

20223310.0001

CALKIN ROAD HOUSING

HENRIETTA, NY

PREPARED FOR:
Dakota Partners Inc.
235 Bear Hill Road
Waltham, MA 02451

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1.0 INTRODUCTION

The Calkins Road Housing project proposes a 62-unit apartment building including a community building, public outdoor areas and walking trails. The site is currently undeveloped and totals ±6.996 acres with forest cover and an existing pond on site.

The site is an ideal location for affordable housing given its proximity to public transportation infrastructure and to schools. The site will utilize existing utility infrastructure on site to serve the site, which includes sanitary and stormwater sewers. A new water service will be proposed for the project. Detailed utility analysis is presented in section 5 of this report.

The parcel is zoned B-2 Commercial and R-1-15 Residential in a Mixed Use Overlay Corridor district in the Town of Henrietta. This report will outline engineering due diligence and basis of design for this development.



2.0 LAND USE & ZONING

2.1 Site Data and Zoning

Below lists site data and zoning requirements based on the Town Code of Henrietta:

SITE DATA

- 1. TAX ACCOUNT NUMBER: 176.060-0002-002.11
- 2. PARCEL ADDRESS: EAST HENRIETTA ROAD
- 3. TOTAL PARCEL AREA: 6.996 ACRES (305,032 SF)
- 4. AREA OF DISTURBANCE: 5.215 ACRES (227,165 SF)
- 5. EXISTING ZONING: R-1-15/B-2 (MIXED USE CORRIDOR DISTRICT)
- 6. EXISTING USE: UNDEVELOPED
PROPOSED USE: MULTIFAMILY RESIDENTIAL
- 7. AREA REQUIREMENTS:

BULK AREA REQUIREMENTS		
	REQUIRED	PROPOSED
<u>LOT</u>		
OPEN SPACE	30%	62.4%
<u>SETBACK</u>		
FRONT	20'	236'
SIDE	20'	103'
REAR	20'	182'
<u>BUILDING</u>		
HEIGHT	≤30'	≤30'
DENSITY	14 DU/ACRE	8.86 DU/ACRE
<u>PARKING</u>		
STALLS (QTY.)	2.5 PER DU (62 UNITS*2.5 = 155 SPACES)	93
STALL SIZE (PERPENDICULAR)	9' X18'	9' X 18'
DRIVE AISLE (WIDTH)	24'	24'

- | | NO | YES |
|--|-------------------|-----|
| 8. STATE REGULATED WETLANDS (NYSDEC WETLAND INVENTORY): | X | |
| 9. FEDERALLY REGULATED WETLANDS (U.S. F.W.S. N.W.I.): | X | |
| 10. FLOOD PLAIN (FEMA NFHL):
FIRM PANEL: 36055C0353G
DATED: 8/28/2008 | X | |
| 11. PUBLIC WATER PROVIDED BY: | MCWA | |
| 12. ELECTRIC SERVICE PROVIDED BY: | RG&E | |
| 13. GAS SERVICE SUPPLIED BY: | RG&E | |
| 14. SANITARY SEWER PROVIDED BY: | TOWN OF HENRIETTA | |
| 15. STORM SEWER & DRAINAGE FACILITIES WILL BE PUBLIC AND MAINTAINED BY THE OWNER | | |
| 16. ALL IMPROVEMENTS SHALL BE MADE IN ACCORDANCE WITH THE CURRENT DEVELOPMENT STANDARDS AND SPECIFICATIONS OF THE MUNICIPALITY | | |

3.0 EXISTING SITE CONDITIONS

3.1 Land Cover and Soils

Soils within the project area were reviewed for their hydrologic soil group in accordance with the USDA's NRCS Soil Survey. The soil groups present on site are summarized below and the soils map can be found in Appendix B:

Table 1: *Hydrologic Soil Group Table*

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
HIB	Hilton loam, 3 to 8 percent slopes	B/D	6.0	85.9%
OnB	Ontario loam, 3 to 8 percent slopes	B	0.2	2.6%
OnC	Ontario loam, 8 to 15 percent slopes	B	0.8	11.5%
Totals for Area of Interest			7.0	100.0%

3.2 Wetlands / Creeks

The site was reviewed for the existence of federal and state regulated wetlands within the property boundaries. Federal wetlands were researched using the National Wetlands Inventory (NWI) using an online U.S. Fish and Wildlife website search. State regulated wetlands were researched using the NYSDEC's online Environmental Resource Mapper website. Review of the mapping indicates there are not federal or state wetlands on site. Refer to Appendix C for the federal and state regulated wetlands mapping.

