturbance to be returned to pre-disturbance elevations. Permanent Impacts include building envelopes and areas of site grading.
- ¹Total Impacts by Cover Type, Total Impacts, and Summary by Cover Type values are rounded from the computed GIS values and therefore may differ slightly from reported phase Total when summed.

USACE JURISDICTIONAL WETLAND AND STREAM IMPACTS

Micron Semiconductor Fabrication Facility
Clay, New York

C:\Projects\Micron\FROMMicron_Grid_Figures\micron_Grid_Figures.aprx|Figure_04-Wetland_Delineation_Cover_Type_Impacts_Overview

PROJECT: 1950100716-001 | DATED: 7/9/2025 | DESIGNER: SSJOLE



- NYSDEC Jurisdictional Wetland Cover Type
- Deep Emergent Marsh
 - Farm Pond/Artificial Pond
 - Floodplain Forest
 - Hemlock-Hardwood Swamp
 - Red Maple-Hardwood Swamp
 - Shallow Emergent Marsh
 - Shrub Swamp
- Wetland Extends Beyond Site Boundary
- Permanent Impact
 - Temporary Impact
 - Forest Conversion
 - National Grid Impact (Under Separate Permit)
 - Limits of Disturbance (As of 12/16/2024)
 - Site Boundary

Notes
- W6a represents an UPL/WET mosaic area (15% WET).

0 275 550 Feet

NYSDEC JURISDICTIONAL WETLAND IMPACTS

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Clay, New York

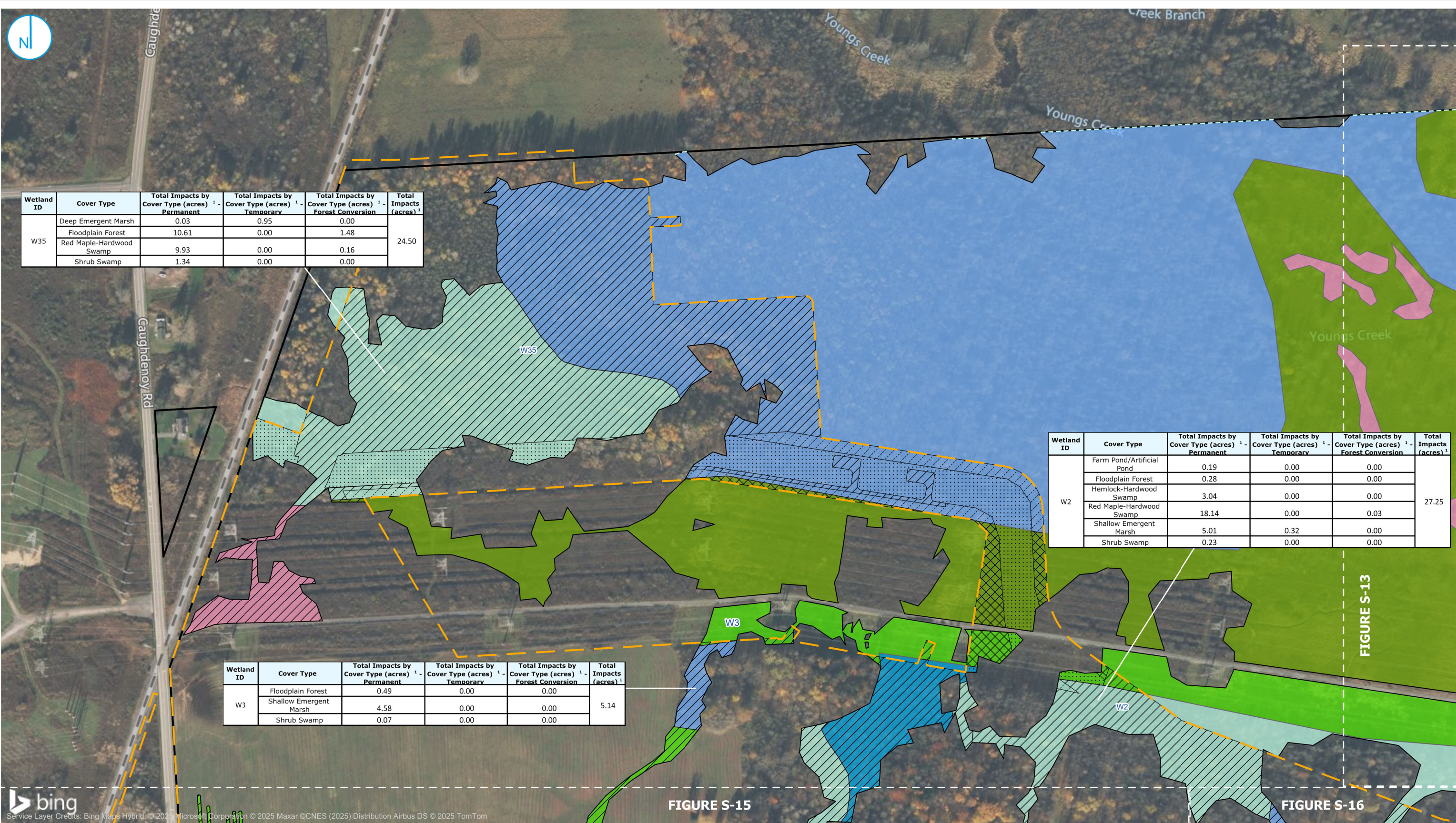
FIGURE S-11

RAMBOLL AMERICAS
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NYSDEC Jurisdictional Wetland Cover Type

Deep Emergent Marsh

Floodplain Forest

Hemlock-Hardwood Swamp

Red Maple-Hardwood Swamp

Shallow Emergent Marsh

Shrub Swamp

Wetland Extends Beyond Site Boundary

Permanent Impact

Temporary Impact

Forest Conversion

National Grid Impact (Under Separate Permit)

Limits of Disturbance (As of 12/16/2024)

Site Boundary

0150300

Feet

Notes

- Impacts shown on tables represent impacts to entire wetland or stream, not just the portion shown on this figure.
- Temporary Impacts include construction laydown areas and areas of ground disturbance to be returned to pre-disturbance elevations. Permanent Impacts include building envelopes and areas of site grading.
- ¹Total Impacts by Cover Type, Total Impacts, and Summary by Cover Type values are rounded from the computed GIS values and therefore may differ slightly from reported phase Total when summed.

