KEARL SITE PLAN

TOWN OF ULYSSES ~ COUNTY OF TOMPKINS
STATE OF NEW YORK

TAX MAP NO.'S: 18-1-19.8 AND 18-1-19.9

TAX MAP NO. 18.-1-19.4
ROBERT R. SPROLE III & SHARI KEARL
~R.O.~
INSTRUMENT NO. 2016-10776

2 STORY HOUSE
NO. 1517

GARAGE

CONCRETE DRIVEWAY

PAVED AREA

GRAVEL DRIVEWAY

PRESENT LOCATION
APPROXIMATE LOCATION
12" DIA CULVERT PIPE

STONE RETAINING WALL

DROP INLET

RAISED BED PLANTER

PROPOSED GRAVEL DRIVE

APPROX LOCATION BURIED CULVERT PIPE

5' TALL VINYL BOARD FENCE

PROPOSED RIP-RAP

PROPOSED GRAVEL PATHWAY

STAIRS

DOCK

DOCK

WIRE FLAG SET BY D.E.C.

MEAN HIGH WATER ELEV.: 383.5' AS DELINEATED BY D.E.C. ON JULY 2024.

PRESENT SHORELINE (JAN. 25, 2024)

PROPOSED RIP-RAP

PROPOSED LIMESTONE FOUNDATION BLOCK

ELEV.: 383.5'

PROPOSED GABIONS

CONCRETE PAD

CAYUGA

LAKE

PROPOSED BLUESTONE PATIO

TO BE PLANTED WITH PERENNIALS

LIMESTONE RETAINING WALL

TO BE PLANTED WITH PERENNIALS

T.B.M.:
ELEVATION 386.9'
TOP OF DRILLED WELL

PROPOSED STEPS
4' WIDE X 13" TREAD
(TYPICAL)

UNDERGROUND PROPANE TANK

GRAVEL AREA

PROPOSED STACKED STONE STAIRWAY

FOUNDATION LINE

1 STORY HOUSE
WITH WALK OUT BASEMENT
NO. 1513

DECK

BOTTOM OF BANK

GARAGE

GRAVEL PARKING

PROPOSED STACKED STONE STAIRWAY

TOP OF BANK

PIN

PER T.G. MILLER SURVEY

22' WIDE GATE

RAISED BED PLANTER

22' WIDE GATE

RAISED BED PLANTER

TAX MAP NO. 18.-1-19.7
MICHAEL G. KIMBERLY &
DAWN EDINGER KIMBERLY
~R.O.~
INSTRUMENT NO. 2019-15500

LEGEND:

- EXISTING MONUMENT AS SHOWN
- UTILITY POLE
- O/H OVERHEAD UTILITIES
- EXISTING CONTOUR
- APPROXIMATE BOUNDARY LINE PER T.G. MILLER SURVEY
- PROPOSED POLE LIGHT WITH UNDERGROUND FEED.

NOTES:

1.) DATUM: NATIONAL GEODETIC VERTICAL DATUM OF 1929.

2.) UNDERGROUND UTILITIES WERE NOT LOCATED BY THIS SURVEY. UNDERGROUND UTILITIES MAY EXIST ON THE SITE AND MUST BE FIELD MARKED BY OTHERS TO DETERMINE THEIR LOCATION.

3.) CONTOURS BASED ON SHORE LINE AS IT EXISTED ON JAN. 25, 2024.

4.) DISTURBED AREAS TO BE RESEEDED

0' 20' 40' 60'

GRAPHIC SCALE

1.) AMENDED OCT. 21, 2025
2.) AMENDED JAN. 28, 2026.

REAGAN LAND SURVEYING
298 CORTLAND ROAD, P.O. BOX 1124
DRYDEN, NEW YORK
PHONE/FAX: (607) 844-8837
EMAIL: office@reaganlandsurveying.com

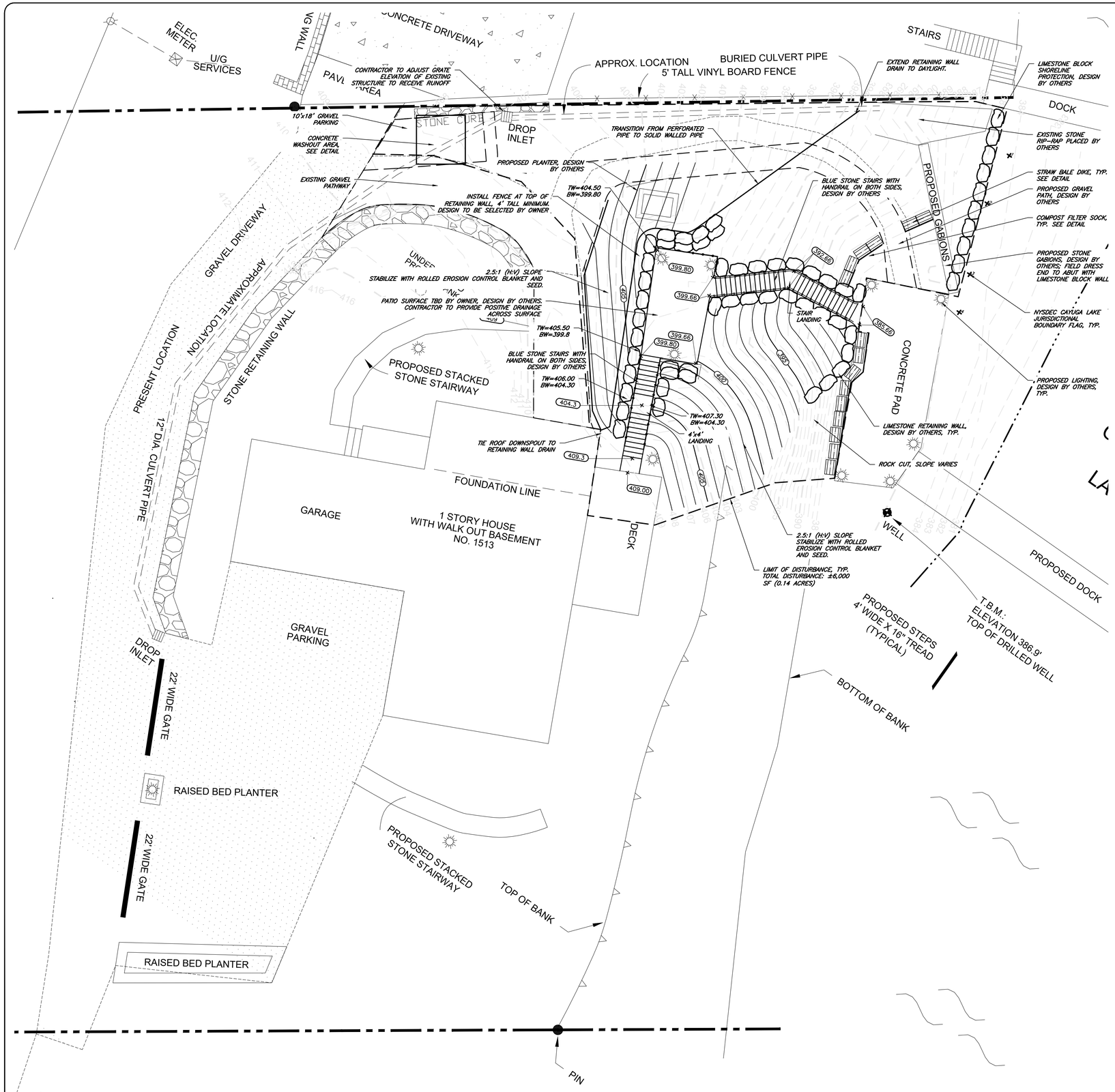
JOB NO.: 24-005 SCALE: 1"=20'

DRAWN BY: A. PUZO DATED: JAN. 24, 2024

SIGNED: Michael J. Reagan

"Copyright 2024: All Rights Reserved, Reagan Land Surveying"

PROFESSIONAL LAND SURVEYOR
MICHAEL JOHN REAGAN
NO. 049892
STATE OF NEW YORK



CONSTRUCTION

1. **STAKEOUT** - THE CONSTRUCTION STAKEOUT SHALL BE PERFORMED BY A LICENSED LAND SURVEYOR USING CONTROL PROVIDED ON THE "SITE PLAN". DISCREPANCIES WITH BUILDING(S), CONTROL POINTS, AND/ OR TIE DIMENSIONS SHALL BE REPORTED TO THE DESIGN ENGINEER (PRIOR TO THE INSTALLATION OF IMPROVEMENTS) FOR COORDINATION AND CLARIFICATION.
2. **BOUNDARY** - BOUNDARY INFORMATION WAS TAKEN FROM PARCEL SURVEY PREPARED BY REGAN LAND SURVEYING DATED 01/24/24 AND IS SHOWN FOR GRAPHICAL REPRESENTATION ONLY.
3. **COORDINATION** - THE CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITY WORK WITH OTHER SITE UTILITIES (I.E. GAS, ELECTRIC, LIGHTING, COMMUNICATIONS) TO AVOID POTENTIAL INSTALLATION CONFLICTS.
4. **STAGING** - AS DEFINED BY THE CONTRACT DOCUMENTS THE CONTRACTOR SHALL CONSTRUCT A SECURE STAGING AREA FOR STORAGE OF EQUIPMENT, MATERIALS, EMPLOYEE PARKING AND OFFICE SPACE. IF THE AREA/METHOD IS NOT SPECIFICALLY DEFINED ON THE DOCUMENTS THEN IT SHALL BE COORDINATED WITH THE OWNER'S ON-SITE REPRESENTATIVE.
5. **CLOSE-OUT** - THE CONTRACTOR'S WORK SCOPE INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING AT PROJECT CLOSE-OUT TO THE SATISFACTION OF OWNER'S ON-SITE REPRESENTATIVE:
   - REMOVAL OF ANY CONSTRUCTION DEBRIS.
   - CLEANING PAVEMENT AND WALKWAY SURFACES.
   - RESTORATION OF ALL DISTURBED GRASS AND LANDSCAPED AREAS.
   - PROVIDING BONDS, GUARANTEES, CERTIFICATIONS, ETC. AS REQUIRED BY CONTRACT DOCUMENTS.
   - PROVIDING REDLINES FOR RECORD DRAWING.
   - COMPLETION OF FINAL PUNCH LIST ITEMS.
6. **RETAINING WALL DESIGN** - THE DESIGN OF THE RETAINING WALLS ARE PROVIDED BY OTHERS.
7. **SITE LIGHTING AND ELECTRICAL DESIGN** - THE SITE LIGHTING AND ELECTRICAL DESIGN IS PROVIDED BY OTHERS.
8. **SITE LANDSCAPING** - THE SITE LANDSCAPING DESIGN IS PROVIDED BY OTHERS.

RESTORATION AND LANDSCAPING

1. **GUARANTEE** - THE **AGREEMENT BETWEEN THE OWNER AND CONTRACTOR SHALL** DEFINE THE REQUIREMENTS, MAINTENANCE, AND TIME TO ESTABLISH NEW TURF AND LANDSCAPING ACCEPTANCE BY THE OWNER.
2. **TOPSOIL** - PLACE A MINIMUM OF **4 INCHES** (REQUIRED) OF TOPSOIL ON ALL DISTURBED SURFACES. FINE GRADE TO ESTABLISH THE DESIGN ELEVATIONS AND DRAINAGE PATTERNS. OBTAIN OWNER'S REPRESENTATIVE APPROVAL PRIOR TO SEEDING.
3. **SEED** - LAWN AREAS SHALL BE HYDROSEEDED WITH AN APPROVED: SEED MIXTURE, MULCH, AND FERTILIZER. THE APPLICATION RATE SHALL BE DETERMINED BY CONTRACTOR TO ESTABLISH A "STAND" OF GRASS. THE CONTRACTOR SHALL SUBMIT MATERIAL AND APPLICATION SPECIFICATIONS TO THE OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO APPLICATION.
4. **LANDSCAPING** - PLANT STOCK AND PLANT SPECIES, QUANTITIES, ETC. ARE TO BE PROVIDED BY OTHERS.

EROSION CONTROL

1. **TOPSOIL** - UPON COMPLETION OF THE STRIPPING OPERATION, STOCKPILES SHALL BE STABILIZED IN ACCORDANCE TO NYSDEC REGULATIONS.
2. **SLOPES** - UPON COMPLETION OF GRADING, SLOPES WITH A GRADIENT OF ONE FOOT VERTICAL TO THREE FEET HORIZONTAL (1 ON 3) OR GREATER SHALL BE: TOPSOILED, SEEDED, FERTILIZED AND MULCHED OR TREATED AS SPECIFIED ON CONTRACT DRAWINGS.
3. **DUST** - THE CONTRACTOR SHALL APPLY WATER AND/OR CALCIUM CHLORIDE, AS CONDITIONS WARRANT, TO CONTROL WIND BORN EROSION. THIS MEASURE APPLIES TO: HAUL ROADS, CUT AND FILL OPERATIONS, SUB-BASE AND ANY OTHER EXPOSED SURFACES.
4. **OPERATION & MAINTENANCE** - THROUGHOUT THE PERIOD OF CONSTRUCTION AND PRIOR TO ESTABLISHING FINAL GROUND COVER THE SITE CONTRACTOR IS RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE TEMPORARY EROSION CONTROL MEASURES. FOR EXAMPLE, THE SILTATION FACILITIES SHALL BE RE-EXCAVATED WHEN THE VOLUME (3600 CUBIC FEET/DISTURBED ACRE) IS REDUCED BY ONE-HALF OR MORE OF ITS SPECIFIED CAPACITY AND/OR THE MATERIAL IS WITHIN ONE FOOT OF THE DISCHARGE POINT.
5. **WORK STOPPAGE** - ALL DISTURBED AREAS NOT TO BE WORKED WITHIN 14 DAYS MUST BE SEEDED WITHIN 7 DAYS FROM THE LAST CONSTRUCTION ACTIVITY IN THAT AREA.
6. **TEMPORARY STABILIZATION** - TEMPORARY STABILIZATION SHALL REQUIRE 4 TONS OF STRAW/ ACRE OF DISTURBANCE PLACED WITH TACKIFIER OR ROLLED WITH A TRACKED VEHICLE TO ENSURE NOT DISPLACED.
7. **WINTER STABILIZATION** - ALL WINTER STABILIZATION METHODS IDENTIFIED IN THE NYS 'BLUE BOOK' SHALL BE FOLLOWED FOR ANY DISTURBANCE OR NON-STABILIZED AREAS FROM NOVEMBER 15TH - APRIL 1ST.