3.3 NYSDEC Environmental Resources

The NYSDEC has an Environmental Resource Mapper on its website. The Environmental Resource Mapper is an interactive mapping application that can be used to identify some of New York State's natural resources and environmental features that are state protected, or of conservation concern. It displays the following:

- Animals and plants that are rare in New York, including those listed as Endangered or Threatened (generalized locations). [Updated May 2008]
- Significant natural communities, such as rare or high-quality forests, wetlands, and other habitat types.
- New York's streams, rivers, lakes, and ponds; water quality classifications are also displayed

According to this database, there are not rare and endangered animals in the vicinity of the project and there are natural communities near the project site but are not on site.

3.4 Floodplain

According to FEMA's National Flood Hazard FIRMette Mapper, the entire site is located in Flood Zone X (minimal hazard) per community panel no. 36055C0353G dated 08/28/2008. Refer to Appendix D for the FIRMette map of the site.

3.5 State Historic Preservation Office Review

The site was reviewed for the presence of archeological sensitive areas using online GIS tools found at the NYS Historic Preservation Office (SHPO). The Cultural Resource Information System mapping of the area found there are archeo-sensitive areas on the parcel. The SHPO map and letter of no impact is included in Appendix E.

4.0 TRAFFIC IMPACT

This development will generate traffic that will be distributed to the surrounding road network. See the amount of traffic generated from this project below, which was calculated using the ITE Trip Generation Manual 10th edition which calculates traffic generation for specific uses:

Table 2: *Traffic Generation*

ITE Use:		221- Multifamily Housing (Mid-Rise)				
Dependent Factor (X):		Dependent Factor (X=62 units)				
	Rate/Formula	Total	Enter		Exit	
AM Peak Hour:	0.36	22	5	26%	17	74%
PM Peak Hour:	0.44	27	16	61%	11	39%

Traffic is distributed to Calkins Road and either goes eastbound or westbound. A majority of traffic will go westbound to East Henrietta Road, and eventually to the 390 Expressway, local businesses, or schools in the area.

The traffic generated from this project is insignificant when compared to existing traffic volumes, and does not negatively impact the function of the existing traffic road network.

See additional traffic design criteria below:

- A firetruck turnaround for the site will be properly designed per Chapter 9 of the NYS Fire Code.
- Pedestrian walkways are proposed for this project. These walkways will be protected in areas that converge with vehicular traffic on site.

5.0 UTILITIES

5.1 Sanitary Sewer

An 8" gravity sewer, owned by the Town of Henrietta, currently runs west-east through the site which will provide a connection point for the proposed system through an existing manhole. The proposed buildings will be served by a new 8" dedicated PVC main. The loading rate for the proposed sanitary main per the NYS Design Standard for Intermediate Sized Wastewater Treatment Systems is described below:

Table 3: Sanitary Demand

Building Information	Dependent Factor	Amount	Loading Rate (Per NYSDEC)	Load
Apartment	Per Bedroom	130	75	9750 gpd
Total:			9750 gpd	(6.77 gpm)
Peak Flow (Peak Factor of 4):			27.08 gpm	

The proposed sanitary sewer system is to 8" SDR-21 PVC pipes at 1.00% slopes. Manning's equation was used to calculate pipe capacity of the sewers for this project, and compared to the flow anticipated from the project to ensure the system will have ample capacity.

Table 4: Sanitary Pipe Capacity

Sanitary Lateral Capacity check using Manning's Equation		
	Manning's Maximum flow	Proposed Flow
8" Sanitary Sewer Pipes	$Q = A(1.49/n)(A/P)^{(2/3)}S^{0.5}$ $Q = 0.35(1.49/0.011)(0.35/2.09)^{(2/3)} * .004^{(0.5)}$ $Q = 0.91 \text{ ft}^3/\text{s} = 409 \text{ gpm}$	46

A=Flow Area (sf) n=Manning's Roughness Coefficient (unitless) P=wetted perimeter (ft) (for maximum flow this equals the pipe circumference = 2πR) S=slope of channel (ft/ft)

Based on the table above, the sanitary sewer system can handle the proposed flows.

5.2 Water

The proposed development will connect to an existing 12" watermain in the southern right-of-way of Calkins Road. The public water main extension for this project will be an 8" Class 52 DIP watermain that runs into the community building's mechanical room to the proposed backflow devices and master meter. The service will split inside the building to a 8" water line for fire protection (private hydrants and sprinkler in the apartment building) and a 4" for domestic service to the apartment building and community building.

The fire service will have a DCDA for backflow prevention and the domestic service will have a Meter and RPZ for water consumption monitoring and backflow prevention.

Private fire hydrants are proposed throughout the sites and will be spaced at a maximum of 500'. The proposed water appurtenances will be constructed in accordance with the latest MCWA, MCHD, and AWWA standards and specifications.

5.3 Gas & Electric

There are gas and electric services on East Henrietta Road and Calkins Road that are owned and operated by RG&E that have ample capacity to support the project.

6.0 DRAINAGE

6.1 Stormwater Quantity

Drainage for the existing site enters an existing pond that ultimately discharges to the east via an outlet control structure to a town owned storm sewer system. This development will expand the existing pond to account for increased runoff from the site. This expanded pond will be designed to account for the Town requirement of 20% reduction during analyzed storm events (1,10, and 100 year events).

