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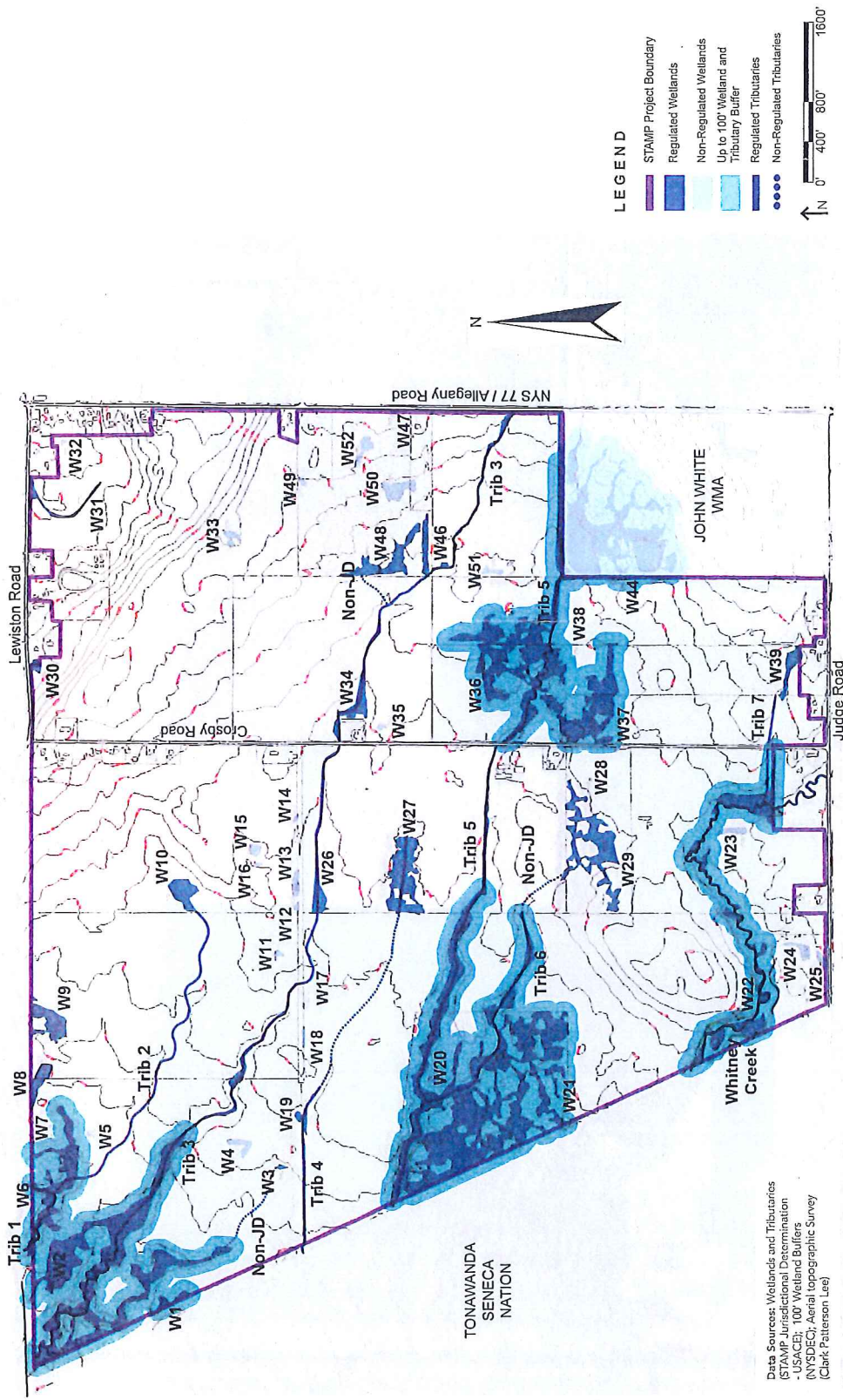
Project Site Location Map

Alabama STAMP – USACE/NYSDEC Joint Permit Application, 2013
 Town of Alabama, Genesee County, NY

FIGURE
1-1



WNY STAMP
 DA Processing No. 2010-00964
 Genesee County, New York
 Quad: Akron
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Data Sources: Wetlands and Tributaries (STAMP) Jurisdictional Determination - USACE; 100' Wetland Buffers (NYSDEC); Aerial Topographic Survey (Clark, Patterson, Lee)

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Delineated Wetlands and Streams