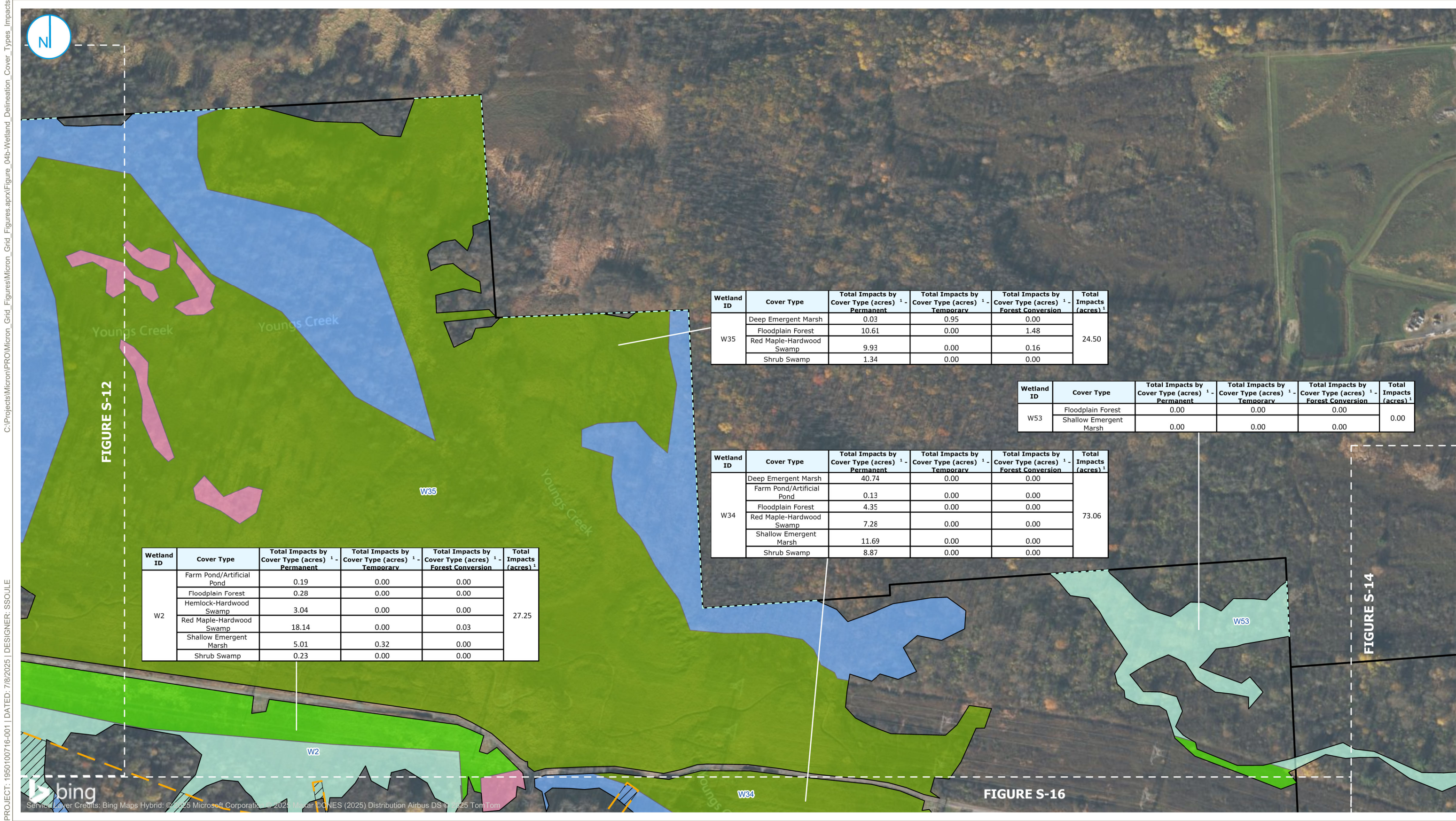
NYSDEC JURISDICTIONAL WETLAND IMPACTS

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Clay, New York

FIGURE S-12

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A RAMBOLL COMPANY

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| Wetland ID | Cover Type | Total Impacts by Cover Type (acres) ¹ - Permanent | Total Impacts by Cover Type (acres) ¹ - Temporary | Total Impacts by Cover Type (acres) ¹ - Forest Conversion | Total Impacts (acres) ¹ |
|------------|---------------------------|--|--|--|------------------------------------|
| W2 | Farm Pond/Artificial Pond | 0.19 | 0.00 | 0.00 | 27.25 |
| | Floodplain Forest | 0.28 | 0.00 | 0.00 | |
| | Hemlock-Hardwood Swamp | 3.04 | 0.00 | 0.00 | |
| | Red Maple-Hardwood Swamp | 18.14 | 0.00 | 0.03 | |
| | Shallow Emergent Marsh | 5.01 | 0.32 | 0.00 | |
| | Shrub Swamp | 0.23 | 0.00 | 0.00 | |
| | | | | | |

| Wetland ID | Cover Type | Total Impacts by Cover Type (acres) ¹ - Permanent | Total Impacts by Cover Type (acres) ¹ - Temporary | Total Impacts by Cover Type (acres) ¹ - Forest Conversion | Total Impacts (acres) ¹ |
|------------|--------------------------|--|--|--|------------------------------------|
| W35 | Deep Emergent Marsh | 0.03 | 0.95 | 0.00 | 24.50 |
| | Floodplain Forest | 10.61 | 0.00 | 1.48 | |
| | Red Maple-Hardwood Swamp | 9.93 | 0.00 | 0.16 | |
| | Shrub Swamp | 1.34 | 0.00 | 0.00 | |

| Wetland ID | Cover Type | Total Impacts by Cover Type (acres) ¹ - Permanent | Total Impacts by Cover Type (acres) ¹ - Temporary | Total Impacts by Cover Type (acres) ¹ - Forest Conversion | Total Impacts (acres) ¹ |
|------------|------------------------|--|--|--|------------------------------------|
| W53 | Floodplain Forest | 0.00 | 0.00 | 0.00 | 0.00 |
| | Shallow Emergent Marsh | 0.00 | 0.00 | 0.00 | |

| Wetland ID | Cover Type | Total Impacts by Cover Type (acres) ¹ - Permanent | Total Impacts by Cover Type (acres) ¹ - Temporary | Total Impacts by Cover Type (acres) ¹ - Forest Conversion | Total Impacts (acres) ¹ |
|------------|---------------------------|--|--|--|------------------------------------|
| W34 | Deep Emergent Marsh | 40.74 | 0.00 | 0.00 | 73.06 |
| | Farm Pond/Artificial Pond | 0.13 | 0.00 | 0.00 | |
| | Floodplain Forest | 4.35 | 0.00 | 0.00 | |
| | Red Maple-Hardwood Swamp | 7.28 | 0.00 | 0.00 | |
| | Shallow Emergent Marsh | 11.69 | 0.00 | 0.00 | |
| | Shrub Swamp | 8.87 | 0.00 | 0.00 | |