6.2 Stormwater Quality

The project will be serviced by a network of private storm sewers which will convey stormwater runoff to stormwater management practices. The project proposes the use of bioretention area and a stormwater management pond to meet the stormwater quality control requirements based on Chapter 4 of the *New York State Stormwater Management Design Manual, 2015* for Water Quality Volume (WQv). It will also meet the stormwater quantity requirements based on Chapter 5 of the *New York State Stormwater Management Design Manual, 2015* criteria for Channel Protection Volume (Cpv), Overbank Flood (Qf), and Extreme Storm (Qr) conditions.

7.0 PARKING

The municipality has specific parking requirements per use. The parking requirements for this project are based on town code Article § 295-44 Off-street parking and is detailed below:

Table 5: Parking Stall Requirements

PARKING		
STALLS (QTY.)	2.5 PER DU (62 UNITS*2.5 = 155 SPACES)	93
STALL SIZE (PERPENDICULAR)	9' X18'	9' X 18'

The total amount of proposed parking for this project requires a variance per the town code.

8.0 FIRE DEPARTMENT ACCESS/FIRE CODE

The municipalities Fire department can access the site from Calkins Road. Fire hydrants for the proposed site will be installed every 500' along the private drives. The proposed apartment building will have proper access and the a sprinkler system to meet all the latest building and fire codes. A set of fire truck turning movement maps are provided in Appendix F and shows there is ample room for a fire apparatus to maneuver the site designed using criteria found in Appendix D of the NYS Fire Code.

9.0 LIGHTING, LANDSCAPING AND SIGNAGE

9.1 Landscaping

Trees and other plants chosen for the facility will meet the Town of Henrietta's standards and compliment the local landscape. Shade trees will be used in parking areas and will provide a reduction in the "heat island effect" along the parking and road areas. Landscape screening will be provided along residential boundaries and no invasive species will be selected. Landscaping will meet the requirements set by the town code.

The area is currently covered in rich vegetation, portions of which will remain undisturbed. The developer will provide replacement trees that will adhere to the town requirement of 8 trees replaced per acre of disturbance. The landscape plan will be prepared by a licensed landscape architect which will be reviewed by the Town's Conservation Board.

9.2 Lighting

The site will feature all new lighting fixtures. Building mounted lights will be provided for entrances and walking areas near the buildings. Parking areas will use two-way LED dark sky compliant shoe box lights that stand 20' tall to ensure pedestrian and motorist safety while traversing the parking lot. These lights will be placed and positioned to prevent light spillage to the neighboring properties.

9.3 Signage

Handicap parking signs will be provided in ADA parking areas that will meet the minimum ADA requirements.

Safety signs will also be provided at areas where the proposed trail system integrates with the development to ensure that pedestrians are safe from vehicular traffic.

10.0 SUMMARY

In summary, the proposed project will provide a benefit to the community and provide an inviting option for residential housing in the area. The traffic generated during peak times will have no detrimental impact on the adjacent intersections or road network. The proposed use "fits" in relation to adjacent property uses and the town's comprehensive plan.

APPENDICES

APPENDIX A: AERIAL PHOTO



APPENDIX B: SOILS MAP



MAP LEGEND

- Area of Interest (AOI)
 - Area of Interest (AOI)
- Soils
 - Soil Rating Polygons**
 - A
 - A/D
 - B
 - B/D
 - C
 - C/D
 - D
 - Not rated or not available
 - Soil Rating Lines**
 - A
 - A/D
 - B
 - B/D
 - C
 - C/D
 - D
 - Not rated or not available
 - Soil Rating Points**
 - A
 - A/D
 - B
 - B/D
- Water Features
 - Streams and Canals
- Transportation
 - Rails
 - Interstate Highways
 - US Routes
 - Major Roads
 - Local Roads
- Background
 - Aerial Photography

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
HIB	Hilton loam, 3 to 8 percent slopes	B/D	6.0	85.9%
OnB	Ontario loam, 3 to 8 percent slopes	B	0.2	2.6%
OnC	Ontario loam, 8 to 15 percent slopes	B	0.8	11.5%
Totals for Area of Interest			7.0	100.0%

APPENDIX C: STATE AND FEDERAL

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION



Environmental Resource Mapper

Base Map: Topographical [Using this map](#)

