Phillips Lytle LLP

Via Hand Delivery

March 11, 2014

City of Ithaca
Division of Planning & Economic Development
108 E. Green Street, 3rd Floor
Ithaca, New York 14850-5690
Attn: Joanne Cornish, Director of
Planning & Economic Development

Re: CA Student Living LLC Application for Site Plan Review and Approval to Develop Multi-Family Housing at 1 Ridgewood Road, Ithaca (the "Project")

Dear Director Cornish:

As you know, this firm represents CA Student Living LLC ("Applicant" or "CA"), and we submit this supplement to our letter of intent and related application materials dated February 14, 2014 ("Application") in response to feedback provided by your office during a conference call on February 27, 2014. Applicant is proposing a residential development targeted specifically to student housing consisting of three 3-story buildings with a total of 45 units and 114 beds ("the Project") on a 2.429 acre parcel located at 1 Ridgewood Road ("Site"). Applicant seeks site plan approval from the Planning and Development Board ("PDB").

We enclose herewith a computer disc with the exhibits listed below as well as 3 full-size sets of the revised site plan sheets and twenty-eight (28) copies of this letter with the following exhibits attached hereto and made part hereof:

Exhibit A: Revised Site Plan Sheet G104
Exhibit B: Revised Site Plan Sheet L005
Exhibit C: Revised Site Plan Sheet L201
Exhibit D: Revised Site Plan Sheet L301
Exhibit E: Revised Full EAF with Informational Details Attached
Exhibit F: Phase 1A/1B Cultural Resource Survey
Exhibit G: Geotechnical Subsurface Investigation Report

These materials update and supplement the Application.

ATTORNEYS AT LAW

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REVISED ZONING ANALYSIS

As requested, we are providing an updated zoning analysis for the Project. The zoning analysis provided with the Application reflected the requirements of the R-3aa District. At the time we prepared the Application, the City was proceeding with a proposal to rezone the Site and surrounding neighborhoods from R-U to R-3aa. We now understand that the City will not be pursuing the R-3aa rezoning. Accordingly, we provide a revised Zoning Analysis to reflect the requirements of the current R-U zoning designation. ***See*** **Exhibit A**. The Project is consistent and compliant with density requirements (even allocating 16,500 sf of land as a baseline for each building) and well below the maximum percentage of lot coverage. The off-street parking requirement is the same under R-U as under R-3aa and the maximum building height is actually less restrictive in the R-U district. The only requirement of the R-U district that the Project does not currently meet is the larger front yard setback, which is 25 feet (10 feet in the R-3aa). Applicant can either reposition the western-most building to meet the 25 feet front yard setback or apply for an area variance from the Board of Zoning Appeals. Similar to the off-street parking requirements, we seek direction from the PDB as to preferred approach. Applicant is willing to do either based on feedback from the PDB.

TREE REMOVAL PLAN

As requested, the Tree Assessment Plan (Sheet L005) has been revised to more clearly identify the trees to be removed and is attached hereto as **Exhibit B**. The re-labeled Assessment of Trees To Be Removed table lists each tree to be removed for the Project and is color-coded to show which of the trees to be removed are invasive species (yellow) and which are dead or dying trees (red). As shown on the table, over 40% of the trees to be removed are invasive, dead, or dying. Each tree in the table is numbered and a correlating numbered dot on the map shows where the tree is located on the Site. In addition, the area of disturbance has been highlighted more prominently on this plan.

SITE PLANS

As requested, provided as **Exhibits C and D** are two revised drawings, the Layout Plan (L201) and the Grading Plan (L301). Each has been revised to more prominently show the area of disturbance. Additionally, the property setback line has been removed from L201 and the convention for the property line on these drawings has been revised per the City's feedback.

UTILITIES

The City suggested that we confirm the availability of natural gas at the Site. We have had discussions with NYSEG and as soon as we file a formal application for service, will have more information. In response the City's inquiry, we were able to confirm a 2" diameter medium pressure gas main currently exists along Ridge Road.

ENVIRONMENTAL ASSESSMENT FORM AND RELATED INFORMATION

The Full Environmental Assessment Form ("FEAF") has been revised to reflect the RU Zoning (attached as **Exhibit E** hereto). Specifically, questions C.2 and C.3 on page 7 of Part 1 of the FEAF have been revised. In addition, pursuant to Section E of Part 1 of the FEAF, we have attached additional informational details to clarify Project information and provide additional information on mitigation of impacts.

ADDITIONAL DOCUMENTATION

Certain studies which were still underway when we submitted the Application have now been completed. Specifically, The Phase 1A/1B Cultural Resource Survey Report prepared by Binghamton University is attached hereto as **Exhibit F**. The Phase 1A/1B evaluated both potential archeological impacts of the Project as well as potential impacts upon architectural resources. The report concludes that the Project will not adversely affect National Register eligible archeological or architectural resources within Site limits.

In addition, a Subsurface Investigation Report prepared by Elwyn & Palmer Consulting Engineers is attached hereto as **Exhibit G**. The report indicates that the subsurface soils

at the Site are well-drained primarily medium to dense sands and gravels and that the proposed structures associated with the Project can be supported on conventional slab-on-grade construction. Copies of these reports are provided herewith as a supplement to the Application.

CONCLUSION

We understand that this matter will be on the PDB's agenda for preliminary consideration at its March 25, 2014 meeting.

We look forward to appearing before the Board.

Thank you.

Very truly yours,

Phillips Lytle LLP

By
Adam S. Walters
Enclosures

Doc #01-2758025.1

Tab A

ZONING REQUIREMENTS:

ZONING DESIGNATIONS:	R-U Cornell Heights Historic District	
LOT SIZE:	2.429 Acres (105,790 SF)	
UNIT DENSITY:		
	MAXIMUM	PROVIDED
16,500 for first 3 (BLDG 1) = 3	46 units	45 units
16,500 for first 3 (BLDG 2) = 3	105,000 SF	105,790 SF
16,500 for first 3 (BLDG 3) = 3		
1,500 for ea/ additional unit = 37		
	ALLOWABLE	PROVIDED
MAX. % LOT COVERAGE BY BUILDINGS	30%	17%
	ALLOWABLE	PROVIDED
MAX. BUILDING HEIGHT:	MAX. 4 STORIES & 40 FEET	3 STORIES, & 34.5 FEET
YARD DIMENSIONS:		
FRONT:	25 FEET	15 FEET
SIDE:	10 FEET	16 FEET
REAR:	25% OF DEPTH OR 50 FEET	80 FEET
MAX BLDG. FOOTPRINT	N/A	BLDG 1: 5,375 SF BLDG 2: 6,090 SF BLDG 3: 6,360 SF
PARKING REQUIREMENTS:		
	1 PER 3 BEDS 2 PER 4+ BEDS 57 REQ'D	57 PROVIDED (51 + 6 END TO END) ALT: 62 PROVIDED (56 + 6 END TO END, NOTE: ZONING ALLOWS 1 END TO END TO COUNT

FIGURE GROUND

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NO.	DATE	DESCRIPTION
		REVISION

KEY PLAN

OWNER: CA STUDENT LIVING

PROJECT: **1 RIDGEWOOD ROAD**
ITHACA, NEW YORK

DRAWING TITLE: **ZONING REQUIREMENTS**

N

SCALE: 1 : 1440	DATE: 3/6/2014
JOB NUMBER: 4054.000	
DRAWN: CH	CHECKED: NF

DRAWING NUMBER: **G104**

Tab B

ASSESSMENT OF TREES TO BE REMOVED

No.	BOTANICAL NAME	SIZE	CONDITION
1	PLATANUS OCCIDENTALIS	24"	GOOD
2	JUGLANS NIGRA	8"	GOOD
3	QUERCUS RUBRA	8"	FAIR
4	PINUS STROBUS	12"	GOOD
5	PINUS STROBUS	12"	GOOD
6	PINUS STROBUS	24"	GOOD
7	ACER PLATANOIDES	8"	GOOD
8	PINUS STROBUS	30"	GOOD
9	PINUS STROBUS	8"	GOOD
10	PINUS STROBUS	12"	GOOD
11	PINUS STROBUS	12"	GOOD
12	PRUNUS SEROTINA	6"	FAIR
13	TSUGA CANADENSIS	8"	GOOD
14	PRUNUS SEROTINA	12"	POOR
15	TSUGA CANADENSIS	12"	FAIR
16	PINUS STROBUS	12"	GOOD
17	PINUS STROBUS	12"	GOOD
18	PINUS STROBUS	12"	GOOD
19	AILANTUS ALTISSIMA	8"	POOR
20	AILANTUS ALTISSIMA	8"	GOOD
21	AILANTUS ALTISSIMA	8"	GOOD
22	AILANTUS ALTISSIMA	8"	GOOD
23	AILANTUS ALTISSIMA	8"	GOOD
24	AILANTUS ALTISSIMA	12"	FAIR
25	MORRIS ALBA	24"	POOR
26	QUERCUS RUBRA	12"	GOOD
27	TSUGA CANADENSIS	10"	FAIR
28	TSUGA CANADENSIS	6"	FAIR
29	TSUGA CANADENSIS	12"	FAIR
30	PINUS STROBUS	12"	FAIR
31	PINUS STROBUS	8"	GOOD
32	TSUGA CANADENSIS	24"	POOR - D
33	PINUS STROBUS	24"	FAIR
34	QUERCUS RUBRA	30"	GOOD
35	ACER PLATANOIDES	6"	GOOD
36	PRUNUS SEROTINA	24"	GOOD
37	PICEA ABIES	8"	GOOD
38	PINUS STROBUS	12"	FAIR
39	PINUS STROBUS	15"	GOOD
40	TSUGA CANADENSIS	12"	GOOD
41	TSUGA CANADENSIS	12"	GOOD
42	QUERCUS RUBRA	28"	GOOD
43	PINUS STROBUS	6"	GOOD
44	PINUS STROBUS	15"	GOOD
45	PINUS STROBUS	8"	FAIR
46	PINUS STROBUS	28"	GOOD
47	PINUS STROBUS	12"	GOOD
48	PINUS SYLVESTRIS	10"	GOOD
49	QUERCUS RUBRA	36"	POOR
50	PRUNUS SEROTINA	6"	FAIR
51	PRUNUS SEROTINA	8"	POOR
52	PRUNUS SEROTINA	10"	POOR
53	PRUNUS SEROTINA	6"	POOR
54	PRUNUS SEROTINA	12"	POOR
55	ROBINIA PSEUDOACACIA	24"	FAIR
56	PRUNUS SEROTINA	24"	FAIR
57	MAGNOLIA VIRGINIANA	8"	GOOD
58	TSUGA CANADENSIS	12"	GOOD
59	MAGNOLIA VIRGINIANA	8"	POOR
60	ULMUS AMERICANA	8"	FAIR
61	TSUGA CANADENSIS	6"	GOOD
62	TSUGA CANADENSIS	6"	GOOD
63	PINUS STROBUS	24"	GOOD
64	TSUGA CANADENSIS	6"	GOOD
65	TSUGA CANADENSIS	12"	GOOD
66	TSUGA CANADENSIS	12"	GOOD
67	ULMUS AMERICANA	24"	GOOD
68	TSUGA CANADENSIS	24"	GOOD
69	POPULUS SPP.	12"	POOR
70	ACER PLATANOIDES	6"	GOOD
71	QUERCUS RUBRA	36"	GOOD
72	CARYA TOMENTOSA	6"	FAIR
73	MAGNOLIA VIRGINIANA	6"	GOOD
74	PINUS STROBUS	10"	POOR
75	PINUS STROBUS	24"	GOOD
76	PINUS STROBUS	12"	GOOD
77	TSUGA CANADENSIS	12"	GOOD
78	TSUGA CANADENSIS	8"	GOOD
79	PICEA ABIES	24"	GOOD
80	PICEA ABIES	12"	GOOD
81	PICEA ABIES	10"	GOOD
82	PICEA ABIES	10"	GOOD
83	PINUS STROBUS	18"	GOOD
84	PINUS STROBUS	8"	GOOD
85	PINUS STROBUS	8"	GOOD
86	PINUS STROBUS	30"	GOOD
87	TSUGA CANADENSIS	8"	GOOD
88	PINUS STROBUS	12"	GOOD
89	PINUS STROBUS	6"	POOR
90	ACER RUBRUM	6"	GOOD
91	ACER NEGUNDO	12"	GOOD
92	ROBINIA PSEUDOACACIA	15"	POOR
93	JUGLANS NIGRA	15"	POOR
94	ACER RUBRUM	14"	GOOD
95	ACER RUBRUM	15"	GOOD

ASSESSMENT OF TREES TO BE REMOVED

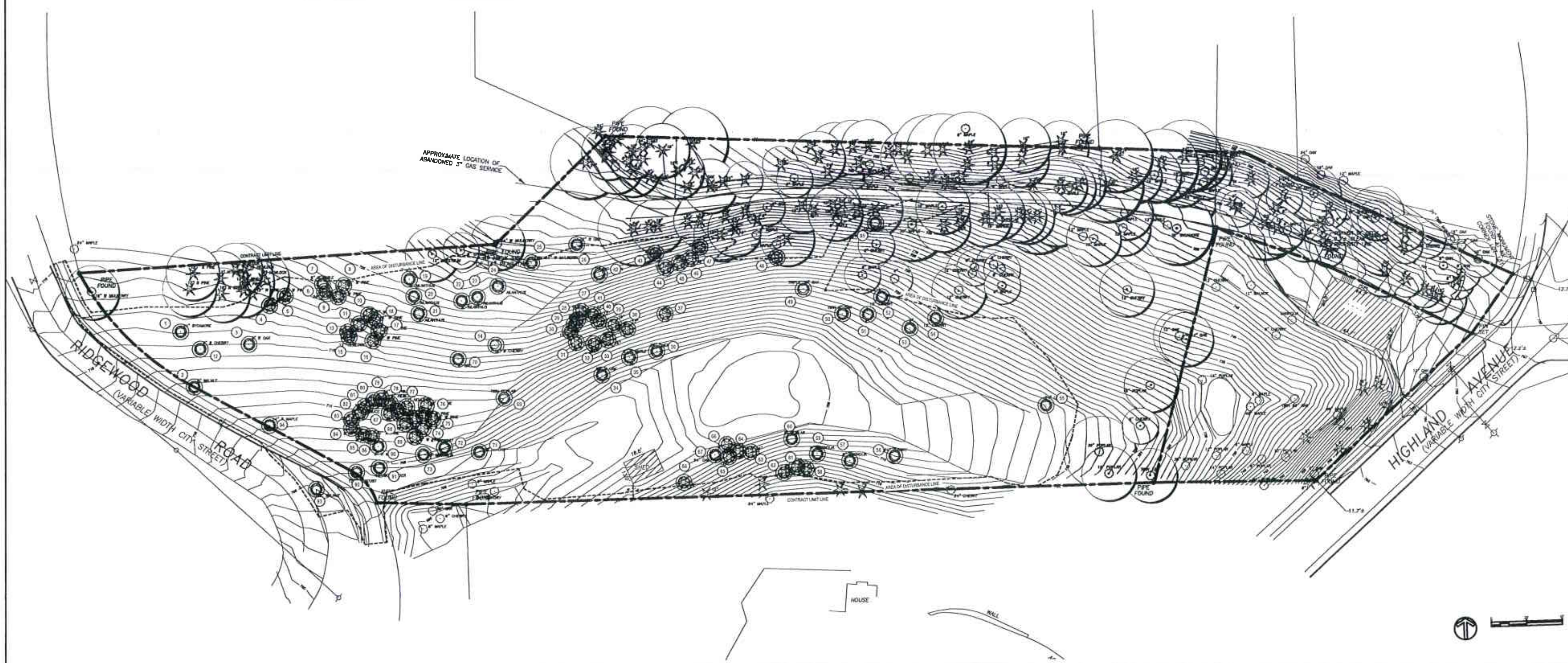
1. INVASIVE UNDER STORY PLANTS TO BE REMOVED SUCH AS LIGUSTRUM, RHAMNUS, CATHARTTOA, CELASTRUS, AND TOXICODENDRON THROUGH ENTIRE PROPERTY.

LEGEND

- NON - NATIVE AND/OR INVASIVE SPECIES
- NATIVE FAIR / POOR OR DEAD
- LIMIT OF AREA OF DISTURBANCE
- EXISTING TREE CANOPY TO REMAIN

PHOTO: TYPICAL FAIR QUALITY TREE

PHOTO: TYPICAL POOR QUALITY TREE



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TWMLA
LANDSCAPE ARCHITECTS

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NO.	DATE	DESCRIPTION
		REVISION

KEY PLAN

OWNER: CA STUDENT LIVING

PROJECT: **1 RIDGEWOOD ROAD**
ITHACA, NEW YORK

DRAWING TITLE: **TREE ASSESSMENT PLAN**

SCALE	As indicated	DATE	03/07/2014
JOB NUMBER	4054.000		
DRAWN	JLF	CHECKED	PJT

DRAWING NUMBER: **L005**

Tab C

GENERAL SHEET NOTES - LAYOUT

1. SEE CIVIL DRAWINGS FOR LAYOUT OF UNDERGROUND UTILITIES.
2. VERIFY DIMENSIONS AND ACCEPT CONDITIONS BEFORE PROCEEDING WITH WORK. REPORT DISCREPANCIES TO LANDSCAPE ARCHITECT FOR INSTRUCTION BEFORE PROCEEDING. DO NOT MEASURE DRAWINGS.
3. WALKS, DRIVES, PARKING & BUILDING LOCATIONS TO BE LAID OUT IN THE FIELD BY A LICENSED SURVEYOR.
4. DIMENSIONS TO CURBS ARE TO EXPOSED FACES UNLESS NOTED OTHERWISE.
5. SEE GRADING PLAN L301 FOR SPOT ELEVATIONS AT SITE FEATURES INCLUDING TOP AND BOTTOM OF SITE WALLS AND CORNERS OF PAVEMENTS .
6. THERE IS NO GUARANTEE THAT ALL EXISTING UNDERGROUND OR OVERHEAD UTILITIES, WHETHER FUNCTIONAL OR ABANDONED WITHIN THE PROJECT AREA ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL UTILITIES BEFORE STARTING WORK AND SHALL BE RESPONSIBLE FOR ALL DAMAGE RESULTING FROM THE WORK AS SHOWN ON THE DRAWINGS .
7. CONTRACTOR TO PROVIDE HANDICAP PARKING SIGNS & PAVEMENT MARKINGS AT DESIGNATED HANDICAP PARKING SPACES, CONSISTENT WITH ALL RELEVANT BUILDING CODES.
8. ALL CONSTRUCTION WORK IN PUBLIC RIGHTS-OF-WAYS SHALL BE IN CONFORMANCE WITH ALL SPECIFICATIONS, RULES AND REGULATIONS OF THE CORRESPONDING AGENCY HAVING JURISDICTION. ALL NECESSARY WORK PERMITS, TAP PERMITS, AND FEES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

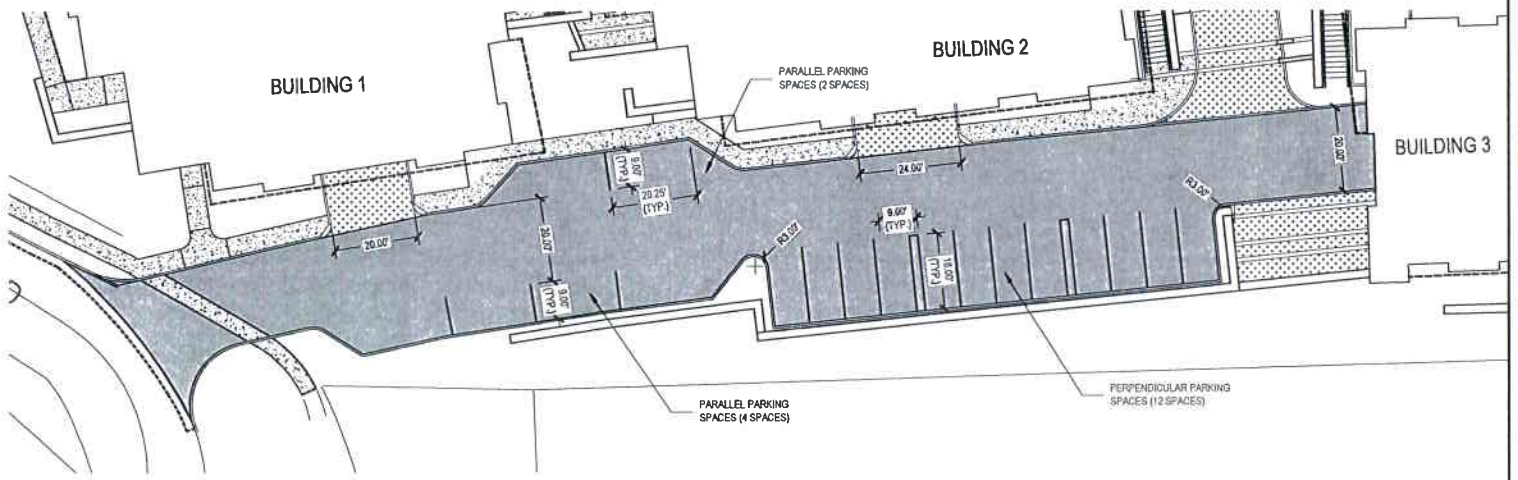
LEGEND

- AREA OF DISTURBANCE
- TREE PROTECTION FENCE
- CONTRACT LIMIT LINE
- STONE DUST PATHWAY
- HEAVY DUTY VEHICULAR CONCRETE PAVING
- STANDARD CONCRETE PAVING
- STANDARD VEHICULAR ASPHALT PAVING
- CURB RAMP - ACCESSIBLE ROUTE TILES