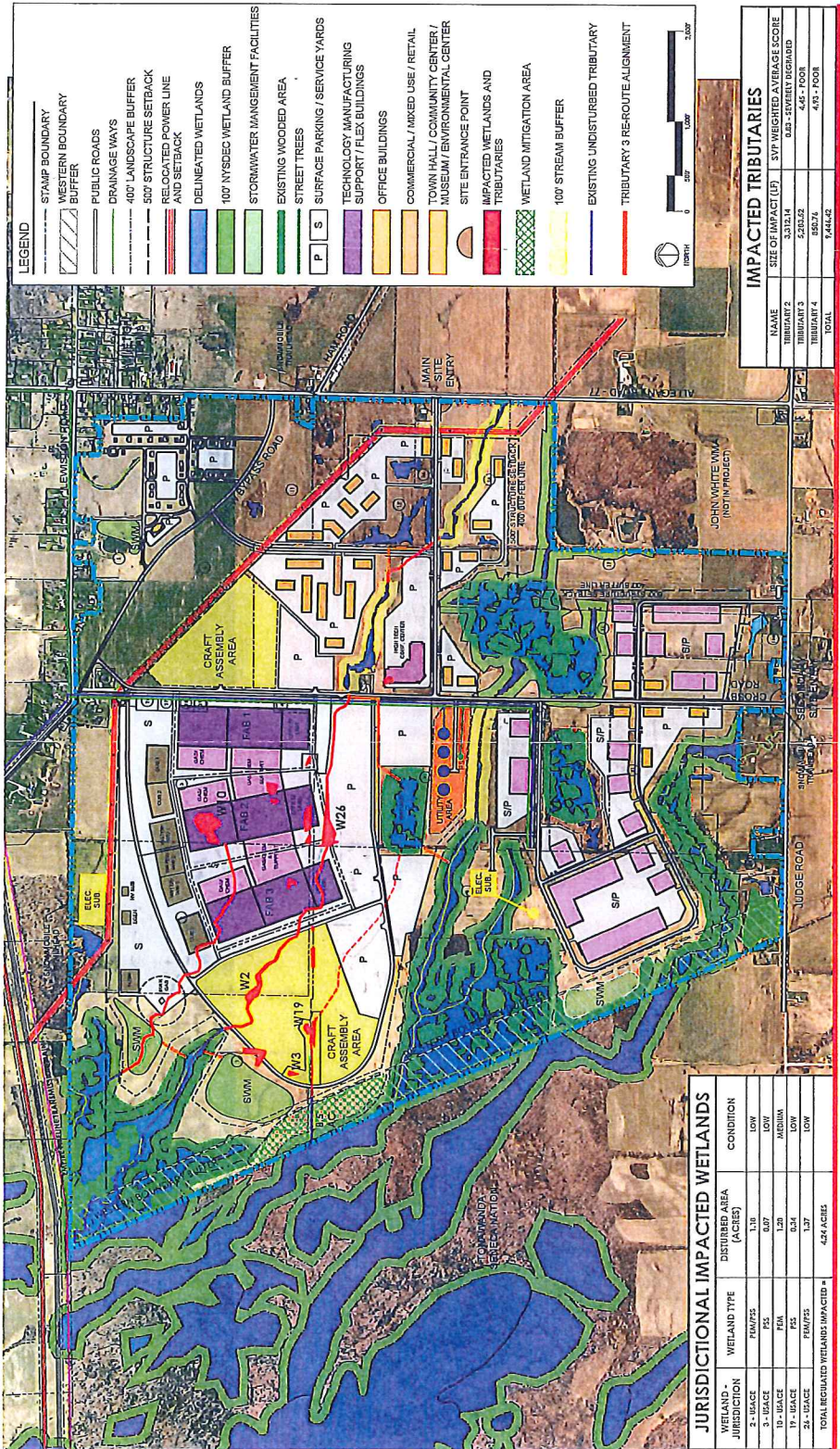
WNY STAMP – USACE/NYSDEC Joint Permit Application, 2013
 Town of Alabama, Genesee County, NY

FIGURE 2-6

WNY STAMP
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Preferred Alternative (on-site) Design Plan



LEGEND

- STAMP BOUNDARY
- WESTERN BOUNDARY BUFFER
- PUBLIC ROADS
- DRAINAGE WAYS
- 40' LANDSCAPE BUFFER
- 50' STRUCTURE SETBACK AND SETBACK
- RELOCATED POWER LINE AND SETBACK
- DELIMITED WETLANDS
- 100' NYSDEC WETLAND BUFFER
- STORMWATER MANAGEMENT FACILITIES
- EXISTING WOODED AREA
- STREET TREES
- P SURFACE PARKING / SERVICE YARDS
- S TECHNOLOGY MANUFACTURING SUPPORT / FLEX BUILDINGS
- OFFICE BUILDINGS
- COMMERCIAL / MIXED USE / RETAIL
- TOWN HALL / COMMUNITY CENTER / MUSEUM / ENVIRONMENTAL CENTER
- SITE ENTRANCE POINT
- IMPACTED WETLANDS AND TRIBUTARIES
- WETLAND MITIGATION AREA
- 100' STREAM BUFFER
- EXISTING UNDISTURBED TRIBUTARY
- TRIBUTARY 3 RE-ROUTE ALIGNMENT

IMPACTED TRIBUTARIES

NAME	SIZE OF IMPACT (LF)	SYP WEIGHTED AVERAGE SCORE
TRIBUTARY 2	3,212.14	0.63 - SEVERELY DEGRADED
TRIBUTARY 3	5,203.52	4.45 - POOR
TRIBUTARY 4	850.74	4.67 - POOR
TOTAL	9,466.42	