Search

Tools

Layers and Legend

Other Wetland Layers

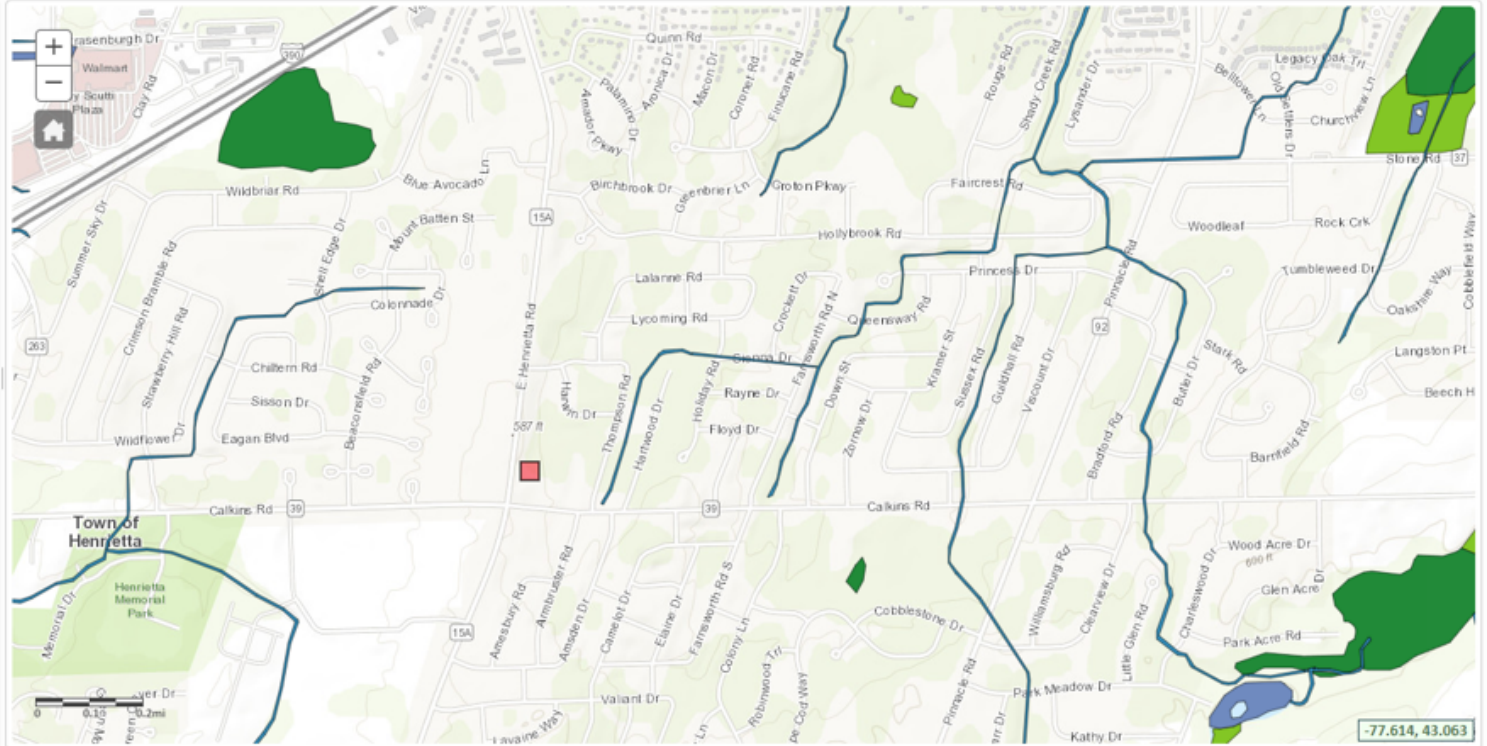
- National Wetlands Inventory
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