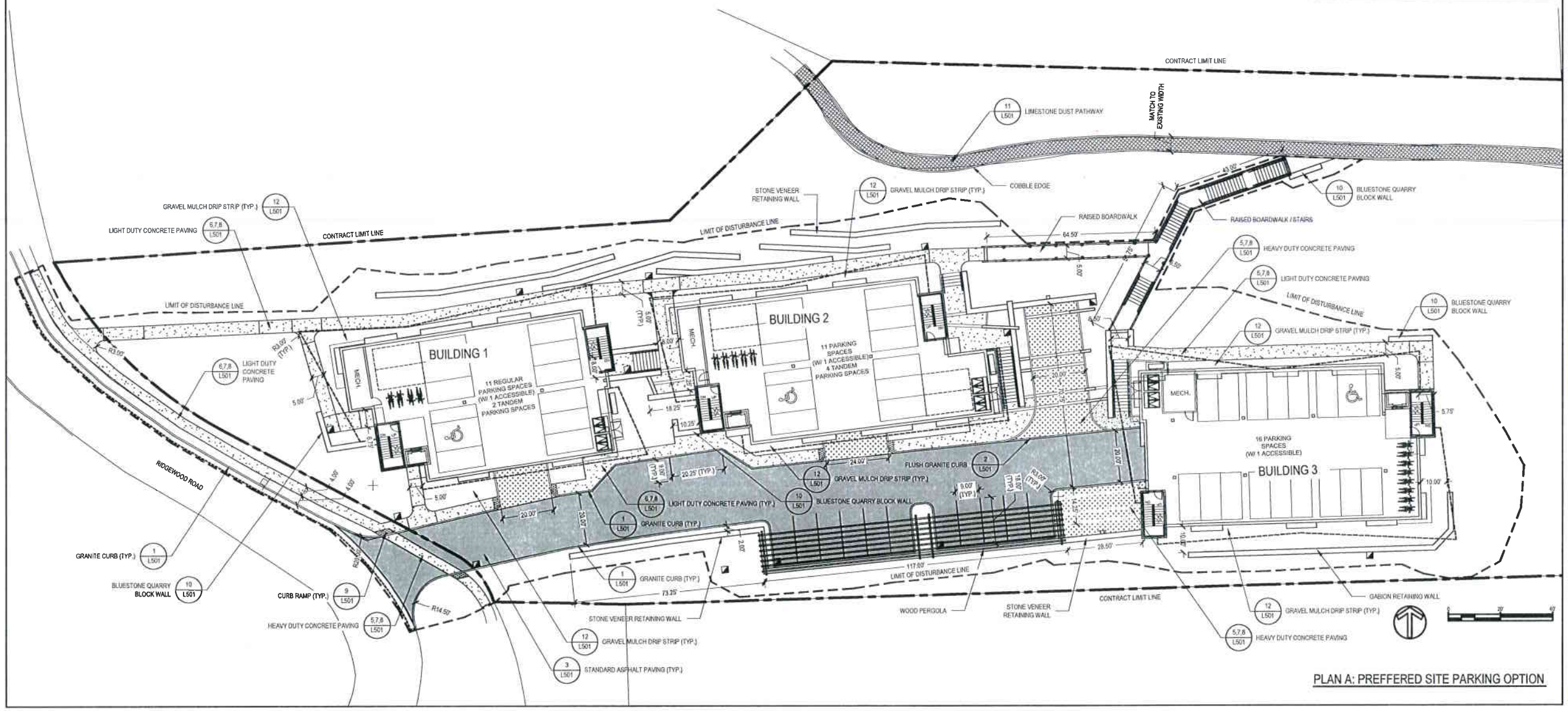
CAR PARKING PROVIDED

LOCATION	PLAN A (PREFERRED OPTION)	PLAN B (ALTERNATE OPTION)
REGULAR PARKING UNDER BUILDING	38 SPACES	38 SPACES
TANDEM PARKING UNDER BUILDING*	6 SPACES*	6 SPACES*
REGULAR PARKING OUTSIDE	13 SPACES	18 SPACES
TOTAL PARKING PROVIDED	57 SPACES	62 SPACES

* TANDEM SPACES ARE NOT DIRECTLY ACCESSIBLE. RESIDENTS MUST MOVE THE CAR PARKED IN THE ASSOCIATED REGULAR SPACE IN ORDER TO ACCESS THESE SPACES.



PLAN B: ALTERNATE SITE PARKING OPTION



PLAN A: PREFFERED SITE PARKING OPTION

1 RIDGEWOOD ROAD

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NO.	DATE	DESCRIPTION
REVISION		

KEY PLAN

OWNER: CA STUDENT LIVING

1 RIDGEWOOD ROAD
ITHACA, NEW YORK

PROJECT

LAYOUT PLAN

DRAWING TITLE

SCALE	As indicated	DATE	03/07/2014
JOB NUMBER	4054.000		
DRAWN	JLF	CHECKED	PJT

L201

DRAWING NUMBER

Tab D

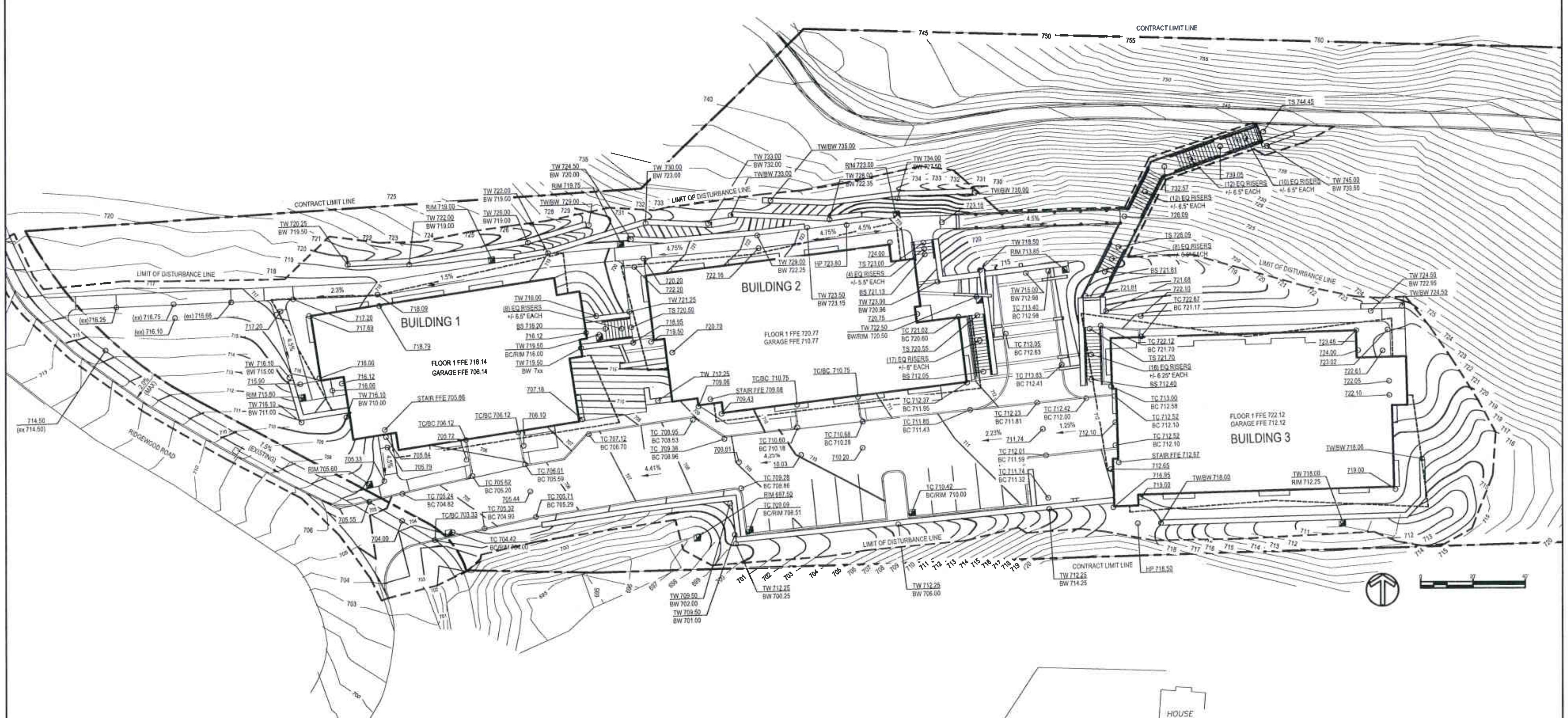
GENERAL SHEET NOTES - GRADING

1. GENERAL CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES HAVING UNDERGROUND UTILITIES ON SITE OR IN RIGHT-OF-WAY PRIOR TO EXCAVATION. CONTRACTOR SHALL CONTACT UTILITY LOCATING COMPANY AND LOCATE ALL UTILITIES PRIOR TO GRADING START.
2. SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED IN ACCORDANCE WITH THE SWPPP.
3. GRADING AROUND EXISTING TREES TO BE MINIMIZED.
4. MINIMIZE IMPACT TO EXISTING, REMAINING LANDSCAPE WHILE EXCAVATING. GREAT CARE IS TO BE TAKEN TO AVOID DISTURBING ROOTS OF EXISTING TREES. HAND EXCAVATION AND/OR EXCAVATION WITH AN AIR SPADE WILL BE REQUIRED WHERE EXISTING TREE ROOTS ARE PRESENT.
5. SEE CIVIL DRAWINGS FOR UTILITIES.
6. THE CONTRACTOR SHALL FIELD VERIFY EXISTING TOPOGRAPHY PRIOR TO COMMENCEMENT OF EARTHWORK OPERATIONS. ANY DISCREPANCIES WHICH WILL AFFECT THE WORK REQUIRED AS PART OF THE CONTRACT DOCUMENTS SHALL BE IMMEDIATELY REPORTED TO THE LANDSCAPE ARCHITECT.

LEGEND

AREA OF DISTURBANCE
EXISTING CONTOUR
MAJOR CONTOUR
CONTOUR
720.25 SPOT ELEVATION
TC911.60 BC911.17 EXISTING SPOT ELEVATION

TC	=	TOP OF CURB
BC	=	BOTTOM OF CURB
TW	=	TOP OF WALL
BW	=	BOTTOM OF WALL
TS	=	TOP OF STAIR
BS	=	BOTTOM OF STAIR
RIM	=	UTILITY RIM ELEVATION
◪	=	CATCH BASIN / DRAINAGE INLET



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NO.	DATE	DESCRIPTION

REVISION

KEY PLAN

OWNER: CA STUDENT LIVING

PROJECT: **1 RIDGEWOOD ROAD**
ITHACA, NEW YORK

DRAWING TITLE: **GRADING PLAN**

SCALE	As indicated	DATE	03/07/2014
JOB NUMBER	4054.000		
DRAWN	JDP	CHECKED	PJT

DRAWING NUMBER: **L301**

1 RIDGEWOOD ROAD

Tab E

CITY OF ITHACA

FULL ENVIRONMENTAL ASSESSMENT FORM (FEAF)

Purpose: This Full Environmental Assessment Form (FEAF) is designed to help applicants and agencies determine, in an orderly manner, whether a project or action may be significant. The question of whether an action may be significant is not always easy to answer. Frequently, there are aspects of a proposed action that are subjective or immeasurable. It is also understood those who determine significance may have little or no formal knowledge of the environment or may not be aware of the broader concerns affecting the question of significance.

The FEAF is intended to provide a method whereby applicants and agencies can be assured the determination process has been orderly, comprehensive in nature, yet flexible enough to allow introduction of information to fit a project or action.

FEAF Components:

Part 1: Provides objective data and information about a given action and its site. By identifying basic project data, it assists in a review of the analysis that takes place in Parts 2 and 3.

Part 2: Focuses on identifying the range of possible impacts that may occur from a project or action. It provides guidance as to whether an impact is likely to be considered small to moderate or whether it is a potentially large impact. The form also identifies whether an impact can be mitigated or reduced.

Part 3: If any impact in Part 2 is identified as potentially large, then Part 3 is used to evaluate whether or not the impact is actually important.

THIS AREA IS FOR LEAD AGENCY USE ONLY

DETERMINATION OF SIGNIFICANCE—TYPE I AND UNLISTED ACTIONS

Identify the portions of FEAF completed for this action: ☐ **Part 1** ☐ **Part 2** ☐ **Part 3**

Upon review of the information recorded on this FEAF (Parts, 2, and 3, if appropriate), and any other supporting information, and considering both the magnitude and importance of each impact, it is reasonably determined by the Lead Agency that:

☐ **A.** The Proposed Action **will not** result in any large and important impact(s) and will not have a significant impact on the environment; therefore, **A NEGATIVE DECLARATION WILL BE PREPARED.**

☐ **B.** Although the proposed action could have a significant impact on the environment, there will not be a significant effect for this Unlisted Action, because the mitigation measures described in PART 3 have been required; therefore, **A CONDITIONED NEGATIVE DECLARATION WILL BE PREPARED.** *

☐ **C.** The proposed action may result in one or more large and important impacts that may have a significant impact on the environment; therefore, **A POSITIVE DECLARATION WILL BE PREPARED.**

* *A Conditioned Negative Declaration is only valid for Unlisted Actions.*

Name of Action: _____

Name of Lead Agency: _____

Name and Title of Responsible Officer in Lead Agency: _____

Signature of Responsible Officer in Lead Agency: _____

Signature of Preparer: _____

Date: _____

FULL ENVIRONMENTAL ASSESSMENT FORM (FEAF)

PART 1—PROJECT INFORMATION

(prepared by project sponsor/applicant)

NOTICE: This document is designed to assist in determining whether the action proposed may have a significant effect on the environment. Please complete the entire form, Parts A through E. Answers to these questions will be considered part of the application for approval and may be subject to further verification and public review. Provide any additional information you believe will be needed to complete Parts 2 and 3. It is expected that completion of the FEAF will depend on information currently available and will not involve new studies, research, or investigation. If information requiring such additional work is unavailable, so indicate and specify each instance.

Name of Action: Student Housing Project, 1 Ridgewood Road, Ithaca		
Location of Action: 1 Ridgewood Road, Ithaca, NY		
Name of Applicant/Sponsor: Campus Acquisitions Holdings, LLC		
Address: 161 N. Clark Street, Suite 4900		
City/Town/Village: Chicago	State: IL	ZIP:60601
Business Phone: 312-994-1871		
Name of Owner (if different): Professional Building Associates, Inc. c/o A. Frost Travis		
Address: 323 North Tioga Street		
City/Town/Village: Ithaca	State: NY	ZIP: 14850
Business Phone: 607-273-1654		
Description of Action: The project includes the construction of three 3-story multi-unit residential buildings with a total of 45 units and 114 beds. The property has frontage on both Ridgewood Road and Highland Avenue. The buildings will be accessed via a driveway on Ridgewood Road and each building will have an underground parking to accommodate cars, bicycles, and dumpsters. Each building will have a green roof.		

Please complete each question (indicate N/A, if not applicable).

A. SITE DESCRIPTION

Physical setting of overall project, both developed and undeveloped areas.

1. Present Land Use:	☐ Urban ☐ Industrial ☐ Commercial ☐ Public ☐ Forest ☐ Agricultural ☒ Other: Undeveloped open space & wooded area
2. Total area of project area: 2.43 acres ____ square feet (***Chosen units apply to following section also.***)	

Approximate Area (*Units in Question 2 apply to this section.*)	**Currently**	**After Completion**
2a. Meadow or Brushland (non-agricultural)	0	0
2b. Forested	2.30	1.08
2c. Agricultural	0	0
2d. Wetland [as per Article 24 of Environmental Conservation Law (ECL)]	0	0
2e. Water Surface Area	0	0
2f. Public	0	0
2g. Water Surface Area	0	0
2h. Unvegetated (rock, earth, or fill)	0	0
2i. Roads, buildings, and other paved surfaces	0.13	0.86
2j. Other (indicate type) (Lawn)	0	0.49

3a. What is predominant soil type(s) on project site (e.g., HdB, silty loam, etc.): To be determined from Soils Investigation	
3b. Soil Drainage:	☒ Well-Drained 90 % of Site ☐ Moderately Well-Drained ____ % of Site ☒ Poorly Drained 10 % of Site
4a. Are there bedrock outcroppings on project site?	☐ Yes ☒ No ☐ N/A
4b. What is depth of bedrock? greater than 5 feet (feet)	
4c. What is depth to the water table? greater than 5 feet (feet)	
5. Approximate percentage of proposed project site with slopes:	☐ 0-10% 45 % ☒ 10-15% 10 % ☒ 15% or greater 45 %
6a. Is project substantially contiguous to, or does it contain a building, site or district, listed on or eligible for the National or State Register of Historic Places?	☒ Yes ☐ No ☐ N/A
6b. ...Or a designated local landmark or located in a local landmark district?	☐ Yes ☐ No ☐ N/A
7. Do hunting and/or fishing opportunities currently exist in the project area?	☐ Yes ☒ No ☐ N/A If yes, identify each species: ____

SITE DESCRIPTION (concluded)

8. Does project site contain any species of plant and/or animal life identified as threatened or endangered?	☐Yes ☒No ☐N/A According to: none documented since 1979 per DEC NY Natural Heritage Identify each species:
9. Are there any unique or unusual landforms on the project site (i.e., cliffs, other geological formations)?	☒Yes ☐No ☐N/A Describe: steep slopes
10. Is project site currently used by the community or neighborhood as an open space or recreation area?	☐Yes ☒No ☐N/A If yes, explain:
11. Does present site offer or include scenic views known to be important to the community?	☐Yes ☒No ☐N/A Describe:
12. Is project within or contiguous to a site designated a Unique Natural Area (UNA) or critical environmental area by a local or state agency?	☐Yes ☒No ☐N/A Describe:
13. Streams within or contiguous to project area:	a. Names of stream(s) or name(s) of river(s) to which it is a tributary: N/A
14. Lakes, ponds, or wetland areas within or contiguous to project area:	a. Name(s): N/A b. Size(s) (in acres): N/A
15. Has site been used for land disposal of solid and/or hazardous wastes?	☐Yes ☐No ☐N/A Describe: Pending Phase I
16. Is the site served by existing public utilities? a. If Yes, does sufficient capacity exist to allow connection? b. If Yes, will improvements be necessary to allow connection?	☒Yes ☐No ☐N/A ☒Yes ☐No ☐N/A ☐Yes ☒No ☐N/A

B. PROJECT DESCRIPTION

1. Physical dimensions and scale of project (fill in dimensions as appropriate): 3 buildings from 21,500 sf to 25,440 sf

1a. Total contiguous area owned by project sponsor in acres: 2.79 or square feet: _____

1b. Project acreage developed: 1.29 Acres initially: 0.20 Acres ultimately: 1.49

1c. Project acreage to remain undeveloped: 1.30

1d. Length of project in miles (if appropriate): N/A or feet: N/A

1e. If project is an expansion, indicate percent of change proposed: N/A %

1f. Number of off-street parking spaces existing: 0 proposed: 57

1g. Maximum vehicular trips generated (upon completion of project) per day: 510 and per hour: 51

1h. Height of tallest proposed structure in feet. 34.51

1j. Linear feet of frontage along a public street or thoroughfare that the project will occupy? 345

2. Specify what type of natural material (i.e., rock, earth, etc.) and how much will be removed from the site: 3,480 cubic yard of earth or added to the site: 3,020 cubic yards of structural fill

3. Specify what type of vegetation (trees, shrubs, ground cover) and how much will be removed from the site: acres: 1.4 acres type of vegetation: Trees and understory

4. Will any mature trees or other locally important vegetation be removed for this project? Yes

5. Are there any plans for re-vegetation to replace vegetation removed during construction? Yes

6. If single-phase project, anticipated period of construction: 12 months (including demolition)

7. If multi-phased project, anticipated period of construction: _____ months (including demolition)

7a. Total number of phases anticipated: 1

7b. Anticipated date of commencement for first phase: August month 2014 year (including demolition)

7c. Approximate completion date of final phase: August month 2015 year.

7d. Is phase one financially dependent on subsequent phases? ☐Yes ☐No ■N/A

8. Will blasting occur during construction? ☐Yes ■No ☐N/A If yes, explain: _____

9. Number of jobs generated during construction: 80 After project is completed: 4-5

10. Number of jobs eliminated by this project: 0 Explain: new construction on undeveloped land

11. Will project require relocation of any projects or facilities? ☐Yes ■No ☐N/A If yes, explain: _____

12a. Is surface or subsurface liquid waste disposal involved? ☐Yes ■No ☐N/A; if yes, explain: _____

12b. If #12a is yes, indicate type of waste (sewage, industrial, etc): _____

12c. If surface disposal, where specifically will effluent be discharged? N/A

13. Will surface area of existing lakes, ponds, streams, or other surface waterways be increased or decreased by proposal? ☐Yes ■No ☐N/A If yes, explain: _____

14a. Will project or any portion of project occur wholly or partially within or contiguous to the 100-year flood plain? ☐Yes ■No ☐N/A

PROJECT DESCRIPTION (concluded)

14b. Does project or any portion of project occur wholly or partially within or contiguous to: Cayuga Inlet Fall Creek, Cascadilla Creek, Cayuga Lake, Six Mile Creek, or Silver Creek? (Circle all that apply.)