JURISDICTIONAL IMPACTED WETLANDS

WETLAND JURISDICTION	WETLAND TYPE	DISTURBED AREA (ACRES)	CONDITION
2 - WACE	FWA/PFS	1.18	LOW
3 - WACE	PFS	0.07	LOW
19 - WACE	PFA	1.28	MEDIUM
17 - WACE	PFS	0.24	LOW
24 - WACE	FWA/PFS	1.07	LOW
TOTAL REGULATED WETLANDS IMPACTED =			4.24 ACRES

FIGURE 2

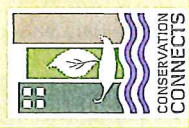
Updated Proposed Development Master Plan

WNY STAMP RAI Response – December 2014
Town of Alabama, Genesee County, NY

CLARK PATTERSON LEE
DESIGN PROFESSIONALS
205 ST. PAUL STREET, SUITE 500
ROCHESTER, NEW YORK 14604
TEL (800) 274-8000
FAX (585) 432-3636
www.clarkpatterson.com

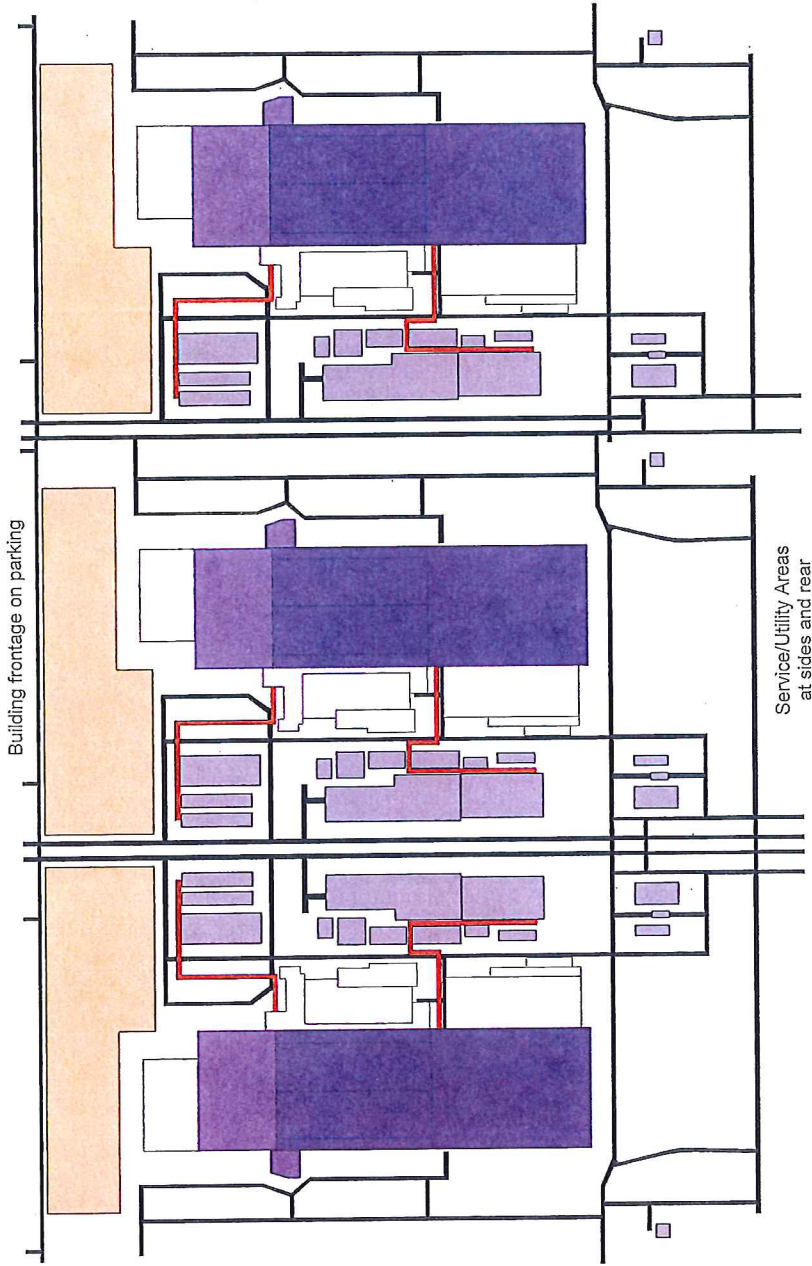


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- ❖ Building frontage with employee and visitor parking/circulation
- ❖ Service/utility areas with truck and cart circulation
- ❖ Organized, efficient, and logical layout to clarify circulation, optimize shared utilities/materials handling, minimize utility/piping lines, and organize service areas
- ❖ Site typically graded to create a plateau so most buildings can be sited at the same elevation
- ❖ Substations and bulk gas yard can typically be shared between multiple facilities when planned for potential expansion.