GENERAL

1. **APPLICABILITY** - THE NOTES AND INFORMATION PROVIDED ON THIS SHEET ARE APPLICABLE TO ALL "C" SERIES DRAWINGS. THE "C" SERIES DRAWINGS COVER SITE RELATED IMPROVEMENTS OUTSIDE THE BUILDING ENVELOPE. THE BUILDING ENVELOPE INCLUDES ALL AREA WITHIN 5' OUTSIDE OF THE BUILDING'S EXTERIOR WALL.
2. **MAPPING** - THE EXISTING UNDERGROUND UTILITIES WERE PLOTTED BASED ON RECORD MAPPING SUPPLIED BY OTHERS. THE ENGINEER MAKES NO WARRANTY AS TO THE LOCATION, SIZE, TYPE, ELEVATION, AND/OR NUMBER OF EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE HORIZONTAL AND VERTICAL LOCATION OF UTILITIES IN THE VICINITY OF THE NEW INFRASTRUCTURE.
3. **UTILITY STAKEOUT** - THE CONTRACTOR SHALL NOTIFY UDIG NY (1-800-962-7962) FOR A UTILITY STAKEOUT 48 HOURS IN ADVANCE OF COMMENCING WORK. STAKEOUT OF PRIVATE UTILITIES SHALL BE COORDINATED WITH THE OWNER.
4. **PROPERTY PROTECTION** - THE CONTRACTOR IS RESPONSIBLE FOR DAMAGE TO EXISTING PAVEMENT, CURBS, WALKS, LAWNS, TREES, ETC. CAUSED BY THEIR CONSTRUCTION OPERATIONS. ALL DAMAGE SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR TO THE OWNER'S SATISFACTION AT NO ADDITIONAL EXPENSE.
5. **ACCESS** - THE CONTRACTOR SHALL PROVIDE SATISFACTORY VEHICULAR ACCESS TO ALL ADJOINING PROPERTIES, PRIVATE ROADWAYS, PARKING FACILITIES, AND PUBLIC STREETS DURING CONSTRUCTION.
6. **SITE SAFETY** - PRIOR TO AND THROUGHOUT CONSTRUCTION, THE CONTRACTOR SHALL POST SIGNAGE IN CONFORMANCE WITH THE REQUIREMENTS OF THE LOCAL MUNICIPALITY AND OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA). JOB SAFETY AND MAINTENANCE AND PROTECTION OF TRAFFIC IS THE RESPONSIBILITY OF THE CONTRACTOR.
7. **EXCAVATIONS** - ALL EXCAVATIONS SHALL BE BACKFILLED/BARRICADED TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE AT THE CONCLUSION OF EACH WORKING DAY.
8. **MAINTENANCE** - PUBLIC STREETS, PRIVATE DRIVES AND PARKING FACILITIES SHALL BE KEPT FREE OF FOREIGN MATERIALS. ALL AREAS SHALL BE SWEPT CLEAN AT THE END OF EACH WORKING DAY AND/OR AS DIRECTED BY THE OWNER'S ON-SITE REPRESENTATIVE.
9. **CONSTRUCTION STORAGE** - STORAGE OF EQUIPMENT AND MATERIALS SHALL BE WITHIN A SPECIFIED AND SECURED AREA AS DETERMINED IN CONTRACT DOCUMENTS OR AS SPECIFIED BY THE OWNER'S ON-SITE REPRESENTATIVE.
10. **PERMIT(S)** - PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN THE NECESSARY PERMITS FROM THE APPLICABLE MUNICIPALITY OR AGENCY. THE CONTRACTOR IS RESPONSIBLE FOR ALL BONDS AND INSURANCES AND THE OWNER IS RESPONSIBLE FOR PERMIT FEES UNLESS OTHERWISE STATED IN THE OWNER/ CONTRACTOR AGREEMENT
11. **INTERIM CONDITIONS** - THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN POSITIVE DRAINAGE AWAY FROM BUILDINGS AND WITHIN PROJECT AREA TO A STABILIZED OUTLET THROUGHOUT THE CONSTRUCTION PERIOD. THIS MAY REQUIRE INTERIM GRADING, SHIMMING OF PAVEMENT ETC. THAT IS NOT SPECIFICALLY SHOWN ON THE PLANS AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

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SITE DEVELOPMENT PLANS for KEARL RESIDENCE

1513 TAUGHANNOCK BOULEVARD
TOMPKINS COUNTY
TOWN OF ULYSSES
STATE OF NEW YORK

JOB NO:	1736-24
SCALE:	AS SHOWN
DRAWN:	AF
DESIGNED:	AF
DATE:	05/16/24

REVISIONS

DATE	BY	REVISION
12/12/25	AF	CLIENT REVISIONS
3/2/26	CE	CLIENT REVISIONS

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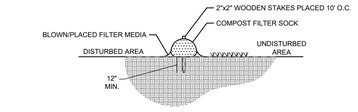
STATE OF NEW YORK · ADAM MCKINLEY FISHEL · NO. 086648 · LICENSED PROFESSIONAL ENGINEER

ADAM M. FISHEL

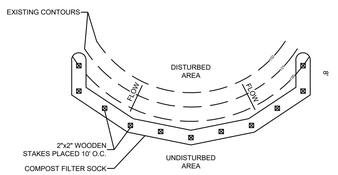
DRAWING TITLE:
Grading, Drainage & Erosion Control Plan

1 of 2 SHEET No:	C-1.0
1736-24 JOB No:	DRAWING No:

File: I:\Engineering\Job Files\1736-24\Drawings\Sheet Set\1736 C-1.0 Grading Drainage Erosion Control Plan.dwg, Last saved: 3/2/2026, Plot Date: 3/5/2026, By: AFISHEL, Plot Style: ----

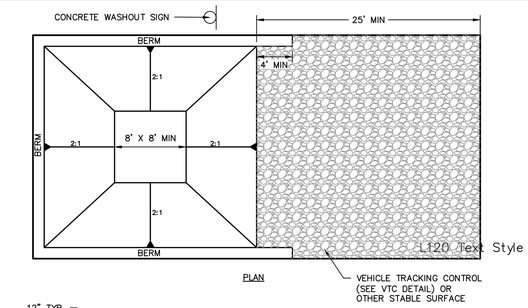


SECTION VIEW



PLAN VIEW

1 COMPOST FILTER SOCK



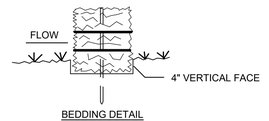
PLAN

SECTION

NOTES:

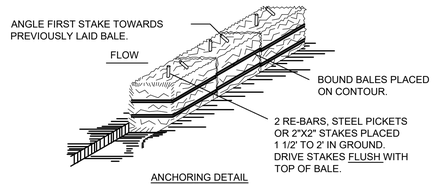
1. CONTRACTOR TO VERIFY SIZE REQUIREMENTS BASED ON ANTICIPATED VOLUMES OF CONCRETE WASHOUT.
2. CONCRETE WASHOUT SHOULD BE PLACED TO NOT ACCEPT SURFACE RUNOFF EXCEPT THE AREA WHERE TRUCKS SIT FOR WASHOUT.
3. IF WATER DOES NOT EVAPORATE AND IS GREATER THAN 75% FULL CONTRACTOR SHALL REMOVE LIQUIDS AS REQUIRED BY THE LOCAL AUTHORITY (SAN SEALER OF VAC TRUCK)
4. PROVIDE MINIMUM AGGREGATE OF 10 MIL PLASTIC AS LINER. SECURE LINER TO PREVENT INFILTRATION & REPLACE AS NECESSARY FOR TEARS.

2 CONCRETE WASHOUT AREA



BEDDING DETAIL
NOT TO SCALE

DRAINAGE AREA NO MORE THAN 1/4 ACRE PER 100 FEET OF STRAW BALE DIKE FOR SLOPES LESS THAN 25%.



ANCHORING DETAIL
NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF (4) INCHES, AND PLACED SO THE BINDINGS ARE HORIZONTAL.
3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
4. INSPECTION SHALL BE FREQUENT AND REPAIR REPLACEMENT SHALL BE MADE PROMTLY AS NEEDED.
5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULLNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

3 STRAW BALE DIKE

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STATE OF NEW YORK
ADAM MCKINLEY FISHEL
LICENSED PROFESSIONAL ENGINEER
NO. 086648

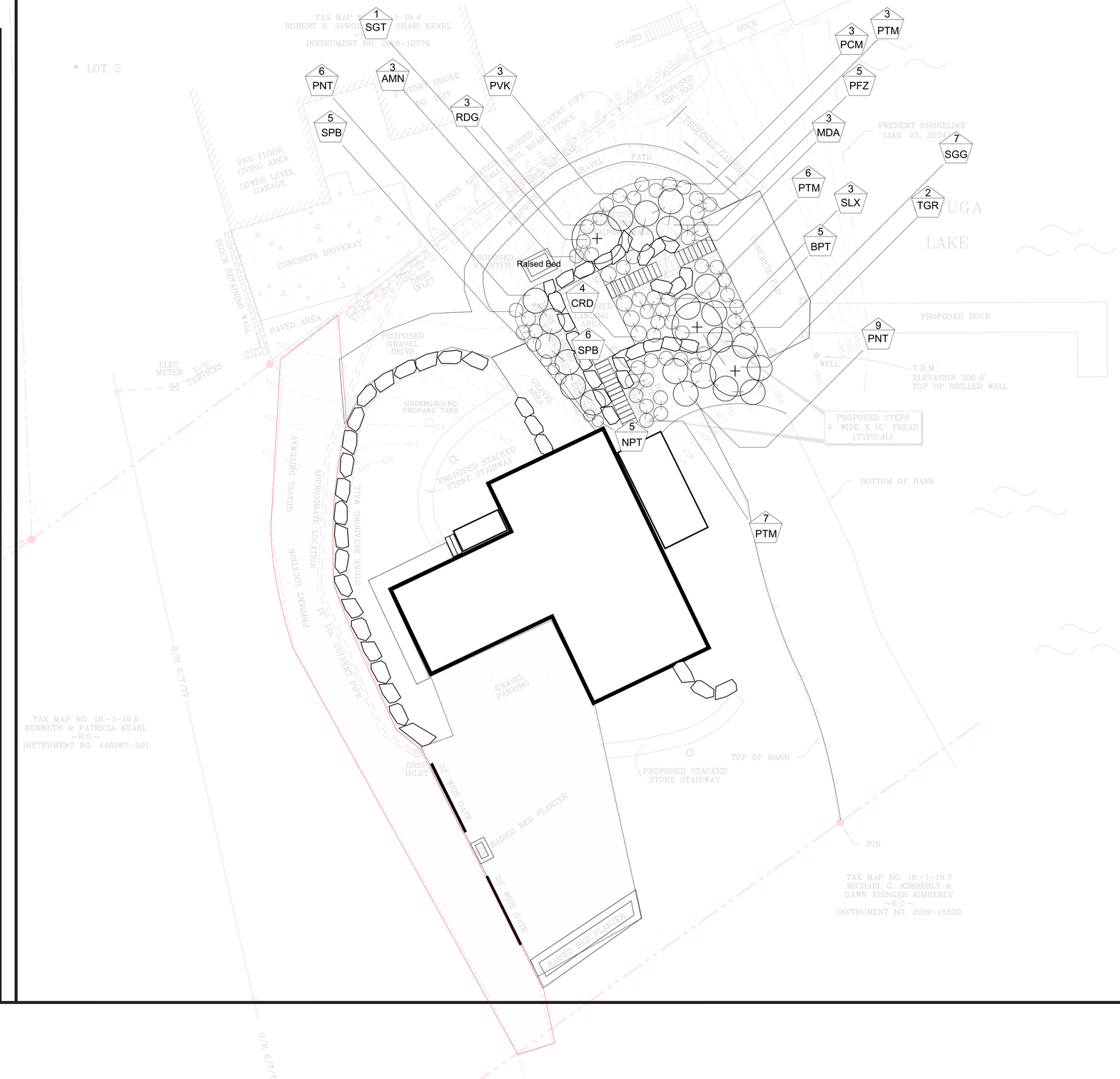
ADAM M. FISHEL

DRAWING TITLE:
Erosion Control Details

2 of 2 SHEET No:	C-2.0 DRAWING No:
1736-24 JOB No:	

File: I:\Engineering\Job Files\1736-24\Drawings\Sheet Set\1736 C-2.0 Erosion Control Details.dwg, Last saved: 12/19/2025, Plot Date: 3/5/2026, By: AFISHEL, Plot Style: ----

Kearl Residence



PLANT SCHEDULE

KEY	COUNT	SIZE	SCIENTIFIC NAME	COMMON NAME
Deciduous & Evergreen Trees:				
ACR	1	10 Gal.	Acer palmatum 'Bloodgood'	Japanese Maple
CC	2	1.5" Cal.	Cercis canadensis	Eastern Redbud
CRN	3	1.5" Cal.	Cornus mas	Cornelian Cherry
JNP	1	7 Gal.	Juniperus virginiana 'Grey Owl'	Eastern Red Cedar
SGT	1	1.5" Cal.	Malus sargentii	Sargent Crabapple
OSR	1	1.5" Cal.	Ostrya virginiana	Hophornbeam
Deciduous & Evergreen Shrubs:				
ARN	3	3 Gal.	Aronia melacarpa 'Low Scape Hedger'	Aronia
BXF	3	3 Gal.	Buxus spp. 'Freedom'	Freedom Boxwood
CRD	4	3 Gal.	Caryopteris spp. 'Dark Knight'	Bluemist Shrub
ART	1	3 Gal.	Cornus spp. 'Arctic Sun'	Arctic Sun Dward Dogwood
DRV	4	3 Gal.	Diervilla spp.	Bush Honeysuckle
FSY	2	3 Gal.	Forsythia spp. 'Spring Fling'	Forsyhthia
PFZ	5	3 Gal.	Juniperus spp. 'Pfitzer Compacta'	Compact Pfitzer Juniper
PNT	11	3 Gal.	Potentilla spp.	Bush Cinquefoil
RHD	1	3 Gal.	Rhodendron viscosum	Swamp Azalea
TGR	2	5 Gal.	Rhus typhina 'Tiger Eyes'	Staghorn Sumac
SLX	3	3 Gal.	Salix spp. 'Iceberg Alley'	Sageleaf Willow
SND	3	5 Gal.	Spiraea spp. 'Snowmound'	Snowmound Spirea
SPR	3	3 Gal.	Spiraea spp. 'Blue Kazoo'	Double Play Blue Kazoo Spirea
SYR	3	5 Gal.	Syringa spp. 'Miss Kim'	Miss Kim Lilac
SGG	7	3 Gal.	Spiraea spp. 'Glow Girl'	Birchleaf Spirea
Perennials:				
AMN	9	2 Gal.	Amsonia hubrichtii	Bluestar
BPT	5	2 Gal.	Baptisia australis	False Indigo
EUP	3	2 Gal.	Eupatorium spp. 'Little Joe'	Joe Pye Weed
GRM	14	1 Gal.	Geranium spp. 'Rozanne'	Hardy Geranium
HKL	7	1 Gal.	Hakonechloa spp. 'Aureola'	Hakone Grass
MDA	9	2 Gal.	Monarda spp. 'Blue Stockings'	Bee Balm
NPT	14	1 Gal.	Nepeta spp. 'Junior Walker'	Catmint
PCM	11	2 Gal.	Panicum spp. 'Shenandoah'	Switchgrass
PTM	18	2 Gal.	Pennisetum spp. 'Hameln'	Dwarf Fountain Grass
RDG	7	1 Gal.	Rudbeckia spp. 'Goldsturm'	Blackeyed Susan
SPB	19	1 Gal.	Sporobolus heterolepsis	Prairie Dropseed
PVK	3	2 Gal.	Perovskia spp. 'Little Spire'	Russian Sage

4740 E. Bates Rd. Trumansburg, NY 14886 - 607.387.5797 - www.vghtburg.com

VILLAGE GREENHOUSE
TRUMANSBURG, NY

N

0 20'
Graphic Scale in Feet

PLANTING PLAN:

LEGEND:

EXISTING MONUMENT
UTILITY POLE
O/H OVERHEAD UTILITIES
EXISTING CONTOUR
APPROXIMATE BOUNDARY
PROPOSED POLE LIGHT WITH UNDERGROUND FEED

Client Contact Info:
Ken Kearl
1513 Taughannock Blvd.
Trumansburg, NY 14886
kennethkearl@gmail.com

Drawing Prepared By
MF

Design Objective: Utilize predominately native plant material to create a low maintenance landscape that provides multi-seasons of interest, bird & beneficial insect habitat & erosion/storm water control.