14c. Does project or any portion of project occur wholly or partially within or contiguous to wetlands as described in Article 24 of the ECL? ☐Yes ■No ☐N/A;

14d. If #14a., b., or c. is yes, explain: N/A

15a. Does project involve disposal of solid waste? ■Yes ☐No ☐N/A

15b. If #15a. is yes, will an existing solid waste disposal facility be used? ■Yes ☐No ☐N/A

15c. If #15b. is yes, give name of disposal facility: Solid Waste Management Division and its location: Tompkins County

15d. Will there be any wastes that will not go into a sewage disposal system or into a sanitary landfill? ☐Yes ■No ☐N/A If yes, explain:

15e. Will any solid waste be disposed of on site? ☐Yes ■No ☐N/A If yes, explain:

16. Will project use herbicides or pesticides? ☐Yes ■No ☐N/A If yes, specify:

17. Will project affect a building or site listed on or eligible for the National or State Register of Historic Places or a local landmark or in a landmark district? ■Yes ☐No ☐N/A; if yes, explain:
Site is in the Cornell Heights Historic District (National/Local)

18. Will project produce odors? ☐Yes ■No ☐N/A If yes, explain:

19. Will project product operating noise exceed the local ambient noise level during construction? ■Yes ☐No ☐N/A After construction? ☐Yes ■No ☐N/A

20. Will project result in an increase of energy use? ■Yes ☐No ☐N/A If yes, indicate type(s):
Electric and gas

21. Total anticipated water usage per day in gals./day: 7,400 Source of water: City of Ithaca

C. ZONING AND PLANNING INFORMATION

1. Does the proposed action involve a planning or zoning decision? ■ Yes ☐ No ☐ N/A If yes, indicate the decision required: _____

☐ Zoning Amendment ☐ Zoning Variance ☐ New/Revision of Master Plan ☐ Subdivision

☒ Site Plan ☐ Special Use Permit ☐ Resource Management Plan ☒ Other: ILPC Cert.

2. What is the current zoning classification of site? RU

3. If the site is developed as permitted by the **present** zoning, what is the maximum potential development?
Multiple unit dwelling with 30% lot coverage,

4. Is proposed use consistent with present zoning? ■ Yes ☐ No ☐ N/A

5. If #4 is no, indicate desired zoning: N/A

6. If the site is developed by the **proposed** zoning, what is the maximum potential development of the site?

7. Is the proposed action consistent with the recommended uses in adopted local land-use plans?
■ Yes ☐ No ☐ N/A If no, explain: _____

8. What is the dominant land use and zoning classification within a ¼ mile radius of the project?
(e.g., R-1a or R-1b) RU

9. Is the proposed action compatible with adjacent land uses? ■ Yes ☐ No ☐ N/A Explain: residential

10a. If the proposed action is the subdivision of land, how many lots are proposed? N/A

10b. What is the minimum lot size proposed? N/A

11. Will the proposed action create a demand for any community-provided services? (e.g., recreation, education, police, fire protection, etc.)? ■ Yes ☐ No ☐ N/A Explain: Police & fire

If yes, is existing capacity sufficient to handle projected demand? ■ Yes ☐ No ☐ N/A
Explain: Increase will not be significant

12. Will the proposed action result in the generation of traffic significantly above present levels?
☐ Yes ■ No ☐ N/A

If yes, is existing road network adequate to handle additional traffic?
☐ Yes ☐ No ■ N/A Explain: _____

D. APPROVALS

1. Approvals: _____

2a. Is any Federal permit required? ☐ Yes ■ No ☐ N/A Specify: _____

2b. Does project involve State or Federal funding or financing? ☐ Yes ■ No ☐ N/A If Yes, Specify:

2c. Local and Regional approvals:

Agency	Yes or No	Type of Approval Required	Submittal Date	Approval Date
Common Council	No			
Board of Zoning Appeals (BZA)	No			
Planning & Development Board	Yes	Site Plan		
Ithaca Landmarks Preservation Commission (ILPC)	Yes	Certificate of Appropriateness		
Board of Public Works (BPW)	No			
Fire Department	Yes	Fire Access		
Police Department	No			
Building Commissioner	Yes	Building Permit		
Ithaca Urban Renewal Agency (IURA)				

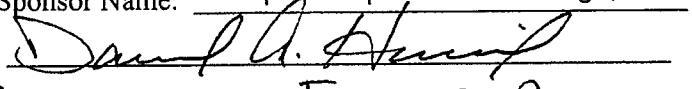
E. INFORMATIONAL DETAILS

Attach any additional information as may be needed to clarify your project. If there are or may be any adverse impacts associated with your proposal, please discuss such impacts and the measures which you propose to mitigate or avoid them.

F. VERIFICATION

I certify that the information provided above is true to the best of my knowledge.

Applicant/Sponsor Name: Campus Acquisitions Holdings, LLC

Signature: 

Title: PROFESSIONAL ENGINEER

********** END OF PART 1 **********

E. ADDITIONAL INFORMATIONAL DETAILS

CA Student Living LLC ("Applicant" or "CA") is proposing a residential development targeted specifically to student housing consisting of three, 3-story buildings with a total of 45 units and 114 beds ("the Project") on a 2.429 acre parcel located at 1 Ridgewood Road ("Site"). Applicant seeks site plan approval from the Planning and Development Board ("PDB"). Prior to taking action on the Site Plan, the State Environmental Quality Review Act ("SEQR") requires that the PDB undertake an environmental review of the Project to assess whether the action has the potential to have a significant adverse environmental impact. Pursuant to SEQR, this Project is classified as a Type 1 action because it is located within the Cornell Heights Historic District.

Applicant understands that the PDB will be the lead agency for the SEQR process. To aid the PDB in determining whether the Project may have a significant adverse impact upon the environment, Applicant provides the following additional informational details for the Project as Section E of Part 1 of the Full Environmental Assessment Form ("FEAF"). In particular, this additional information is designed to demonstrate that potentially significant adverse impacts have been avoided or mitigated adequately and, accordingly, the Project will not have any significant adverse environmental impact. Thus, we believe it is appropriate that the PDB issue a negative declaration pursuant to SEQR for the Project

Impact on Land

The Project will involve construction on land with slopes of 15% or greater. However, significant effort has been made to limit areas of disturbance along sloped areas and to minimize sloped disturbance. Development has been limited to just 17% of the lot coverage by buildings (30% allowed). In fact, large sloped areas of the Site have been protected from development and Applicant has offered to establish a restrictive covenant on the Site to ensure long-term protection of these areas. In addition, the Subsurface Investigation Report, attached as **Exhibit G** to a supplement to a Letter of Intent for the Project dated March 11, 2014, states the proposed structures can be supported on conventional shallow foundations. Thus, Site excavation will be minimized.

Based on the above, we do not believe that the Project will have a substantial adverse impact upon land.

Impact on Flooding

As noted in the Subsurface Investigation Report, the Site soils are well-drained and the Project itself will not impair surface waters, flood plains, or wetlands in any way. In

order to minimize the impact of storm water, green roofs will be included on each of the three buildings. T.G. Miller, P.C., the Applicant's storm water engineer is working closely with the City's Stormwater Management Officer to prepare a full Storm Water Pollution Prevention Plan ("SWPPP") which will be completed prior to the issuance of a building permit. Pursuant to the SWPPP, preventative erosion and sediment control practices will be implemented during construction.

Based on the above, we do not believe that the Project will have a substantial adverse impact upon flooding.

Impact on Plants and Animals

The site is currently undeveloped and flora and fauna will be displaced by the development of the Project. Nonetheless, a number of efforts have been made to limit adverse impacts to flora and fauna. First, development has been limited to just 17% of the lot coverage by buildings (30% allowed). In fact, large portions of the Site will be maintained in a natural state. In addition, invasive species in these areas will be removed to ensure healthy native habitat.

In terms of threatened or endangered species, the initial phase of a rare flora and fauna survey was completed for the Site by F. Robert Wesley in February 2014. A copy of his initial assessment was included as Exhibit J to the Project Letter of Intent dated February 14, 2014. While Mr. Wesley will not be able to complete field work until Spring of 2014, he did note that he has previously investigated the Site and failed to identify any rare species. Moreover, while the New York Natural Heritage Program databases suggests several rare species may be on-site, Mr. Wesley strongly suspects that these were found in nearby Fall Creek Gorge and there is no evidence of a history of their occurrence on-Site. Mr. Wesley will confirm that this is the case when he completes his field work in the Spring.

Based on the above, we do not believe that the Project will have a substantial adverse impact upon plants and animals.

Impact of Aesthetic Resources/Community Character

A number of efforts have been made to minimize adverse aesthetic impacts from the Project and to ensure Project compatibility with the surrounding aesthetic and cultural resources. CA initiated early design guidance with the Ithaca Landmarks Preservation Commission ("ILPC") and PDB in September 2013, on its proposal to develop the Site for student housing. Initially, CA was proposing a large single building development with 70 units and 192 beds. As a result of extensive consultation with both ILPC and the PDB, as well as staff, the Project has been substantially downsized to better blend in with the surrounding community and to protect aesthetic resources in the area of the

Site. CA is currently proposing to develop the Site with three much smaller buildings which will include 45 units and 114 beds. This downsizing has greatly reduced aesthetic impacts from the Project. In addition, the existing trail across the northern border of the Site will be maintained, allowing the continued use and enjoyment of the Site by the public. The Project includes an extensive landscaping plan. To further improve aesthetics, most parking has been moved indoors (basement level). The limited parking that is outdoors is largely covered by a pergola for screening from off-site view points.

Other measures have been taken to limit the visibility of the Project from off-Site. The eastern side of the parcel, along with a neighboring parcel at 150 Highland Avenue, will be maintained in an undeveloped state. This will ensure that the view shed from Highland Avenue (which is above the Site) will remain largely unchanged with a substantial natural buffer. The Project Letter of Intent dated February 14, 2014 includes photos of the site as well as photo simulations and renderings of the Project. Applicant has also expressed a willingness to consider imposing a restrictive covenant on the Site to ensure long-term protection of areas of the Site by prohibiting further development.

Aesthetic mitigation has also extended to minimize impacts on cultural resources. The Site is located in the Cornell Heights Historic District, a turn-of-the-century planned "residential park" originally built for professors from Cornell University. The landscape, curving roads, and unique architecture distinguish this residential neighborhood. The district has always been closely tied to Cornell and has housed its faculty and students for over a century. The large residences which were constructed as part of the original planned development are now mostly fraternity and sorority houses, all housing Cornell students.

The Project has been designed to blend in well with this neighborhood. First, by constructing three smaller buildings, increasing the setback on Highland Avenue, focusing on landscaping, and preserving much of the tree cover, the visual impact of the Project is minimal. The Project's prairie style, as a turn-of-the-century architectural style, is well-suited for the neighborhood and consistent with "contributing" buildings in the district. There is no common architectural style or theme within the district; it was designed to showcase a diverse array of architectural styles. The Project, like other buildings in the district, will be contemporary but period appropriate with clear architectural references. Moreover, with other student residences nearby, the Project will not be out of character with surrounding development. In fact, the Project will provide much needed student housing in the City and within walking distance to the Cornell campus. Parking, as required, is provided on-site and mostly in the basement level of the proposed buildings. The demand for student housing has caused recent student housing development, historically concentrated in Collegetown, to expand into the district.

For the foregoing reasons, the Project will not have an adverse impact upon aesthetic resources or upon the Cornell Heights Historic District/community character.

Impact on Cultural Resources

In addition to designing the Project in a way that minimizes impact upon aesthetic resources or upon the Cornell Heights Historic District/community character, a cultural resource survey was conducted for the Site by Binghamton University. The Phase 1A/1B Cultural Resources Survey, attached as **Exhibit F** to a Supplement to a Letter of Intent for the Project dated March 11, 2014, included a visual assessment, site walkover, and photo-documentation of the Project area, and background research and archaeological site file searches at the New York State Office of Parks, Recreation and Historic Preservation's Field Services Bureau. Shovel testing in the field was also conducted.

The archeological portion of the investigation concluded that the Site is not archeologically sensitive. The Site's topography limits the Site's potential to have served as a settlement. Field work confirmed these findings. No pre-historic or historic sites were encountered.

The historical architectural portion of the investigation was limited to structures on-Site or immediately adjacent. There are two properties within the immediate Project area - a house at 152 Highland Avenue and a small, dilapidated pool/bathhouse structure. Neither appears to be National Register eligible. Further, the bath house will be demolished in conjunction with the Project. Overall, the report concludes that the Project will not adversely affect National Register eligible archeological or architectural resources.

Based on the above, we do not believe that the Project will have substantially adverse impact upon cultural resources.

Impact on Transportation

A Traffic Information Assessment report was included as **Exhibit H** to the Letter of Intent for the Project dated February 14, 2014. As explained in the traffic assessment, the Site has good sight lines and will not have any potentially significant adverse impact on traffic operations. As explained in the report, the traffic figures are conservative and are likely on the high side given the multi-modal options in the area and the limited on-campus parking for students. Even so, the impact analysis shows no impacts to area roadways. In addition, bicycle parking is a central feature to encourage alternative non-automobile forms of transportation.

Based on the above, we do not believe that the Project will have an adverse impact upon transportation.

Impact on Human Health

The New York State Department of Environmental Conservation's environmental resource map indicated that a site in the vicinity of the Project Site had been used for the disposal of hazardous materials. However, CA has completed a Phase I Environmental Site Assessment for the Site which found no recognized environmental conditions at or around the Site. Moreover, soil testing at the Site has not revealed anything other than native materials.

Based on the above, the development of the Site will not have a substantial adverse impact upon human health.

Conclusion

A number of temporary and/or minor environmental impacts have been identified in connection with the Project. However, an analysis of these potential impacts reveals that, where necessary, such impacts have been mitigated to the greatest extent possible by the design of the Project and that none of these impacts will be significantly adverse. Accordingly, it is appropriate that the PDB issue a Negative Declaration for the Project.

Tab F

Public Archaeology Facility Report

PHASE 1A/1B CULTURAL RESOURCE SURVEY

CORNELL HEIGHTS
STUDENT HOUSING PROJECT
CITY OF ITHACA
TOMPKINS COUNTY, NEW YORK
(MCD 10940)

PREPARED BY:

RICHARD A. KASTL, M.A., RPA

SUBMITTED TO:

CAMPUS ACQUISITIONS HOLDINGS, LLC.
161 NORTH CLARK STREET
SUITE 4900
CHICAGO, ILLINOIS 60601

FEBRUARY 24, 2014

Binghamton University, State University of New York
Binghamton, New York 13902-6000

PHASE 1A/1B CULTURAL RESOURCE SURVEY

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FEBRUARY 24, 2014

MANAGEMENT SUMMARY

Project Name: Cornell Heights Student Housing Project

SHPO Project Review Number (if available): N/A

Involved State or Federal Agencies (DEC, CORPS, FHWA, etc): NYSDEC, Local

Phase of Survey: 1A/1B Cultural Resource Survey

Location Information

Location: 150-152 Highland Avenue
Minor Civil Division: City of Ithaca (MCD 10940)
County: Tompkins

Survey Area (Metric & English)

Length: irregular
Width: irregular
Number of Acres Surveyed: 2.9 ac (1.17 ha)

USGS 7.5 Minute Quadrangle Map: Ithaca East

Results Archaeological Testing:

Number of STPs: 18 @ 15 m (49 ft) intervals
Number of Prehistoric Sites: 0
Number of Historic Sites: 0
Recommendations: No further archaeological work recommended

Results of Architectural Assessment:

Number of Buildings in the Project Area: 2 (see Table 4, p. 16)
Number of National Register Listed Buildings: 0
Number of National Register Eligible Buildings: 0

Report Author(s): Richard A. Kastl, M.A, RPA

Date of Report: February 24, 2014

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FIGURES

TABLES

PHOTOS

I. INTRODUCTION

This report presents the results of a Phase 1A/1B cultural resource survey conducted by the Public Archaeology Facility for the proposed Cornell Heights Student Housing Project in the City of Ithaca, New York. The project is located at 150 and 152 Highland Avenue in the City of Ithaca. The two lots extend from Highland Avenue west to Ridgewood Road, and encompass a steep gorge. The total area contained within the project limits is approximately 2.9 acres. The purpose of the project is to construct a student housing complex on the two lots.

The fieldwork summarized in this document was performed under the supervision of Dr. Nina M. Versaggi, Director of the Public Archaeology Facility, Binghamton University. Richard A. Kastl served as the project director and is the author of this report. Field crew consisted of Dylan Pelton, Andrea Zlotucha Kozub, Josh Anderson, Edgar Alarcon, and Greg Diute. Laura Knapp performed data entry for all notes and catalogs. Maria Pezzuti and Annie Pisani performed all related administrative duties. In compliance with the Standards for Cultural Resource Investigations in New York State (1994) and the National Park Service's Criteria and Procedures for the Identification of Historic Properties (1990), the area within the project limits is considered the area of impact for the purpose of conducting the survey. *The results of the research performed for this report do not apply to any territory outside the project area.*

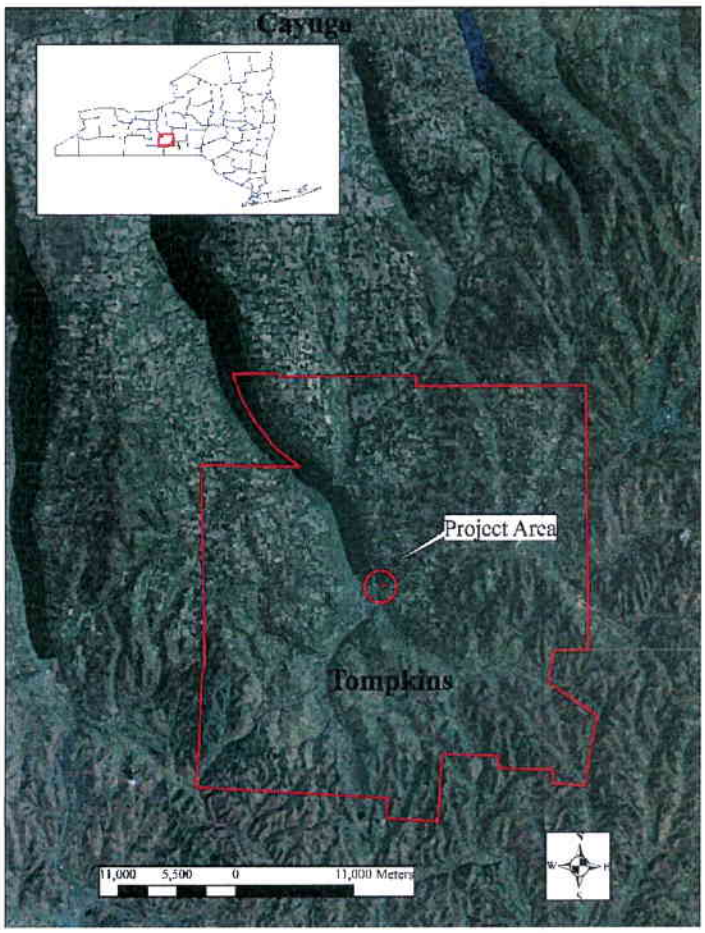

Figure 1. Location of the project area in Tompkins County and New York State.

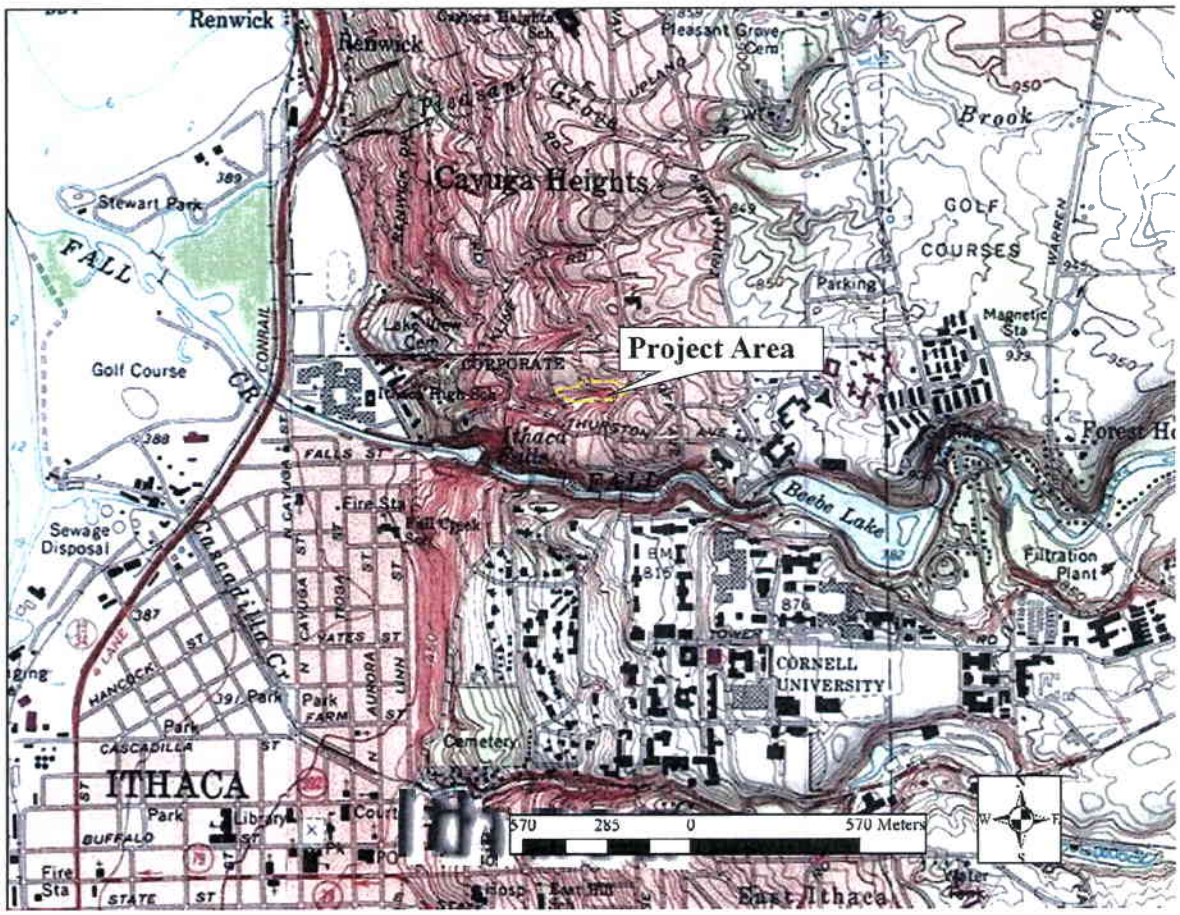

Figure 2. Location of the Project limits on the Ithaca East 7.5' USGS Quadrangle.