Data Source: IDC Architects/CP2W Hill



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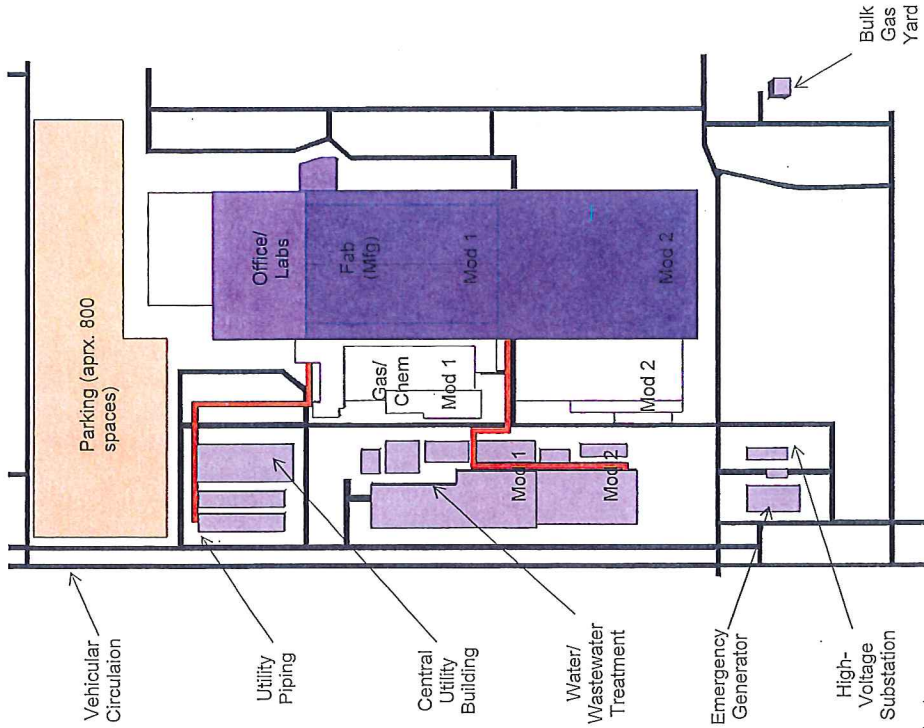
450mm Multi-Facility Layout

WNY STAMP – USACE/NYSDEC Joint Permit Application, 2013
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FIGURE
5-2

WNY STAMP
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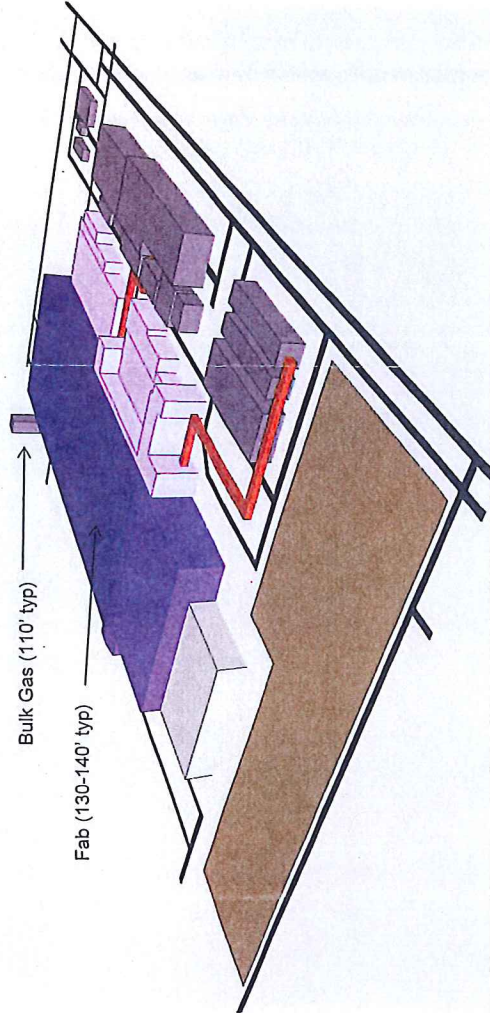




*Additional outreach/educational/office space not applicable to all facilities

450mm Facility Template

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Typical Square Footages**
 Fab (Manufacturing) – 490,000sf/Mod
 Office/Labs
 Gas/Chem – 83,500sf/Mod
 Central Utility Building
 Water/Wastewater – 38,400sf/Mod 1)
 Emergency Generator
 High-Voltage Substation
 Bulk Gas Yard

490,000sf x 2 floors = 980,000sf
 125,000 x 5 floors = 625,000sf
 167,000sf
 58,000sf
 76,800sf
 11,000sf
 7,000sf
 2,500sf

**Specific square footages may be refined during ongoing site planning process.

Data Source: IDC Architects, CH2M Hill

450mm Facility Layout

FIGURE 5-1

WNY STAMP – USACE/NYSDEC Joint Permit Application, 2013
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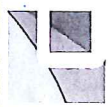