NEW YORK STATE | Department of Environmental Conservation

KATHY HOCHUL
Governor

AMANDA LEFTON
Commissioner

October 6, 2025

Kenneth Kearl
1513 Taughannock Blvd
Ithaca, New York 14850

Re: GID-000239
Kearl Property
No Jurisdiction Determination
Town of Ulysses, Tompkins County

Dear Mr. Kearl:

The New York State Department of Environmental Conservation (DEC) has reviewed the submitted information for the above referenced project, received by the Department on April 18, 2024 and supplemental information received July 25, 2024. According to the provided materials, the project consists of landscaping work including the installation of riprap, gabions, and a pathway with stairs at 1513 Taughannock Blvd Ithaca, NY. The project site is located on Cayuga Lake (NYS Water Index #: Ont. 66-12-P296) a Class AA(T) protected navigable waterbody.

A site visit was performed by DEC, where the mean high water level (MHWL) was marked and then drawn on the project plans. In review of the provided plans, it has been determined that the location of the landscaping work is above the MHWL of Cayuga Lake, therefore, an Excavation and Placement of Fill Permit is not required for the proposal. Further, as a Section 404 Permit from the US Army Corps of Engineers (USACE) does not appear to be required, a Section 401 Water Quality Certification (WQC) is not required from the Department. Please contact this office if project plans change to the extent that a federal permit is required.

It has been determined that the project site is not within the regulated area of a protected NYS Freshwater Wetland, and no adverse impacts to state-listed species are anticipated. Therefore, no permits from the Department are required for this project

Please also note the project sponsor is responsible for ensuring that work shall not pollute any stream or waterbody. Care shall be taken to stabilize any disturbed areas promptly after construction, and all necessary precautions shall be taken to prevent contamination of the stream or waterbody by silt, sediment, fuels, solvents, lubricants, or any other pollutant associated with the project.

ADDITIONAL INFORMATION

Other permits from this Department or other agencies may be required for projects conducted on this property now or in the future. Also, regulations applicable to the location subject to this

determination occasionally are revised and you should, therefore, verify the need for permits if your project is delayed or postponed. This determination regarding the need for permits will remain effective for a maximum of one year unless you are otherwise notified. Applications may be downloaded from our website at www.dec.ny.gov under “Programs” then “Division of Environmental Permits.”

Please contact this office if you have questions regarding the above information. Thank you.

Sincerely,

Melanie Kukko

Melanie Kukko
Environmental Analyst
Division of Environmental Permits, Region 7
Telephone No. (315) 426-7482

cc: T. Yorks, R7 BEH

Foundation Design, P.C.

SOIL ● BEDROCK ● GROUNDWATER

May 3, 2024

Marathon Engineering
39 Cascade Drive
Rochester, New York

Attention: Adam Fishel

Reference: Retaining Wall, Slope Stability Assessment
1513 Taughannock Boulevard, Ulysses, New York
Geotechnical Consultation, 24.05636

Dear Mr. Fishel:

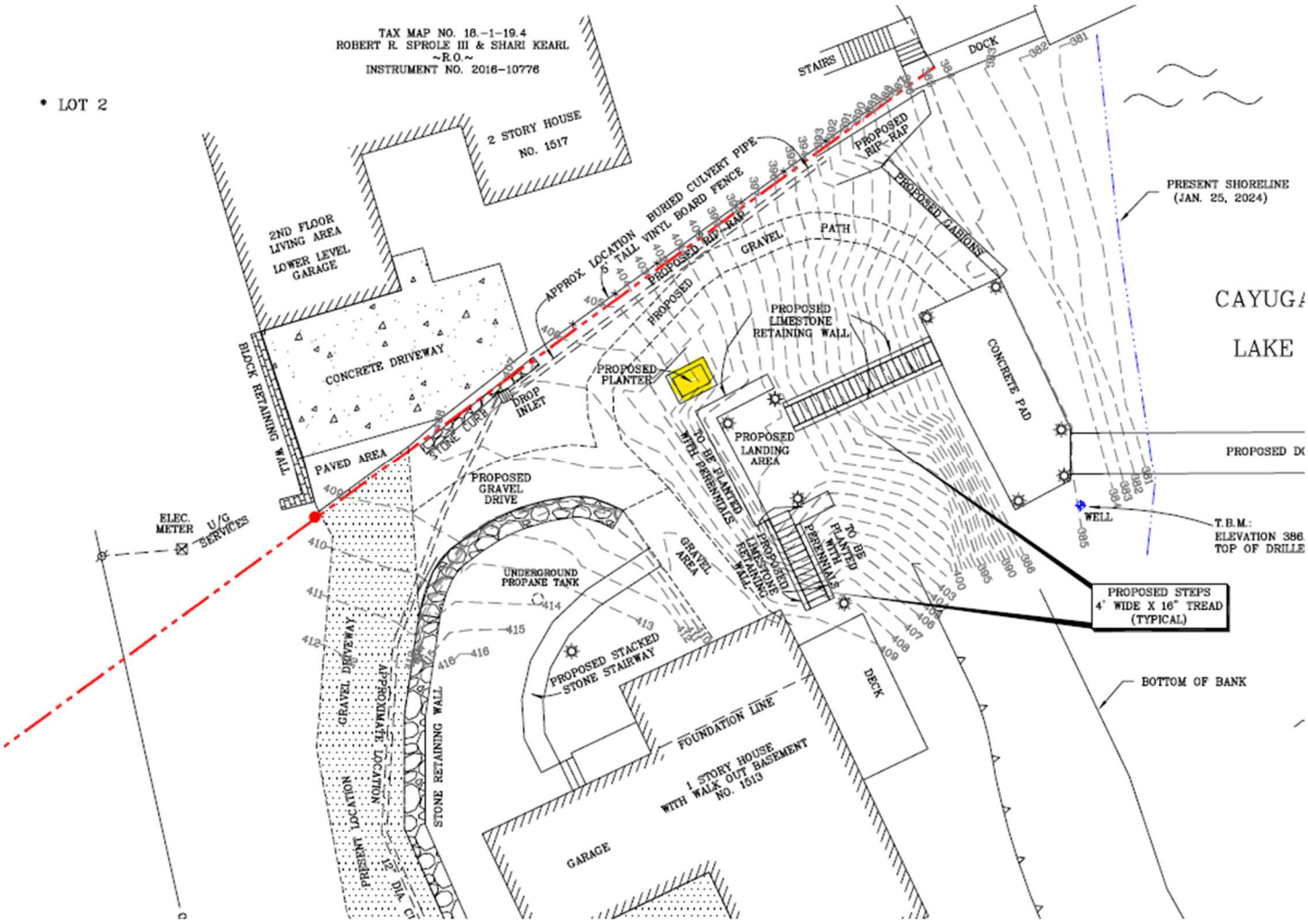
This report summarizes our geotechnical consultation for the proposed slope improvements that will be constructed north of the residence at 1513 Taughannock Boulevard in Ulysess, New York. This letter addresses the slope stability across the project area and the proposed retaining wall. We intend this report for use exclusively on this project.

In summary, we found the existing slope to be in a stable configuration and we found no evidence of slope failure. The proposed retaining wall and slope improvements will maintain a similar slope stability. Drainage control measures that will be implemented as part of the project should help to prevent surface saturation and erosion. Slope stability analysis of the project area after development is approximately 2.1 slightly higher than the predevelopment condition of 1.9 (1.5 is considered a stable configuration). Therefore, the proposed development which includes the site retaining walls, draining control improvements and re-vegetation should maintain a stable slope across the project area.

The proposed project includes a stepped walkway leading from the basement walk out (near elevation 409) to the concrete pad (elevation 385) near the lake shore. At elevation 399 a landing area will bench into the hill slope. A five-foot-high stacked stone wall will support the hill slope along the landing area. Across the proposed stairway there is about 24 feet of elevation change over a 60-foot area. The areas north and south of the stairway with be revegetated with a gravel path at the north end of the parcel.

The project site is located north of the residence that was constructed in 2019. The area is approximately 80' x 80'. The slope is at about a 20-degree angle. Slopes are shallower near the house becoming near vertical at the bedrock outcrop near the shoreline. Geologic mapping of the area identifies the soil in the area as glaciofluvial deposits over bedrock. Rock outcrops are exposed along Willow Creek to the west.

P & S Excavating provided a CAT mini-excavator for the test pit work on April 19, 2024. The test pit was located near the proposed planter, highlighted on the plan below. Our staff logged the soil profile.



The following interpretations of the soil, bedrock, and groundwater conditions are based on the test pit, previous excavations exposed between the landing and concrete pad, our site observations, and previous work in the general area. Variations from the inferred profile are possible. Call us immediately if such variations are found during construction so we may evaluate the impact on our recommendations, the design plans, and the specifications.

We encountered reworked native soil over hard silt and clay, then weathered bedrock. The upper reworked soil consists of silt and clay with lesser amounts of sand and gravel. A few pockets of topsoil were within the fill.

Underlying the reworked soil is stiff to hard layered silt and clay. Unconfined compressive strength reading using a pocket penetrometer were 3.5 to 4.0 tons/ft². Bedrock outcrop was noted at the toe of slope. The soil rock interface at the toe of slope was at about elevation 393. We assume the bedrock slopes upward to the west.

Groundwater was not observed. There was no indication of seepage at the bedrock/soil interface. We expect native undisturbed soil encountered during exploration to have a very low permeability. Infiltration will be limited and with most precipitation will manifest into runoff.

As part of our evaluation, we performed a slope stability analysis of the proposed project area using a 2-D slope stability program (Slide). We calculated a minimum factor of safety of 2.1 using conservative soil properties that were applied to the proposed slope configuration.

Recommendations:

1. The native soil is capable of supporting the proposed stacked rock walls under eight feet in height. Assume a net new allowable bearing pressure for the native soil of 2,000 lb/ft². We suggest recessing the first course of rock a minimum of two feet below grade to reduce frost impacts on the wall. Install a foundation drain at the backside base of the wall. Surround the drain with free draining granular material. Wrap the drain with a filter fabric to avoid silt buildup in the drain. Backfill the backside of the wall with free draining granular material. Grade slopes to minimize runoff into the wall backfill.

2. Bench the subgrade for the steps down to level, undisturbed soil. We recommend the steps bear on a minimum of four inches of compacted gravel subbase. Pitch landing subgrade one to two percent to prevent ponding.

3. Design wall systems using the lateral pressures tabulated below. The pressure distribution may be taken as triangular and equivalent to a fluid with a specified weight. Assume a coefficient of friction of 0.37 between the stacked rock and native soil. These values assume a drained condition.

Table No. 1 – Lateral Earth Pressures

Backfill Material	Moist Unit Weight (pcf)	Internal Friction	K_a	K_p	K_o	Active Pressure	Passive Pressure	At Rest Pressure
Silt and Clay	125	25	0.41	2.46	0.58	51	308	57
Imported Gravel	145	34	0.28	3.54	0.44	41	513	64

4. Install cutoff drains along the gravel area above the wall. Tie cutoff drains into the existing storm drain system. House roof drains should not discharge onto the hill slope or into the wall drains. Regrade upslope access drive to drain into the drop inlet at the north end of the parcel.

5. Topsoil and vegetate areas outside the hardscape. Grade green areas to limit concentrated runoff in areas where ground cover is to be established. As needed, install jute mat or other surface stabilizing material to help minimize surface erosion until ground cover and root systems can develop.

Attached to the end of the text is a Geoprofessional Business Association paper entitled *Important Information about This Geotechnical Engineering Report*. It discusses some of the risks and unknowns inherent with Geotechnical Engineering and describes how we intend this report to be used. We will continue to work cooperatively with you and other interested parties to achieve win/win solutions that benefit all.

This concludes our geotechnical consultation. It has been a pleasure working with you on this project and we look forward to hearing from you again as the project proceeds toward construction.

Sincerely,

FOUNDATION DESIGN, P.C.

James M. Baker, P.E.
President
Enc.

Important Information about This

Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, you can benefit from a lowered exposure to problems associated with subsurface conditions at project sites and development of them that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed herein, contact your GBA-member geotechnical engineer. Active engagement in GBA exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.

Understand the Geotechnical-Engineering Services Provided for this Report

Geotechnical-engineering services typically include the planning, collection, interpretation, and analysis of exploratory data from widely spaced borings and/or test pits. Field data are combined with results from laboratory tests of soil and rock samples obtained from field exploration (if applicable), observations made during site reconnaissance, and historical information to form one or more models of the expected subsurface conditions beneath the site. Local geology and alterations of the site surface and subsurface by previous and proposed construction are also important considerations. Geotechnical engineers apply their engineering training, experience, and judgment to adapt the requirements of the prospective project to the subsurface model(s). Estimates are made of the subsurface conditions that will likely be exposed during construction as well as the expected performance of foundations and other structures being planned and/or affected by construction activities.

The culmination of these geotechnical-engineering services is typically a geotechnical-engineering report providing the data obtained, a discussion of the subsurface model(s), the engineering and geologic engineering assessments and analyses made, and the recommendations developed to satisfy the given requirements of the project. These reports may be titled investigations, explorations, studies, assessments, or evaluations. Regardless of the title used, the geotechnical-engineering report is an engineering interpretation of the subsurface conditions within the context of the project and does not represent a close examination, systematic inquiry, or thorough investigation of all site and subsurface conditions.

Geotechnical-Engineering Services are Performed for Specific Purposes, Persons, and Projects, and At Specific Times

Geotechnical engineers structure their services to meet the specific needs, goals, and risk management preferences of their clients. A geotechnical-engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client.

Likewise, geotechnical-engineering services are performed for a specific project and purpose. For example, it is unlikely that a geotechnical-engineering study for a refrigerated warehouse will be the same as one prepared for a parking garage; and a few borings drilled during a preliminary study to evaluate site feasibility will not be adequate to develop geotechnical design recommendations for the project.