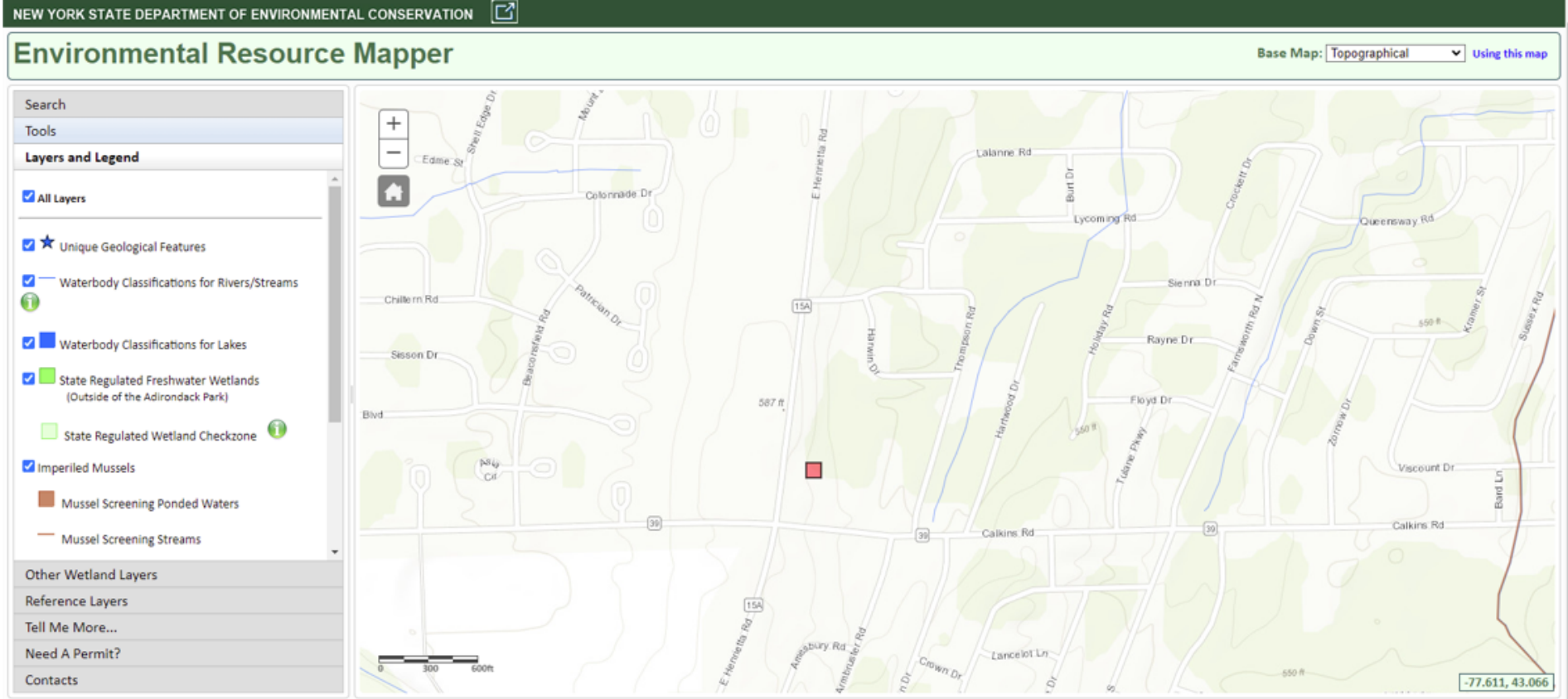
Reference Layers

Tell Me More...

Need A Permit?