NYSDEC Jurisdictional Wetland Cover Type

Deep Emergent Marsh

Floodplain Forest

Red Maple-Hardwood Swamp

Shallow Emergent Marsh

Shrub Swamp

Wetland Extends Beyond Site Boundary

Permanent Impact

Limits of Disturbance (As of 12/16/2024)

Site Boundary

0150300

Feet

Notes

- Impacts shown on tables represent impacts to entire wetland or stream, not just the portion shown on this figure.
- Temporary Impacts include construction laydown areas and areas of ground disturbance to be returned to pre-disturbance elevations. Permanent Impacts include building envelopes and areas of site grading.
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NYSDEC JURISDICTIONAL WETLAND IMPACTS

Micron Semiconductor Fabrication Facility
Clay, New York

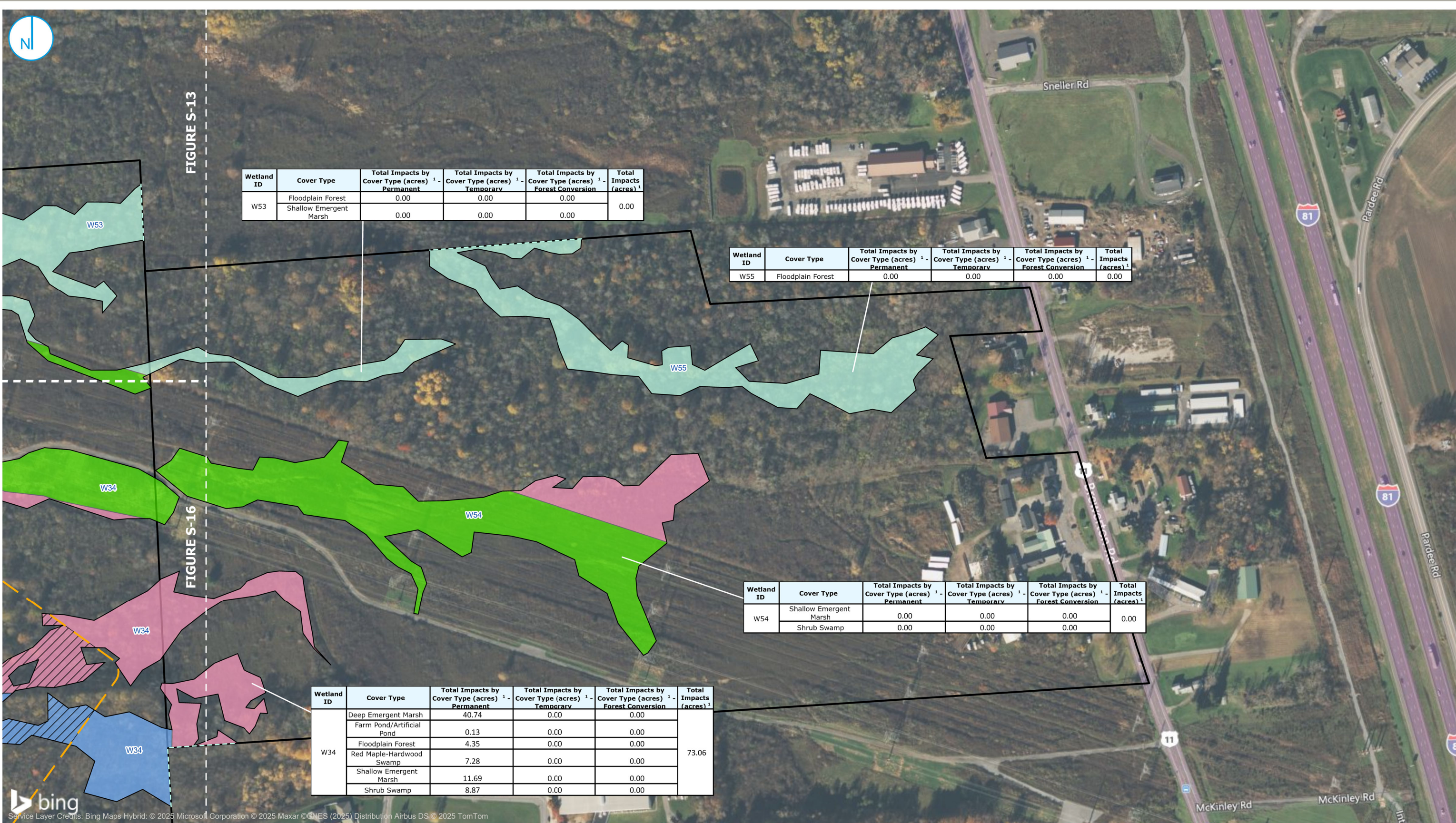
FIGURE S-13

RAMBOLL AMERICAS
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NYSDEC Jurisdictional Wetland Cover Type

- Floodplain Forest
- Red Maple-Hardwood Swamp
- Shallow Emergent Marsh
- Shrub Swamp

- Wetland Extends Beyond Site Boundary
- Permanent Impact

Limits of Disturbance (As of 12/16/2024)