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client;
- for a different project or purpose;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, the reliability of a geotechnical-engineering report can be affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If you are the least bit uncertain* about the continued reliability of this report, contact your geotechnical engineer before applying the recommendations in it. A minor amount of additional testing or analysis after the passage of time – if any is required at all – could prevent major problems.

Read this Report in Full

Costly problems have occurred because those relying on a geotechnical-engineering report did not read the report in its entirety. Do not rely on an executive summary. Do not read selective elements only. *Read and refer to the report in full.*

You Need to Inform Your Geotechnical Engineer About Change

Your geotechnical engineer considered unique, project-specific factors when developing the scope of study behind this report and developing the confirmation-dependent recommendations the report conveys. Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the elevation, configuration, location, orientation, function or weight of the proposed structure and the desired performance criteria;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project or site changes – even minor ones – and request an assessment of their impact. *The geotechnical engineer who prepared this report cannot accept*

responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.

Most of the "Findings" Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site's subsurface using various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing is performed.* The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgement to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team through project completion to obtain informed guidance quickly, whenever needed.

This Report's Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, they are not final, because the geotechnical engineer who developed them relied heavily on judgement and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* exposed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

This Report Could Be Misinterpreted

Other design professionals' misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a continuing member of the design team, to:

- confer with other design-team members;
- help develop specifications;
- review pertinent elements of other design professionals' plans and specifications; and
- be available whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction-phase observations.

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note conspicuously that you've included the material for information purposes only.* To avoid misunderstanding, you may also want to note that "informational purposes" means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. This happens in part because soil and rock on project sites are typically heterogeneous and not manufactured materials with well-defined engineering properties like steel and concrete. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a "phase-one" or "phase-two" environmental site assessment – differ significantly from those used to perform a geotechnical-engineering study. For that reason, a geotechnical-engineering report does not usually provide environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated subsurface environmental problems have led to project failures.* If you have not obtained your own environmental information about the project site, ask your geotechnical consultant for a recommendation on how to find environmental risk-management guidance.

Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, the engineer's services were not designed, conducted, or intended to prevent migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, ***proper implementation of the geotechnical engineer's recommendations will not of itself be sufficient to prevent moisture infiltration. Confront the risk of moisture infiltration*** by including building-envelope or mold specialists on the design team. ***Geotechnical engineers are not building-envelope or mold specialists.***

GEOPROFESSIONAL BUSINESS ASSOCIATION

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SOIL DESCRIPTIONS

COHESIVE SOIL	**DESCRIPTION**	
Very fine grained soil. Plastic soil that can be rolled into a thin thread if moist. Clays and silty clays show cohesion.	Very Soft	Extrude between fingers when squeezed
	Soft	Molded by light finger pressure
	Medium	Molded by strong finger pressure
	Stiff	Indented by thumb with effort
	Hard	Indented by thumb nail with difficulty

NON-COHESIVE SOIL	**DESCRIPTION**
Soil composed of silt, sand and gravel, showing no cohesion or very slight cohesion.	Loose
	Firm
	Compact
	Dense
	Very Dense

SOIL COMPOSITION	**DESCRIPTION**	**ESTIMATED PERCENTAGE**
	and	50
	some	30-49
	little	11-29
	trace	0-10

MOISTURE CONDITIONS dry, damp, moist, wet, saturated
Groundwater measured in the boring or test pit may not have reached equilibrium

SOIL STRATA	**TERM**	**DESCRIPTION**
	layer	Soil deposit more than 6" thick
	seam	Soil deposit less than 6" thick
	parting	Soil deposit less than ⅛" thick
	varved	Horizontal uniform layers or seams of soil

GRAIN SIZE

MATERIAL		SIEVE SIZE
Boulder		Larger than 12"
Cobble		3" to 12"
Gravel	- coarse	1" to 3"
	- medium	⅜" to 1"
	- fine	No. 4 to ⅜"
Sand	- coarse	No. 10 to No. 4
	- medium	No. 40 to No. 10
	- fine	No. 200 to No. 40
Silt and Clay		Less than No. 200

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Test Pit Log

Project No.	5636.0	**Page**	1	**of**	1	**Test Pit No.**	TP24-1
Project Name	Kearl Residence, 1513 Taughannock Blvd., Ulysses, New York						
Client	Marathon Engineer, 39 Cascade Drive, Rochester, New York 14614						
Elevation	403.0 est.	**Weather**	P. Cloudy			**Technician**	S. Allen
Date Started	4/19/24	**Completed**	4/19/24			**Operator**	Bill
Backhoe Subcontractor	P & S Excavating					**Equipment**	Cat mini excavator

Depth Below Surface	Sample Number	Depth of Sample	Soil and Rock Classifications Remarks
2			FILL: Firm rad-brown damp to moist SLT and CLAY, little gravel, little sand, few organic pockets
4			3'6" Stiff to hard gray-brown damp SILT and CLAY, trace sand, trace gravel
6			Pocket Penetrometer: 3.5-4.0 tons/ft² at 6 feet
8			7'0' Test pit terminated at 7'0"
10			
12			

Site Pictures

Notes:
1. Sides vertical upon completion.
2. Dry on completion.
3. Staked location and elevation referenced from features depicted on the Reagan Land Surveying *Kearl Site Plan*

BASIC SWPPP

Stormwater Pollution Prevention Plan

---------- For ----------

The Kearl Property

1513 Taughannock Boulevard
Town of Ulysses, NY

December 12, 2025

Prepared by:

MARATHON ENGINEERING
39 Cascade Drive / Rochester NY 14614 / 585-458-7770
840 Hanshaw Rd, Suite 6 / Ithaca NY 14850 / 607-241-2917

Prepared For:

Kenneth Kearl
1513 Taughannock Boulevard
Ulysses, NY

Table of Contents

SECTION 1: PROJECT INFORMATION

1.1 Owner or Operator, and SWPPP Preparer Information

Owner/Operator: Kenneth Kearl	Contact Person: Kenneth Kearl Email: kennethkearl@gmail.com
1513 Taughannock Boulevard Ulysses, NY 14850	Phone Number: (860) 272-7000

SWPPP Preparer: Marathon Engineering	Contact Person: Adam M. Fishel, PE Email: afishel@marathoneng.com
840 Hanshaw Rd, Suite 6 Ithaca, NY 14850	Phone Number: (607) 241-2917

1.2 Site Address, Scope, Type, and Size of Project

Address:	1513 Taughannock Boulevard
Municipality:	Town of Ulysses
County:	Tompkins
Tax Parcel #:	18.-1-19.8
Nearest Cross St:	Willow Creek Point Road
Watershed:	The site drains to Cayuga Lake

Project Description:

This project proposes the demolition of the existing site features to facilitate the construction of a new gravel walkway, stone stairs and patio areas. In addition, associated site grading, drainage, utility, lighting, and landscaping improvements are also proposed.

Currently, access to the parcel is via a residential driveway from Taughannock Boulevard (NYS Rt. 89).

This project is located within the Town of Ulysses, NY which is not classified by NYSDEC as a Municipal Separate Storm Sewer System (MS4). Therefore, authority over stormwater related items lies with NYSDEC. The site disturbance is ±0.14 acres and therefore does not require coverage under NYSDEC's Stormwater Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharge from Construction Activities. However, given the site's proximity to Cayuga Lake, the Town has requested the preparation of a "Basic SWPPP".

This site is located within the Willow Creek tributary of Cayuga Lake

SECTION 2: STORMWATER SITE PLANNING, PRACTICE SELECTION, AND DETAILS

2.1 Stormwater Management

The total site development (disturbance) area is approximately ±0.14 acres which does not exceed the allowable site disturbance (1 acre) outlined in the New York State Department of Environmental Conservation's (NYSDEC) General Permit for Stormwater Pollutant Discharges. Therefore, a full Stormwater Pollution Prevention Plan (SWPPP) including Stormwater Quality and Quantity provisions is not required.

As illustrated in the construction drawings provided in Appendix B, the stormwater runoff generated by the project site will drain east and flow into Cayuga Lake.

Under existing conditions, the site consists of impervious cover associated with existing gravel driveways, access aisles and the existing home as well as perimeter lawn areas. Under proposed conditions, the same land use cover type will remain with slightly more impervious cover due to the proposed stone stairs and associated patio areas. Surface runoff will either be collected by existing onsite storm sewer which will discharge to existing rip rap rock aprons or flow via surface drainage directing into Cayuga Lake.

Ground disturbing activities are anticipated to include construction of stone stairs, landing and associated, grading, drainage, lighting and landscaping improvements.

2.2 Reference the Map/Construction Drawing for the Descriptions, Dimensions, Material Specifications and Installation Details for each Post-Construction Stormwater Control Practice:

Not Applicable.

2.3 Long Term Operation and Maintenance of Post-Construction Stormwater Management Practices:

1. **General Landscape Maintenance**

   - Landscape maintenance shall include necessary watering, cultivation, weeding, pruning, wound dressing, disease and insect pest control, protective spraying, straightening plants which lean or sag, adjustments of plans which settle or are planted too low, mowing, replacement of mulch that has been displaced. Such maintenance shall be performed as needed or annually at minimum.

2. **Grass Areas**

- Fertilize and lime as needed to maintain dense vegetation.
- Mow as required during the growing season to maintain grass heights at 4 inches to 6 inches.
- Inspect for pools of standing water. Re-grade to restore design grade and re-vegetate.
- Use of heavy equipment for mowing and removing plants/debris should be avoided to minimize soil compaction. Disturbed areas shall be stabilized with seed and mulch, or revetment, as necessary.

2.7 Logs of Borehole Investigations and Supporting Geotechnical Report (if applicable)

A geotechnical assessment has been performed at the site and is provided in Appendix C.

SECTION 3: CONSTRUCTION EROSION AND SEDIMENT CONTROL PLANS, VEGETATIVE MEASURES & CONTROL OF NON-STORMWATER DISCHARGES

3.1 Description of Temporary and Permanent Structural and Vegetative Measures:

A. Temporary Stabilization

Topsoil stockpiles and disturbed portions of the site where construction activity temporarily ceases for 14 days or more will be stabilized with temporary seed and mulch within 7 days of cessation of work. The temporary seed shall be annual rye applied at the rate of 100 lbs. per acre. After seeding, each area shall be mulched with 2 tons per acre or 3 bales per 1000 square feet of straw. The straw mulch is to be tacked into place by a disk with blades set nearly straight. Areas of the site that are to be paved will be temporarily stabilized by applying geotextile and stone sub-base until bituminous pavement can be applied.

B. Soil Restoration

Soil restoration **is a required practice** applied across areas of a development site where soils have been disturbed and will be vegetated in order to recover the original properties of the soil. Soil restoration is applied in the cleanup, restoration, and landscaping phase of construction followed by the permanent establishment of an appropriate, deep-rooted groundcover to help maintain the restored soil structure.

Soil restoration is required in areas where existing impervious areas will be converted to pervious areas. Contractor shall keep all construction equipment, staging and storage within the existing/proposed paved areas only. In areas where construction equipment use is required in and around areas to be landscaped, the Contractor shall perform Soil Restoration as discussed below.

Below is a summary of soil disturbance activities related to land development, soil types and the requirements for soil restoration for each activity as outlined in the NYSDEC Stormwater Design Manual, Dated January 2015:

For soils having HSG A and/or B classification:

- Areas where topsoil is stripped only – no change in grade:
    1. Apply 6 inches of topsoil and protect area from any ongoing construction activities.
- Areas of cut or fill:
    1. Aerate and apply 6 inches of topsoil
- Heavy traffic areas on site (especially in a zone 5-25 feet around buildings but not within a 5 foot perimeter around foundation walls):
    1. Apply full soil restoration [2] (de-compaction and compost enhancement)
- Areas where Runoff Reduction (bioretention) and/or Infiltration Practices are applied)
    1. Restoration not required, but may be applied to enhance the reduction specified for appropriate practices.

For soils having HSG C and/or D classification:

- Areas where topsoil is stripped only – no change in grade:
    1. Aerate[1] and apply 6 inches of topsoil and protect area from any ongoing construction activities.
- Areas of cut or fill:
    1. Apply full soil Restoration [2]
- Heavy traffic areas on site (especially in a zone 5-25 feet around buildings but not within a 5 foot perimeter around foundation walls):
    1. Apply full soil restoration [2] (de-compaction and compost enhancement)
- Areas where Runoff Reduction (bioretention) and/or Infiltration Practices are applied)
    1. Restoration not required, but may be applied to enhance the reduction specified for appropriate practices.

- Redevelopment Projects

1. Soil restoration is required on redevelopment projects in areas where existing impervious area will be converted to pervious area.

[1] Aeration includes the use of machines such as tractor-drawn implements with coulters making a narrow slit in the soil, a roller with many spikes making indentations in the soil, or prongs which function like a mini-subsoiler.

[2] per "Deep Ripping and De-compaction, DEC 2008".

Compost shall be aged, from plant derived materials, free of viable weed seeds, have no visible free water or dust produced when handling, pass through a half inch screen and have a pH suitable to grow desired plants.

During periods of relatively low to moderate subsoil moisture, the disturbed soils are returned to rough grade and the following Soil Restoration steps applied:

1. Apply 3 inches of compost over subsoil;
2. Till compost into subsoil to a depth of at least 12 inches using a cat-mounted ripper, tractor mounted disc, or tiller, mixing and circulating air and compost into subsoils;
3. Rock-pick until uplifted stone/rock materials of four inches and larger size are cleaned off the site;
4. Apply topsoil to a depth of 6 inches;
5. Vegetate as required by approved plan;

Contractor shall locate and avoid all underground utilities during soil restoration procedures. If depths of utilities are located in areas to be restored which prevent the achieving the soil restoration depth, the Contractor shall contact the Civil Engineer of Record and request directive.

At the end of the project an inspector should be able to push a 3/8" metal bar 12 inches into the soil just with body weight.

C. <u>Permanent Stabilization</u>

Disturbed portions of the site where construction activities permanently cease shall have 6" of topsoil placed and be stabilized with permanent seed no later than 14 days after the last construction activity. Lime and fertilizer will be applied as determined by soil tests. After seeding,

each area shall be mulched as described above. All slopes greater than or equal to 3H: 1V shall have erosion control fabric applied as specified on the drawings. Seed mix shall be as specified by the owner at the seed suppliers recommended rates.

D. Off-Site Vehicle Tracking

If the stabilized construction entrance is not sufficient to reduce vehicle tracking of sediments to an acceptable amount the contractor shall install a truck wash station on-site. The paved street adjacent to the site entrance will be swept daily to remove any excess mud, dirt, or rock tracked from the site. Dump trucks hauling material from the construction site will be covered with a tarpaulin.

3.2 Reference the Map/Construction Drawing for the Material Specifications, Dimensions, and Installation Details for All Erosion and Sediment Control Practices

See Appendix B, Site Development Plans. Specifically: Grading Drainage and Erosion Control Plan.