Photo 1. Project Area looking southwest from 150 Highland Avenue.

Photo 2. Project area looking west from 150 Highland Avenue.

Photo 3. Project area looking southwest from 150 Highland Avenue.

Photo 4. Project area looking west from its midpoint.

Photo 5. Project area looking southeast from Ridgeway Road.

Photo 6. Project area looking south along Ridgeway Road.

Photo 7. Project area looking east toward bathhouse from Ridgeway Road.

Photo 8. Project area looking east from swimming pool.

II. BACKGROUND RESEARCH

2.1 Environmental Context

Tompkins County lies almost entirely within the glaciated Allegheny Plateau section of the Appalachian Plateau province in what is commonly known as the Finger Lakes region of New York. The southern part of the county consists of a high plateau that is dissected by a series of broad valleys. Glaciation last took place 13,000 to 16,000 years ago during the Cary substage of the Wisconsin glaciation. The northern part of the county is part of the Lake Ontario drainage system. In this section of the county, the Valley Heads till mantles the bedrock. In this region, the Langford and Erie soils are dominant. The project area is part of the Lake Ontario drainage system, and is drained by Fall Creek, which flows into Cayuga Lake. The elevation of the project area varies between 211 m and 234 m (692-768 ft) amsl.

Soils in the project area are listed as unevaluated. The steeply sided gorge has little soil development. It can be inferred that the soils, though undeveloped, are related to the Langford and Erie soils dominant in this area of the county. About 90% of the project area has slopes greater than 15%. The Langford-Erie association consists of moderately well drained and somewhat poorly drained, medium textured soils on rolling to moderately steep topography. The Langford soils are found on rounded ridge tops and steep slopes. Langford soils have a grayish brown surface soil, a yellowish brown upper subsoil and a mottled, dense, compact fragipan as the lower part of the subsoil. Deeply buried soils are not expected. STPs will need to penetrate at least 15 cm (6 in) into sterile subsoil.

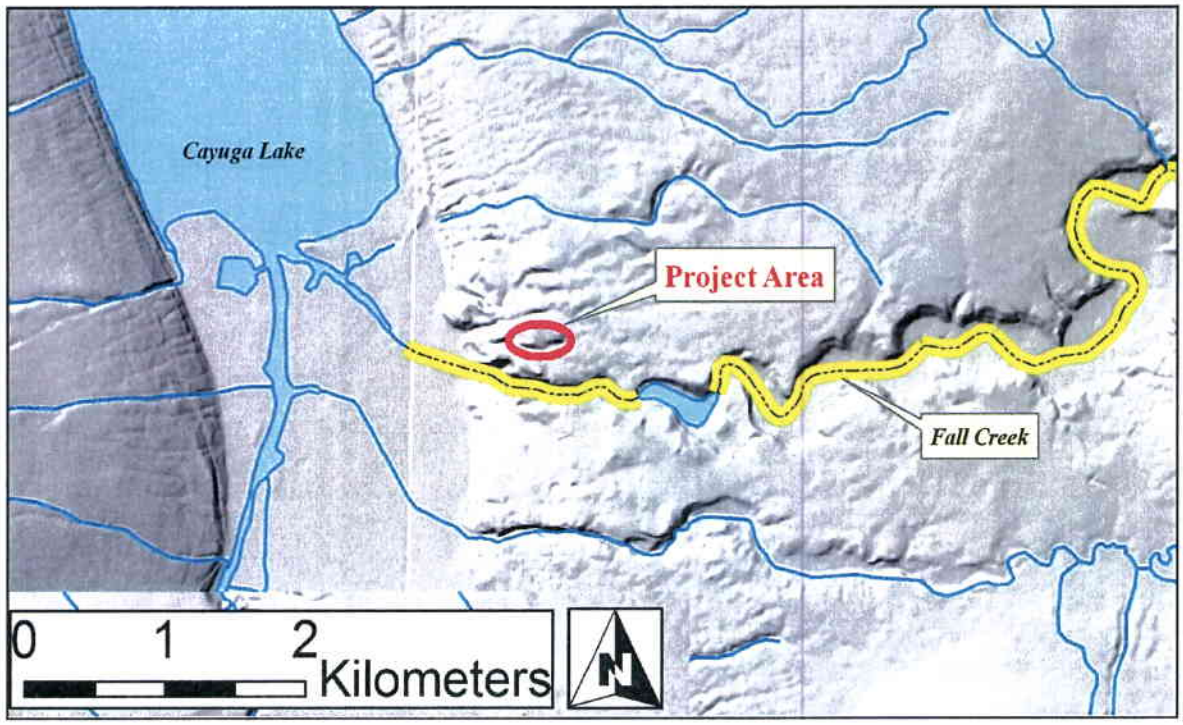

Figure 3. Digital elevation model (DEM) showing the project area and regional landscape.

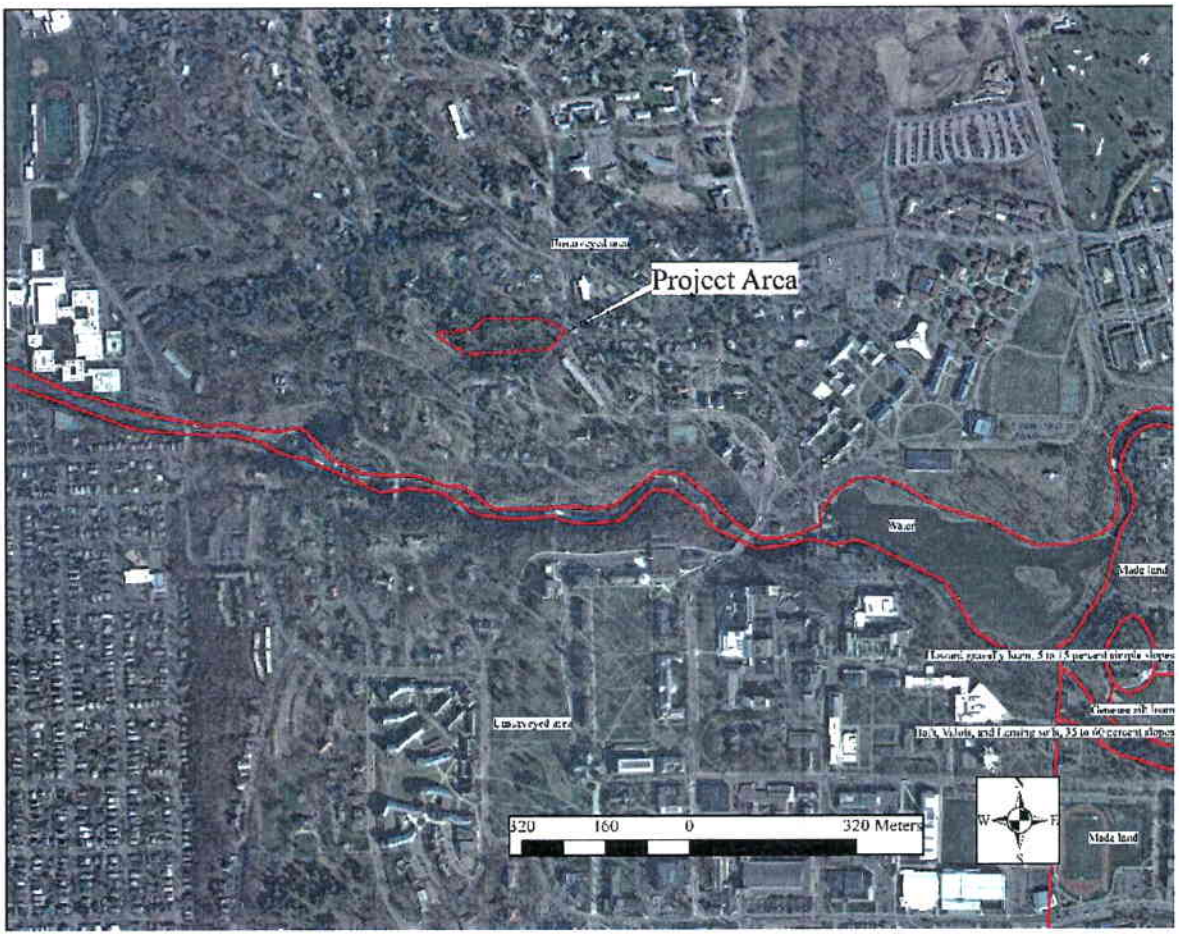

Figure 4. Approximate location of the proposed APE showing the mapped soils.

2.2 Prehistoric Context and Site Files Summary (adapted from Kudrle 2009)

Like most upland landscapes, the uplands and inland areas of the southern Finger Lakes have traditionally been viewed as "marginal" environments in terms of archaeological site potential (see Levine 2003). Past studies have focused almost exclusively on large residential settlements at the inlets and outlets of the Finger Lakes (e.g., Lamoka Lake, Oneida Lake, Seneca Lake). Until recently very few systematic archaeological surveys have been completed in the uplands and tributary valleys of the Finger Lakes (Levine 2003). Particularly lacking in the chronology and settlement models for the southern Finger Lakes are examples of small hunter-gatherer sites, types often found in upland environments. Interestingly, surveys completed in these "marginal" environments often identify small lithic scatters (some with diagnostic tools) and suggest the uplands were important components in the seasonal round (Levine 2003). In fact, Levine's 2003 study of southwestern Cayuga Lake identified 15 prehistoric lithic scatters within the upland Glenwood, Taughannock, Trumansburg, and Willow Creek watersheds.

The southern Finger Lakes are a very rich and diverse landscape, ranging from the rugged uplands of the Northern Appalachian Plateau to the smooth and rolling hills overlooking the lakes. The area around Cascadilla Creek, just south of the Fall Creek drainage, includes several resource-rich perennial and seasonal wetlands, as well as multiple access corridors to Cayuga Lake and headwaters of Susquehanna River tributaries. Within the vicinity of the Cascadilla Creek Archaeological District (Tompkins County limits) there are at least 30 known prehistoric sites (see Tables 1-3), ranging from Early-Middle Archaic components and isolated Paleoindian fluted-point finds (n=2; Ritchie 1980) to Late Woodland and Historic Period villages. The majority of sites occupy landforms within or adjacent to uplands similar to those within the current project area. Of particular note is that the two fluted-points, and one Early Archaic point (from the Brown Farm Site) are within the Fall Creek drainage.

Table 1. PAF/SHPO recorded prehistoric sites within Tompkins County, New York

SITE	DESCRIPTION	DISTANCE FROM PROJECT (KM)
SUBi-2639	UNDIAGNOSTIC LITHIC SCATTER	5.07
SUBi-953	ISOLATED FIND - BIFACE	5.02
SUBi-121	UNDIAGNOSTIC LITHIC SCATTER	9.08
COWELL 2	LATE ARCHAIC LITHIC SCATTER - **BREWERTON POINT**	8.20
INLET VALLEY 1	UNDIAGNOSTIC LITHIC SCATTER	7.42
BROWN FARM	ISOLATED FIND - **BIFURCATE POINT**	2.21
COWELL 1	UNDIAGNOSTIC LITHIC SCATTER	8.72
A10906.000200	EARLY/MIDDLE WOODLAND SITE	7.00
COREORGONEL	HISTORIC PERIOD VILLAGE	5.25
A10907.000004	CAYUGA CAMPS? AND INDIAN TRAIL	14.01
A10907.000006	PREHISTORIC BURIAL SITE	13.45
PLUS SITE SUBi-736	LATE WOODLAND IROQUOIAN SITE	11.20
DRYDEN 2	UNDIAGNOSTIC LITHIC SCATTER	12.53

Table 2. Sites identified by Parker (1920) within Tompkins County, New York

SITE	DESCRIPTION	DISTANCE TO PROJECT (KM)
BURIAL SITE		18.83
VILLAGE SITE		18.01
BURIAL SITE		11.72
VILLAGE SITE		16.83
BURIAL SITE		19.87
VILLAGE		19.72
FORT/BURIAL SITE		19.48
EARTHWORKS		18.30
BURIAL SITE		6.11
VILLAGE SITE		5.93
BURIAL SITE	COREORGONEL	5.16
BURIAL SITE		3.98
VILLAGE SITE		3.57
VILLAGE SITE	TOTIERONNO	4.39
VILLAGE/BURIAL SITE		15.80

Table 3. Fluted-points identified by Ritchie (1980)

SITE	DESCRIPTION	DISTANCE TO PROJECT (KM)
FLUTED POINT	APPROXIMATE LOCATION OF POINT	5.25
FLUTED POINT	APPROXIMATE LOCATION OF POINT	3.47

The Cascadilla Creek Prehistoric District provides the best context for evaluating the potential for the project to contain prehistoric sites.

***Cascadilla Creek Prehistoric Archaeological District Context** (from Kudrle 2009)*

Diagnostic artifacts recovered from the numerous Cascadilla Creek sites suggest the district was used by hunter-gatherer groups from at least the Late Archaic through the Early Woodland (4500 BC - AD 0). Projectile point styles include a potential Brewerton-like type from Cascadilla Creek 2 Locus 3, a side-notched possible Early Woodland type from Cascadilla Creek 2 Locus 2, and a clear Early Woodland Meadowood type from Cascadilla Creek 1 Locus 1. In addition, a polished Lamoka-like celt/adze was found on the ground surface within Locus 2 of Cascadilla Creek 1. We know from previously recorded sites in the region, that Paleoindian and Early Archaic peoples also used the area

surrounding the project. In general, comparatively little is known of the upland landuse and settlement patterns of hunter-gatherer groups in the Finger Lakes. Large Late Archaic residential sites are known at Lamoka Lake, Seneca Lake, and Oneida Lake, but these are probably more unique than representative. Smaller Late Archaic camps and foraging sites have been identified throughout the dissected valleys of the Appalachian Plateau, but clear evidence of Early Woodland landuse is relatively rare in the Finger Lakes region of Central New York.

For the Northeast, the Archaic period is generally applied to a broad period of hunting/gathering cultures spanning the waning of the Paleoindian material culture adaptations of the post-Pleistocene (12,000-8,000 BC) to the advent of widespread ceramic technologies during the Woodland (1000 BC). The Archaic was initially a period of "settling in", whereby small groups (likely from more hospitable southern locales) moved into the interior Northeast to access newly available diverse landforms and environments.

By the Late Archaic (4000-1500 BC) the vegetation had shifted from a mixed-boreal forest of the late post-Pleistocene to the deciduous canopy present today. This vegetation/climate shift appears to have paralleled an increase in human population densities and regional adaptations in the Northeast. Several archaeologists have attributed the increase in population density in the Late Archaic to more favorable environmental conditions associated with the transition to a deciduous forest and a generally warmer climate (Ritchie 1980; Versaggi et al. 2001). Unlike the broad-based wandering settlement of the Early/Middle Archaic, groups of the Later Archaic appear to have formed some degree of territoriality in the interior Northeast, with variations in projectile point types linked to geographic areas(Versaggi 1987; 1996; Versaggi et al. 2001).

Transitional Phase cultural adaptations were also characterized by a hunting and gathering subsistence pattern, but the introduction of steatite (soapstone) cooking vessels into the material culture assemblage suggests that significant changes in technology occurred at this time. Like earlier groups, Transitional peoples favored river valleys in this region for residential camps (Ritchie 1980: 150-178). The two main cultural expressions, Frost Island and Orient, are present to varying degrees in central New York. Frost Island sites are more numerous north of the Finger Lakes compared to Orient sites. Originally, Orient occupations appeared to be confined primarily to the south eastern and coastal regions of New York State (Ritchie 1980), but more recent research has shown that Orient groups also occupied the Hudson, Upper Susquehanna, and Delaware River Valleys in eastern and south central New York. Known in this region as the Dry Brook phase, excavations at the Broome Tech and Owego Sewage Treatment Plant sites indicate that Transitional period cultural traits were maintained by the indigenous populations well past the classic 1000 BC terminus of the Terminal Archaic in central and western New York (Versaggi and Knapp 2000).

The waning of the Transitional in central New York coincided with the appearance of Early Woodland cultural traits associated with the Adena core areas in the Ohio Valley and the upper Great Lakes. The most well-known Early Woodland manifestation in central New York was Meadowood (1000 BC - AD 0). Meadowood subsistence practices were similar to earlier Transitional and Late Archaic cultures with a heavy reliance on small-game hunting, fishing, and gathering (Ritchie 1980: 183)

Meadowood sites and components appear to be distributed throughout New York State, although they are rare in portions of the Hudson, Upper Delaware, and parts of the Susquehanna valleys (Versaggi 1999). The majority of the documented sites are located in the Erie-Ontario Lowlands of north-central New York and the Niagara Frontier (Versaggi 1999). In parts of the Allegany Plateau and Hudson Valley, earlier Transitional groups (Dry Brook) persisted into time periods usually designated as Early Woodland (Versaggi and Knapp 2000).

During later prehistory, hunter-gatherers transitioned to settled agricultural lifeways. Beginning in the Middle Woodland (A.D. 100-900), people experimented with garden-plot horticulture and longer seasonal stays in regions with abundant fishing and fertile soils. By the Late Woodland (A.D. 900-1500), sedentary patterns of village life and large-scale agriculture (maize, beans and squash) became established.

Archaeologists have documented a historical record of the Cayuga Iroquois (Haudenosaunee) Nation around Cayuga Lake (Niemczycki 1984). The Levanna site, located near the eastern shore of Cayuga Lake (and north of the project area), is one example. Radiocarbon dates and cultural material place site use from the Middle to Late Woodland, namely the eighth to the thirteenth centuries (Hart and Brumbach 2009). Several extensively excavated Late Woodland sites lie on the west side of Cayuga Lake. Klinko, Indian Fort Road, Parker Farm, and Carman are the occupations of a segment of the Cayuga ancestral sequence. The villages represent the successive settlements of a group moving from

the north to the south, and from the east side to the west side of the lake (Michaud-Stutzman 2009:132; Sydoriak Allen 2009:166). While the main population of the earlier group was located to the east of the lake, a smaller group was present on the west from approximately A.D. 1450 to the late 1500s. Villages on the east side of the lake also went through a sequence of residential base relocations. By the historic period, the scattered villages had converged into one (Michaud-Stutzman 2009). Parker Farm, located on the western side of Cayuga lake, was occupied between the fourteenth and sixteenth centuries, and it represents one of the last prehistoric Cayuga settlements before significant European contact (Michaud-Stutzman 2009). The last village occupied in the sequence on the west side of the lake is Carman. It is the southernmost of the four sites and dates to the late 1500s (Sydoriak Allen 2009). Based on the research completed thus far, a rich Middle to Late Woodland history of occupation ancestral to the Cayuga Nation is present along the margins of Cayuga Lake, and the region remains important to the Nation today.

Prehistoric Sensitivity Assessment

Prehistoric land use in this region was likely organized on a logistical landuse and settlement system. The core of the system was the seasonal hunter-gatherer base-camp or horticultural village (likely occupied by many families). These sites were usually situated near major river confluences or lake out/inlets; for agricultural villages, locations on rises with defendable margins were selected. These large residential bases formed the center of daily domestic activities and tend to contain diverse artifact assemblages and features typical of long-term occupations. Outside of the residential bases, people conducted general foraging activities and specialized tasks. These produced smaller sites, such as single-task camps (such as a quarry or butchering site) and resource-procurement/processing stations that supplied the daily food and non-food resources to the larger residential sites. During periods of seasonal resource dispersal (such as summer), the large residences could have divided into smaller units that moved frequently across the landscape to hunt, gather, and fish. These smaller units would have created a series of small, multi-task camps near isolated resource-rich areas (such as upland wetlands, small streams, and low water river channels).

Overall, this type of logistical organization, along with seasonal aggregation and dispersal, created a variety of site types (Versaggi 1987, 1996). Summary descriptions for these site types commonly found in central New York include:

- **Residential bases** are large sites with high frequencies of artifacts, tools, features, and spatial clusters. These were typically located at confluences near winter deer aggregation areas and dense spring fish runs.

- **Single-task field camps** are typically smaller size occupations that contain large numbers of artifacts and specialized tools. Bifacial reduction debitage is prominent as bifacial tool-kits are replaced and maintained. Single-task temporary camps appear to have been occupied by few people for a short duration, and there may have been little need to organize and divide space. Fewer spatial clusters would result and these would tend to be similar in composition, reflecting a focus on a single or limited range of tasks.

- **Multi-task field camps** are typically smaller size occupations that contain lower numbers of artifacts and tools. These sites resemble forager-like camps in which the occupants moved frequently in pursuit of low density and dispersed resources. Multi-task camps occur in a wide variety of contexts. Some were widely scattered within the valleys of major and secondary drainages, and others were mapped onto specific resource patches in the uplands.

- **Resource-procurement/processing locations** and encounter-like hunting/butchering stations are small occupations with very low numbers of artifacts, tools, and spatial clusters. Generally, these sites are expected within the daily foraging radius around a camp, as well as around dispersed single- and multi-task camps.

The Cornell Heights project is located in the uplands on the east side of Cayuga Lake above Fall Creek. Fall Creek runs through a gorge near the project and eventually empties into the Lake's inlet. This upland context with rugged topography and shallow soils would not have been well-suited for residential bases. However, single or multi-task camps, as well as ephemeral types of land use such as daily foraging would be likely within this landscape. The types of sites reported for this immediate area include single artifact finds suggesting these types of ephemeral land use (hunting). This would support the expected sensitivity for this landform for similar types of landuse.