Site Boundary

Notes

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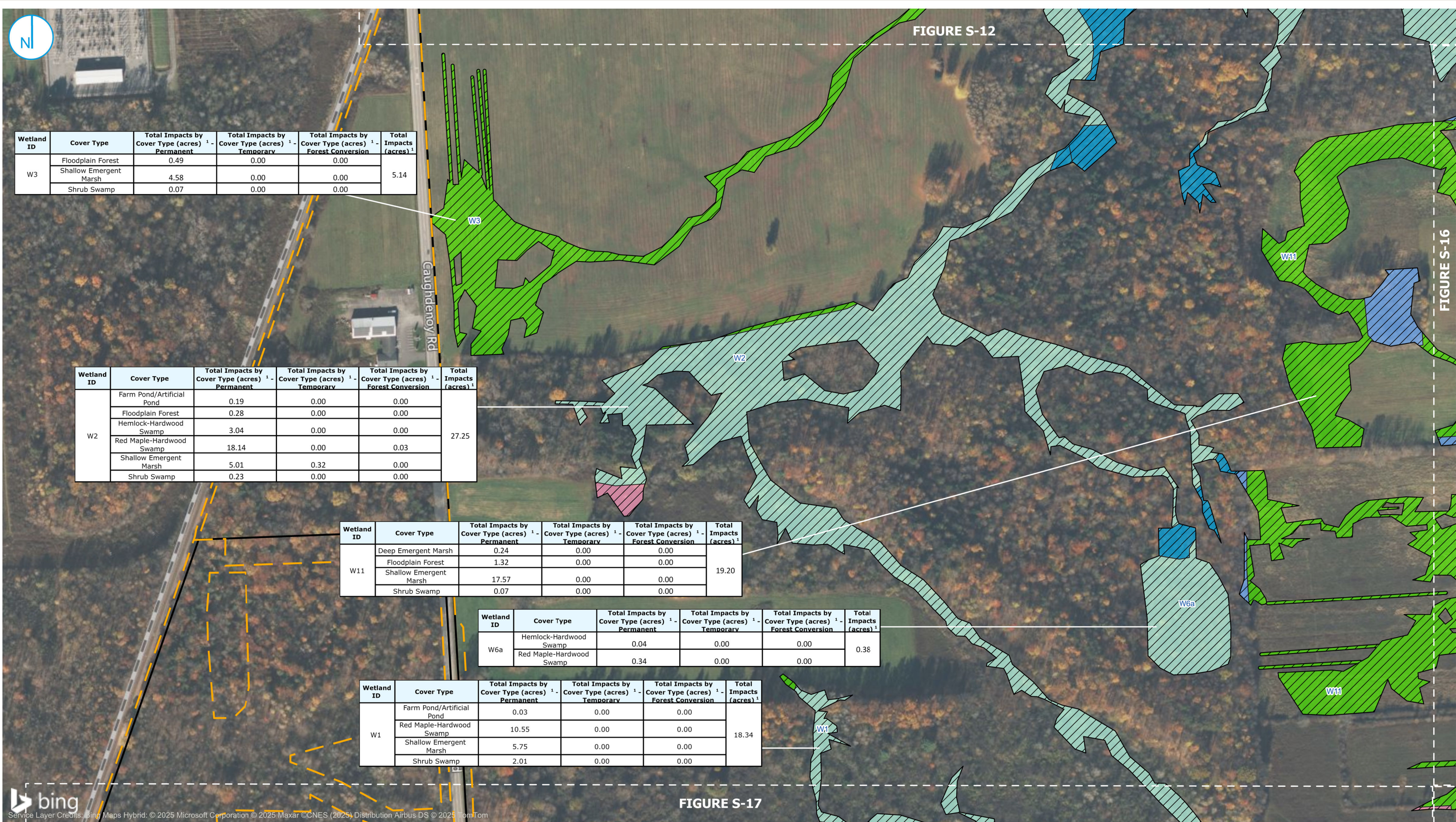
FIGURE S-14

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PROJECT: 1950100716-001 | DATED: 7/8/2025 | DESIGNER: SSOJLE



NYSDEC Jurisdictional Wetland Cover Type

- Floodplain Forest
- Hemlock-Hardwood Swamp
- Red Maple-Hardwood Swamp
- Shallow Emergent Marsh
- Shrub Swamp
- Permanent Impact

Limits of Disturbance (As of 12/16/2024)

Site Boundary

0 150 300 Feet

Notes

- W6a represents an UPL/WET mosaic area (15% WET).
- Impacts shown on tables represent impacts to entire wetland or stream, not just the portion shown on this figure.
- Temporary Impacts include construction laydown areas and areas of ground disturbance to be returned to pre-disturbance elevations. Permanent Impacts include building envelopes and areas of site grading.
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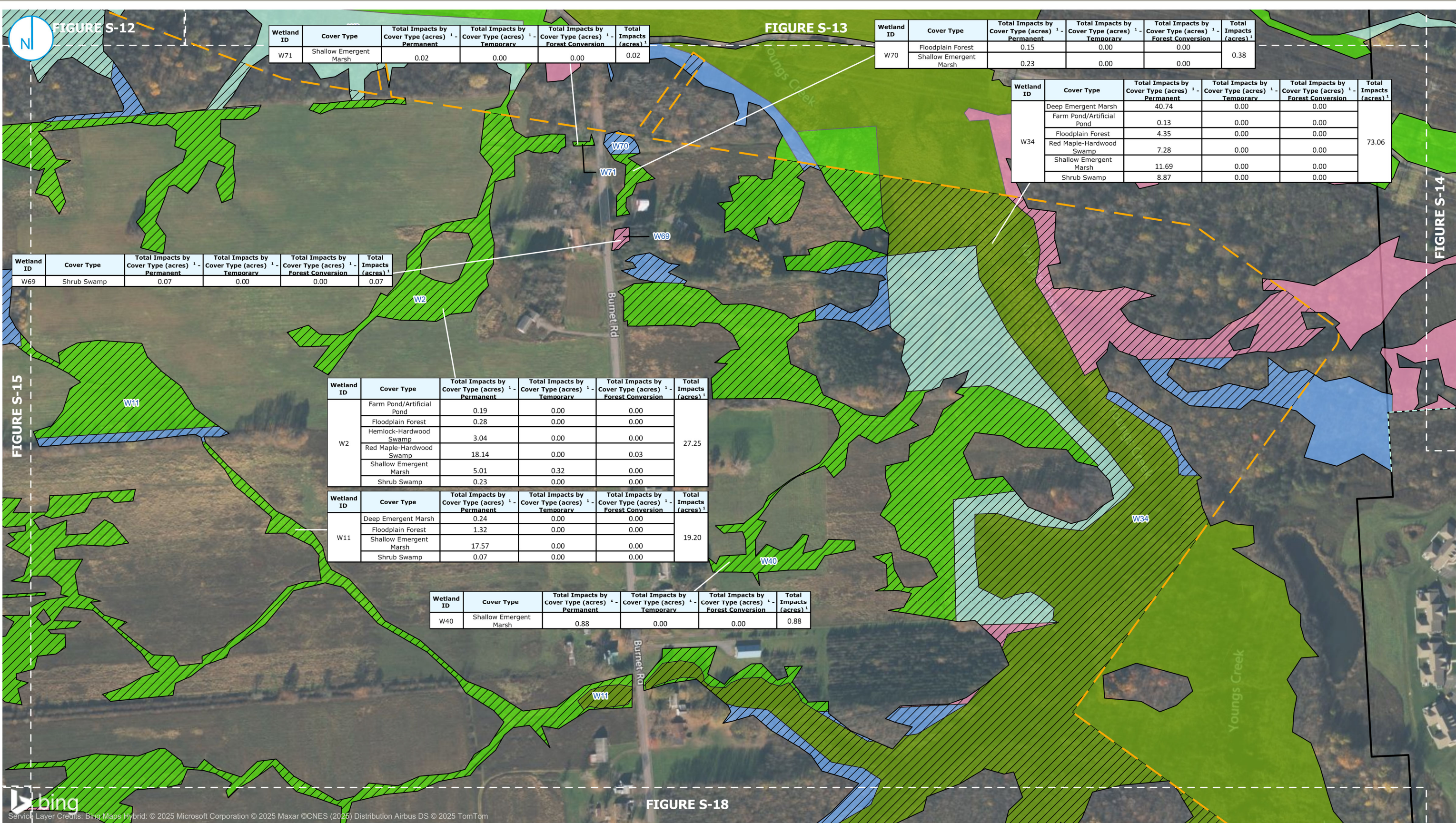
NYSDEC JURISDICTIONAL WETLAND IMPACTS