Data Sources: Clark Patterson, Lee Design Professionals



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Off-site Alternatives (Alabama A1, A2, Elba Site, Batavia Site) 5-6
 WNY STAMP – USACE/NYSDEC Joint Permit Application, 2013
 Town of Alabama, Genesee County, NY

FIGURE

*Off-site Alternatives and Preferred Site Alternative
 (Alabama Site A3)*

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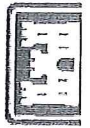


Table 5-1. Off-site Alternatives - Comparison to Specified Minimum Criteria

Site	Size > 1,000 acres	Site Compliance with Minimum Requirements							Water and Sewer Nearby	Land Assembly support
		Flat Topography	Proximity to Ground and Air Primaries	Power Access (50-200MW)	Within NYPA Hydropower Zone	Within 60 min. drive from population centers	Wetland Potential Impacts			
Alabama A-1	2,041 acres	Yes	Yes	Yes	Yes	Yes	High	Yes	No	
Alabama A-2	1,154 acres	Yes	Yes	Yes	Yes	Yes	High	Yes	No	
Preferred Site	1,243 acres	Yes	Yes	Yes	Yes	Yes	Moderate	Yes	Yes	
Baravia	877 acres	Yes	Yes	Yes	No	Yes	Low	Yes	No	
Elba	1,739 acres	Yes	Yes	Yes	No	Yes	Moderate	Yes	No	

Table 5-2. Off-site Alternatives - Cost Comparisons

Site	Acquisition Cost ¹	Power Line Cost ²	Water Line Cost	Sewer Cost	Roadway Costs	Wetland Mitigation Cost ³	Total Development Cost	Power Cost Premium Per Year ⁴	Dev Cost plus 10 Year Power Cost Premium
Alabama A-1	\$19,389,500.00	\$98,000,000.00	\$75,000,000.00	\$67,000,000.00	\$18,000,000.00	\$985,000.00	\$278,374,500.00	\$12,667,200.00	\$405,046,500.00
Alabama A-2	\$10,953,000.00	\$95,290,000.00	\$75,000,000.00	\$67,000,000.00	\$11,200,000.00	\$1,485,000.00	\$264,938,000.00	\$12,667,200.00	\$391,610,000.00
Preferred Site	\$8,079,500.00	\$95,600,000.00	\$75,000,000.00	\$67,000,000.00	\$14,000,000.00	\$985,000.00	\$254,664,500.00	\$12,667,200.00	\$391,336,500.00
Baravia	\$8,331,500.00	\$101,770,000.00	\$95,000,000.00	\$75,000,000.00	\$10,000,000.00	\$985,000.00	\$291,026,500.00	\$28,953,600.00	\$580,562,500.00
Elba	\$16,520,500.00	\$100,100,000.00	\$95,000,000.00	\$75,000,000.00	\$21,000,000.00	\$985,000.00	\$308,605,500.00	\$28,953,600.00	\$598,144,500.00

¹ Acquisition Cost assumes \$4,500 per acre as a development price for the Proposed Site and \$9,500 per acre for A-1, A-2, Baravia and Elba sites due to location/strategic farmland

² Power line cost assumes estimated base cost for preferred site plus \$1,000,000 per mile for additional distance of Alternative Sites

³ Mitigation Costs as \$100,000 per acre - assumed all sites could avoid and minimize to level of Preferred Site except A-2 which includes additional cost (\$500,000) to replace NRCS wetland/easement

⁴ Power cost premium is the Hydropower Zone Rate (\$0.037/KWh) or Blended Rate/Recharge NY (\$0.030/KWh) at average estimated yearly rate of 361,990,000 kWh/yr