2.3 Historic Context

Tompkins County was formed from Cayuga and Seneca Counties in 1817. Settlement in Ithaca began in the early 1800s with the village of Ithaca incorporated in 1820. The project area is shown without any structures on the 1853 Fagan map (Figure 5) suggesting it was woodlot (based on the current severe slope, the ravine, and shallow soils). The map shows the project as being within Lot #90. The two major landowners near the project in this lot are Manning and Harrison; it is likely that the land on which the project sits belonged to one of their farmsteads. Cornell University was established by an 1865 act of the New York legislature but no development is shown in the project area on the 1866 Stone and Stewart map (Figure 6). The university grew within its core area, and by 1879 had about forty professors with courses of study that included: arts, literature, philosophy, science, agriculture, architecture, civil engineering, and mechanical arts. At the time, the campus included nine buildings. The fraternity/sorority houses that surround the project area were built near the University in the late 19th and early 20th centuries as the university expanded. The project area remained undeveloped until 1929 when the Sanborn map (Figure 8) shows a structure on the eastern end of the project.

Historic Sensitivity Assessment

Maps of the project area were available for 1853, 1866, 1919 and 1929. The maps show the edge of a residential area located near the campus of Cornell University. The Sanborn maps (1919 and 1929) show that these were empty lots until construction of 150 Highland Avenue in 1920, which is depicted on the 1929 Sanborn map. These lots are located in an area surrounded by fraternity houses. The lot at 152 Highland Avenue includes a bath house/changing house and below ground swimming pool. These are not depicted on any historic map of the project area. There is a high probability of encountering historic materials near the 150 Highland Avenue building, but a low probability of encountering historic resources in other parts of the project area.

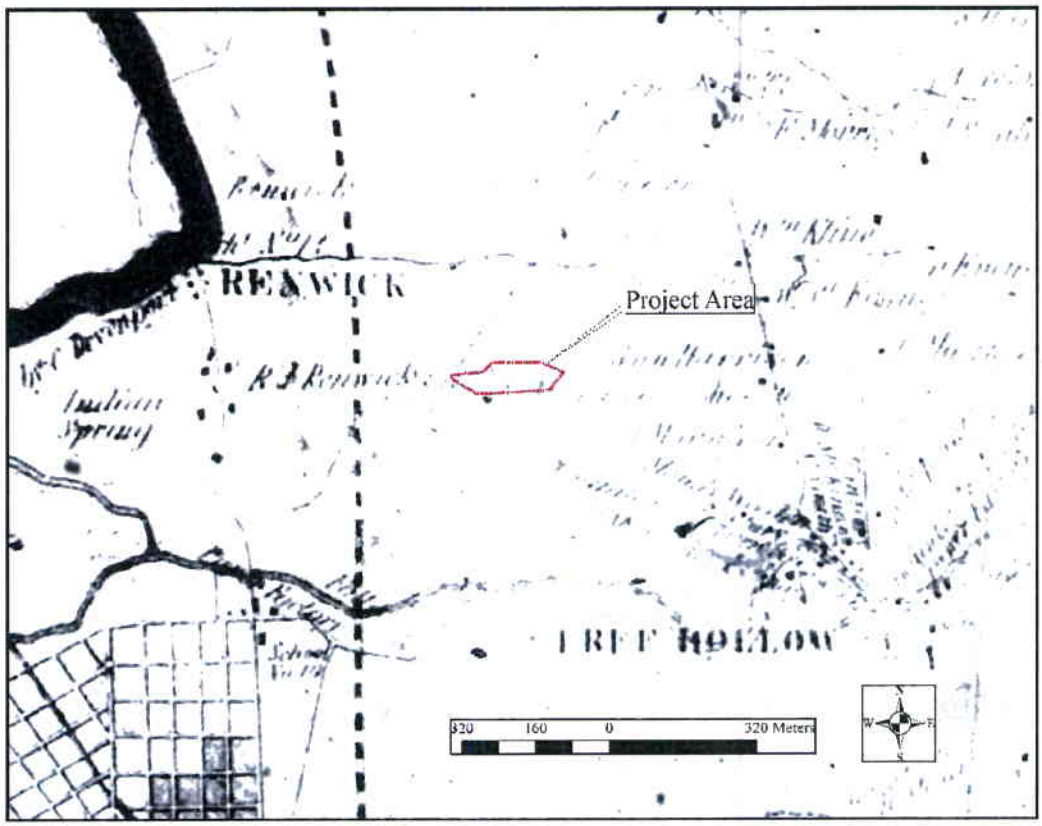

Figure 5. 1853 Fagan map showing the project area.

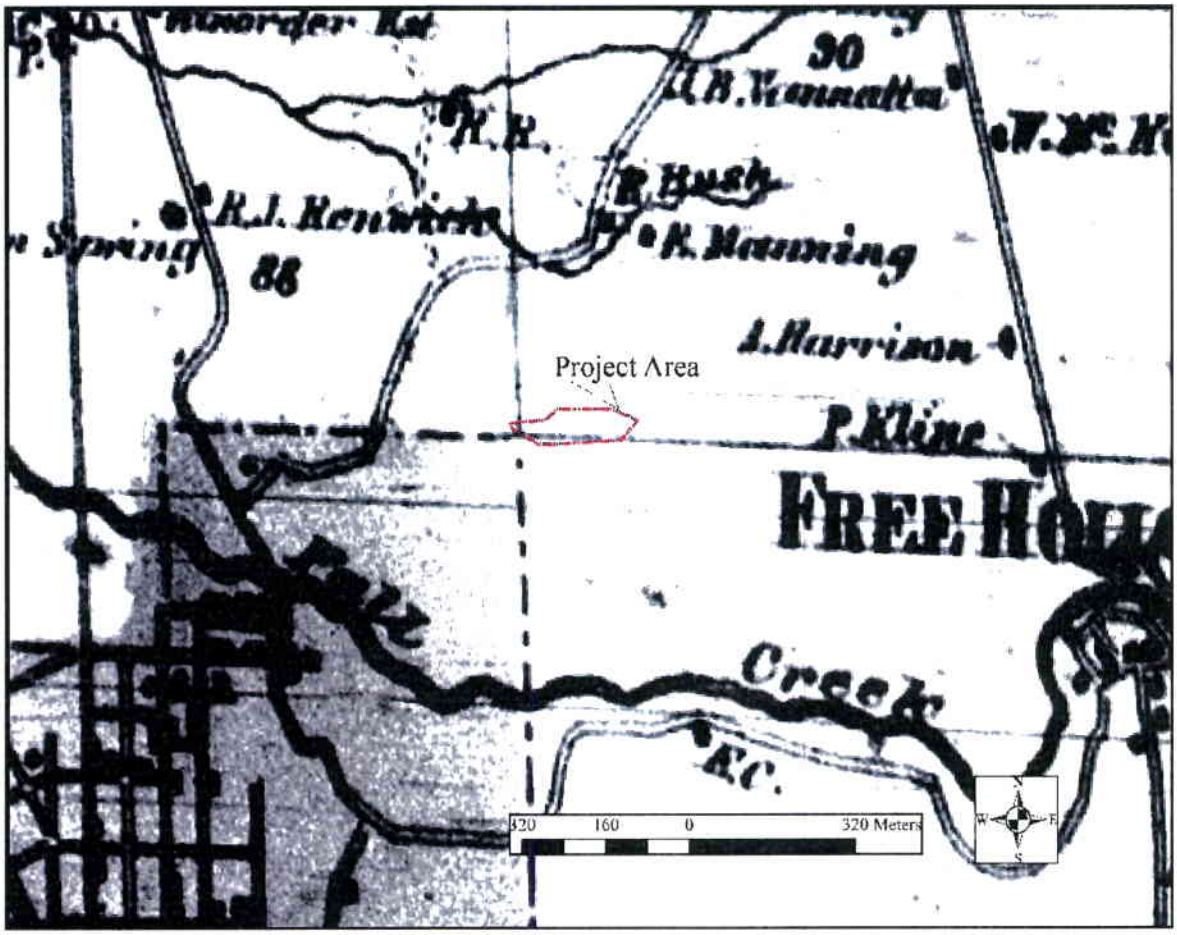

Figure 6. 1866 Stone and Stewart map showing the project area.

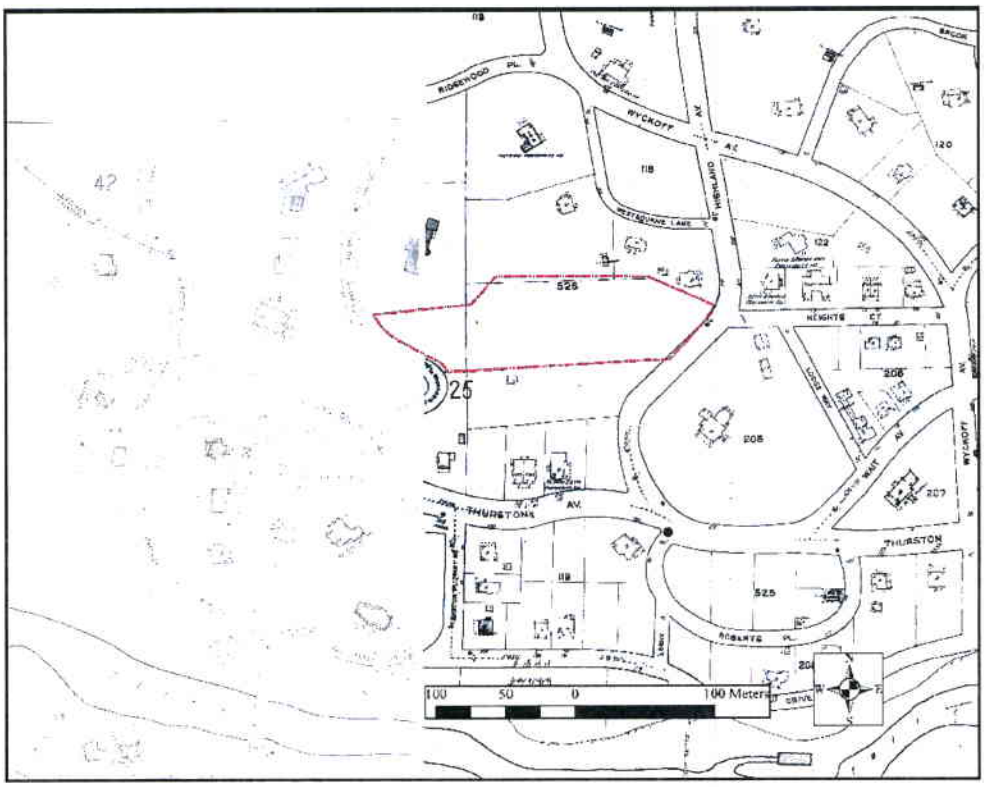

Figure 7. 1919 Sanborn map showing the project area.

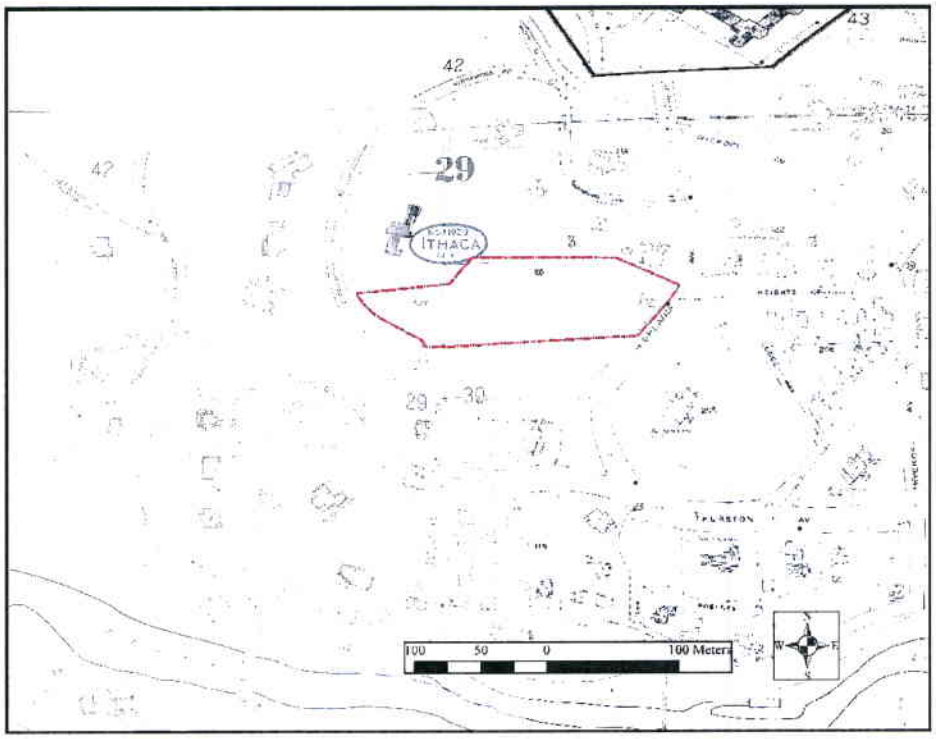

Figure 8. 1929 Sanborn map showing the project area.

III. METHODOLOGY

3.1 Subsurface Testing Procedures

Shovel test pits (STPs) were excavated in all areas that were not disturbed and where the slope was not excessive (i.e., greater than 15%). These areas were confined to the land around the house at 150 Highland Avenue, and along Ridgeway Road. There was a small area in the bottom of the gorge that was also accessible. In some exposed areas the ground was frozen beyond a couple of inches. The frozen ground was removed and then thawed using a kerosene heater. The thawed dirt was then screened normally.

The STPs were excavated with shovels and were generally 40 cm (16 in) in diameter. All STPs extended at least 15 cm (6 in) into sterile subsoil. All soil was sifted through 7 mm (¼ in) hardware cloth. Notation was made of coal ash, brick fragments, and any post-1945 materials such as plastic and roadside debris, and these items were discarded in the field. Written descriptions of soil color and texture, artifact content, and digging conditions were made at the time of excavation. Photographs were taken of the project area, including standing structures. The STP soil records and the artifact catalog are presented in Appendixes IIA (p. 22) and IIB (p. 2).

3.2 General Laboratory Methods

Following fieldwork, all artifacts were processed and analyzed in the laboratories of the Public Archaeology Facility. Processing included washing and dry-brushing fragile material, as well as checking and re-tagging of the artifact bags. Historic artifacts were classified according to a non-hierarchical catalog system developed at PAF. The system, in part, uses a modification of South's artifact classification (South 1976), which identifies broad artifact patterning through the use of functional groups. Following South, each artifact was classified as to functional group (e.g., food related, architectural, personal, smoking, etc.) as well as to a specific type attribute (e.g., nail, bottle, food preparation, etc.). Information on ceramic decoration and form are also recorded, when present, along with time ranges for the manufacture of these artifacts and other diagnostic pieces. All artifacts were coded on the material of manufacture. In the case of ceramic or glass vessels, an item's decoration, color of decoration, manufacturing technique, neck finish and form were noted. Date ranges were added for all diagnostic artifacts, based either on maker's marks, decorative or manufacturing technique, or patent dates. These dates are all based on the production of goods and may not directly reflect their archaeological deposition.

The resulting artifact catalogs were entered into a relational database management program (Paradox) to facilitate subsequent analysis, and are included in Appendix IIB (p. 2). All of the artifacts, notes, and other documentation of the reconnaissance testing are curated according to federal (36 CFR Part 79) and state (NYAC 1994) guidelines in the facilities of the Department of Anthropology at Binghamton University.

IV. RESULTS

4.1 Results of Archaeological Testing

Archaeologists excavated 18 STPs within the project limits at 15 meter intervals (see Appendix IV, p. 24). No prehistoric artifacts were recovered. Historic artifacts were found in 2 STPs (C1 and C6). These artifacts consisted of: an aluminum can top, curved piece of wire, clam shell, amber bottle glass, and clear bottle glass. These artifacts represent random refuse and no historic sites were designated.

Soils in the project area consisted of a topsoil characterized as a medium brown silt loam with rocks that averaged 21.7 cm (8.5 in) in depth. The subsoil consisted of a yellow brown silt loam with rock that averaged 38.5 cm (15 in) in depth. These soils are consistent with the generalized Langford series soils noted earlier.

The extreme slope that dominates much of the project area precludes anything but short term ephemeral prehistoric sites. The very limited amount of relatively flat area indicates that the project area would not have been a preferred place for a residential settlement. Similarly, the yard area near historic structures was limited due to steep slope and the gorge. Sparse materials were encountered in the bottom of the gorge near the bath house and the pool, but these were likely modern refuse. The construction of these two features likely resulted in the leveling of the bottom of the gorge and consequent soil disturbance.

4.2 Results of Architectural Assessment

A general architectural assessment was undertaken for the structures within the project area. There are two properties within the project area (Table 4). Both are greater than 50 years old. Neither has been listed in the National Register of Historic Places, and neither is eligible.

The house at 150 Highland Avenue was built in 1920. The 152 Highland Avenue location does not have a residential structure. It does have a bath house/changing house (noted as a shed on the project maps) and the remnants of a below ground swimming pool. These structures are not depicted on the Sanborn maps, indicating they were built after 1929. There is no map or physical evidence to indicate the presence of a residential structure at the 152 Highland Avenue location.

Table 4. Structures within the project area, City of Ithaca, Tompkins County (MCD 10940)

Address	< 50 yrs.	> 50 yrs.	NRE	Not NRE
150 Highland Avenue		X		X
152 Highland Avenue (Bathhouse/Changing House)		X		X

Photo 9. 150 Highland Avenue, facing west. This is a one story gabled roofed house with unboxed eaves. The house sits on a poured concrete foundation and is clad with wood shingle siding. There is a gabled roof porch that is doing duty as a car port. The windows are 6/6 double hung sash, with aluminum frame storm windows. The house is built into the side of the gorge, and the basement has exposure to the south, and a balcony on the west facade.

Photo 10. 150 Highland Avenue, facing east.

Photo 11. 152 Highland Avenue bathhouse, facing southeast. This structure is a single story, gabled roof building. It has slate shingle siding and a slate shingle roof. Many of the shingles have been removed. Windows and doors have been removed. There is a stone fireplace in the west wall.

Photo 12. 152 Highland Avenue bathhouse, facing southwest.

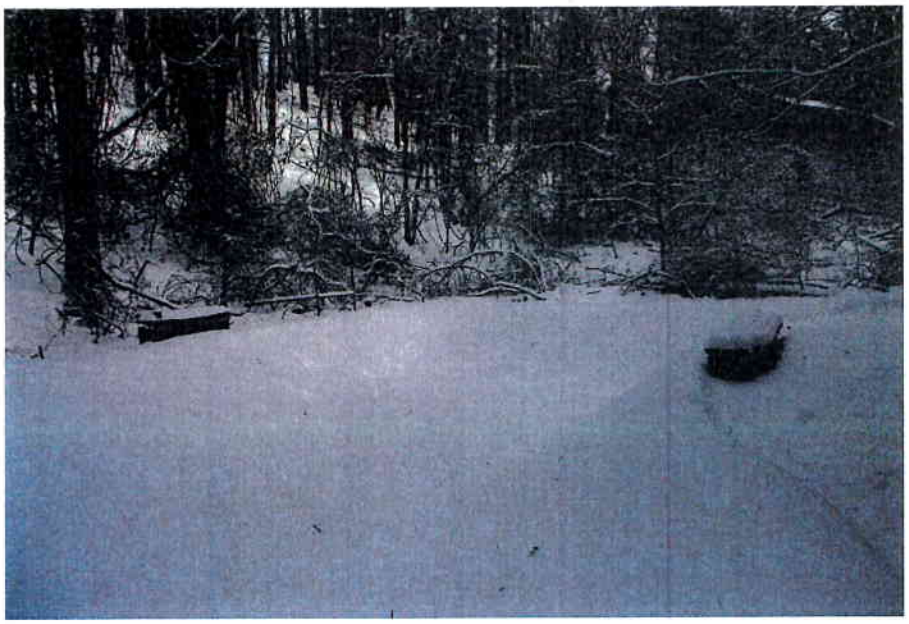

Photo 13. 152 Highland Avenue swimming pool, facing east.

V. RECOMMENDATIONS

The Phase 1A sensitivity assessment determined that previously recorded prehistoric land use near the project area was limited to ephemeral foraging activities, such as hunting and resource collection/processing. Very little historic development has occurred in the project area. Research determined there was a low sensitivity for historic sites.

Phase 1B archaeological testing for this project consisted of the excavation of 18 shovel test pits (STPs). Slope and a natural gorge limited the amount of testing possible. No prehistoric or historic sites were encountered. Some modern refuse was encountered but no historic sites were designated.

The general architectural assessment documented two standing structures greater than 50 years old in the project area: a house built between 1919 and 1929, and a slate-sided bath house adjacent to an in-ground swimming pool. Neither appears to be eligible for the National Register of Historic Places.

Based on the negative findings of this survey, we recommend that the proposed student housing project will not adversely affect National Register eligible archaeological or architectural resources within the project limits. We recommend no further cultural resource work for this project.