3.3 Identification of Design Elements not in Conformance with the New York State Stormwater Management Design Manual

Not applicable.

3.4 Identification of Design Elements not in Conformance with the New York State Standard and Specifications for Erosion and Sediment Control

The proposed project conforms to the New York State Standard and Specifications for Erosion and Sediment Control. Conformance with these requirements is defined throughout the SWPPP and design plans.

3.5 Description of the Structural Stormwater Sediment Control Practices

No temporary structural sediment control practices are proposed.

3.6 Description of the Structural Practices to Divert Flows

No structural practices to divert flows are proposed.

3.7 Construction Phasing and Sequencing Plans

- Contractor shall denote the location of equipment storage/laydown, job trailers, porta-potty, waste receptacles, etc. on the construction drawings prior to the start of work.
- Protect existing vegetation and environmental features to remain.

- Install stabilized construction entrance.
- Install perimeter sediment controls.
- Complete demolition activities.
- Strip topsoil and place erosion control measures around all topsoil stockpiles. Contractor to denote location of stockpile(s) on the construction drawings.
- Install additional erosion and sediment controls according to plan.
- Grade site.
- Stabilize denuded areas and stockpiles within 14 days of last construction activity in each area.
- Install/place concrete washout area(s). Contractor to denote location of concrete washout area(s) on the construction drawings.
- Install utilities, including culvert pipes and associated outlet protection.
- Apply stone to roads and parking areas.
- Complete grading, reapply topsoil, and perform soil restoration.
- Install permanent seeding, fertilizer and mulch.
- Complete final concrete work
- Remove all temporary sediment control practices after soils are stabilized.

3.8 Description of Pollution Prevention Measures to Control Construction Litter, Construction Chemicals, and Debris

Note: blanks to be filled in prior to the pre-construction meeting

I. Pollution Prevention Measures (from Construction-Phase Operations other than soil disturbance)

A. _____ (site superintendent responsible for the day-to-day site operations) will be the spill prevention and cleanup coordinator.

B. Product Specific Practices:

The following product specific practices will be followed onsite:

1. Petroleum Products - All onsite vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers that are clearly labeled. Any asphalt substances used onsite will be applied according to the manufacturer's recommendations.

2. Fertilizers - Fertilizers used will be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer will be worked into the soil to limit exposure to stormwater. Storage will be in a covered shed. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.

3. Paints - All containers will be tightly sealed and stored when not required for use. Excess paint will not be discharged to the storm sewer system but will be properly disposed according to manufacturers' instructions or state and local regulations.

4. Concrete Trucks - Concrete trucks will not be allowed to wash out or discharge surplus concrete or drum wash water on the site.

5. Waste Disposal - All waste materials will be collected and stored in a securely lidded metal dumpster rented from _____, which is a licensed solid waste management company in _____ (city). The dumpster will meet all local and any State solid waste management regulations. All trash and construction debris from the site will be deposited in the dumpster. The dumpster will be emptied as often as necessary, and the trash will be hauled to _____ (landfill). No construction waste materials will be buried onsite. All personnel will be instructed regarding the correct procedure for waste disposal. Notices stating these practices will be posted in the office trailer. _____ (site superintendent responsible for the day-to-day site operations), will be responsible for seeing that these procedures are followed.

6. Hazardous Waste - All hazardous waste materials will be disposed of in the manner specified by local or State regulation or by the manufacturer. Site personnel will be instructed in these practices. _____ (site superintendent responsible for the day-to-day site operations) will be responsible for seeing that these practices are followed.

7. Sanitary Waste - All sanitary waste will be collected from the portable units a minimum of three times per week by _____, a licensed sanitary waste management contractor.

8. Recyclable Waste – All recyclable waste (cardboard, wood etc.) shall be collected and recycled.

II. On-Site Storage of Construction and Waste Materials

A. Spill Prevention Inventory: The materials or substances listed below are expected to be present onsite during construction: (Check appropriate boxes)

☐ Concrete	☐ Detergents	☐ Roofing shingles
☐ Metal studs	☐ Paints (enamel and latex)	☐ Wood
☐ Petroleum-based products	☐ Fertilizers	☐ Tar
☐ Masonry block	☐ Cleaning solvents	☐ Other (specify)

B. Material Management Practices

The following are the management practices that will be used to reduce the risk of spills or other accidental exposure of materials and substances listed above to stormwater runoff:

☐ Products will be kept in original containers unless they are not resealable.

☐ Original labels and material safety data sheets will be retained; they contain important product information.

☐ An effort will be made to store only enough product required to do the job.

☐ All materials stored onsite will be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure and/or on blacktop.

☐ Products will be kept in their original containers with the original manufacturer's label.

☐ Substances will not be mixed with one another unless recommended by the manufacturer.

☐ Whenever possible, all of a product will be used up before disposing of the container.

☐ Manufacturer's recommendations for proper use and disposal will be followed.

☐ The site superintendent will inspect daily to ensure the proper use and disposal of materials onsite.

☐ Manufacturers' recommended methods for spill cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the information and cleanup supplies.

☐ Materials and equipment necessary for spill cleanup will be kept in the material storage area onsite. Equipment and materials will include but not be limited to brooms, dustpans, mops, rags, gloves, goggles, kitty litter, sand, sawdust, and plastic and metal trash containers specifically for this purpose.

☐ All spills will be cleaned up immediately after discovery.

☐ The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.

☐ Spills, of any size, of toxic or hazardous material will be reported to the appropriate State or local government agency.

☐ The spill prevention plan will be adjusted to include measures to prevent this type of spill from recurring and how to clean up the spill if there is another one. A description of the spill, what caused it, and the cleanup measures will also be included.

SECTION 4: EXISTING AND PROPOSED MAPPING AND PLANS

4.1 Vicinity Map and Project Boundary

See "Figure 1.0: Location Map" in Appendix A.

4.2 Existing and Proposed Topography

See Appendix B, Site Development Plans (reduced size).

4.3 Location of Perennial and Intermittent Streams

See Appendix B, Site Development Plans (reduced size). Perennial and/or Intermittent Streams have not been identified within the project site or the adjacent properties.

4.4 Map and Description of Soils from USDA Soil Survey

See Appendix C for the NRCS Soil Survey.

4.5 Boundaries of Existing Vegetation and Proposed Limits of Clearing

See Appendix B, Site Development Plans.

4.6 Location and Boundaries of Resource Protection Areas, such as Wetlands, Lakes, Ponds, etc.

Cayuga Lake is immediately adjacent to the work area. No work shall occur below the normal water elevation of Cayuga Lake.

4.7 Boundary and Acreage of Upstream Watershed

Upstream watershed analysis is not included in this SWPPP.

4.8 Name and Locations of Receiving Waters

The site drains to Cayuga Lake.

4.9 Location of Existing and Proposed Roads, Lot Boundaries, Buildings, and other Structures

Refer to Appendix B.

4.10 Location and Size of Staging Areas, Equipment Storage Areas, Borrow Pits, Waste Areas, and Concrete Washout Areas

The above referenced items will be determined at the preconstruction meeting. The Contractor shall be responsible for denoting the location of these areas on the plans.

4.11 Existing and Proposed Utilities (Sewer, Water, Gas etc) and Easements

Refer to Appendix B.

4.12 Location and Flow Paths of Existing and Proposed Conveyance Systems, such as Channels, Swales, Culverts, and Storm Drains

See Appendix B for site plans showing the above-mentioned items, if applicable.

4.13 Location of Floodplain/Floodway Limits

All proposed improvements will be above the normal water elevation of Cayuga Lake.

4.14 Location and Dimensions of Proposed Channel Modifications, such as Bridge or Culvert Crossings

Not Applicable.

4.15 Location, Size, Maintenance Access and Limits of Disturbance of Proposed Temporary and Permanent Stormwater Management and Erosion and Sediment Control Practices, including Timing and Duration of Temporary Practices

Refer to Appendix B.

4.16 Existing and Proposed Structural Elevations

Refer to Appendix B.

4.17 Final Landscaping Plans

Refer to Appendix B.

Appendix A

Maps and Figures

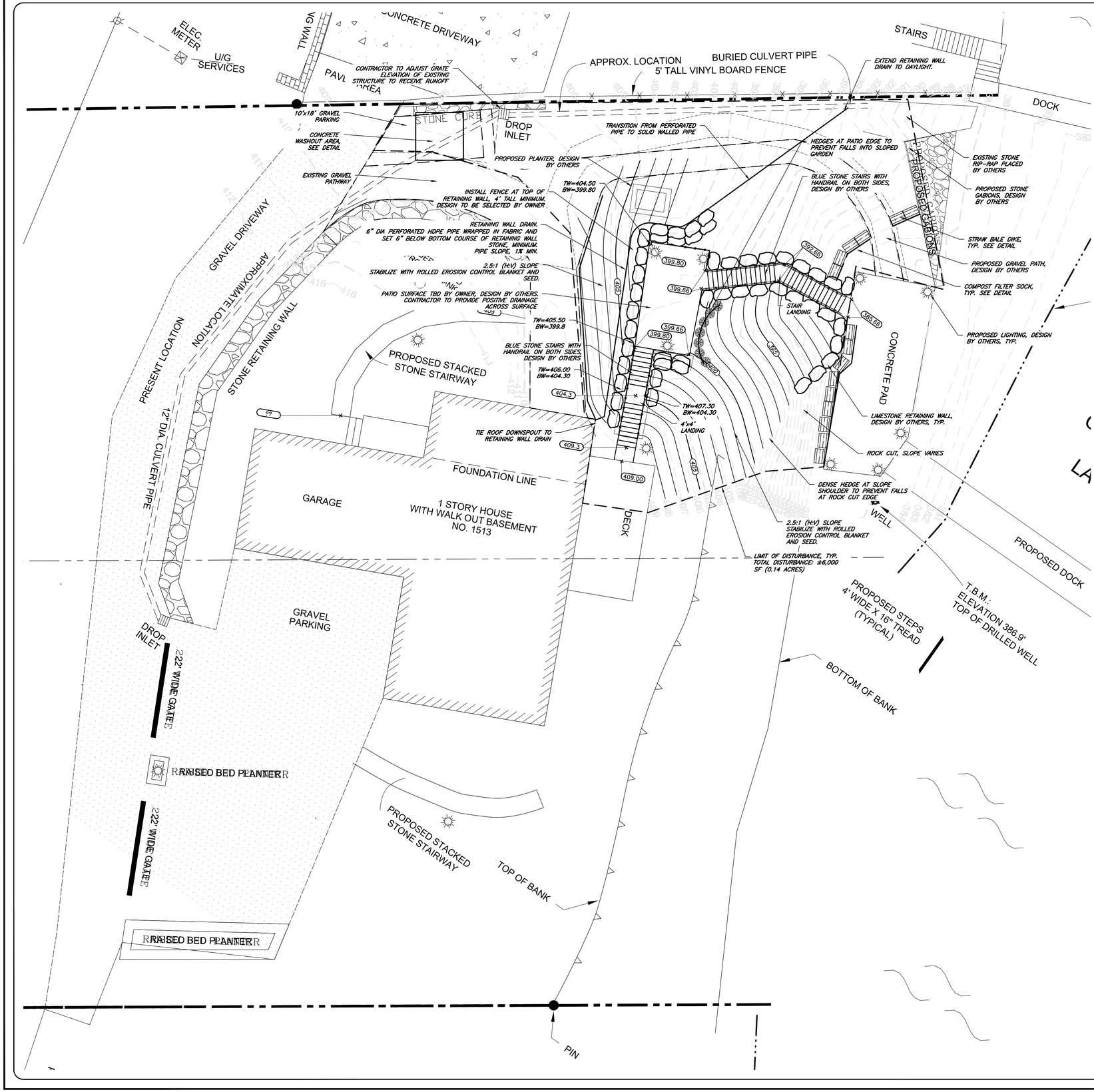
LOCATION MAP

N.T.S.

Appendix B

Site Development Plans

(reduced size)



CONSTRUCTION

1. **STAKEOUT** - THE CONSTRUCTION STAKEOUT SHALL BE PERFORMED BY A LICENSED LAND SURVEYOR USING CONTROL PROVIDED ON THE "SITE PLAN". DISCREPANCIES WITH BUILDING(S), CONTROL POINTS, AND/ OR TIE DIMENSIONS SHALL BE REPORTED TO THE DESIGN ENGINEER (PRIOR TO THE INSTALLATION OF IMPROVEMENTS) FOR COORDINATION AND CLARIFICATION.
2. **BOUNDARY** - BOUNDARY INFORMATION WAS TAKEN FROM PARCEL SURVEY PREPARED BY REGAN LAND SURVEYING DATED 01/24/24 AND IS SHOWN FOR GRAPHICAL REPRESENTATION ONLY.
3. **COORDINATION** - THE CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITY WORK WITH OTHER SITE UTILITIES (I.E. GAS, ELECTRIC, LIGHTING, COMMUNICATIONS) TO AVOID POTENTIAL INSTALLATION CONFLICTS.
4. **STAGING** - AS DEFINED BY THE CONTRACT DOCUMENTS THE CONTRACTOR SHALL CONSTRUCT A SECURE STAGING AREA FOR STORAGE OF EQUIPMENT, MATERIALS, EMPLOYEE PARKING AND OFFICE SPACE. IF THE AREA/METHOD IS NOT SPECIFICALLY DEFINED ON THE DOCUMENTS THEN IT SHALL BE COORDINATED WITH THE OWNER'S ON-SITE REPRESENTATIVE.
5. **CLOSE-OUT** - THE CONTRACTOR'S WORK SCOPE INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING AT PROJECT CLOSE-OUT TO THE SATISFACTION OF OWNER'S ON-SITE REPRESENTATIVE:
   - REMOVAL OF ANY CONSTRUCTION DEBRIS.
   - CLEANING PAVEMENT AND WALKWAY SURFACES.
   - RESTORATION OF ALL DISTURBED GRASS AND LANDSCAPED AREAS.
   - PROVIDING BONDS, GUARANTEES, CERTIFICATIONS, ETC. AS REQUIRED BY CONTRACT DOCUMENTS.
   - PROVIDING REDLINES FOR RECORD DRAWING.
   - COMPLETION OF FINAL PUNCH LIST ITEMS.
6. **RETAINING WALL DESIGN** - THE DESIGN OF THE RETAINING WALLS ARE PROVIDED BY OTHERS.
7. **SITE LIGHTING AND ELECTRICAL DESIGN** - THE SITE LIGHTING AND ELECTRICAL DESIGN IS PROVIDED BY OTHERS.
8. **SITE LANDSCAPING** - THE SITE LANDSCAPING DESIGN IS PROVIDED BY OTHERS.