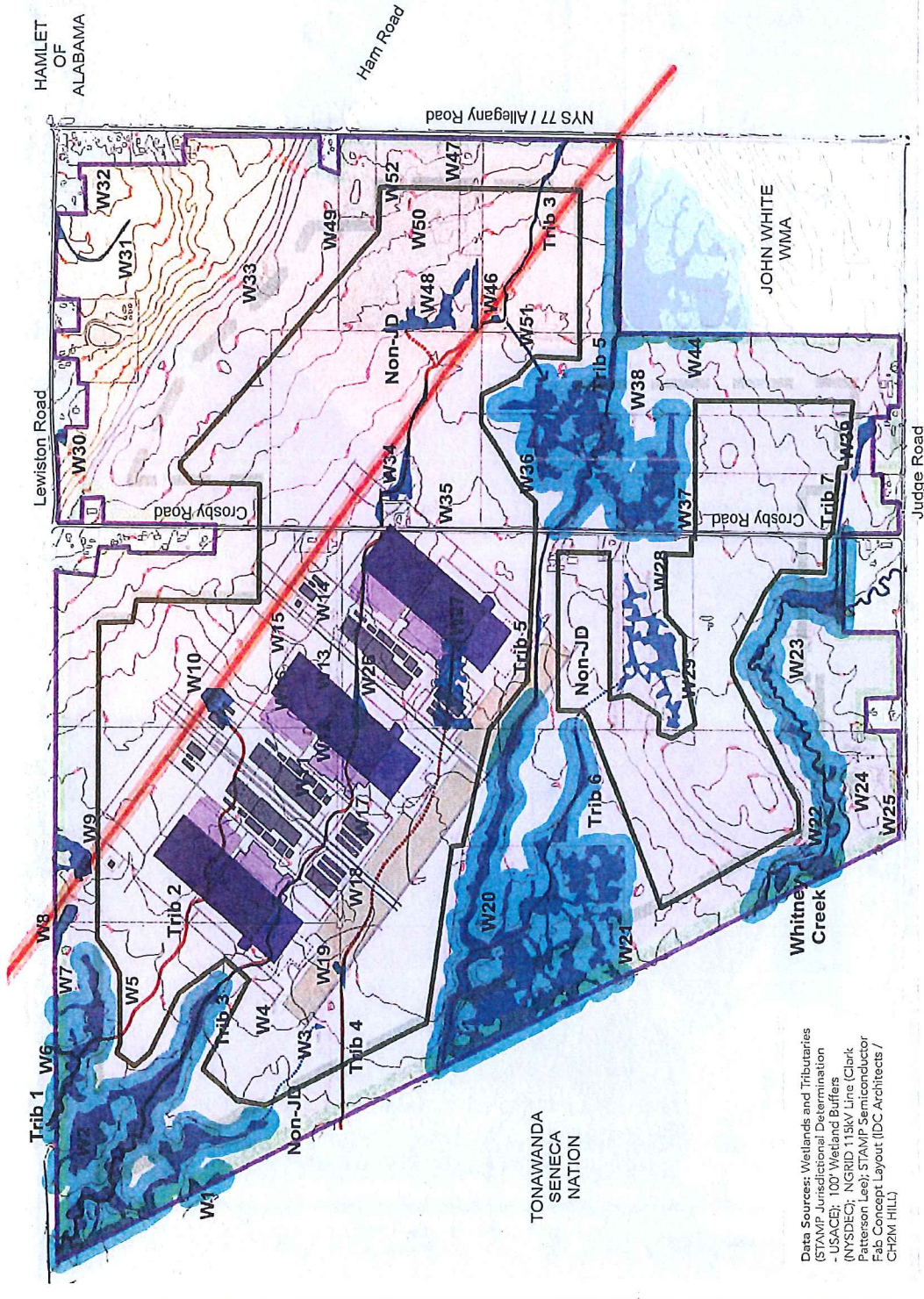
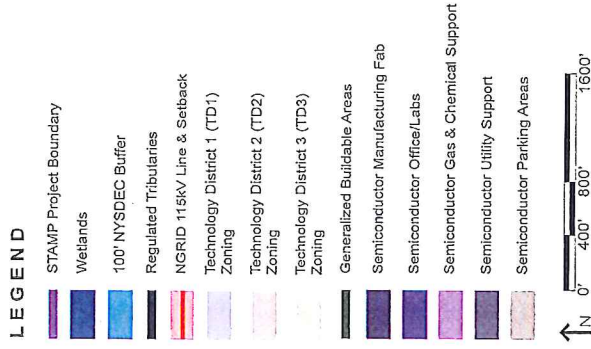
⁵ Water line cost for Alabama A-1, A-2 and the Preferred Site were based on cost estimates completed for the SEQR process. Costs for the Baravia and Elba sites were estimated using \$100/LF of water main installed. These costs include infrastructure to bring water to the site and the main babbones for the site, but do not include onsite distribution.

⁶ Sewer costs for the Preferred Site were based on cost estimates completed for the SEQR process. Cost for the remaining sites were estimated using \$300/LF for gravity sewer and \$135 for force mains. These costs include infrastructure to treat and discharge the sewage. These costs only include the main babbones collection pipe and do not include individual lot collection costs.

⁷ Roadway costs include an interior roadway system for each park based on park size. These costs do not include any offsite improvements that would be required.



- Notes:
- FGEIS Wetland Impacts (& additional tributaries)
 - 115kV power line remains
 - North Crosby houses remain
 - Crosby Road to be rerouted
 - Fabs do not fit with needed access and circulation
 - Systematic arrangement of 3 fabs is a positive
 - Industry layout requirements unmet



Data Sources: Wetlands and Tributaries (STAMP Jurisdictional Determination - USACE); 100' Wetland Buffers (NYSDEC); NGRID 115kV Line (Clark Patterson Lee); STAMP Semiconductor Fab Concept Layout (IDC Architects / CH2M HILL)