Contacts



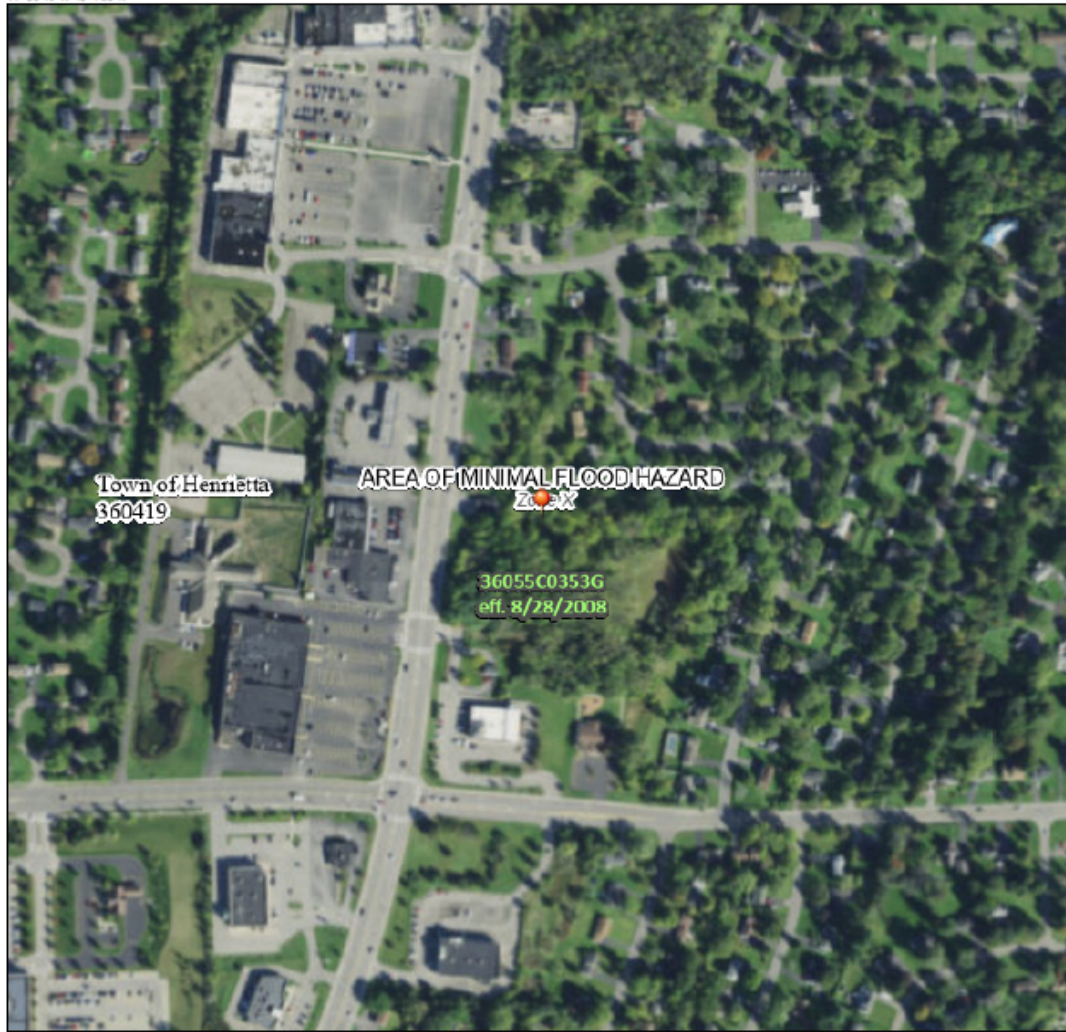


APPENDIX D: WETLANDS FEMA MAP

National Flood Hazard Layer FIRMette



77°36'41"W 43°4'28"N



0 250 500 1,000 1,500 2,000 Feet 1:6,000 77°36'41"W 43°4'1"N
 Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

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

SPECIAL FLOOD HAZARD AREAS	<ul style="list-style-type: none"> Without Base Flood Elevation (BFE) <small>Zone A, V, AE9</small> With BFE or Depth <small>Zone AE, AO, AH, VE, AR</small> Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD	<ul style="list-style-type: none"> 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <small>Zone X</small> Future Conditions 1% Annual Chance Flood Hazard <small>Zone X</small> Area with Reduced Flood Risk due to Levee. See Notes. <small>Zone X</small> Area with Flood Risk due to Levee <small>Zone D</small>
OTHER AREAS	<ul style="list-style-type: none"> No SCREEN Area of Minimal Flood Hazard <small>Zone X</small> Effective LOMRs Area of Undetermined Flood Hazard <small>Zone D</small>
GENERAL STRUCTURES	<ul style="list-style-type: none"> Channel, Culvert, or Storm Sewer Levee, Dike, or Floodwall
OTHER FEATURES	<ul style="list-style-type: none"> 20.2 Cross Sections with 1% Annual Chance Water Surface Elevation 17.6 Coastal Transect Coastal Transect Base Flood Elevation Line (BFE) Limit of Study Jurisdiction Boundary Coastal Transect Baseline Profile Baseline Hydrographic Feature
MAP PANELS	<ul style="list-style-type: none"> Digital Data Available No Digital Data Available Unmapped <p>The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.</p>

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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 2/16/2022 at 1:01 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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

APPENDIX E: ARCHEOLOGICAL SENSITIVE AREA



**Parks, Recreation,
and Historic Preservation**

KATHY HOCHUL
Governor

ERIK KULLESEID
Commissioner

February 17, 2022

Alena Fast
Dakota Partners
235 Bear Hill Road, Suite 400
Waltham, MA 02451

Re: NYSHCR
Calkins Road Apartments Construction Project - Sixty (60) Apartments in Two (2) New
Three-Story Buildings
E Henrietta Rd, Henreitta, Monroe County, NY
21PR08580

Dear Alena Fast:

Thank you for requesting the comments of the New York State Historic Preservation Office (SHPO). We have reviewed the provided materials in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources.