RESTORATION AND LANDSCAPING

1. **GUARANTEE** - THE **AGREEMENT BETWEEN THE OWNER AND CONTRACTOR SHALL** DEFINE THE REQUIREMENTS, MAINTENANCE, AND TIME TO ESTABLISH NEW TURF AND LANDSCAPING ACCEPTANCE BY THE OWNER.
2. **TOPSOIL** - PLACE A MINIMUM OF **4 INCHES** (REQUIRED) OF TOPSOIL ON ALL DISTURBED SURFACES. FINE GRADE TO ESTABLISH THE DESIGN ELEVATIONS AND DRAINAGE PATTERNS. OBTAIN OWNER'S REPRESENTATIVE APPROVAL PRIOR TO SEEDING.
3. **SEED** - LAWN AREAS SHALL BE HYDROSEEDED WITH AN APPROVED: SEED MIXTURE, MULCH, AND FERTILIZER. THE APPLICATION RATE SHALL BE DETERMINED BY CONTRACTOR TO ESTABLISH A "STAND" OF GRASS. THE CONTRACTOR SHALL SUBMIT MATERIAL AND APPLICATION SPECIFICATIONS TO THE OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO APPLICATION.
4. **LANDSCAPING** - PLANT STOCK AND PLANT SPECIES, QUANTITIES, ETC. ARE TO BE PROVIDED BY OTHERS.

EROSION CONTROL

1. **TOPSOIL** - UPON COMPLETION OF THE STRIPPING OPERATION, STOCKPILES SHALL BE STABILIZED IN ACCORDANCE TO NYSDEC REGULATIONS.
2. **SLOPES** - UPON COMPLETION OF GRADING, SLOPES WITH A GRADIENT OF ONE FOOT VERTICAL TO THREE FEET HORIZONTAL (1 ON 3) OR GREATER SHALL BE: TOPSOILED, SEEDED, FERTILIZED AND MULCHED OR TREATED AS SPECIFIED ON CONTRACT DRAWINGS.
3. **DUST** - THE CONTRACTOR SHALL APPLY WATER AND/OR CALCIUM CHLORIDE, AS CONDITIONS WARRANT, TO CONTROL WIND BORN EROSION. THIS MEASURE APPLIES TO: HAUL ROADS, CUT AND FILL OPERATIONS, SUB-BASE AND ANY OTHER EXPOSED SURFACES.
4. **OPERATION & MAINTENANCE** - THROUGHOUT THE PERIOD OF CONSTRUCTION AND PRIOR TO ESTABLISHING FINAL GROUND COVER THE SITE CONTRACTOR IS RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE TEMPORARY EROSION CONTROL MEASURES. FOR EXAMPLE, THE SILTATION FACILITIES SHALL BE RE-EXCAVATED WHEN THE VOLUME (3600 CUBIC FEET/DISTURBED ACRE) IS REDUCED BY ONE-HALF OR MORE OF ITS SPECIFIED CAPACITY AND/OR THE MATERIAL IS WITHIN ONE FOOT OF THE DISCHARGE POINT.
5. **WORK STOPPAGE** - ALL DISTURBED AREAS NOT TO BE WORKED WITHIN 14 DAYS MUST BE SEEDED WITHIN 7 DAYS FROM THE LAST CONSTRUCTION ACTIVITY IN THAT AREA.
6. **TEMPORARY STABILIZATION** - TEMPORARY STABILIZATION SHALL REQUIRE 4 TONS OF STRAW/ ACRE OF DISTURBANCE PLACED WITH TACKIFIER OR ROLLED WITH A TRACKED VEHICLE TO ENSURE NOT DISPLACED.
7. **WINTER STABILIZATION** - ALL WINTER STABILIZATION METHODS IDENTIFIED IN THE NYS 'BLUE BOOK' SHALL BE FOLLOWED FOR ANY DISTURBANCE OR NON-STABILIZED AREAS FROM NOVEMBER 15TH - APRIL 1ST.

GENERAL

1. **APPLICABILITY** - THE NOTES AND INFORMATION PROVIDED ON THIS SHEET ARE APPLICABLE TO ALL "C" SERIES DRAWINGS. THE "C" SERIES DRAWINGS COVER SITE RELATED IMPROVEMENTS OUTSIDE THE BUILDING ENVELOPE. THE BUILDING ENVELOPE INCLUDES ALL AREA WITHIN 5' OUTSIDE OF THE BUILDING'S EXTERIOR WALL.
2. **MAPPING** - THE EXISTING UNDERGROUND UTILITIES WERE PLOTTED BASED ON RECORD MAPPING SUPPLIED BY OTHERS. THE ENGINEER MAKES NO WARRANTY AS TO THE LOCATION, SIZE, TYPE, ELEVATION, AND/OR NUMBER OF EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE HORIZONTAL AND VERTICAL LOCATION OF UTILITIES IN THE VICINITY OF THE NEW INFRASTRUCTURE.
3. **UTILITY STAKEOUT** - THE CONTRACTOR SHALL NOTIFY UDIG NY (1-800-962-7962) FOR A UTILITY STAKEOUT 48 HOURS IN ADVANCE OF COMMENCING WORK. STAKEOUT OF PRIVATE UTILITIES SHALL BE COORDINATED WITH THE OWNER.
4. **PROPERTY PROTECTION** - THE CONTRACTOR IS RESPONSIBLE FOR DAMAGE TO EXISTING PAVEMENT, CURBS, WALKS, LAWNS, TREES, ETC. CAUSED BY THEIR CONSTRUCTION OPERATIONS. ALL DAMAGE SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR TO THE OWNER'S SATISFACTION AT NO ADDITIONAL EXPENSE.
5. **ACCESS** - THE CONTRACTOR SHALL PROVIDE SATISFACTORY VEHICULAR ACCESS TO ALL ADJOINING PROPERTIES, PRIVATE ROADWAYS, PARKING FACILITIES, AND PUBLIC STREETS DURING CONSTRUCTION.
6. **SITE SAFETY** - PRIOR TO AND THROUGHOUT CONSTRUCTION, THE CONTRACTOR SHALL POST SIGNAGE IN CONFORMANCE WITH THE REQUIREMENTS OF THE LOCAL MUNICIPALITY AND OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA). JOB SAFETY AND MAINTENANCE AND PROTECTION OF TRAFFIC IS THE RESPONSIBILITY OF THE CONTRACTOR.
7. **EXCAVATIONS** - ALL EXCAVATIONS SHALL BE BACKFILLED/BARRICADED TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE AT THE CONCLUSION OF EACH WORKING DAY.
8. **MAINTENANCE** - PUBLIC STREETS, PRIVATE DRIVES AND PARKING FACILITIES SHALL BE KEPT FREE OF FOREIGN MATERIALS. ALL AREAS SHALL BE SWEPT CLEAN AT THE END OF EACH WORKING DAY AND/OR AS DIRECTED BY THE OWNER'S ON-SITE REPRESENTATIVE.
9. **CONSTRUCTION STORAGE** - STORAGE OF EQUIPMENT AND MATERIALS SHALL BE WITHIN A SPECIFIED AND SECURED AREA AS DETERMINED IN CONTRACT DOCUMENTS OR AS SPECIFIED BY THE OWNER'S ON-SITE REPRESENTATIVE.
10. **PERMIT(S)** - PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN THE NECESSARY PERMITS FROM THE APPLICABLE MUNICIPALITY OR AGENCY. THE CONTRACTOR IS RESPONSIBLE FOR ALL BONDS AND INSURANCES AND THE OWNER IS RESPONSIBLE FOR PERMIT FEES UNLESS OTHERWISE STATED IN THE OWNER/ CONTRACTOR AGREEMENT
11. **INTERIM CONDITIONS** - THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN POSITIVE DRAINAGE AWAY FROM BUILDINGS AND WITHIN PROJECT AREA TO A STABILIZED OUTLET THROUGHOUT THE CONSTRUCTION PERIOD. THIS MAY REQUIRE INTERIM GRADING, SHIMMING OF PAVEMENT ETC. THAT IS NOT SPECIFICALLY SHOWN ON THE PLANS AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

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SITE DEVELOPMENT PLANS for KEARL RESIDENCE

1513 TAUGHANNOCK BOULEVARD
TOMPKINS COUNTY
TOWN OF ULYSSES
STATE OF NEW YORK

JOB NO:	1736-24
SCALE:	AS SHOWN
DRAWN:	AF
DESIGNED:	AF
DATE:	05/16/24

REVISIONS

DATE	BY	REVISION
12/12/25	AF	CLIENT REVISIONS

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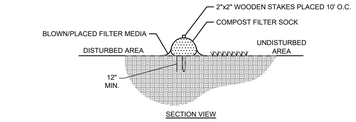
STATE OF NEW YORK · ADAM MCKINLEY FISHEL · NO. 086648 · LICENSED PROFESSIONAL ENGINEER

ADAM M. FISHEL

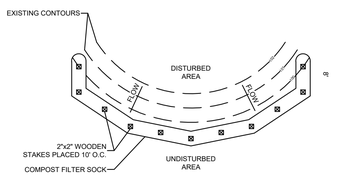
DRAWING TITLE:
Grading, Drainage & Erosion Control Plan

1 of 2 SHEET No:	C-1.0
1736-24 JOB No:	DRAWING No:

File: I:\Engineering\Job Files\1736-24\Drawings\Sheet Set\1736 C-1.0 Grading Drainage Erosion Control Plan.dwg, Last saved: 12/18/2025, Plot Date: 12/19/2025, By: AFISHEL, Plot Style: ----

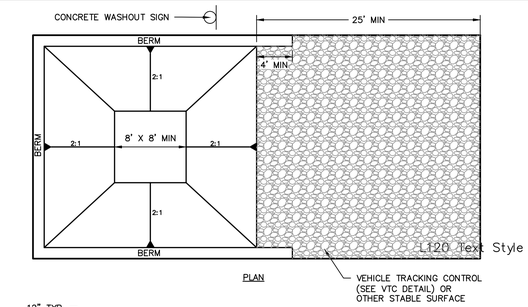


SECTION VIEW



PLAN VIEW

1 COMPOST FILTER SOCK



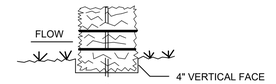
PLAN

SECTION

NOTES:

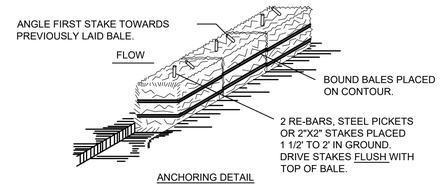
1. CONTRACTOR TO VERIFY SIZE REQUIREMENTS BASED ON ANTICIPATED VOLUMES OF CONCRETE WASHOUT.
2. CONCRETE WASHOUT SHOULD BE PLACED TO NOT ACCEPT SURFACE RUNOFF EXCEPT THE AREA WHERE TRUCKS SIT FOR WASHOUT.
3. IF WATER DOES NOT EVAPORATE AND IS GREATER THAN 75% FULL CONTRACTOR SHALL REMOVE LIQUIDS AS REQUIRED BY THE LOCAL AUTHORITY (SAN SEALER OF VAC TRUCK)
4. PROVIDE MINIMUM AGGREGATE OF 10 MIL PLASTIC AS LINER. SECURE LINER TO PREVENT INFILTRATION & REPLACE AS NECESSARY FOR TEARS.

2 CONCRETE WASHOUT AREA



BEDDING DETAIL
NOT TO SCALE

DRAINAGE AREA NO MORE THAN 1/4 ACRE PER 100 FEET OF STRAW BALE DIKE FOR SLOPES LESS THAN 25%.



ANCHORING DETAIL
NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.

2. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF (4) INCHES, AND PLACED SO THE BINDINGS ARE HORIZONTAL.

3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.

4. INSPECTION SHALL BE FREQUENT AND REPAIR REPLACEMENT SHALL BE MADE PROMTLY AS NEEDED.

5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULLNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

3 STRAW BALE DIKE

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L120 Text Style

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DRAWING TITLE:
Erosion Control Details

2 of 2 SHEET No:	C-2.0 DRAWING No:
1736-24 JOB No:	

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Appendix C

Soils Report, Soil Map, & Geotechnical Report

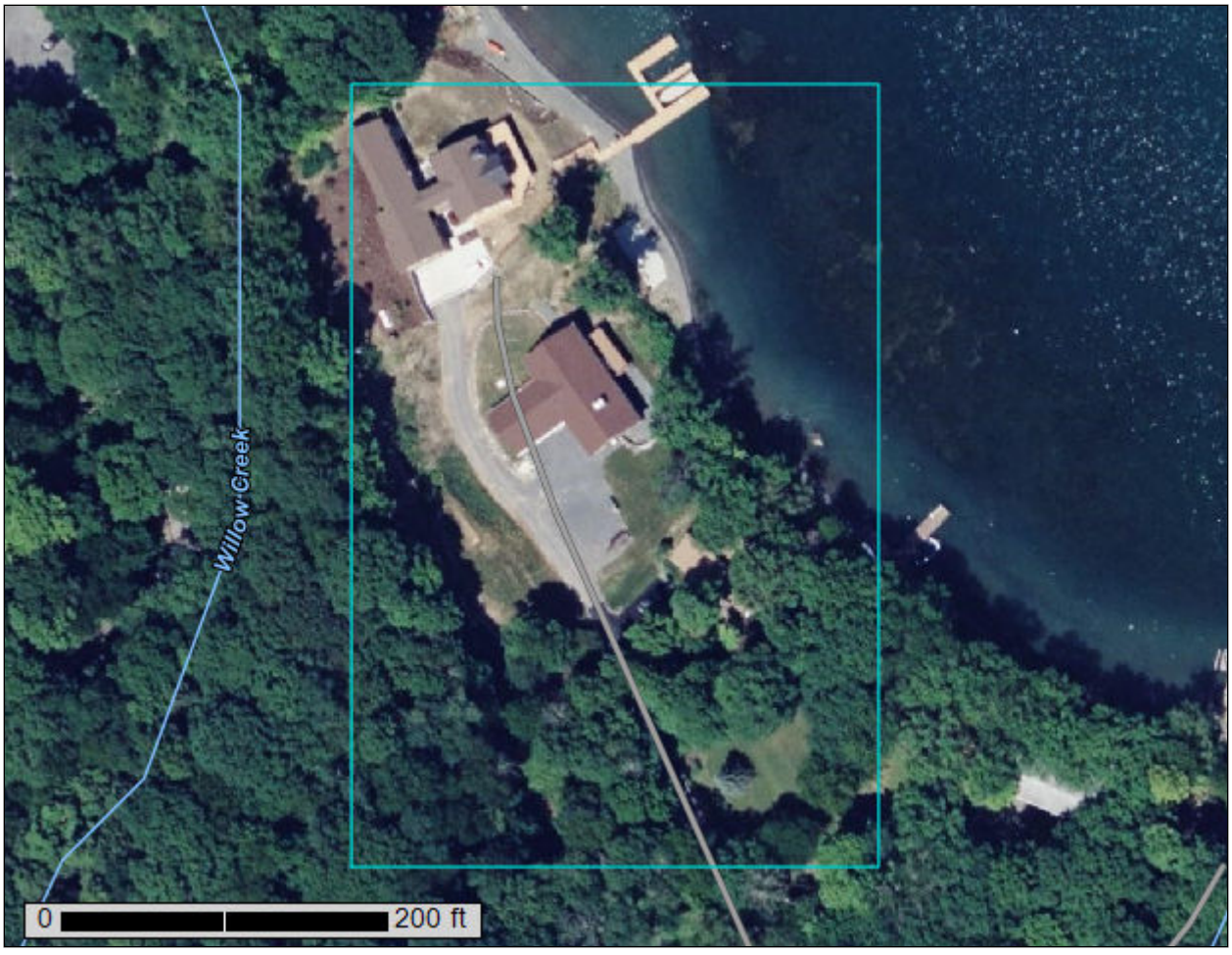
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Tompkins County, New York