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On-site Alternative - A - 1

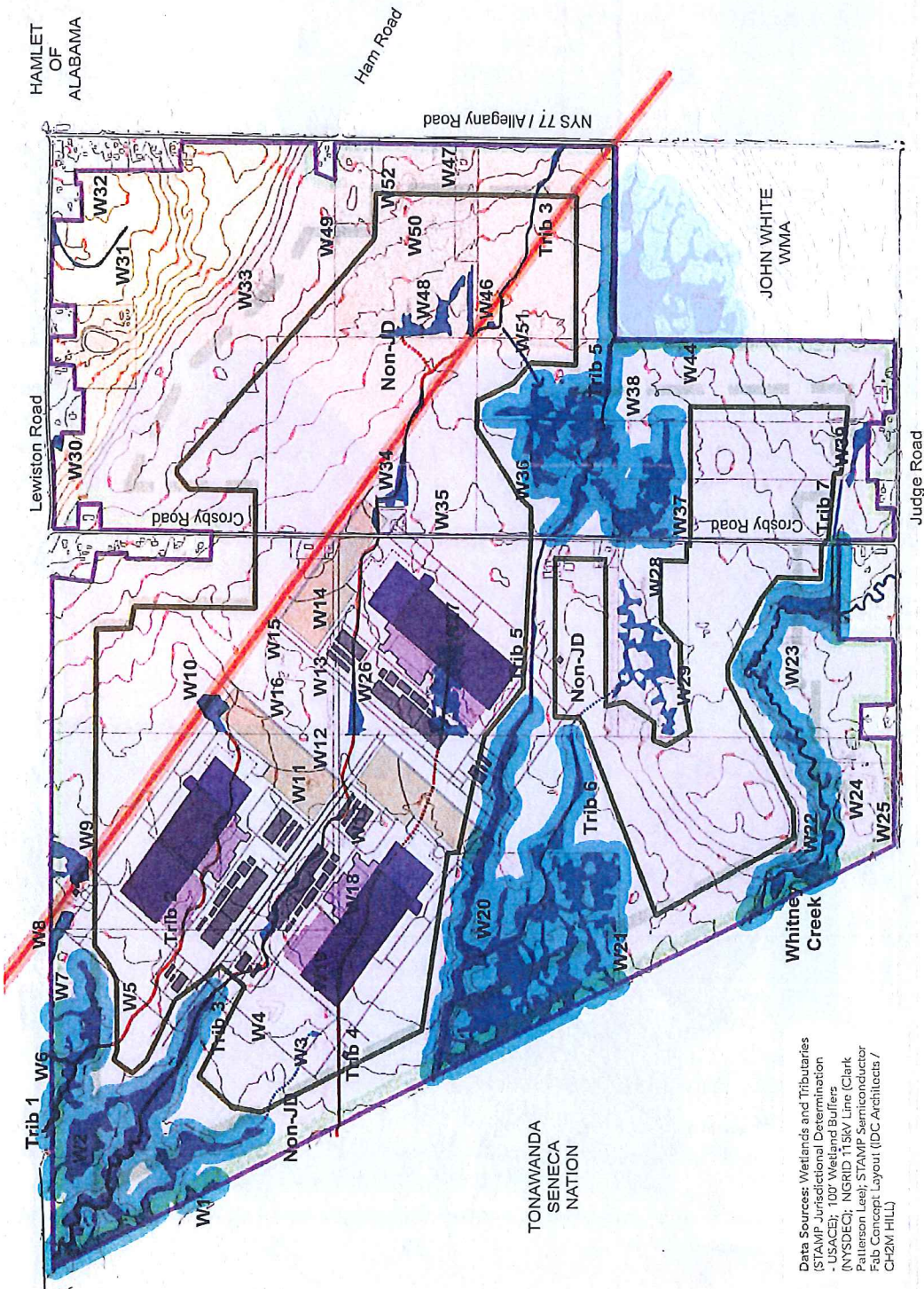
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FIGURE 5-15

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- Notes:**
- FGEIS Wetland Impacts (& additional tributaries)
 - 115kV power line remains
 - North Crosby houses remain
 - Crosby Road to be rerouted
 - Fabs do not fit with needed access and circulation
 - Non-systematic arrangement of 3 fabs does not work
 - Industry layout requirements unmet



LEGEND

[Symbol]	STAMP Project Boundary
[Symbol]	Wetlands
[Symbol]	100' NYSDEC Buffer
[Symbol]	Regulated Tributaries
[Symbol]	NGRID 115kV Line & Setback
[Symbol]	Technology District 1 (TD1) Zoning
[Symbol]	Technology District 2 (TD2) Zoning
[Symbol]	Technology District 3 (TD3) Zoning
[Symbol]	Generalized Buildable Areas
[Symbol]	Semiconductor Manufacturing Fab
[Symbol]	Semiconductor Office/Labs
[Symbol]	Semiconductor Gas & Chemical Support
[Symbol]	Semiconductor Utility Support
[Symbol]	Semiconductor Parking Areas