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Clay, New York

FIGURE S-15

RAMBOLL AMERICAS
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A RAMBOLL COMPANY

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NYSDEC Jurisdictional Wetland Cover Type

Deep Emergent Marsh

Floodplain Forest

Hemlock-Hardwood Swamp

Red Maple-Hardwood Swamp

Shallow Emergent Marsh

Shrub Swamp

Wetland Extends Beyond Site Boundary

Permanent Impact

Limits of Disturbance (As of 12/16/2024)

Site Boundary

0

150

300

Feet

Notes

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NYSDEC JURISDICTIONAL WETLAND IMPACTS

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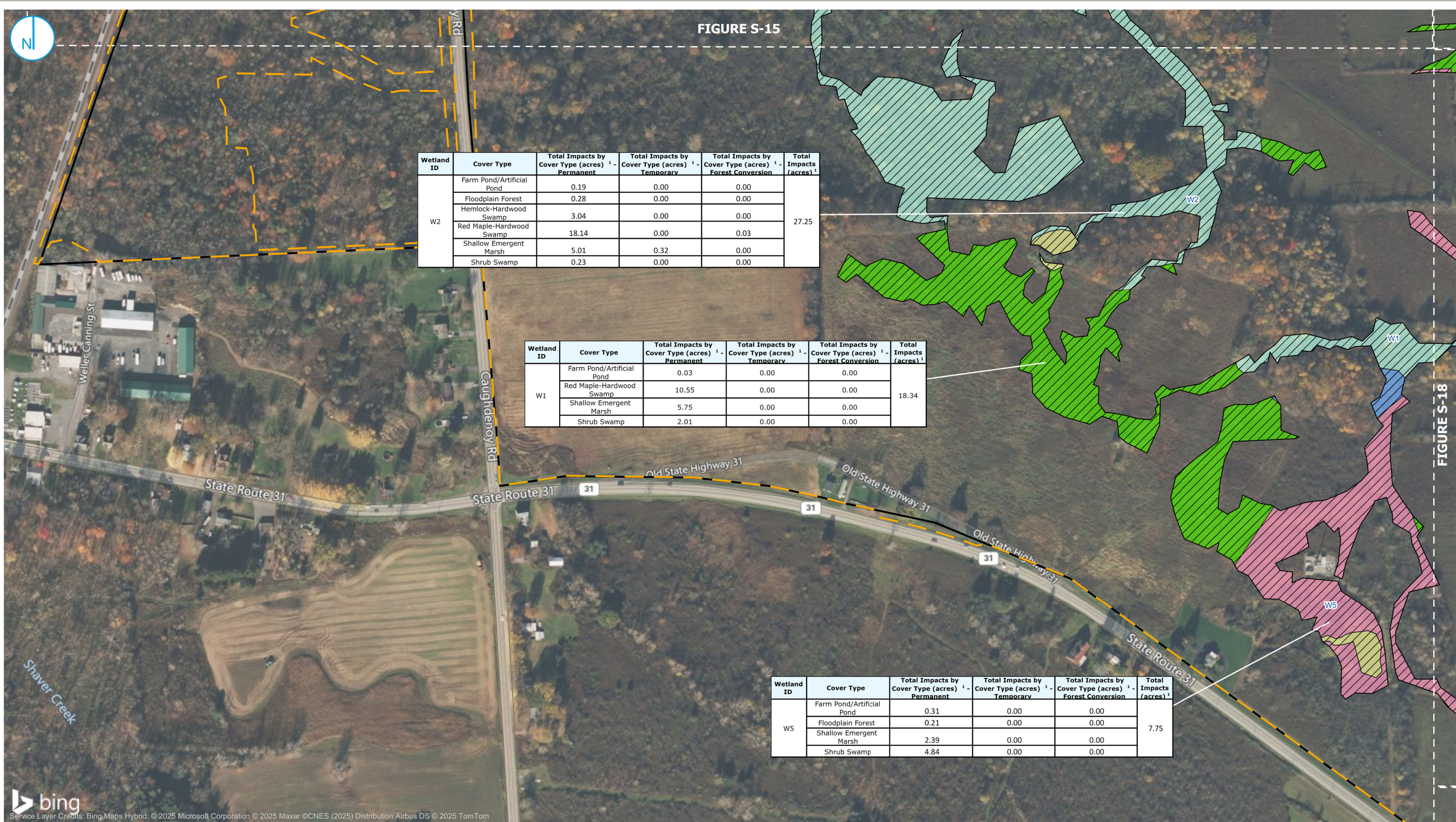
FIGURE S-16

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PROJECT: 1950100716-001 | DATED: 7/8/2025 | DESIGNER: SSOULE



NYSDEC Jurisdictional Wetland Cover Type

- Farm Pond/Artificial Pond
- Floodplain Forest

- Red Maple-Hardwood Swamp
- Shallow Emergent Marsh
- Shrub Swamp
- Permanent Impact