May 17, 2024

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

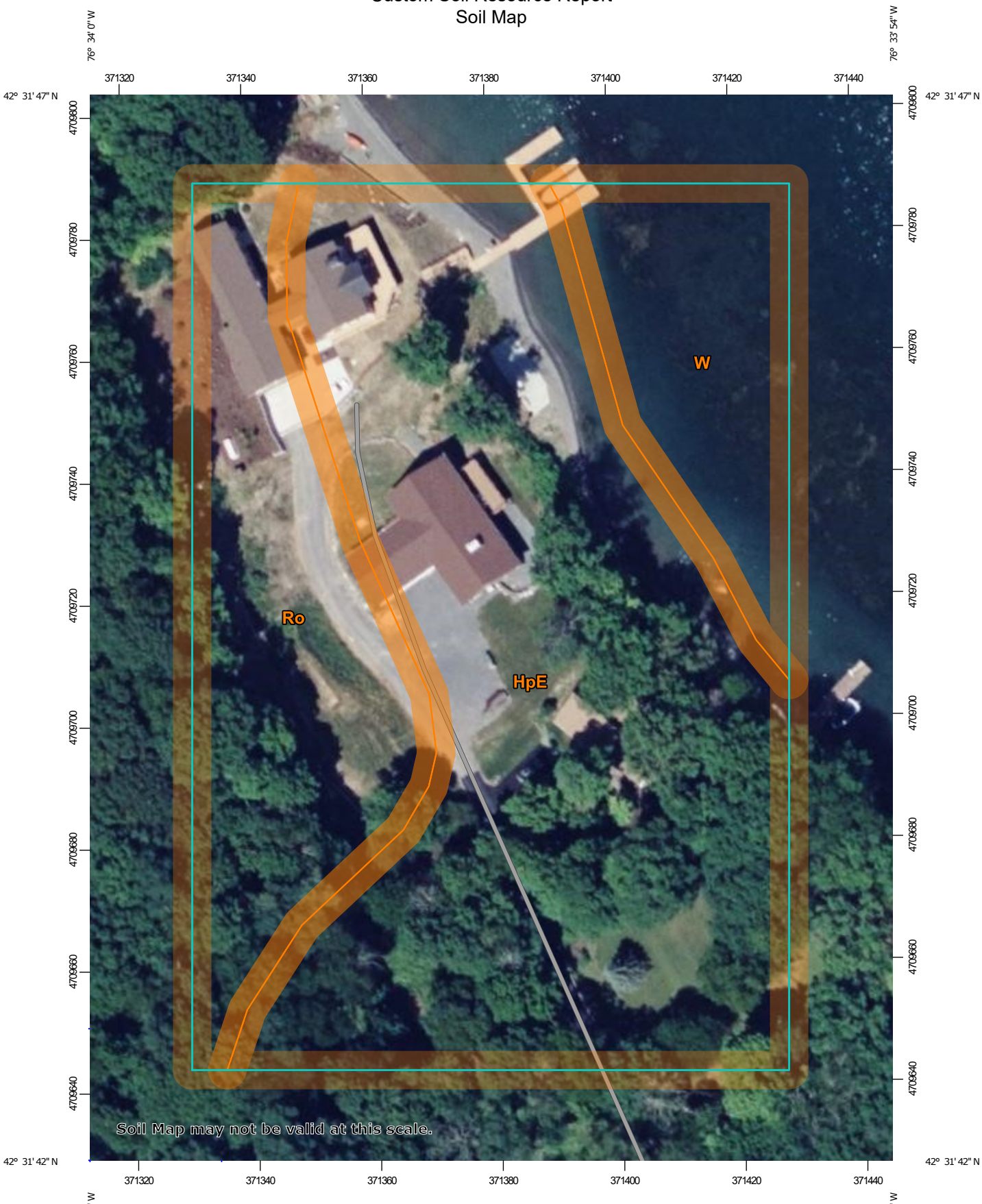
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:851 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 10 20 40 60

Feet: 0 40 80 160 240

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Tompkins County, New York
Survey Area Data: Version 19, Sep 5, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 1, 2020—Oct 1, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
HpE	Howard and Palmyra soils, 25 to 35 percent slopes	2.2	62.2%
Ro	Rock outcrop	0.9	24.6%
W	Water	0.5	13.2%
Totals for Area of Interest		**3.5**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the

development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Tompkins County, New York

HpE—Howard and Palmyra soils, 25 to 35 percent slopes

Map Unit Setting

National map unit symbol: 9xm2
Elevation: 160 to 1,970 feet
Mean annual precipitation: 32 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 120 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Howard and similar soils: 40 percent
Palmyra and similar soils: 35 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Howard

Setting

Landform: Terraces, valley trains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Riser
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Gravelly loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits, containing significant amounts of limestone

Typical profile

H1 - 0 to 9 inches: gravelly loam
H2 - 9 to 25 inches: loam
H3 - 25 to 47 inches: gravelly silt loam
H4 - 47 to 60 inches: Error

Properties and qualities

Slope: 25 to 35 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: A
Ecological site: F140XY021NY - Dry Outwash
Hydric soil rating: No

Description of Palmyra

Setting

Landform: Terraces, outwash plains, deltas
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Riser
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy over sandy and gravelly glaciofluvial deposits, derived mainly from limestone and other sedimentary rocks

Typical profile

H1 - 0 to 12 inches: gravelly loam
H2 - 12 to 21 inches: gravelly clay loam
H3 - 21 to 60 inches: stratified extremely gravelly sand

Properties and qualities

Slope: 25 to 35 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Available water supply, 0 to 60 inches: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: A
Ecological site: F101XY005NY - Dry Outwash
Hydric soil rating: No

Minor Components

Valois

Percent of map unit: 5 percent
Hydric soil rating: No

Mardin

Percent of map unit: 5 percent
Hydric soil rating: No

Arkport

Percent of map unit: 5 percent
Hydric soil rating: No

Chenango

Percent of map unit: 5 percent
Hydric soil rating: No

Langford

Percent of map unit: 5 percent
Hydric soil rating: No

Ro—Rock outcrop

Map Unit Setting

National map unit symbol: 9xp3
Mean annual precipitation: 32 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 120 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Rock outcrop: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rock Outcrop

Properties and qualities

Slope: 0 to 25 percent
Depth to restrictive feature: 0 to 10 inches to lithic bedrock

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: Unranked

W—Water

Map Unit Setting

National map unit symbol: 1nc3d
Mean annual precipitation: 32 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 120 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Water: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

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Foundation Design, P.C.

SOIL ● BEDROCK ● GROUNDWATER

May 3, 2024

Marathon Engineering
39 Cascade Drive
Rochester, New York

Attention: Adam Fishel

Reference: Retaining Wall, Slope Stability Assessment
1513 Taughannock Boulevard, Ulysses, New York
Geotechnical Consultation, 24.05636

Dear Mr. Fishel:

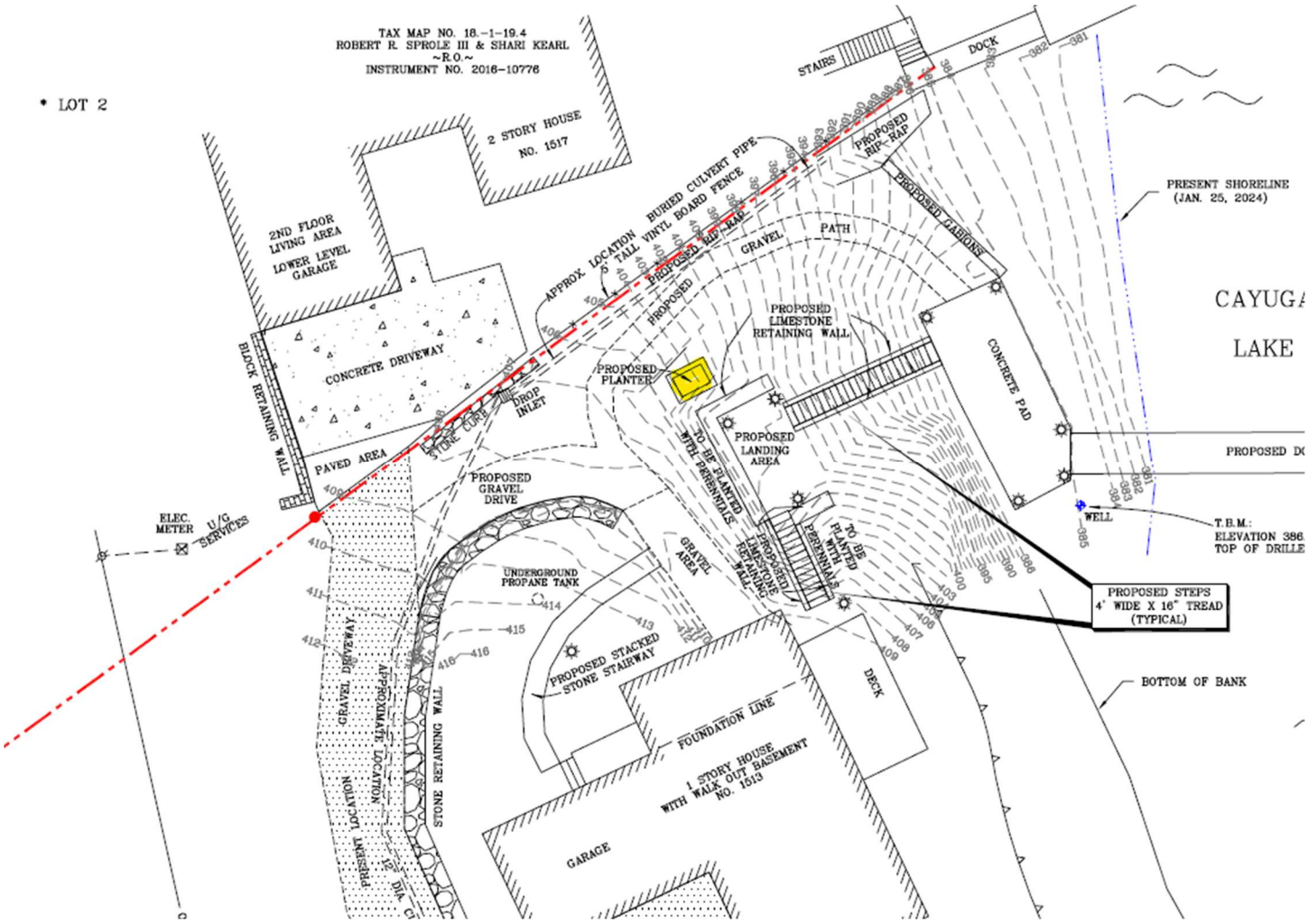
This report summarizes our geotechnical consultation for the proposed slope improvements that will be constructed north of the residence at 1513 Taughannock Boulevard in Ulysess, New York. This letter addresses the slope stability across the project area and the proposed retaining wall. We intend this report for use exclusively on this project.

In summary, we found the existing slope to be in a stable configuration and we found no evidence of slope failure. The proposed retaining wall and slope improvements will maintain a similar slope stability. Drainage control measures that will be implemented as part of the project should help to prevent surface saturation and erosion. Slope stability analysis of the project area after development is approximately 2.1 slightly higher than the predevelopment condition of 1.9 (1.5 is considered a stable configuration). Therefore, the proposed development which includes the site retaining walls, draining control improvements and re-vegetation should maintain a stable slope across the project area.

The proposed project includes a stepped walkway leading from the basement walk out (near elevation 409) to the concrete pad (elevation 385) near the lake shore. At elevation 399 a landing area will bench into the hill slope. A five-foot-high stacked stone wall will support the hill slope along the landing area. Across the proposed stairway there is about 24 feet of elevation change over a 60-foot area. The areas north and south of the stairway with be revegetated with a gravel path at the north end of the parcel.

The project site is located north of the residence that was constructed in 2019. The area is approximately 80' x 80'. The slope is at about a 20-degree angle. Slopes are shallower near the house becoming near vertical at the bedrock outcrop near the shoreline. Geologic mapping of the area identifies the soil in the area as glaciofluvial deposits over bedrock. Rock outcrops are exposed along Willow Creek to the west.

P & S Excavating provided a CAT mini-excavator for the test pit work on April 19, 2024. The test pit was located near the proposed planter, highlighted on the plan below. Our staff logged the soil profile.



The following interpretations of the soil, bedrock, and groundwater conditions are based on the test pit, previous excavations exposed between the landing and concrete pad, our site observations, and previous work in the general area. Variations from the inferred profile are possible. Call us immediately if such variations are found during construction so we may evaluate the impact on our recommendations, the design plans, and the specifications.

We encountered reworked native soil over hard silt and clay, then weathered bedrock. The upper reworked soil consists of silt and clay with lesser amounts of sand and gravel. A few pockets of topsoil were within the fill.

Underlying the reworked soil is stiff to hard layered silt and clay. Unconfined compressive strength reading using a pocket penetrometer were 3.5 to 4.0 tons/ft². Bedrock outcrop was noted at the toe of slope. The soil rock interface at the toe of slope was at about elevation 393. We assume the bedrock slopes upward to the west.

Groundwater was not observed. There was no indication of seepage at the bedrock/soil interface. We expect native undisturbed soil encountered during exploration to have a very low permeability. Infiltration will be limited and with most precipitation will manifest into runoff.

As part of our evaluation, we performed a slope stability analysis of the proposed project area using a 2-D slope stability program (Slide). We calculated a minimum factor of safety of 2.1 using conservative soil properties that were applied to the proposed slope configuration.

Recommendations:

1. The native soil is capable of supporting the proposed stacked rock walls under eight feet in height. Assume a net new allowable bearing pressure for the native soil of 2,000 lb/ft². We suggest recessing the first course of rock a minimum of two feet below grade to reduce frost impacts on the wall. Install a foundation drain at the backside base of the wall. Surround the drain with free draining granular material. Wrap the drain with a filter fabric to avoid silt buildup in the drain. Backfill the backside of the wall with free draining granular material. Grade slopes to minimize runoff into the wall backfill.

2. Bench the subgrade for the steps down to level, undisturbed soil. We recommend the steps bear on a minimum of four inches of compacted gravel subbase. Pitch landing subgrade one to two percent to prevent ponding.