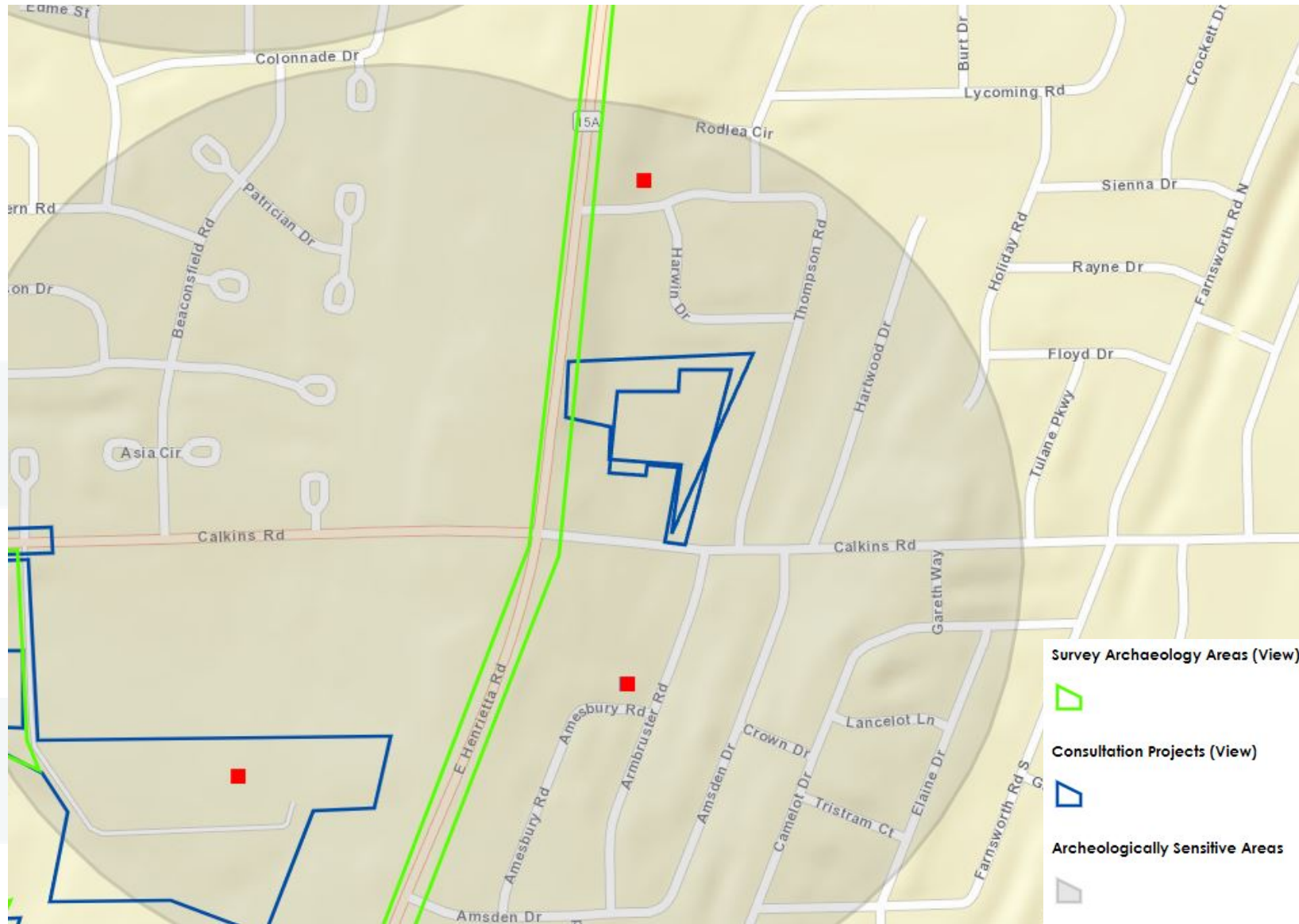
Based upon our review, the NYSHPO understands that the proposed undertaken will largely take place within previously disturbed soils, and we have thus rescinded our previous recommendation for a Phase IA/B Archaeological Survey. It is, therefore, the SHPO's opinion that this undertaking will have no effect on properties, including archaeological and/or historic resources, listed in or eligible for the New York State and National Registers of Historic Places. This recommendation pertains only to the Area of Potential Effects (APE) examined during this project review. Should the project design change, the SHPO recommends further consultation with this office.

If you have any questions, I can be reached via e-mail at Josalyn.Ferguson@parks.ny.gov.

Sincerely,

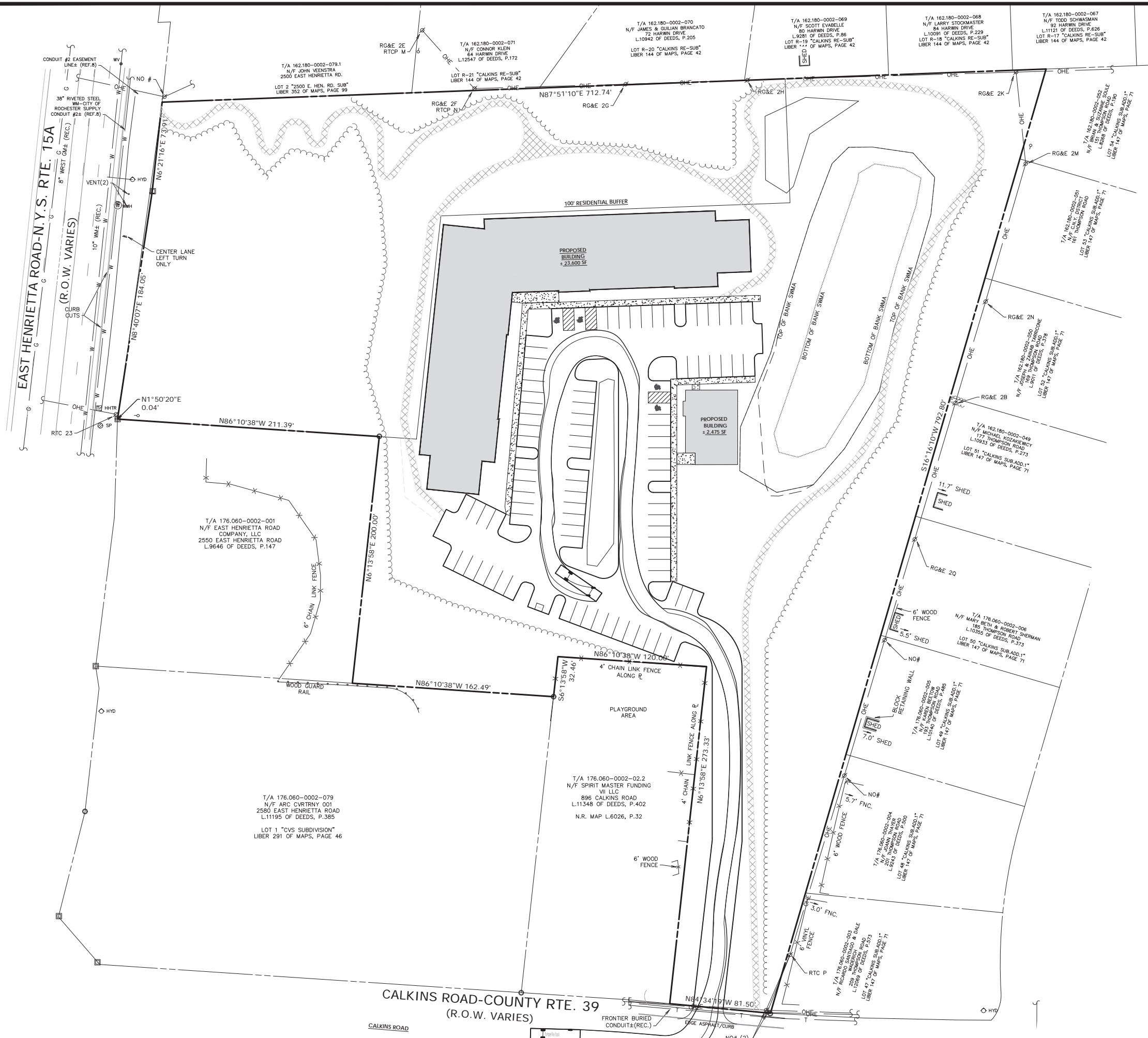
Josalyn Ferguson, Ph.D.
Scientist Archaeology