- Limits of Disturbance (As of 12/16/2024)
- Site Boundary

0 150 300 Feet

Notes

- Impacts shown on tables represent impacts to entire wetland or stream, not just the portion shown on this figure.
- Temporary Impacts include construction laydown areas and areas of ground disturbance to be returned to pre-disturbance elevations.
- Permanent Impacts include building envelopes and areas of site grading.
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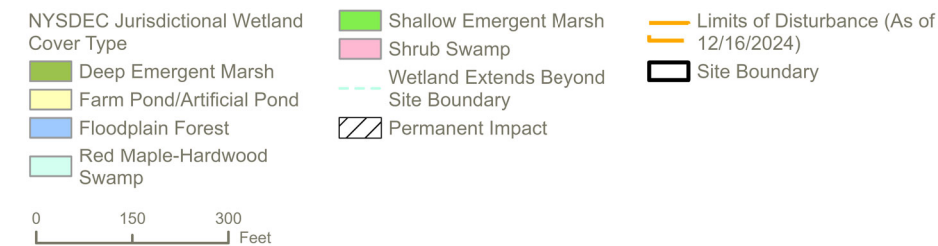
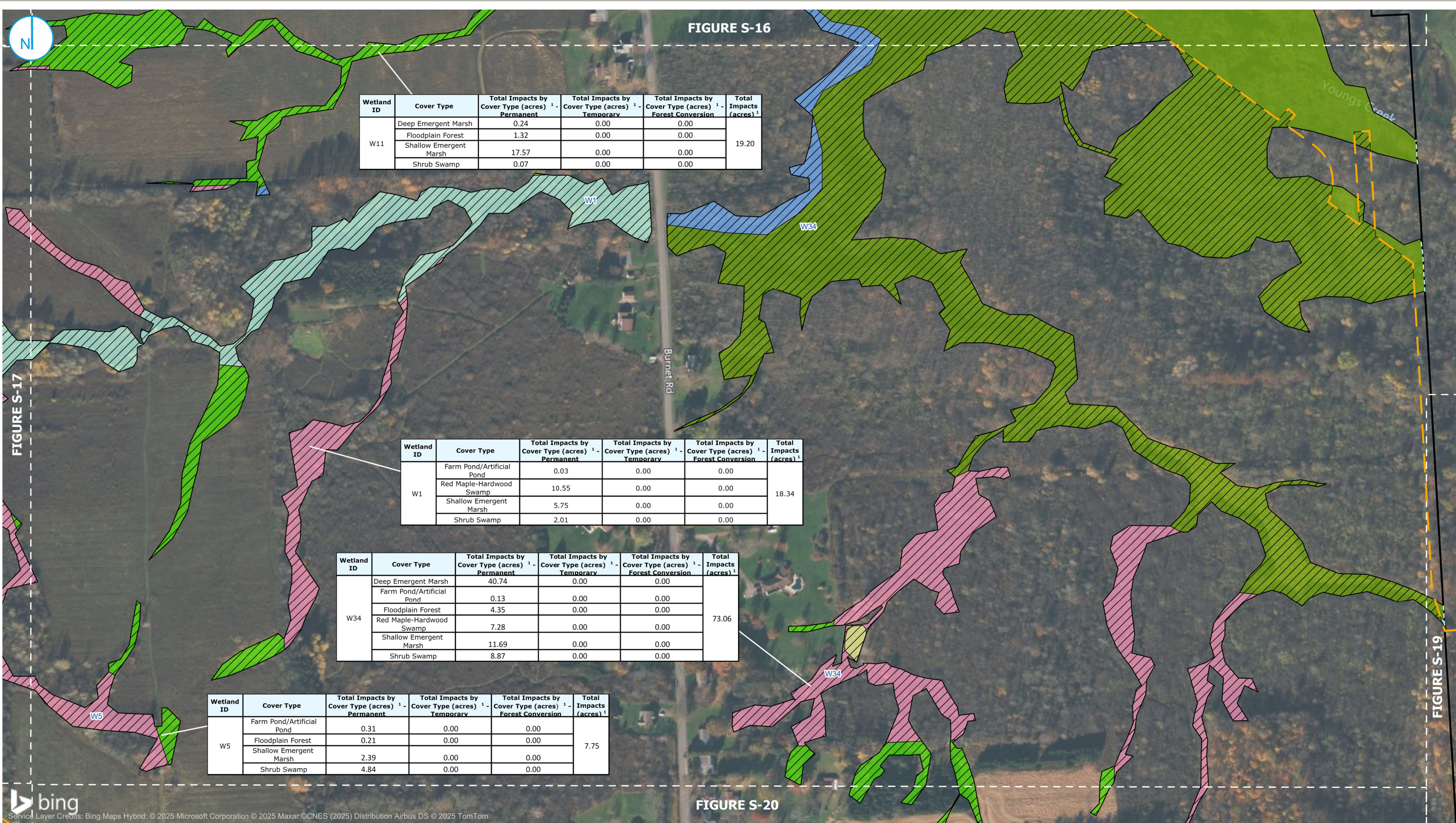
NYSDEC JURISDICTIONAL WETLAND IMPACTS

FIGURE S-17

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
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Clay, New York



Notes

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- Permanent Impacts include building envelopes and areas of site grading.
- ¹Total Impacts by Cover Type, Total Impacts, and Summary by Cover Type values are rounded from the computed GIS values and therefore may differ slightly from reported phase Total when summed.