3. Design wall systems using the lateral pressures tabulated below. The pressure distribution may be taken as triangular and equivalent to a fluid with a specified weight. Assume a coefficient of friction of 0.37 between the stacked rock and native soil. These values assume a drained condition.

Table No. 1 – Lateral Earth Pressures

Backfill Material	Moist Unit Weight (pcf)	Internal Friction	K_a	K_p	K_o	Active Pressure	Passive Pressure	At Rest Pressure
Silt and Clay	125	25	0.41	2.46	0.58	51	308	57
Imported Gravel	145	34	0.28	3.54	0.44	41	513	64

4. Install cutoff drains along the gravel area above the wall. Tie cutoff drains into the existing storm drain system. House roof drains should not discharge onto the hill slope or into the wall drains. Regrade upslope access drive to drain into the drop inlet at the north end of the parcel.

5. Topsoil and vegetate areas outside the hardscape. Grade green areas to limit concentrated runoff in areas where ground cover is to be established. As needed, install jute mat or other surface stabilizing material to help minimize surface erosion until ground cover and root systems can develop.

Attached to the end of the text is a Geoprofessional Business Association paper entitled *Important Information about This Geotechnical Engineering Report*. It discusses some of the risks and unknowns inherent with Geotechnical Engineering and describes how we intend this report to be used. We will continue to work cooperatively with you and other interested parties to achieve win/win solutions that benefit all.

This concludes our geotechnical consultation. It has been a pleasure working with you on this project and we look forward to hearing from you again as the project proceeds toward construction.

Sincerely,

FOUNDATION DESIGN, P.C.

James M. Baker, P.E.
President
Enc.

Important Information about This

Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, you can benefit from a lowered exposure to problems associated with subsurface conditions at project sites and development of them that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed herein, contact your GBA-member geotechnical engineer. Active engagement in GBA exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.

Understand the Geotechnical-Engineering Services Provided for this Report

Geotechnical-engineering services typically include the planning, collection, interpretation, and analysis of exploratory data from widely spaced borings and/or test pits. Field data are combined with results from laboratory tests of soil and rock samples obtained from field exploration (if applicable), observations made during site reconnaissance, and historical information to form one or more models of the expected subsurface conditions beneath the site. Local geology and alterations of the site surface and subsurface by previous and proposed construction are also important considerations. Geotechnical engineers apply their engineering training, experience, and judgment to adapt the requirements of the prospective project to the subsurface model(s). Estimates are made of the subsurface conditions that will likely be exposed during construction as well as the expected performance of foundations and other structures being planned and/or affected by construction activities.

The culmination of these geotechnical-engineering services is typically a geotechnical-engineering report providing the data obtained, a discussion of the subsurface model(s), the engineering and geologic engineering assessments and analyses made, and the recommendations developed to satisfy the given requirements of the project. These reports may be titled investigations, explorations, studies, assessments, or evaluations. Regardless of the title used, the geotechnical-engineering report is an engineering interpretation of the subsurface conditions within the context of the project and does not represent a close examination, systematic inquiry, or thorough investigation of all site and subsurface conditions.

Geotechnical-Engineering Services are Performed for Specific Purposes, Persons, and Projects, and At Specific Times

Geotechnical engineers structure their services to meet the specific needs, goals, and risk management preferences of their clients. A geotechnical-engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client.

Likewise, geotechnical-engineering services are performed for a specific project and purpose. For example, it is unlikely that a geotechnical-engineering study for a refrigerated warehouse will be the same as one prepared for a parking garage; and a few borings drilled during a preliminary study to evaluate site feasibility will not be adequate to develop geotechnical design recommendations for the project.

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client;
- for a different project or purpose;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, the reliability of a geotechnical-engineering report can be affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If you are the least bit uncertain* about the continued reliability of this report, contact your geotechnical engineer before applying the recommendations in it. A minor amount of additional testing or analysis after the passage of time – if any is required at all – could prevent major problems.

Read this Report in Full

Costly problems have occurred because those relying on a geotechnical-engineering report did not read the report in its entirety. Do not rely on an executive summary. Do not read selective elements only. *Read and refer to the report in full.*

You Need to Inform Your Geotechnical Engineer About Change

Your geotechnical engineer considered unique, project-specific factors when developing the scope of study behind this report and developing the confirmation-dependent recommendations the report conveys. Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the elevation, configuration, location, orientation, function or weight of the proposed structure and the desired performance criteria;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project or site changes – even minor ones – and request an assessment of their impact. *The geotechnical engineer who prepared this report cannot accept*

responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.

Most of the "Findings" Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site's subsurface using various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing is performed.* The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgement to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team through project completion to obtain informed guidance quickly, whenever needed.

This Report's Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, they are not final, because the geotechnical engineer who developed them relied heavily on judgement and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* exposed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

This Report Could Be Misinterpreted

Other design professionals' misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a continuing member of the design team, to:

- confer with other design-team members;
- help develop specifications;
- review pertinent elements of other design professionals' plans and specifications; and
- be available whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction-phase observations.

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note conspicuously that you've included the material for information purposes only.* To avoid misunderstanding, you may also want to note that "informational purposes" means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. This happens in part because soil and rock on project sites are typically heterogeneous and not manufactured materials with well-defined engineering properties like steel and concrete. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a "phase-one" or "phase-two" environmental site assessment – differ significantly from those used to perform a geotechnical-engineering study. For that reason, a geotechnical-engineering report does not usually provide environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated subsurface environmental problems have led to project failures.* If you have not obtained your own environmental information about the project site, ask your geotechnical consultant for a recommendation on how to find environmental risk-management guidance.

Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, the engineer's services were not designed, conducted, or intended to prevent migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, ***proper implementation of the geotechnical engineer's recommendations will not of itself be sufficient to prevent moisture infiltration. Confront the risk of moisture infiltration*** by including building-envelope or mold specialists on the design team. ***Geotechnical engineers are not building-envelope or mold specialists.***

GEOPROFESSIONAL BUSINESS ASSOCIATION

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e-mail: info@geoprofessional.org www.geoprofessional.org

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Foundation Design, P.C.

SOIL • BEDROCK • GROUNDWATER

SOIL DESCRIPTIONS

COHESIVE SOIL	**DESCRIPTION**	
Very fine grained soil. Plastic soil that can be rolled into a thin thread if moist. Clays and silty clays show cohesion.	Very Soft	Extrude between fingers when squeezed
	Soft	Molded by light finger pressure
	Medium	Molded by strong finger pressure
	Stiff	Indented by thumb with effort
	Hard	Indented by thumb nail with difficulty

NON-COHESIVE SOIL	**DESCRIPTION**
Soil composed of silt, sand and gravel, showing no cohesion or very slight cohesion.	Loose
	Firm
	Compact
	Dense
	Very Dense

SOIL COMPOSITION	**DESCRIPTION**	**ESTIMATED PERCENTAGE**
	and	50
	some	30-49
	little	11-29
	trace	0-10

MOISTURE CONDITIONS dry, damp, moist, wet, saturated
Groundwater measured in the boring or test pit may not have reached equilibrium

SOIL STRATA	**TERM**	**DESCRIPTION**
	layer	Soil deposit more than 6" thick
	seam	Soil deposit less than 6" thick
	parting	Soil deposit less than ⅛" thick
	varved	Horizontal uniform layers or seams of soil

GRAIN SIZE

MATERIAL		SIEVE SIZE
Boulder		Larger than 12"
Cobble		3" to 12"
Gravel	- coarse	1" to 3"
	- medium	⅜" to 1"
	- fine	No. 4 to ⅜"
Sand	- coarse	No. 10 to No. 4
	- medium	No. 40 to No. 10
	- fine	No. 200 to No. 40
Silt and Clay		Less than No. 200

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Test Pit Log

Project No.	5636.0	**Page**	1	**of**	1	**Test Pit No.**	TP24-1
Project Name	Kearl Residence, 1513 Taughannock Blvd., Ulysses, New York						
Client	Marathon Engineer, 39 Cascade Drive, Rochester, New York 14614						
Elevation	403.0 est.	**Weather**	P. Cloudy			**Technician**	S. Allen
Date Started	4/19/24	**Completed**	4/19/24			**Operator**	Bill
Backhoe Subcontractor	P & S Excavating					**Equipment**	Cat mini excavator

Depth Below Surface	Sample Number	Depth of Sample	Soil and Rock Classifications Remarks
2			FILL: Firm rad-brown damp to moist SLT and CLAY, little gravel, little sand, few organic pockets
4			3'6" Stiff to hard gray-brown damp SILT and CLAY, trace sand, trace gravel
6			Pocket Penetrometer: 3.5-4.0 tons/ft² at 6 feet
8			7'0' Test pit terminated at 7'0"
10			
12			

Site Pictures

Notes:
1. Sides vertical upon completion.
2. Dry on completion.
3. Staked location and elevation referenced from features depicted on the Reagan Land Surveying *Kearl Site Plan*

Appendix D

Documentation from Regulatory Agencies

NEW YORK STATE | Department of Environmental Conservation

KATHY HOCHUL
Governor

AMANDA LEFTON
Commissioner

October 6, 2025

Kenneth Kearl
1513 Taughannock Blvd
Ithaca, New York 14850

Re: GID-000239
Kearl Property
No Jurisdiction Determination
Town of Ulysses, Tompkins County

Dear Mr. Kearl:

The New York State Department of Environmental Conservation (DEC) has reviewed the submitted information for the above referenced project, received by the Department on April 18, 2024 and supplemental information received July 25, 2024. According to the provided materials, the project consists of landscaping work including the installation of riprap, gabions, and a pathway with stairs at 1513 Taughannock Blvd Ithaca, NY. The project site is located on Cayuga Lake (NYS Water Index #: Ont. 66-12-P296) a Class AA(T) protected navigable waterbody.

A site visit was performed by DEC, where the mean high water level (MHWL) was marked and then drawn on the project plans. In review of the provided plans, it has been determined that the location of the landscaping work is above the MHWL of Cayuga Lake, therefore, an Excavation and Placement of Fill Permit is not required for the proposal. Further, as a Section 404 Permit from the US Army Corps of Engineers (USACE) does not appear to be required, a Section 401 Water Quality Certification (WQC) is not required from the Department. Please contact this office if project plans change to the extent that a federal permit is required.

It has been determined that the project site is not within the regulated area of a protected NYS Freshwater Wetland, and no adverse impacts to state-listed species are anticipated. Therefore, no permits from the Department are required for this project

Please also note the project sponsor is responsible for ensuring that work shall not pollute any stream or waterbody. Care shall be taken to stabilize any disturbed areas promptly after construction, and all necessary precautions shall be taken to prevent contamination of the stream or waterbody by silt, sediment, fuels, solvents, lubricants, or any other pollutant associated with the project.

ADDITIONAL INFORMATION

Other permits from this Department or other agencies may be required for projects conducted on this property now or in the future. Also, regulations applicable to the location subject to this

determination occasionally are revised and you should, therefore, verify the need for permits if your project is delayed or postponed. This determination regarding the need for permits will remain effective for a maximum of one year unless you are otherwise notified. Applications may be downloaded from our website at www.dec.ny.gov under “Programs” then “Division of Environmental Permits.”

Please contact this office if you have questions regarding the above information. Thank you.

Sincerely,

Melanie Kukko

Melanie Kukko
Environmental Analyst
Division of Environmental Permits, Region 7
Telephone No. (315) 426-7482

cc: T. Yorks, R7 BEH

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
Phone: (607) 753-9334 Fax: (607) 753-9699
Email Address: fw5es_nyfo@fws.gov

In Reply Refer To: 05/01/2024 01:19:34 UTC
Project code: 2024-0084174
Project Name: Kearl Residence

Federal Nexus: no
Federal Action Agency (if applicable):

Subject: Technical assistance for 'Kearl Residence'

Dear Adam Fishel:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on May 01, 2024, for 'Kearl Residence' (here forward, Project). This project has been assigned Project Code 2024-0084174 and all future correspondence should clearly reference this number. **Please carefully review this letter. Your Endangered Species Act (Act) requirements are not complete.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis, your project is not reasonably certain to cause incidental take of the northern long-eared bat. Unless the Service advises you within 15 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the Action is not likely to result in unauthorized take of the northern long-eared bat.

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Monarch Butterfly *Danaus plexippus* Candidate
- Tricolored Bat *Perimyotis subflavus* Proposed Endangered

You may coordinate with our Office to determine whether the Action may cause prohibited take of the animal species and/or critical habitat listed above. Note that if a new species is listed that may be affected by the identified action before it is complete, additional review is recommended to ensure compliance with the Endangered Species Act.

Next Steps

Coordination with the Service is complete. This letter serves as technical assistance. All conservation measures should be implemented as proposed. Thank you for considering federally listed species during your project planning.

We are uncertain where the northern long-eared bat occurs on the landscape outside of known locations. Because of the steep declines in the species and vast amount of available and suitable forest habitat, the presence of suitable forest habitat alone is a far less reliable predictor of their presence. Based on the best available information, most suitable habitat is now expected to be unoccupied. During the interim period, while we are working on potential methods to address this uncertainty, we conclude take is not reasonably certain to occur in areas of suitable habitat where presence has not been documented.

If no changes occur with the Project or there are no updates on listed species, no further consultation/coordination for this project is required for the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place before project implements any changes which are final or commits additional resources.

If you have any questions regarding this letter or need further assistance, please contact the New York Ecological Services Field Office and reference Project Code 2024-0084174 associated with this Project.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

Kearl Residence

2. Description

The following description was provided for the project 'Kearl Residence':

> Construction of stone stairs, patio, retaining walls and associated grading, drainage, utility, lighting and landscaping improvements.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@42.5292525,-76.56616651924162,14z

DETERMINATION KEY RESULT

Based on the answers provided, the proposed Action is consistent with a determination of "may affect, but not likely to adversely affect" for the Endangered northern long-eared bat (*Myotis septentrionalis*).

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

   Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

   No

2. The action area does not overlap with an area for which U.S. Fish and Wildlife Service currently has data to support the presumption that the northern long-eared bat is present. Are you aware of other data that indicates that northern long-eared bats (NLEB) are likely to be present in the action area?

   Bat occurrence data may include identification of NLEBs in hibernacula, capture of NLEBs, tracking of NLEBs to roost trees, or confirmed NLEB acoustic detections. Data on captures, roost tree use, and acoustic detections should post-date the year when white-nose syndrome was detected in the relevant state. With this question, we are looking for data that, for some reason, may have not yet been made available to U.S. Fish and Wildlife Service.

   No

3. Does any component of the action involve construction or operation of wind turbines?

   Note: For federal actions, answer 'yes' if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

   No

4. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

   No

PROJECT QUESTIONNAIRE

IPAC USER CONTACT INFORMATION

Agency:	Marathon Engineering
Name:	Adam Fishel
Address:	840 Hanshaw Road
Address Line 2:	Suite 6
City:	Ithaca
State:	NY
Zip:	14850
Email	afishel@marathoneng.com
Phone:	6072412917

Appendix E

Revisions to the SWPPP