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APPENDIX IIA. SHOVEL TEST PIT RECORD

STP Record
Cornell Heights Student Housing Project
All measurements are in centimeters below surface

ABBREVIATIONS USED: P = Prehistoric Cultural Material H = Historic Cultural Material N = No Cultural Material
lt=light md=medium dk=dark br=brown gr=gray yl=yellow ol=olive tn=tan rd=red bk=black wh=white si=silt sa=sand cl=clay lo=loam gvl=gravel Disc.=discarded

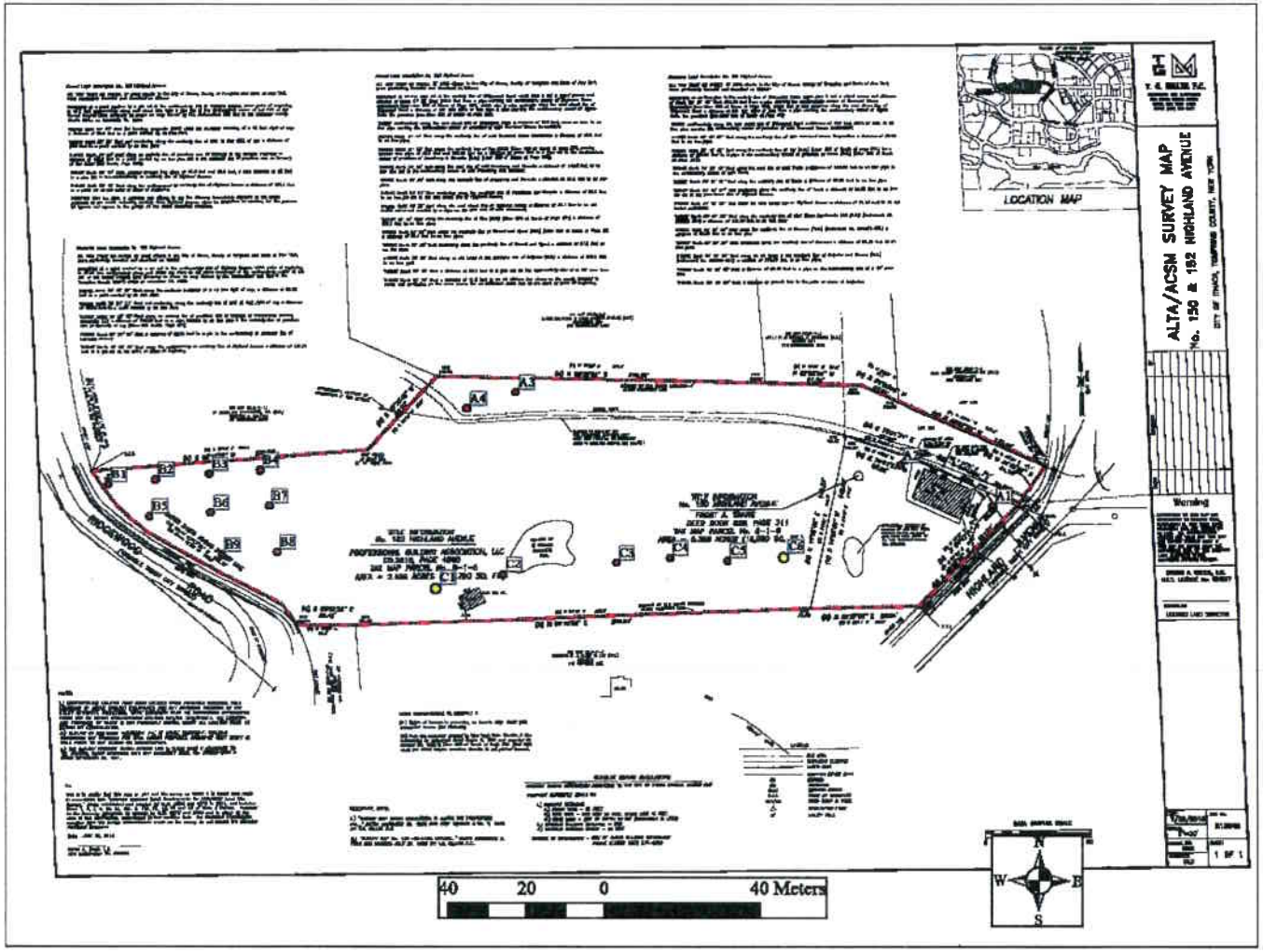
STP	LEV/DEPTH	DESCRIPTION	CM	CREW/DATE
A1	1/0-15	BR SI LO W/ROCK	N	JA/DP/02/12/2014
A1	2/15-30	YL BR SI LO W/ROCK	N	JA/DP/02/12/2014
A2	/-	NOT DUG - DUE TO FILL		/02/12/2014
A3	1/0-19	MD BR SI LO W/ROCKS	N	RK/RS/02/12/2014
A3	2/19-39	YL BR SI LO W/ROCKS	N	RK/RS/02/12/2014
A4	1/0-23	MD BR SI LO W/ROCKS & GVL	N	RK/RS/02/12/2014
A4	2/23-38	YL BR SI LO W/ROCKS & GVL	N	RK/RS/02/12/2014
B1	1/0-17	BR SI LO W/ROCK	N	JA/DP/02/12/2014
B1	2/17-32	YL BR SI LO W/ROCK	N	JA/DP/02/12/2014
B2	1/0-20	MD BR SI LO W/ROCKS	N	RK/RS/02/12/2014
B2	2/20-40	YL BR SI LO W/ROCKS	N	RK/RS/02/12/2014
B3	1/0-20	MD BR SI LO W/ROCKS	N	RK/RS/02/12/2014
B3	2/20-40	YL BR SI LO W/ROCKS	N	RK/RS/02/12/2014
B4	1/0-27	BR SI LO; FROZEN	N	JA/DP/02/12/2014
B4	2/27-52	BR SA LO W/GVL & LG.ROCK; WONDERBREAD BAG, 10 PCS.BONE (GROUNDHOG?) - DISC.	N	JA/DP/02/12/2014
B4	3/52-68	BR SA LO W/GVL & LG.ROCK	N	JA/DP/02/12/2014
B5	1/0-16	MD BR SI LO W/ROCKS	N	RK/RS/02/12/2014
B5	2/16-42	YL BR SI LO W/ROCKS	N	RK/RS/02/12/2014
B6	1/0-20	BR SI LO W/GVL; FROZEN	N	GD/AK/02/12/2014
B6	2/20-36	DK YL BR SI LO W/GVL	N	GD/AK/02/12/2014
B7	1/0-19	DK BR SI LO W/ROCK	N	JA/DP/02/12/2014
B7	2/19-36	YL BR SI LO W/ROCK	N	JA/DP/02/12/2014
B8	1/0-23	DK BR SI LO W/ROCK	N	JA/DP/02/12/2014
B8	2/23-43	YL BR SI LO W/ROCK	N	JA/DP/02/12/2014
B9	1/0-23	MD BR SI LO W/ROCKS	N	RK/RS/02/12/2014
B9	2/23-38	YL BR SI LO W/ROCKS	N	RK/RS/02/12/2014
C1	1/0-36	BR SI LO; CEMENT - DISC.	H	GD/AK/02/12/2014
C1	2/36-51	STRONG YL BR SA SI	N	GD/AK/02/12/2014
C2	1/0-25	BR SI LO W/ROCK	N	GD/AK/02/12/2014
C2	2/25-40	BR SI LO W/ROCK; STOPPED BY ROCK	N	GD/AK/02/12/2014
C3	1/0-20	MD BR SI LO W/ROCKS	N	RK/RS/02/12/2014
C3	2/20-38	YL BR SI LO W/ROCKS	N	RK/RS/02/12/2014
C4	1/0-20	MD BR SI LO W/ROCKS	N	RK/RS/02/12/2014
C4	2/20-35	YL BR SI LO W/ROCKS	N	RK/RS/02/12/2014
C5	1/0-27	BR SI LO; STOPPED BY ROCK	N	GD/AK/02/12/2014
C6	1/0-20	DK BR SI LO W/ROOTS & ROCKS; STOPPED BY ROCK	H	GD/AK/02/12/2014

APPENDIX IIB. ARTIFACT CATALOG

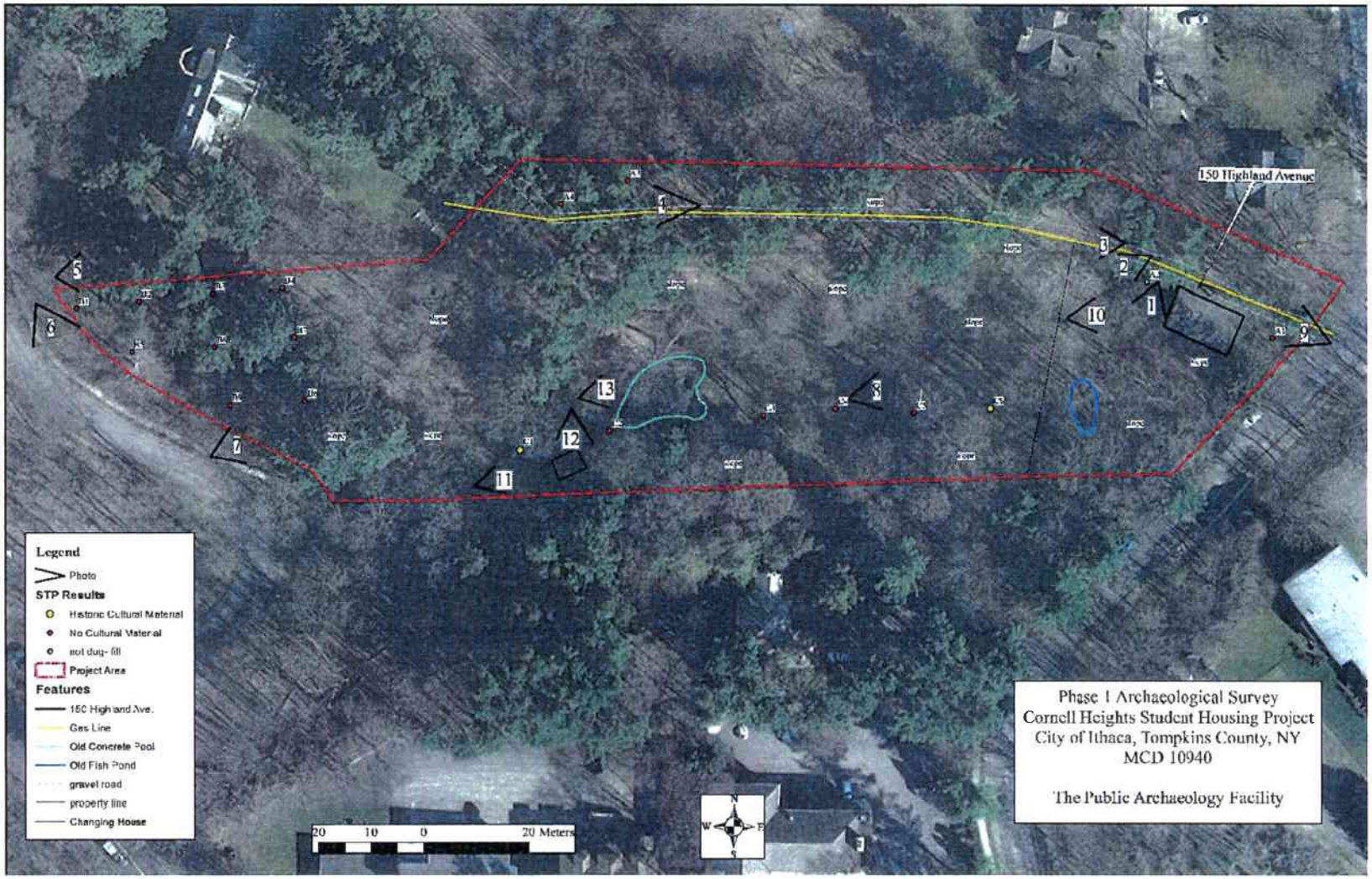
ARTIFACT CATALOG
Cornell Heights Student Housing Project

STP	Level	Depth	Description	CT	WT(g)	Date	Crew/Date
C1	1	0-36	ALUMINUM CAN CAN TOP W/SPACE FOR PULL TAB	1	6.9	1962-2014	GD/AK 02/12/2014
C1	1	0-36	FERROUS METAL WIRE CURVED FRAGS.OF WIRE - POSS.SPRING?	9	49.	-	GD/AK 02/12/2014
C1	1	0-36	SHELL CLAM SMALL CLAM SHELL	1	8.5	-	GD/AK 02/12/2014
C1	1	0-36	GLASS AMBER BOTTLE-UNID.	1	2.4	-	GD/AK 02/12/2014
C6	1	0-20	GLASS AMBER BOTTLE-UNID.	1	0.7	-	GD/AK 02/12/2014
C6	1	0-20	GLASS CLEAR BOTTLE-UNID. "H" ON BASE	4	51.5	-	GD/AK 02/12/2014

APPENDIX III. CLIENT MAP OF PROJECT AREA SHOWING STPs



APPENDIX IV. AERIAL PROJECT MAP SHOWING STPs (Figure 9).



Tab G

Elwyn Palmer
CONSULTING ENGINEERS, PLLC

Subsurface Investigation Report

For

Proposed Ridgewood Road Apartments
1 Ridgewood Road
Ithaca, NY

Prepared for:

Mr. Stephen Bus
Campus Acquisitions Holdings, LLC
sbus@ca-studentliving.com

Provided By:
Elwyn & Palmer Consulting Engineers PLLC
213 E. Seneca Street
Ithaca, New York 14850
Phone 607.272.5060
Fax 607.272.5065
www.ElwynPalmer.com

February 2014

E P

Subsurface Investigation Report
for
Ridgewood Road Apartments
Ithaca, NY

Prepared for:

Mr. Stephen Bus
Campus Acquisitions Holdings, LLC
sbus@ca-studentliving.com

A. INTRODUCTION

We have completed a subsurface investigation for the proposed apartment building project to be located at 1 Ridgewood Road in Ithaca, NY. The work was done in accordance with our proposal of January 10, 2014 and our signed agreement with Campus Acquisitions of January 21, 2014. The subsurface investigation was performed at the site during the period of February 10-24, 2014. This report includes a description of the work performed, a summary and discussion of the findings, and our recommendations for foundation design for the proposed structures.

B. SCOPE OF WORK

The scope of work included advancing six borings at the project site and performing four infiltration tests. Borings were located at corners of the proposed buildings. Infiltration test locations and depths were set by the project civil engineer, TG Miller. Boring locations were staked by TG Miller. A site plan showing the location of the borings and infiltration tests is attached in the Appendix. Logs of each boring and infiltration test logs and test results are included in the Appendix.

C. SITE AND PROJECT DESCRIPTION

The project site is located on the east side of Ridgewood Road not far north from the intersection with Thurston Avenue and immediately south and adjacent to 55 Ridgewood Road. The parcel extends between Ridgewood Road on the west and Highland Avenue on the east with an approximate size of 3 acres.

The property is essentially a three-sided valley with the base of the valley running east-west and steeply sloping sides that slope upward to the north, south, and east. The ground elevation at the base of the valley is approximately Elevation 705 ft. The maximum elevation at the northern and southern property lines are approximately 755 ft and 720 ft, respectively.

The proposed project consists of three 3-story multi-unit apartment buildings. As shown on the attached plan the buildings are to be located closer to the western and southern limits of

the property. We understand the buildings will be wood framed with a steel and concrete framed at-grade parking level beneath the living space. We assumed that first floor elevations for each building will be approximately equal to the current grade at the lowest corner elevation for each building as shown on the attached plan. This will result in excavation depths in the range of 15-25 ft for portions of all three buildings.

D. SUBSURFACE INVESTIGATION

Boring locations were selected by Elwyn & Palmer. The locations were staked by TG Miller prior to the start of the exploration. Soil borings were advanced using 3 ¼ inch inside diameter hollow stem augers. Standard Penetration Tests were performed and split-spoon soil samples were taken using a 2 inch outside diameter split spoon sampler in accordance with ASTM D1586. Samples were taken continuously (2 ft intervals) or at 5 foot or "standard" intervals based on conditions encountered and depth. All boring holes were backfilled with cuttings from the borings and on-site soils.

For infiltration tests, test holes were advanced to the depths selected by TG Miller and notes were made on the logs on characteristics of the soil encountered. Infiltration tests were performed at depths selected by TG Miller and in accordance with NYS guidelines.

Soil samples were classified in the field by the driller with select samples being classified by the engineer in the field. A site plan showing the boring and infiltration test locations is attached. Logs for each of the borings and infiltration tests are attached. The attached boring logs contain soil classifications and standard penetration test results.

E. SUBSURFACE FINDINGS

This section provides a description of the subsurface conditions encountered during the investigation. It is important to note that subsurface conditions will vary across the site and that each boring is only a snapshot of the subsurface conditions at that particular location.

Borings B1-B6 were advanced at corners of the proposed buildings as shown on the attached plan. The soils encountered were primarily sands and gravels with lesser and variable amounts of silt.

Borings B1 and B2 were advanced at the northwest and southeast corners of the proposed westernmost building and from approximate elevations of 716 and 711, respectively. The borings encountered approximately 6-8 inches of topsoil underlain by medium and dense sand and gravel with occasional cobbles to the bottom of the boring at 40 ft and 30 ft, respectively.

Borings B3 and B4 were advanced at the northwest and southeast corners of the proposed middle building and from approximate elevations of 725 and 704, respectively. The borings encountered approximately 5-8 inches of topsoil underlain by 5-7 ft of loose fill that consisted mainly of soil with trace amounts of brick. In B3 this was underlain by medium and dense sand and gravel with occasional cobbles to the bottom of the boring at 40 ft. In B4 the fill was underlain by similar material that was primarily loose in consistency to 12 ft and then firm to the bottom of boring at 20 ft.

Borings B5 and B6 were advanced at the northwest and southeast corners of the proposed easternmost building and from approximate elevations of 706 and 712, respectively. The borings encountered approximately 6-8 inches of topsoil. In B5 the topsoil was underlain by loose to medium dense sand and gravel with occasional cobbles to the bottom of the boring at 20 ft. In B6 similar materials were encountered to the bottom of boring at 30 ft.

Standing groundwater was not encountered in any of the borings. All samples were noted as "moist" but none were found to be wet. This should indicate that the groundwater table is below the depth of exploration and below the depth of construction excavation. It is important to note that during heavy periods of rainfall the groundwater level can rise quickly and could affect construction operations. The project contractor should be directed to be prepared for that situation.

F. INFILTRATION TEST RESULTS

Four infiltration tests were performed at the direction of TG Miller. The infiltration test locations and depths were selected by TG Miller and located in the field by Elwyn & Palmer. Tests were performed in accordance with NYSDEC guidelines. Test location plans prepared by TG Miller, infiltration test results, and logs from the borings advanced for the test holes are included in the Appendix.

As shown on the location plans the infiltration tests were located in or near the base of the valley. The soils encountered during installation of the test pipe were sand and gravel with some silt. The silt content in these locations was somewhat higher than in most of the borings. This is likely due to the location at the bottom of the valley.

Tests P1 and P2 were conducted with the base of the pipe at a depth of 2.5 ft. They resulted in infiltration rates of 0.47 and 0.0 ft/hour, respectively. After these results were reported to TG Miller we were requested to perform tests P1A and P2A. Tests P1A and P2A were conducted with the base of the pipe at 5 ft. These resulted in infiltration rates of 0.21 and 0.39 ft/hour, respectively.

G. GEOTECHNICAL ENGINEERING ANALYSIS

The subsurface soils at the site of the proposed new buildings are primarily medium to dense sands and gravels with areas of similar material of loose consistency. We believe the proposed structures can be supported on conventional shallow foundations and the proposed concrete floor may be constructed as a concrete slab-on-grade provided they are constructed in accordance with the recommendations detailed below.

Foundations shall bear on sound natural subgrade that is approved by the Engineer or a qualified representative. In fill areas the subgrade shall be approved prior to fill placement and structural fill shall be compacted in accordance with the recommendations included in this report.

When reviewing the subsurface conditions for suitability and determining allowable bearing capacity we assumed that the finished floor of each proposed building would be close to the existing grade at the lowest corner of the proposed structure footprint and that foundations

would bear 4 ft below that level. We also assumed the buildings would be wood framed for the upper three floors with a steel and concrete first floor to be used for parking with an at grade entrance.

The soil encountered at the assumed bearing level in borings B1, B2, B3, and B6 was all very competent medium to dense sand and gravel with occasional cobbles. The two borings at the lowest elevation, B4 and B5, encountered soils that were much looser in consistency but still adequate for supporting conventional foundations with an appropriate bearing pressure. In these areas the subgrade will require close attention and undercutting and replacement with select fill may be required if proof rolling reveals areas that are not suitable. Due to the variability in the soil conditions we are recommending a lower allowable bearing pressure that can be used to design footings in all areas of all three proposed buildings.

H. SEISMIC DESIGN

Based on the soils encountered in the borings, the project site can be classified as Seismic Site Class D according to the current edition of the Building Code of New York State. The subsurface exploration did not reveal soils vulnerable to liquefaction or collapse under seismic loading. Based on the locations of the sites and the site class, we determined a value for the maximum considered earthquake spectral response acceleration for short periods, (S_{MS}) of 0.20g, and at 1-second period (S_{M1}) of 0.135g. A full USGS site summary report is attached in the Appendix behind the boring location plan.

I. RECOMMENDATIONS

Based on the results of the subsurface investigation and engineering analyses, we have the following recommendations:

Site Preparation and Excavation

1. Clear, grub, and strip topsoil and remove significant root structures within new construction areas. Remove any remnants of any existing structures encountered from within the new footprint.
2. In areas where fill is required, compact subgrade before placing fill by making at least 4 overlapping passes in perpendicular directions with a self-propelled roller weighing at least 30,000 lbs. Soft or uncompactable areas should be excavated and replaced with granular structural fill approved by the Engineer. The structural fill should be placed to at least 95% of the maximum dry density as determined in accordance with ASTM D1557.
3. All excavation should be performed in accordance with all OSHA and other applicable safety standards.
4. Dewatering operations should be configured to route surface runoff and groundwater away from site and out of the excavation. Operations shall conform to applicable environmental regulations.