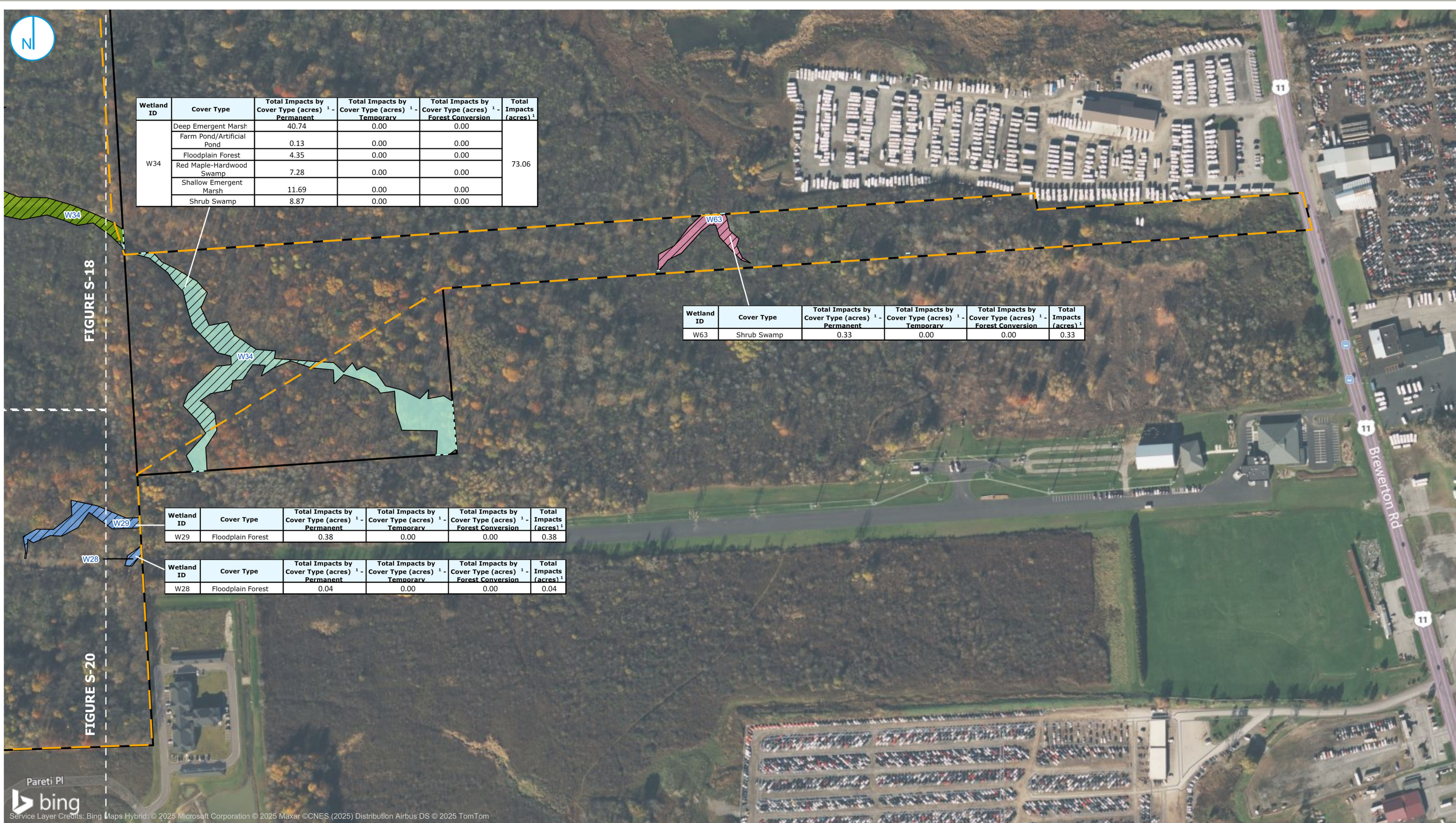
NYSDEC JURISDICTIONAL WETLAND IMPACTS

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Clay, New York

FIGURE S-18

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY





NYSDEC Jurisdictional Wetland Cover Type

- Deep Emergent Marsh
- Floodplain Forest
- Red Maple-Hardwood Swamp

Shrub Swamp

Wetland Extends Beyond Site Boundary

Permanent Impact

Limits of Disturbance (As of 12/16/2024)

Site Boundary

0 150 300 Feet

Notes

- Impacts shown on tables represent impacts to entire wetland or stream, not just the portion shown on this figure.
- Temporary Impacts include construction laydown areas and areas of ground disturbance to be returned to pre-disturbance elevations.
- Permanent Impacts include building envelopes and areas of site grading.
- ¹Total Impacts by Cover Type, Total Impacts, and Summary by Cover Type values are rounded from the computed GIS values and therefore may differ slightly from reported phase Total when summed.

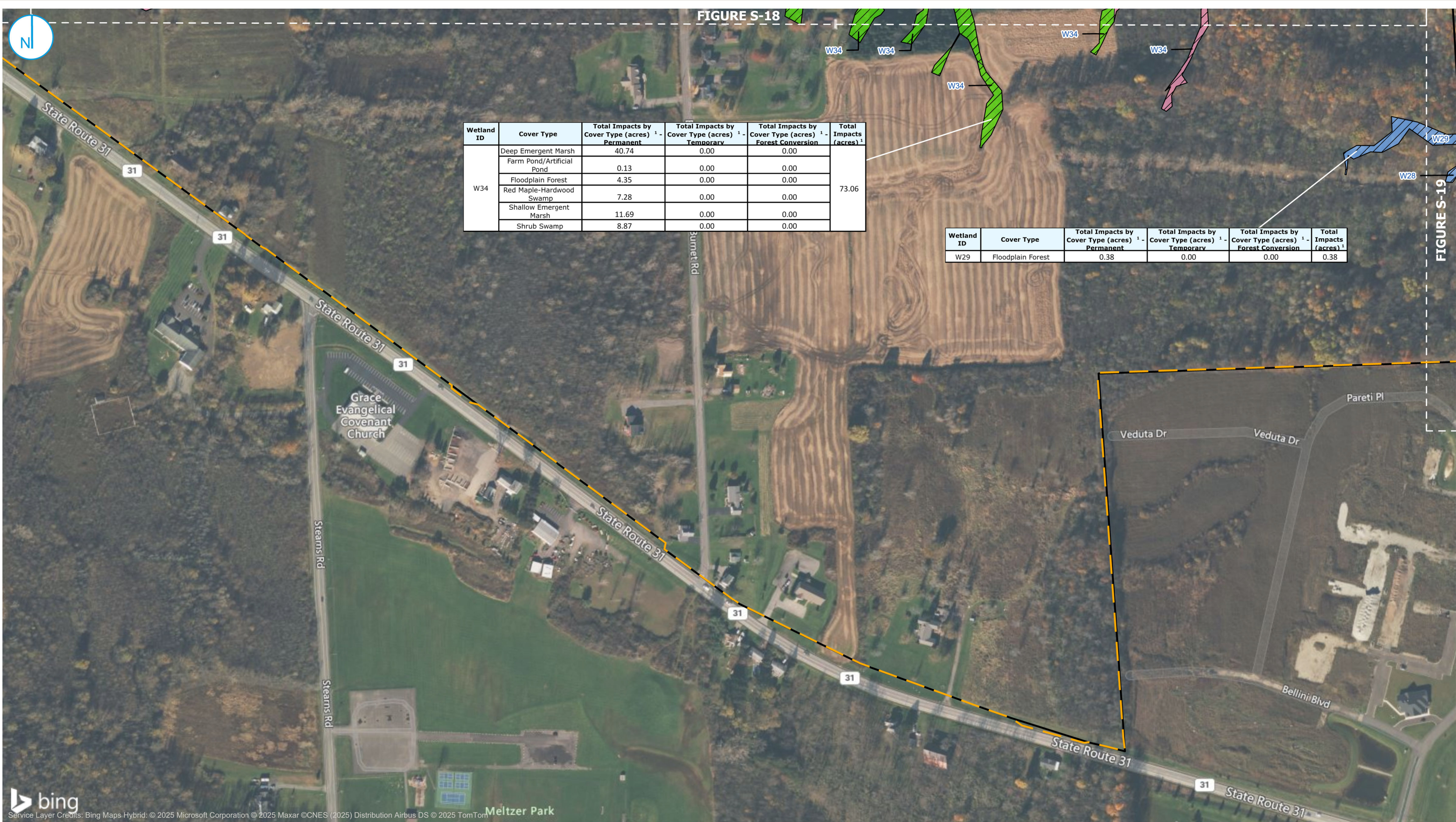
NYSDEC JURISDICTIONAL WETLAND IMPACTS

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Clay, New York

FIGURE S-19

RAMBOLL AMERICAS
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NYSDEC Jurisdictional Wetland Cover Type