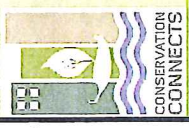
FIGURE 5-16

On-site Alternative - A - 2

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HAMLET OF ALABAMA

Lewisston Road

Harm Road

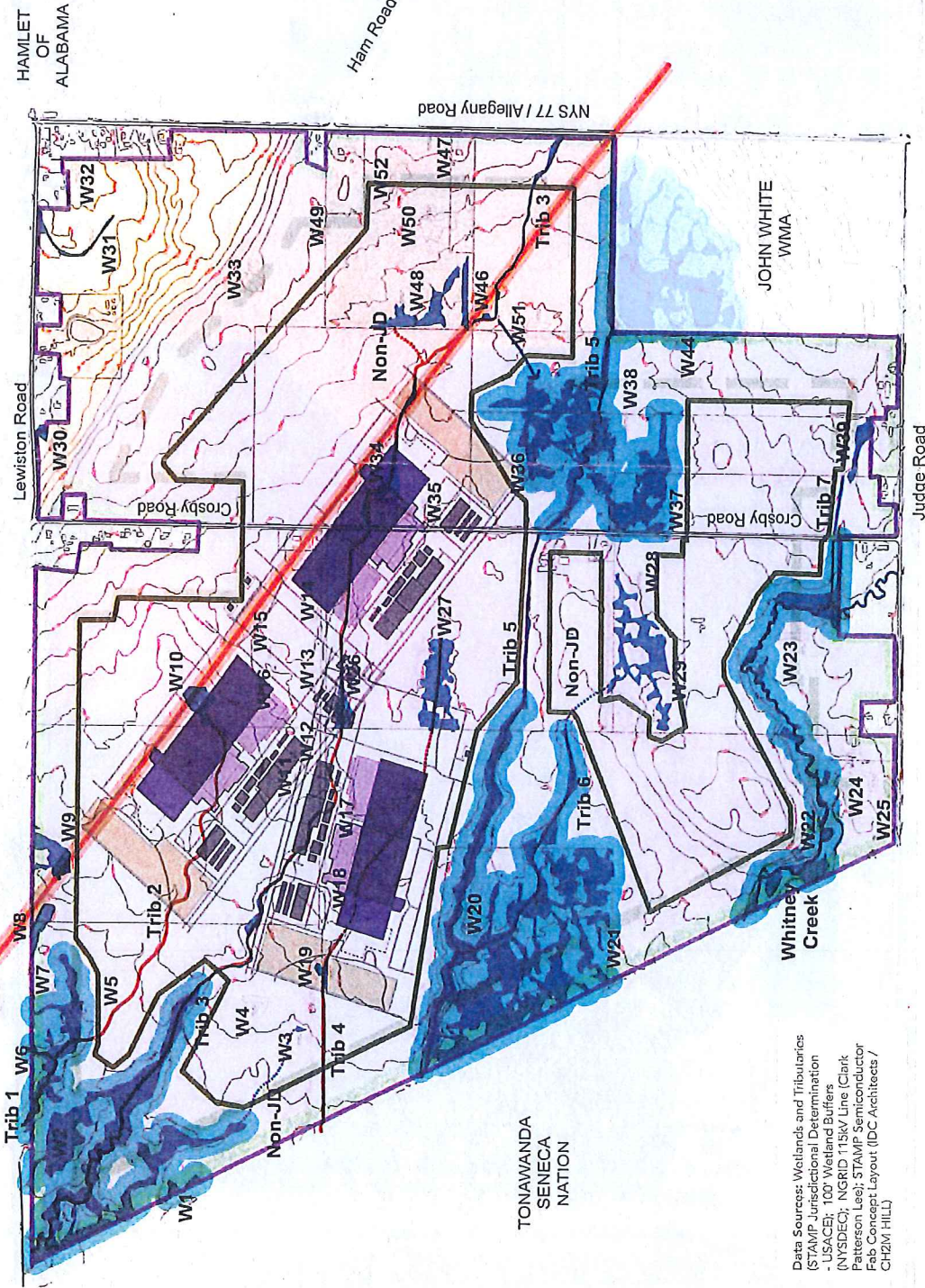
NYS 77 / Allegany Road

Judae Road

TONAWANDA SENECA NATION

JOHN WHITE WMA

Whitney Creek



- Notes:
- FGEIS Wetland Impacts (& additional tributaries)
 - 115kV power line remains
 - North Crosby houses remain
 - Crosby Road to be rerouted
 - Fabs do not fit with needed access and circulation
 - Reasonably systematic arrangement of 3 fabs does not really work
 - Industry layout requirements unmet

LEGEND

- STAMP Project Boundary
- Wetlands
- 100' NYSDEC Buffer
- Regulated Tributaries
- NGRID 115kV Line & Setback
- Technology District 1 (TD1) Zoning
- Technology District 2 (TD2) Zoning
- Technology District 3 (TD3) Zoning
- Generalized Buildable Areas
- Semiconductor Manufacturing Fab
- Semiconductor Office/Labs
- Semiconductor Gas & Chemical Support
- Semiconductor Utility Support
- Semiconductor Parking Areas



Data Sources: Wetlands and Tributaries (STAMP Jurisdictional Determination - USACE); 100' Wetland Buffers (NYSDEC); NGRID 115kV Line (Clark Patterson Lee); STAMP Semiconductor Fab Concept Layout (IDC Architects / CH2M HILL)



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On-site Alternative - A -3

WNY STAMP – USACE/NYSDEC Joint Permit Application, 2013
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FIGURE 5-17



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