5. When structural fill is required beneath foundations it shall consist of an engineered mix of crushed ledge rock conforming to the following gradation:

Sieve Size	Percent Passing
2"	100
1"	80-95
½"	45-75
#4	30-60
#40	10-40
#200	0-7

Foundation Design and Construction

1. The foundations for the proposed new buildings should bear on stable natural subgrade or compacted select fill that is approved by the Engineer. Foundations shall be set not less than 4 ft below finished grade to provide protection against frost.
2. Foundation subgrade to be free of loose or disturbed material. The loose soil at subgrade level should be compacted during a dry period prior to placing of forms.
3. Foundations for the proposed new buildings may be sized using an allowable bearing pressure of 2500 psf.
4. The slab on grade shall be placed on 8 inches of compacted select material. The subgrade below the select material shall be proofrolled in accordance with the above recommendations on Site Preparation. The slab should be reinforced against cracking in accordance with ACI design standards. Concrete slab-on-grade shall be designed using a modulus of subgrade reaction of 150 pci.
5. Minimum width of column footings to be 30 inches, minimum width of wall footings to be 24 inches.
6. We anticipate total and differential settlements of less than 1 and ½ inch, respectively for these foundations.
7. Select granular fill for beneath the slab shall be clean bank run gravel conforming to the following gradation:

Sieve Size	Percent Passing
2"	100
¼""	35-65
#200	0-10

J. CLOSING

Elwyn & Palmer has prepared this report based on our interpretation of the subsurface conditions at the project sites and our understanding of the proposed project. Changes in scope, location, structure type, or loads should be brought to our attention for review to allow us to make changes as necessary to the recommendations provided.

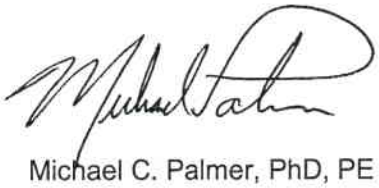
Elwyn & Palmer has performed these services in a manner consistent with the standard methods and level of care exercised by members of the geotechnical engineering profession.

No warranty, expressed or implied, is made in connection with the providing of geotechnical engineering services.

We appreciate the opportunity to be of service on this project. Please call if you have any questions or require additional information.

Sincerely,

ELWYN & PALMER CONSULTING ENGINEERS PLLC



Michael C. Palmer, PhD, PE
Partner

Attachments

E P

APPENDIX

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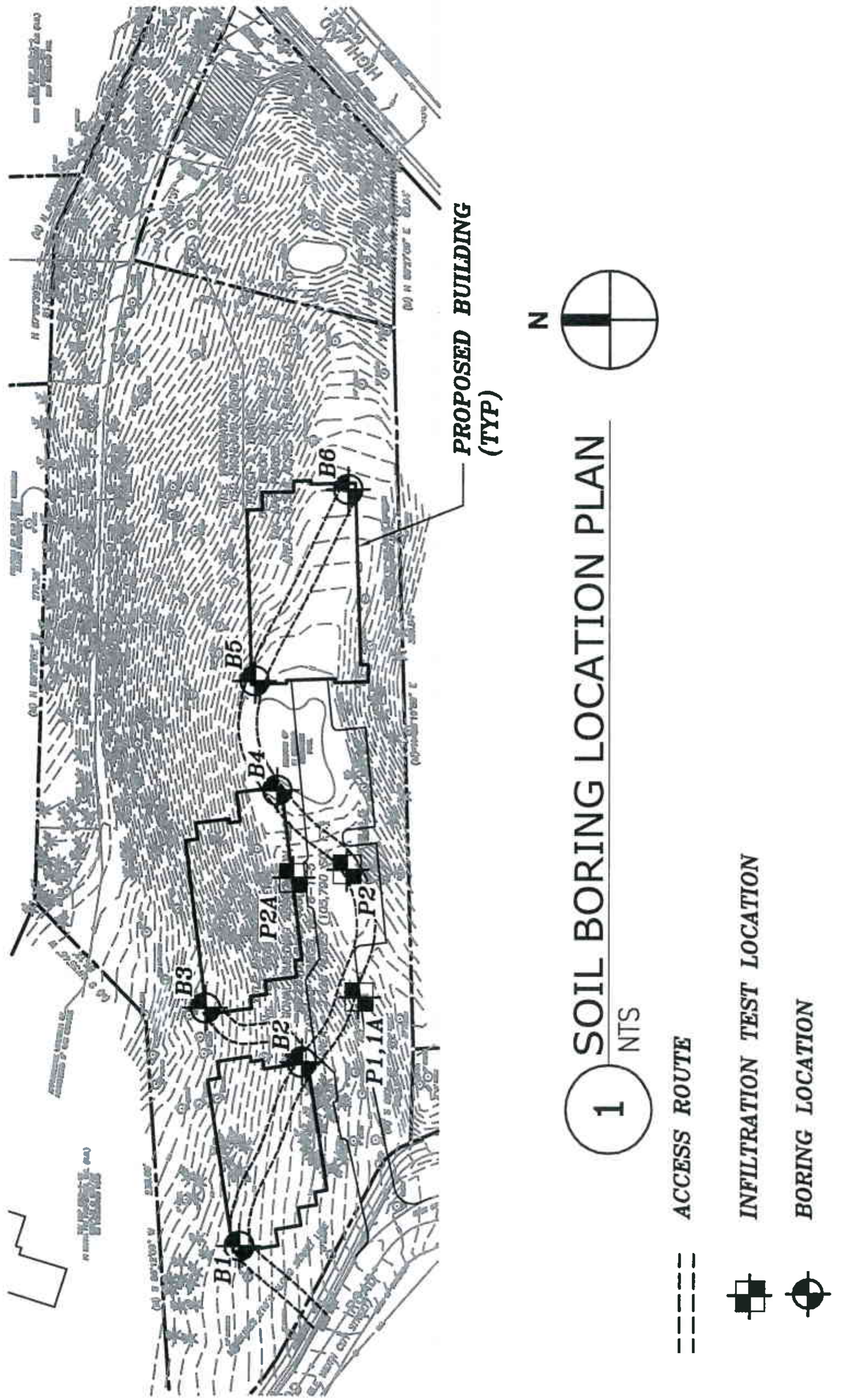
BORING LOCATION PLAN
and
USGS SEISMIC REPORT



Elwyn&Palmer
CONSULTING ENGINEERS, PLLC
Ithaca, New York
607.272.5060 www.ElwynPalmer.com

SOIL BORING / INFILTRATION TEST LOCATION PLAN

SUBSURFACE INVESTIGATION
PROPOSED RIDGEWOOD ROAD APTS
1 RIDGEWOOD ROAD
ITHACA, NY

ISSUE DATE: 2/26/14
PROJECT No.:
DWG. NO.
S1

USGS Design Maps Summary Report

User-Specified Input

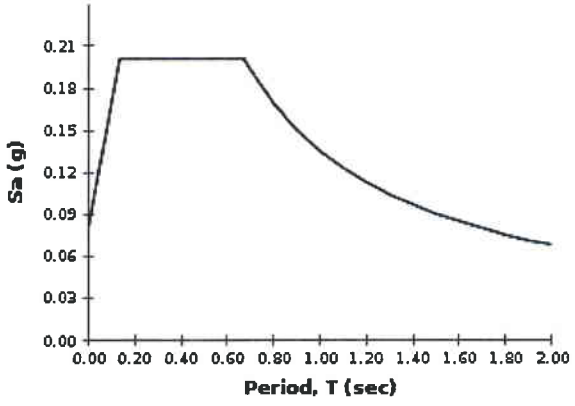
Report Title	Ridgewood Apts Wed March 5, 2014 16:28:15 UTC
Building Code Reference Document	ASCE 7-10 Standard (which utilizes USGS hazard data available in 2008)
Site Coordinates	42.456°N, 76.48893°W
Site Soil Classification	Site Class D – "Stiff Soil"
Risk Category	I/II/III

USGS-Provided Output

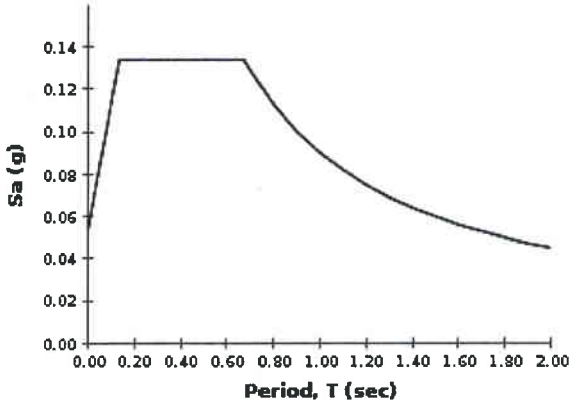
S_S =	0.126 g	S_{MS} =	0.201 g	S_{DS} =	0.134 g
S_1 =	0.056 g	S_{M1} =	0.135 g	S_{D1} =	0.090 g

For information on how the SS and S1 values above have been calculated from probabilistic (risk-targeted) and deterministic ground motions in the direction of maximum horizontal response, please return to the application and select the "2009 NEHRP" building code reference document.

MCE_R Response Spectrum



Design Response Spectrum



For PGA_M, T_L, C_{RS}, and C_{R1} values, please view the detailed report.

E P

BORING LOGS

EP

General Information and Key to Subsurface Logs

The subsurface logs attached to this report present the observations and mechanical data collected by the driller at the site, supplemented by classification of the material removed from the boring as determined through visual identification by technicians in the laboratory. It is cautioned that the materials removed form the borings represent only a fraction of the total volume of the deposits at the site and may not necessarily be representative of the subsurface conditions between adjacent borings or between sampled intervals. The data presented on the subsurface logs together with the recovered samples will provide basis for evaluating the character of the subsurface conditions relative to the project. The evaluation must consider all the recorded details and their significance relative to each other. Often analyses of standard boring data indicate the need for additional testing or sampling procedures to more accurately evaluate the subsurface conditions. Any evaluation of the contents of this report and the recovered samples must be performed by Professionals. The information presented in the following list defines some of the procedures and terms used on the subsurface logs to describe the conditions encountered.

1. The figures in the depth column define the scale of the subsurface log.
2. The sample column shows the depth range from which the sample was recovered. The sample type column will show an "S" for split spoon sample, a "T" for a tube sample and a "C" for a rock core sample.
3. The sample number is used for identification o n sample containers and in laboratory reports.
4. The Blows on Sampler column shows results of the Standard Penetration Tests and indicates the number of blows required to drive a split spoon sampler into the soil. The number of blows required for each six inches of penetration is recorded. The first six inches of penetration is considered the seating drive. The number of blows required for the second and third six inches of penetration is termed the penetration resistance, N. The sampler diameter, hammer weight, and length of drop are noted on the log.
5. All recovered soil samples are reviewed in the laboratory by an engineering technician, geologist, or geotechnical engineer unless noted otherwise. The visual descriptions are made on the basis of a combination of the driller's field descriptions and observations and the sample as viewed in the laboratory. The method of visual classification is based primarily on the Unified Soil Classification System (ASTM D2487) with regard to particle size and plasticity. The relative portion by weight by weight of tow or more soil types is described for granular soils in accordance with "Suggested Methods of Test for Identification of Soils" by D.M. Burmister (ASTM Special Technical Publication No. 479, June 1970). The description of relative soil density or consistency is based on Penetration Test results. The description of soil moisture is based upon relative wetness of the soil as recovered and is described as dry, damp, moist, wet, and saturated. The presence of boulders and large gravel is sometimes, but not necessarily, detected by an evaluation of sampler blows or the behavior of the drill rig.
6. The description of rock is based on the recovered rock core and the driller's observations.
7. The stratification lines present the approximate boundary between soil types. Actual boundaries may vary between sampling intervals and the transition may be gradual. Solid stratification lines are based on the driller's field observations.
8. Miscellaneous observations and procedures noted by the driller are shown on the logs, including water level observations. It is important to realize the reliability of the water level observations depends upon the soil type (water does not readily stabilize in a hole through fine grained soils) and that drill water used to advance the boring may influence the observations. The groundwater level typically will fluctuate seasonally. One or more perched or trapped water levels may exist in the ground seasonally. All the available readings should be evaluated. If definite conclusion cannot be made, it may be necessary to examine the conditions more thoroughly through test pit excavations or observation wells.
9. The length of rock core run is defined as the length of penetration of the core barrel. Core recovery is the length of core recovered divided by the core run. The RQD (Rock Quality Designation) is the total pieces of NX core exceeding 4 inches in length divided by the core run. Fresh, irregular or drilling induced breaks are ignored and the pieces counted as intact lengths. RQD values are valid only for NX size cores (2.125" diameter). The barrel size is noted in the logs.

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Definition of Descriptors used in Boring Logs

Soil Type and Particle Size

Type		Size
Boulder		>12"
Cobble		12"-3"
Gravel		
	Coarse	3"- ¾"
	Fine	¾"-#4
Sand		
	Coarse	#4-#10
	Medium	#10-#40
	Fine	#40-#200
Silt		<#200
Clay		<#200

Soil Type Proportions

Term	Percent of Sample
"and"	35-50
"some"	20-35
"little"	10-20
"trace"	1-10

Relative Compactness or Consistency

Granular Soils

Descriptor	Blows/ft (N)
Loose	<11
Med-Dense	11-30
Dense	31-50
Very Dense	>51

Fine Grained Soils

Descriptor	Blows/ft (N)
Very Soft	0-2
Soft	2-4
Medium	4-8
Stiff	8-15
Very Stiff	15-30
Hard	>30

Stratification Description

Varved – Horizontal uniform layers or seams
Layer – Soil deposit more than 6" thick
Seam – Soil deposit less than 6" thick
Parting – Soil deposit less than 1/8" thick

Rock Classification Terms

Quality	Terms	Definition
Hardness	Soft	Scratched by fingernail
	Medium hard	Scratched easily by penknife
	Hard	Scratched with difficulty by penknife
	Very hard	Cannot be scratched with penknife
Weathering	Very weathered	Judged by the relative amounts of disintegration, iron staining, core recovery, clay seams, etc.
	Weathered	
	Sound	
Bedding	Laminated/Fissile	Less than 0.08"
	Thinly bedded	½" to 2"
	Medium bedded	2" to 2ft
	Thickly bedded	2 ft to 4 ft
	Massive	More than 6 ft

Client ELWYN & PALMER	**LYON DRILLING CO.**	Boring No. B6	
Project HIGHLAND APARTMENTS	**BORING LOG**	Project No.	
Location 1 RIDGEWOOD ROAD, ITHACA, NY		Sheet 1 of 1	
		Date Started 02/18/14	
		Date Completed 02/18/14	
		Driller HARRY LYON	

Drill Rig CME 45 BATV
Casing 3 1/4" I.D. HOLLOW STEM AUGERS
Casing Hammer: Wt. ____ lb. Fall ____ in.
Soil Sampler 2" SPLIT SPOON
Sample Hammer: Wt. 140 lb. Fall 30 in.
Rock Sampler:
Other:

Weather Conditions: 28 OVERCAST

Boring Location AS STAKED, BY CLIENT

Surface Elevation 711.5

Ground Water Observations

Date	Time	Casing at	Hole at	Water at
02/18/14	5:50 PM	27.5	30.0	DRY
02/18/14	6:15 PM	OUT	14.5	DRY

Depth	Sample Number	Sample Depth From (Ft)	Sample Depth To (Ft)	Sample Type	SOIL Blows on Sampler 0'/0 5'	0 5'/1.0'	1.0'/1.5'	1.5'/2.0'	N	Rock Recovery Ft.	Rock Recovery %	RQD	Sample Recovery	MATERIAL DESCRIPTION	Depth of Change	REMARKS
	1	0.0	2.0	S	1	4	4	9	8				0.9	TOPSOIL	0.5	1 HR CLEARING
														MOIST BROWN FINE TO MEDIUM SAND. LITTLE		2:00-3:00
	2	2.0	4.0	S	3	6	6	8	12				1.1	COARSE SAND TO FINE GRAVEL. TRACE SILT	2.0	
														MOIST BROWN FINE SAND. SOME SILT. TRACE		ROOT FIBERS AT 2.5
5	3	4.0	6.0	S	5	6	4	2	10				1.3	ROOTS	2.5	
														MOIST BROWN FINE TO COARSE SAND. LITTLE		0-.7 FROST
	4	6.0	8.0	S	2	2	4	6	6				1.2	FINE GRAVEL. TRACE SILT	5.3	
														MOIST BROWN LOOSE FINE SAND. TRACE		
	5	8.0	10.0	S	4	5	5	9	10				1.3	MEDIUM TO COARSE SAND	9.5	
10														MOIST BROWN FINE TO COARSE SAND. SOME		
														FINE GRAVEL	11.5	
														MOIST BROWN FINE SAND. TRACE COARSE		
	6	13.0	15.0	S	7	7	7	8	14				1.4	SAND TO FINE GRAVEL. TRACE SILT		
15																
	7	18.0	20.0	S	5	8	6	8	14				1.5			
20																
	8	23.0	25.0	S	3	4	5	4	9				1.5			
25																
	9	28.0	30.0	S	3	4	4	5	8				1.2			
														BORING TERMINATED AT 30.0		
30																
35																
40																
45																
50																

Client ELWYN & PALMER	**LYON DRILLING CO.**	Boring No. B2	
Project HIGHLAND APARTMENTS		Project No.	
Location 1 RIDGEWOOD ROAD, ITHACA, NY	**BORING LOG**	Sheet 1 of 1	
		Date Started 02/11/14	
		Date Completed 02/11/14	
		Driller HARRY LYON	

Drill Rig CME 45 BATV
Casing 3 1/4" I.D. HOLLOW STEM AUGERS
Casing Hammer: Wt. ____ lb. Fall ____ in.
Soil Sampler 2" SPLIT SPOON
Sample Hammer: Wt. 140 lb. Fall 30 in.
Rock Sampler:
Other:

Weather Conditions: COLD CLEAR

Boring Location AS STAKED, BY CLIENT

Surface Elevation 711.0

Ground Water Observations

Date	Time	Casing at	Hole at	Water at
02/11/14	1:30 PM	27.5	30.0	DRY
02/11/14	2:00 PM	OUT	4.3	DRY

Depth	Sample Number	Sample Depth From (Ft)	Sample Depth To (Ft)	Sample Type	SOIL Blows on Sampler 0'/0 5'	0.5'/1.0'	1 0'/1 5'	1 5'/2 0'	N	Rock Recovery Ft.	Rock Recovery %	RQD	Sample Recovery	MATERIAL DESCRIPTION	Depth of Change	REMARKS
	1	0.0	2.0	S	2	2	2	1	4				0.9	MOIST BROWN FINE SAND. TRACE SILT WITH ROOTS (TOPSOIL)	0.6	FROST 0 - .5
	2	2.0	4.0	S	2	3	3	4	6				0.6	MOIST BROWN FINE TO COARSE SAND AND FINE GRAVEL	2.5	
5	3	4.0	6.0	S	5	10	14	14	24				1.1	GRADES TO COARSE TO FINE SAND AND FINE GRAVEL WITH OCCASIONAL COBBLES		
	4	6.0	8.0	S	10	26	30	21	56				1.3			
	5	8.0	10.0	S	12	14	15	19	29				1.5			
10																UNABLE TO SAMPLE AT 13.0' DUE TO COBBLE
	6	14.0	16.0	S	22	17	16	18	32				1.0			
15																
	7	18.0	20.0	S	15	22	30	48	52				1.1			
20																
	8	23.0	23.2	S	50/.2								0.0			S#8 DROVE COBBLE
25																
															26.0	
	9	28.0	30.0	S	11	14	14	15	28				1.1	MOIST BROWN FIRM FINE SAND. TRACE SILT		
30														BORING TERMINATED AT 30.0		AUGERS EASILY AT 30.0
																.75 HR CLEARING FOR BORING ACCESS
35																
40																
45																
50																

Client	ELWYN & PALMER	**LYON DRILLING CO.**	Boring No. B3
Project	HIGHLAND APARTMENTS	**BORING LOG**	Project No.
Location	1 RIDGEWOOD ROAD, ITHACA, NY		Sheet 1 of 1
			Date Started 02/11/14
			Date Completed 02/12/14
			Driller HARRY LYON

Drill Rig	CME 45 BATV	Boring Location	AS STAKED, BY CLIENT
Casing	3 1/4" I.D. HOLLOW STEM AUGERS	Surface Elevation	725.0
Casing Hammer: Wt.	lb. Fall in.		
Soil Sampler	2" SPLIT SPOON		
Sample Hammer: Wt.	140 lb. Fall 30 in.		
Rock Sampler:			
Other:			
Weather Conditions:	COLD CLEAR		

Ground Water Observations

Date	Time	Casing at	Hole at	Water at
02/12/14	2:30 PM	28.0	30.0	DRY
02/12/14	3:40 PM	37.5	40.0	DRY
02/12/14	4:00 PM	OUT	14.3	DRY

Depth	Sample Number	Sample Depth From (Ft)	Sample Depth To (Ft)	Sample Type	SOIL Blows on Sampler 0'/0.5'	0.5'/1.0'	1.0'/1 5'	1.5'/2.0'	N	RQD	Rock Recovery Ft.	Rock Recovery %	Sample Recovery	MATERIAL DESCRIPTION	Depth of Change	REMARKS
	1	0.0	2.0	S	1	2	4	4	6				0.2	TOPSOIL	0.7	2:00 - 3:30 CLEARING
														MOIST BROWN LOOSE FINE TO COARSE SAND		FOR BORING ACCESS
	2	2.0	4.0	S	3	3	4	4	7				0.9	LITTLE SILT. TRACE BRICK. TRACE FINE		
														GRAVEL (FILL)		
5	3	4.0	6.0	S	5	6	5	6	11				0.0			
	4	6.0	8.0	S	4	6	5	3	12				0.4		7.5	
														MOIST BROWN LOOSE FINE TO COARSE SAND		
	5	8.0	10.0	S	6	7	5	3	12				0.3	AND FINE GRAVEL		S#5 DROVE COBBLE
10																
	6	10.0	12.0	S	3	5	6	7	11				0.4		10.5	AUGERS HARDER
														MOIST BROWN COARSE TO FINE SAND AND		AT 10.5
	7	13.0	15.0	S	9	10	10	16	20				0.0	FINE GRAVEL WITH OCCASIONAL COBBLES		
															15.5	
15														MOIST BROWN FIRM FINE SAND. TRACE		
														COARSE SAND TO FINE GRAVEL		
	8	18.0	20.0	S	3	5	11	12	16				1.5			
20																
	9	23.0	25.0	S	6	8	10	12	18				1.4			
															25.5	AUGERS HARDER
25														MOIST BROWN COMPACT COARSE TO FINE		AT 25.5
														SAND AND FINE GRAVEL WITH OCCASIONAL		
	10	28.0	30.0	S	16	18	23	26	41				1.5	COBBLES		
															31.5	
30														MOIST BROWN FIRM FINE SAND. TRACE FINE		
														GRAVEL WITH OCCASIONAL COBBLES		
	11	33.0	35.0	S	35	25	20	18	45				0.0			S#11 DROVE COBBLE
35	12	35.0	37.0	S	8	10	11	8	21				1.5			
	13	38.0	40.0	S	8	10	10	10	20				1.4			
														BORING TERMINATED AT 40.0		
40																
45																
50																

