New York State Geological Survey New York State Museum Mark Schaming, Director Cayuga Tompkins Cayuga Lake North American Datum of 1983 Geologic mapping by K. Backhaus, A. Kozlowski and J.Leone, 2018. Hydrology, and planimetry layers from the Digital data and cartography by K. Backhaus, 2018. New York State DOT Raster Quadrangle separates for Cayuga, Seneca 0 KILOMETERS and Wayne Counties (https://gis.ny.gov/gisdata/inventories/member.cfm?OrganizationID=108). Geographic data layers from 2017 TIGER/Line shapes for transportation and hydrograpghy (https://www.census.gov/cgi-bin/geo/shapefiles/index.php) Shaded relief from Cayuga County 2 m Lidar (http://www.cayugacounty.us/portals/0/planning nteractivegis.htm),10 m DEM and FEMA Seneca Watershed 2012 (http://gis.ny.gov/elevation/index.cfm) for Tompkins and Seneca Counties Magnetic declination from the NOAA online Declination Calculator: CONTOUR INTERVAL: 10 FEET http://www.ngdc.noaa.gov/geomag-web/#declination UTM GRID AND 2016 MAGNETIC NORTH **DECLINATION AT CENTER OF SHEET**

SURFICIAL GEOLOGY OF THE LUDLOWVILLE 7.5-MINUTE QUADRANGLE, CAYUGA, SENECA AND TOMPKINS COUNTIES, NEW YORK

Karl J. Backhaus, Andrew L. Kozlowski and James A. Leone

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prepared by Karl Backhaus, Andrew Kozlowski and James Leone

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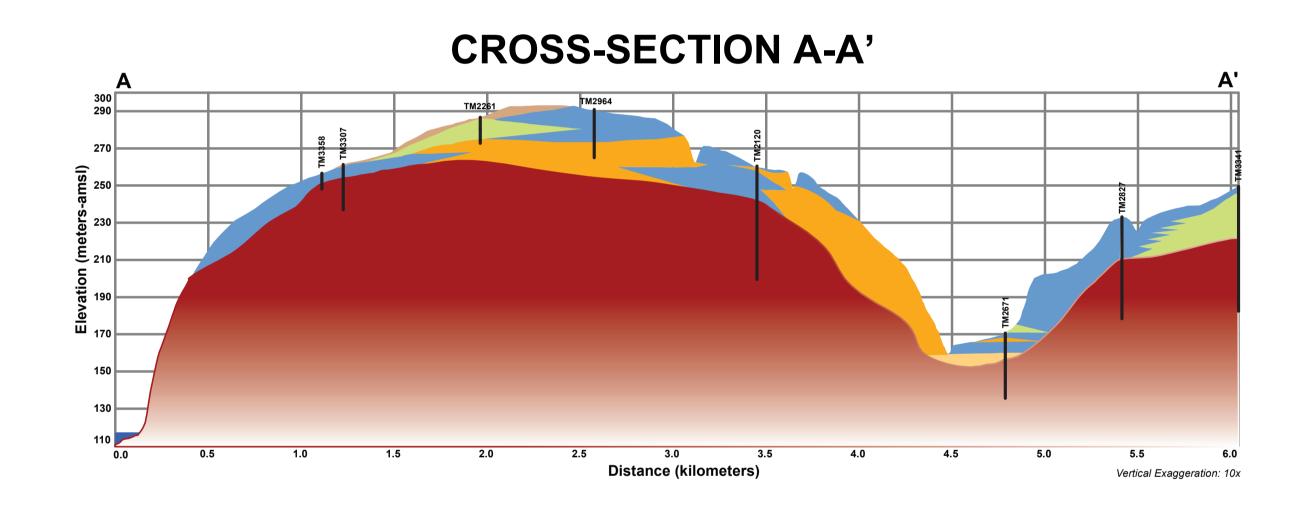
DESCRIPTION OF MAP UNITS

	Holocene		
	Af	Artifical Fill (Af) Surficial sediment composed of coarse/fine and or crushed rock anthropogenically transported and used for construction purposes.	
	На	Stratified silt, sand and gravel (Ha) Sorted and stratified silt, sand, and gravel, deposited by rivers and streams. May include cobbles and boulders. Inferred as post-glaical alluvium and includes modern channel, over-bank and fan deposits	
	Hw	Wetland Deposit (Hw) Peat, muck, marl, silt, clay or sand deposited in association with wetland environments. Various sediments can be present at transitional boundaries from one facies to another	
Pleistocene			
	Plsc	Silt and Clay (Plsc) Stratified, fine-grained sediment consisting of fine sand, silt and clay size particles. Inferred to be deposited in mid shore to deepwater settings of glacial lakes. May include marl, rythmites, and varves.	
	Pics-iw	Ice Contact Silt and Clay (Pics-iw) Stratified, fine-grained sediment consisting of fine sand, silt and clay size particles. Constrained to isolated pockets, inferred to be deposited in circular depressions within or on former ice sheets.	
	Psg	Stratified sand and gravel (Psg) Well-sorted and stratified sand and gravel. May include cobbles and boulders. Inferred to be delta, fan or lag deposits in glacial channels or near ice margins.	
	Pd	Diamicton (Pd) An admixture of unsorted sediment ranging from clay to boulders. Generally matrix supported, massive and clast-rich.	
	Pdcs	Diamicton (Pdcs)	

Pre-Pleistocene

Non-glacially derived, hard rock, pre-pleistocene in age. May be covered up to a meter in diamicton, sand and gravel, or sand and clay

An admixture of unsorted sediment ranging from clay to boulders. Generally clast supported, massive and clast-rich.



SYMBOLS NYSGS Sample Locations NYSDOT Boring Locations Contours NYSDEC Gas Well Location Cross-Section Line ·°°° lce Margins ----- County Lines NYSDEC Water Well Location

QUADRANGLE LOCATION County View Statewide View



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1:75,000 scale; 2x vertical exaggeration

QUADRANGLE ELEVATION