via email only



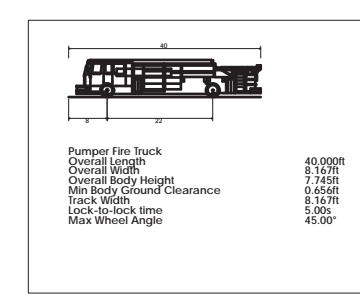
APPENDIX F: FIRE TRUCK TURNING ANALYSIS

Y:\PROJECTS-NEW\2022\20223310\20223310_0001\01_CAD-BIM-MODELS\CIVIL\20223310_0001\FIRE TRUCK TURN.DWG 3/10/2022 4:18 PM Bitama Mitchell



LEGEND - SITE:

- PROPERTY BOUNDARY
- RIGHT OF WAY
- EXISTING CENTER LINE ROAD
- SETBACK
- PROPOSED EASEMENT LINE
- EXISTING EASEMENT LINE
- EXISTING BUILDING
- PROPOSED BUILDING
- PROPOSED PARKING COUNT
- PROPOSED CONCRETE
- PROPOSED ACCESS RAMP
- PROPOSED PAVEMENT STRIPING
- PROPOSED CURB
- PROPOSED SIGN
- EXISTING SIGN
- PROPOSED LIGHT POLE
- PROPOSED FENCE
- PROPOSED BUILDING MOUNTED LIGHT
- PROPOSED TREE LINE
- PROPOSED STONE DUST WALKING TRAIL



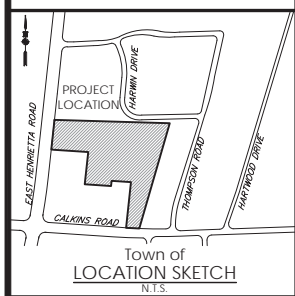
APPROVED BY: _____ DATE: _____
 PLANNING BOARD CHAIRMAN

APPROVED BY: _____ DATE: _____
 DIRECTOR OF ENGINEERING AND PLANNING

APPROVED BY: _____ DATE: _____
 FIRE MARSHAL

APPROVED BY: _____ DATE: _____
 DIRECTOR OF BUILDING AND FIRE PREVENTION

APPROVED BY: _____ DATE: _____
 COMMISSIONER OF PUBLIC WORKS



Client:
DAKOTA PARTNERS, INC.
 235 BEAR HILL ROAD
 WALTHAM, MA, 02451

PASSERO ASSOCIATES
 242 West Main Street Suite 100 (585) 325-1000
 Rochester, New York 14614 Fax: (585) 325-1691

Principal-in-Charge: Jess Sudol, PE
 Project Manager: David Cox, PE
 Designed by: Joshua Saxton, EIT

Revisions			
No.	Date	By	Description
1			

FIRE TRUCK TURN ANALYSIS

CALKINS ROAD HOUSING

Town/City: HENRIETTA
 County: MONROE State: NEW YORK

Project No:
20223310.0001

Drawing No. _____ Sheet No. _____

Scale:
1" = 40'

Date:
FEBRUARY 2022

NOT FOR CONSTRUCTION