- Floodplain Forest
- Shallow Emergent Marsh
- Shrub Swamp

Permanent Impact

Limits of Disturbance (As of 12/16/2024)

Site Boundary

0 150 300 Feet

Notes

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- Temporary Impacts include construction laydown areas and areas of ground disturbance to be returned to pre-disturbance elevations.
- Permanent Impacts include building envelopes and areas of site grading.
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NYSDEC JURISDICTIONAL WETLAND IMPACTS

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FIGURE S-20

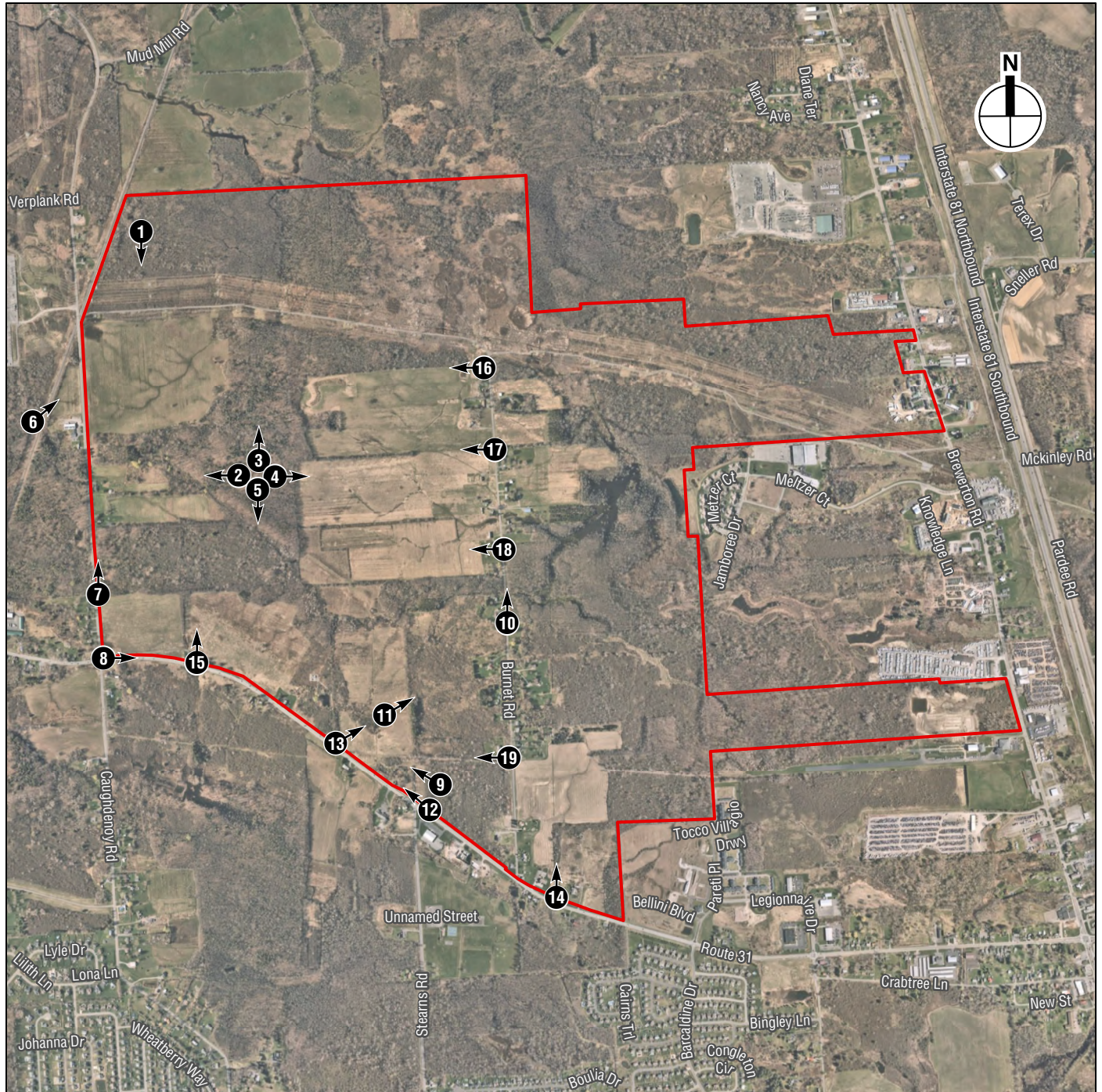
RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY



Drawings

Permit Application Drawings are included in a separate file.

Site Photolog



- Study Area
- 1 ↗ Photograph View Location and Reference Number

0 2,000 FEET



Deciduous forest, scrub-shrub uplands, and open fields, facing southeast.
August 25, 2021.

1



Deciduous forest, residential developments, and open fields, facing west.
August 25, 2021.

2



Deciduous forest and open fields, facing north. August 25, 2021.

3

Deciduous forest and open fields, facing east. August 25, 2021.

4



Deciduous forest and open fields, facing south. August 25, 2021.

5



Deciduous forest and open fields, facing northeast looking at the intersection of Caughdenoy Road and the railroad line. August 25, 2021.

6



Residential developments, open field, and deciduous forest, facing north along Caughdenoy Road. August 25, 2021.

7



Open fields, scrub-shrub uplands, residential developments, and deciduous forest, facing east along New York State Route 31. August 25, 2021

8



Open fields and deciduous forest, facing northwest. New York State Route 31 is visible in the western edge of the photo. August 25, 2021.

9



Open fields, scrub-shrub uplands, residential developments, and deciduous forests, facing north. August 25, 2021

10



Deciduous forest, residential developments, open fields, and scrub-shrub uplands, facing north-east. New York State Route 31 is visible in the eastern edge of the photo. August 25, 2021.

11



Deciduous forest and open field. Facing northwest from New York State Route 31. July 2022.

12



Deciduous forest, facing northeast from New York State Route 31. July 2022. **13**



Deciduous forest and open field, looking north from New York State Route 31. July 2022. **14**



Deciduous forest, scrub-shrub uplands, and open fields, looking north from New York State Route 31. July 2022.

15



Deciduous forest and scrub-shrub uplands, looking west from Burnet Road. September 2021.

16



Open field and deciduous forest, looking west from Burnet Road. September 2021. **17**



Residential developments, deciduous forest, and open fields, looking west from Burnet Road. September 2021. **18**



Open fields and deciduous forest, looking west from Burnet Road. September 2021. **19**