Client ELWYN & PALMER	**LYON DRILLING CO.**	Boring No. B4	
Project HIGHLAND APARTMENTS		Project No.	
Location 1 RIDGEWOOD ROAD, ITHACA, NY	**BORING LOG**	Sheet 1 of 1	
		Date Started 02/13/14	
		Date Completed 02/17/14	
		Driller HARRY LYON	

Drill Rig CME 45 BATV
Casing 3 1/4" I.D. HOLLOW STEM AUGERS
Casing Hammer: Wt. _____ lb. Fall _____ in.
Soil Sampler 2" SPLIT SPOON
Sample Hammer: Wt. 140 lb. Fall 30 in.
Rock Sampler:
Other:

Weather Conditions: 25 SNOW

Boring Location AS STAKED, BY CLIENT

Surface Elevation 704.0

Ground Water Observations

Date	Time	Casing at	Hole at	Water at
02/17/14	3:30 PM	17.5	20.0	DRY
02/17/14	4:00 PM	OUT	8.5	DRY

Depth	Sample Number	Sample Depth From (Ft)	Sample Depth To (Ft)	Sample Type	SOIL Blows on Sampler 0'/0.5'	0.5'/1 0'	1.0'/1.5'	1.5'/2 0'	N	Rock Recovery Ft.	Rock Recovery %	RQD	Sample Recovery	MATERIAL DESCRIPTION	Depth of Change	REMARKS
	1	0.0	2.0	S	3	6	4	5	10				0.5	TOPSOIL	0.4	CLEARING FOR BORING
														MOIST BROWN COARSE TO FINE SAND AND		ACCESS 1.5 HR
	2	2.0	4.0	S	4	3	3	3	6				0.5	FINE GRAVEL WITH COBBLES. TRACE		0 - 1.0 FROST
														SILT (FILL)		
5	3	4.0	6.0	S	2	3	8	3	4				0.5		5.8	
														MOIST BROWN LOOSE FINE SAND. TRACE		
	4	6.0	8.0	S	2	3	3	3	6				1.1	MEDIUM TO COARSE SAND. TRACE SILT		
														(APPEARS NATURAL)	8.5	
	5	8.0	10.0	S	4	3	3	3	6				0.0	MOIST BROWN LOOSE FINE TO COARSE SAND		
10														SOME GRAVEL WITH COBBLES	10.0	AUGERS EASILY
	6	10.0	12.0	S	2	3	3	4	6				0.7	MOIST BROWN LOOSE FINE TO COARSE SAND		0 - 11.8
														SOME FINE GRAVEL	11.8	
	7	13.0	15.0	S	6	8	8	8	16				1.5	MOIST BROWN FIRM FINE SAND. TRACE		
														MEDIUM SAND TO FINE GRAVEL		COBBLE AT 16.5
15																AUGERS EASILY
															19.0	AT 17.0
														SIMILAR LOOSE BROWN FINE SAND. TRACE		
	8	18.0	20.0	S	4	5	6	7	11				1.5	MEDIUM SAND TO FINE GRAVEL		
20														BORING TERMINATED AT 20.0		
25																
30																
35																
40																
45																
50																

Client ELWYN & PALMER	**LYON DRILLING CO.**	Boring No. B5	
Project HIGHLAND APARTMENTS	**BORING LOG**	Project No.	
Location 1 RIDGEWOOD ROAD, ITHACA, NY		Sheet 1 of 1	
		Date Started 02/17/14	
		Date Completed 02/18/14	
		Driller HARRY LYON	

Drill Rig CME 45 BATV
Casing 3 1/4" I.D. HOLLOW STEM AUGERS
Casing Hammer: Wt. _____ lb. Fall _____ in.
Soil Sampler 2" SPLIT SPOON
Sample Hammer: Wt. 140 lb. Fall 30 in.
Rock Sampler:
Other:

Weather Conditions: 25 SNOW

Boring Location AS STAKED, BY CLIENT

Surface Elevation 705.5

Ground Water Observations

Date	Time	Casing at	Hole at	Water at
02/18/14	1:15 PM	17.5	20.0	DRY
02/18/14	1:35 PM	OUT	14.5	DRY

Depth	Sample Number	Sample Depth From (Ft)	Sample Depth To (Ft)	Sample Type	SOIL Blows on Sampler 0'/0.5'	0.5'/1.0'	1.0'/1.5'	1.5'/2.0'	N	Rock Recovery Ft.	Rock Recovery %	RQD	Sample Recovery	MATERIAL DESCRIPTION	Depth of Change	REMARKS
	1	0.0	2.0	S	1	10	5	4	15				1.3	FROZEN BROWN FINE SAND. SOME SILT (TOPSOIL)	0.7	0-1.0 FROST
	2	2.0	4.0	S	4	7	9	12	16				0.8	MOIST BROWN FINE TO COARSE SAND. LITTLE SILT. TRACE ROOTS	2.5	
5	3	4.0	6.0	S	4	3	3	2	6				1.3	MOIST BROWN LOOSE FINE TO COARSE SAND SOME FINE GRAVEL WITH OCCASIONAL		
	4	6.0	8.0	S	2	2	3	10	4				1.1	COBBLES	5.5	
	5	8.0	10.0	S	12	12	10	10	22				0.0	MOIST BROWN LOOSE FINE SAND. TRACE SILT. TRACE FINE GRAVEL		
10																AUGERS HARDER
	6	10.0	12.0	S	5	5	5	8	10				1.1		12.0	AT 12.0
	7	13.0	15.0	S	5	4	7	8	11				0.2	GRADES TO FINE TO COARSE SAND. SOME FINE GRAVEL WITH OCCASIONAL COBBLES		
15															17.0	
	8	18.0	20.0	S	5	7	7	10	14				1.0	MOIST BROWN FINE SAND. TRACE FINE GRAVEL		
20														BORING TERMINATED AT 20.0		
																CLEARING 4:00-4:35 1/2 HR
25																
30																
35																
40																
45																
50																

Client ELWYN & PALMER

Project HIGHLAND APARTMENTS

Location 1 RIDGEWOOD ROAD, ITHACA, NY

LYON DRILLING CO.

BORING LOG

Boring No. B6
Project No.
Sheet 1 of 1
Date Started 02/18/14
Date Completed 02/18/14
Driller HARRY LYON

Drill Rig CME 45 BATV
Casing 3 1/4" I.D. HOLLOW STEM AUGERS
Casing Hammer: Wt. ____ lb. Fall ____ in.
Soil Sampler 2" SPLIT SPOON
Sample Hammer: Wt. 140 lb. Fall 30 in.
Rock Sampler:
Other:

Weather Conditions: 28 OVERCAST

Boring Location AS STAKED, BY CLIENT

Surface Elevation 711.5

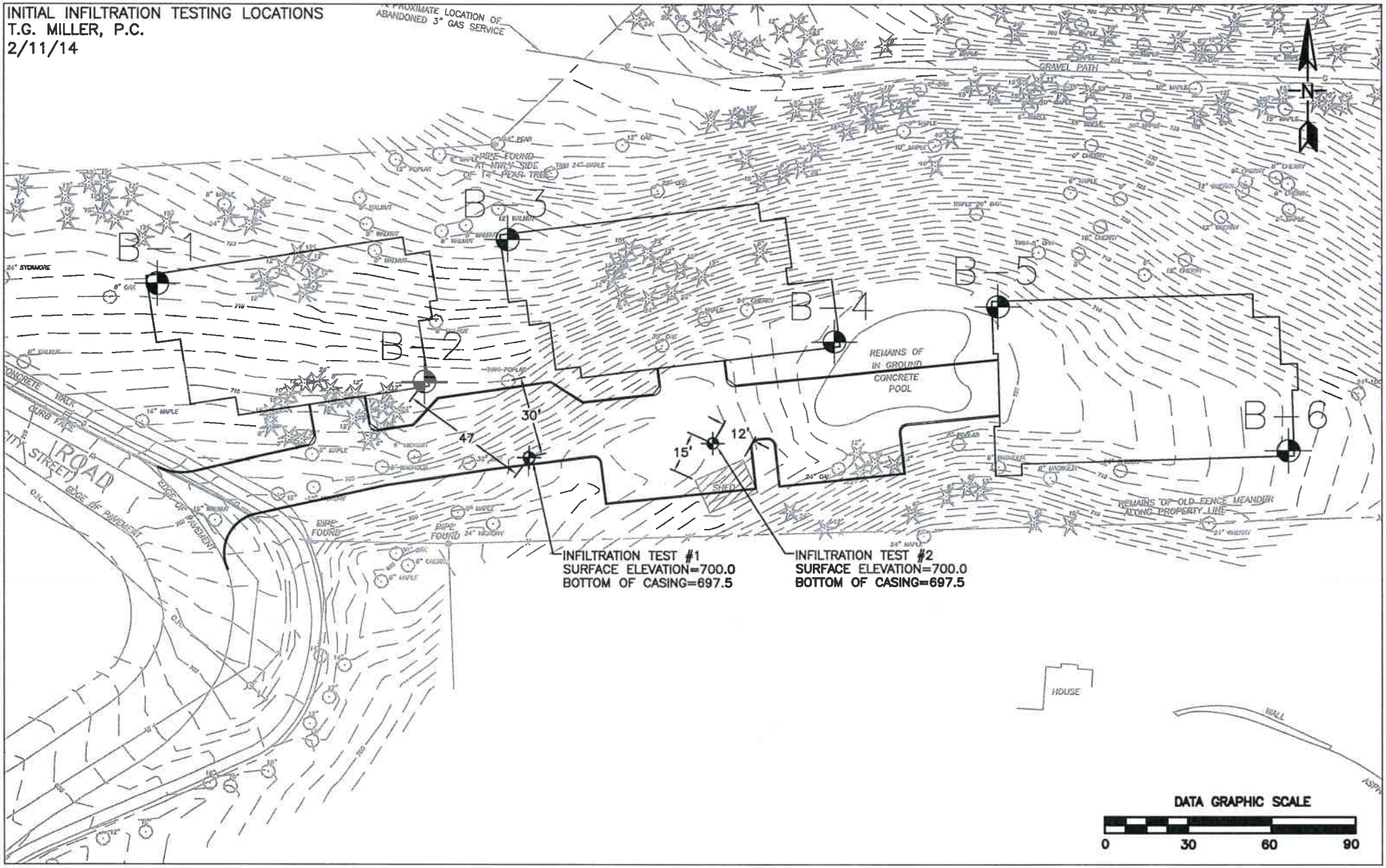
Ground Water Observations

Date	Time	Casing at	Hole at	Water at
02/18/14	5:50 PM	27.5	30.0	DRY
02/18/14	6:15 PM	OUT	14.5	DRY

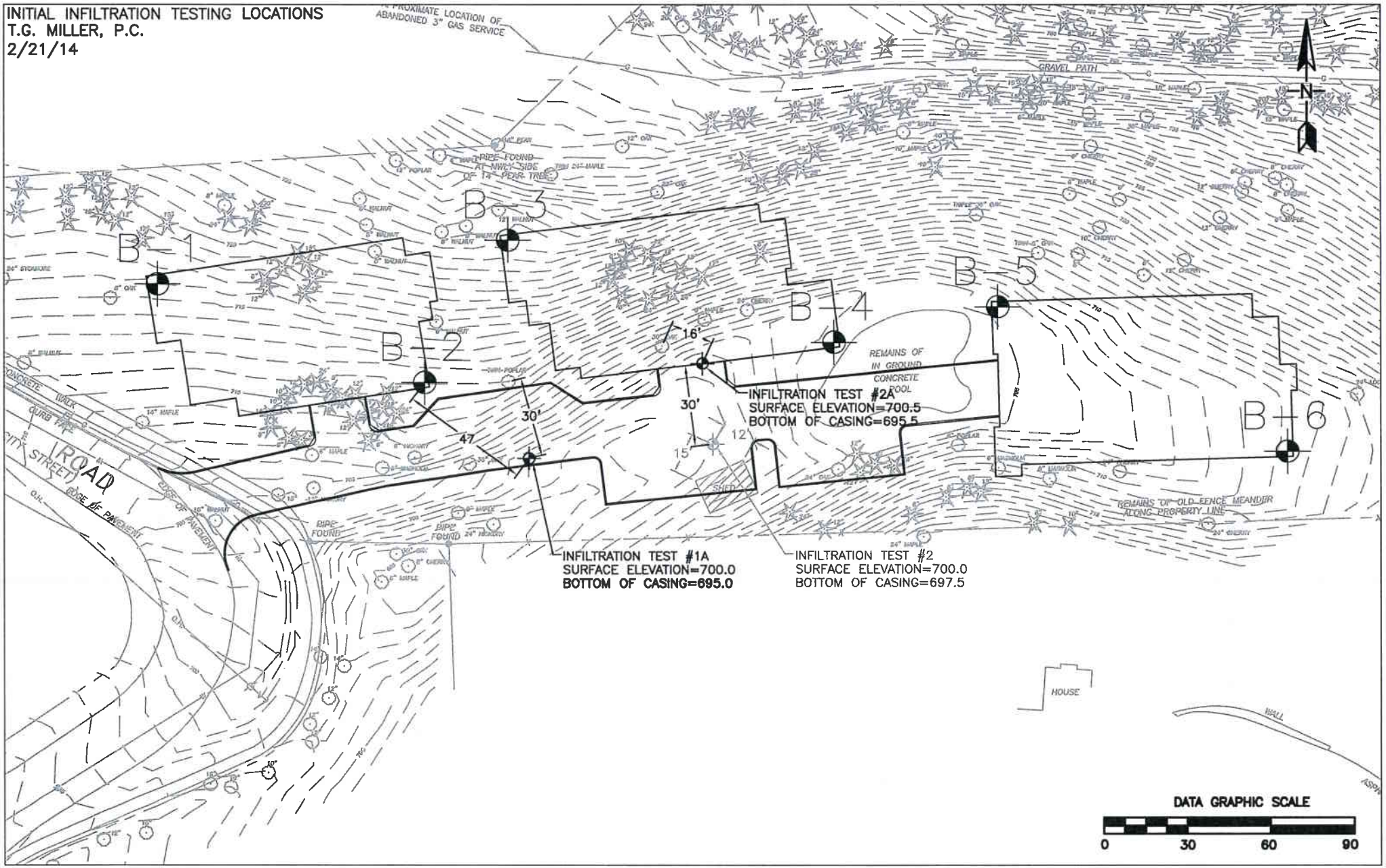
Depth	Sample Number	Sample Depth From (Ft)	Sample Depth To (Ft)	Sample Type	SOIL Blows on Sampler 0'/0.5'	0.5'/1.0'	1.0'/1.5'	1.5'/2.0'	N	Rock Recovery Ft.	Rock Recovery %	RQD	Sample Recovery	MATERIAL DESCRIPTION	Depth of Change	REMARKS
	1	0.0	2.0	S	1	4	4	9	8				0.9	TOPSOIL	0.5	1 HR CLEARING
														MOIST BROWN FINE TO MEDIUM SAND. LITTLE		2:00-3:00
	2	2.0	4.0	S	3	6	6	8	12				1.1	COARSE SAND TO FINE GRAVEL. TRACE SILT	2.0	
														MOIST BROWN FINE SAND. SOME SILT. TRACE		ROOT FIBERS AT 2.5
5	3	4.0	6.0	S	5	6	4	2	10				1.3	ROOTS	2.5	
														MOIST BROWN FINE TO COARSE SAND. LITTLE		0-.7 FROST
	4	6.0	8.0	S	2	2	4	6	6				1.2	FINE GRAVEL. TRACE SILT	5.3	
														MOIST BROWN LOOSE FINE SAND. TRACE		
	5	8.0	10.0	S	4	5	5	9	10				1.3	MEDIUM TO COARSE SAND	9.5	
10														MOIST BROWN FINE TO COARSE SAND. SOME		
														FINE GRAVEL	11.5	
														MOIST BROWN FINE SAND. TRACE COARSE		
	6	13.0	15.0	S	7	7	7	8	14				1.4	SAND TO FINE GRAVEL. TRACE SILT		
15																
	7	18.0	20.0	S	5	8	6	8	14				1.5			
20																
	8	23.0	25.0	S	3	4	5	4	9				1.5			
25																
	9	28.0	30.0	S	3	4	4	5	8				1.2			
														BORING TERMINATED AT 30.0		
30																
35																
40																
45																
50																

E P

INFILTRATION TESTS


INITIAL INFILTRATION TESTING LOCATIONS
T.G. MILLER, P.C.
2/11/14
APPROXIMATE LOCATION OF ABANDONED 3" GAS SERVICE
GRAVEL PATH
PIPE FOUND AT NW'LY SIDE OF 14" PEAR TREE
B-1
B-2
B-3
B-4
B-5
B-6
REMAINS OF IN GROUND CONCRETE POOL
30'
47'
12'
15'
SHED
CONCRETE WALK
CURB FACE
EDGE OF PAVEMENT
ROAD
PIPE FOUND
PIPE FOUND
REMAINS OF OLD FENCE MEANDER ALONG PROPERTY LINE
HOUSE
WALL
INFILTRATION TEST #1
SURFACE ELEVATION=700.0
BOTTOM OF CASING=697.5
INFILTRATION TEST #2
SURFACE ELEVATION=700.0
BOTTOM OF CASING=697.5
N
DATA GRAPHIC SCALE
0
30
60
90

INITIAL INFILTRATION TESTING LOCATIONS
T.G. MILLER, P.C.
2/21/14



E P

Infiltration Test Results: Proposed Ridgewood Road Apartments, Ithaca, NY

Test Date: February 19, 2014. Test locations and depths determined by TG Miller.

All Tests Pre-soaked 24 Hours before testing

P-1 Pipe bottom @ 2.5'		P-2 Pipe bottom @ 2.5'	
Minutes	Depth	Minutes	Depth
Initial	0.50	Initial	0.50
1	0.50	1	0.50
2	0.51	2	0.50
5	0.53	5	0.50
10	0.57	10	0.50
15	0.64	15	0.50
30	0.84	30	0.50
45	0.93	45	0.50
60	0.97	60	0.50
Rate:	0.47' Per Hour		0' Per Hour

E P

Infiltration Test Results: Proposed Ridgewood Road Apartments, Ithaca, NY

Test Date: February 24, 2014. Test locations and depths determined by TG Miller.

All Tests Pre-soaked 24 Hours before testing

P-1A Pipe bottom @ 5'		P-2A Pipe bottom @ 5'	
Minutes	Depth	Minutes	Depth
Initial	3.00	Initial	3.00
1	3.05	1	3.00
2	3.10	2	3.05
5	3.15	5	3.14
10	3.16	10	3.16
15	3.18	15	3.18
30	3.18	30	3.27
45	3.20	45	3.34
60	3.21	60	3.39
Rate:	0.21' Per Hour		0.39' Per Hour

Client ELWYN & PALMER

Project HIGHLAND APARTMENTS

Location 1 RIDGEWOOD ROAD, ITHACA, NY

LYON DRILLING CO.

BORING LOG

Boring No. P1
Project No.
Sheet 1 of 1
Date Started 02/19/14
Date Completed 02/19/14
Driller HARRY LYON

Drill Rig CME 45 BATV
Casing 3 1/4" I.D. HOLLOW STEM AUGERS
Casing Hammer: Wt. ____ lb. Fall ____ in.
Soil Sampler 2" SPLIT SPOON
Sample Hammer: Wt. 140 lb. Fall 30 in.
Rock Sampler:
Other:

Weather Conditions: 35 OVERCAST

Boring Location AS STAKED, BY CLIENT
Surface Elevation

Ground Water Observations

Date	Time	Casing at	Hole at	Water at

Depth	Sample Number	Sample Depth From (Ft)	Sample Depth To (Ft)	Sample Type	SOIL Blows on Sampler 0'/0.5'	0.5'/1 0'	1 0'/1 5'	1 5'/2 0'	N / RQD	Sample Recovery	MATERIAL DESCRIPTION	Depth of Change	REMARKS
						Rock Recovery Ft.	Rock Recovery %						
	1	0.0	2.0	S	2	3	3	2		1.3	TOPSOIL	0.6	0-.4 FROST
											MOIST BROWN FINE TO COARSE SAND AND		S#2 RECOVERY FROM
	2	2.0	2.5	S	2					1.2	FINE GRAVEL. TRACE SILT	1.5	CUTTER PRAD
											MOIST BROWN FINE SAND. SOME SILT. TRACE		
5											MEDIUM TO COARSE SAND		4" PVC PIPE SET AT 2.5'
											BORING TERMINATED AT 2.5		
													.25 CLEARING
10													
15													
20													
25													
30													
35													
40													
45													
50													

Client ELWYN & PALMER

Project HIGHLAND APARTMENTS

Location 1 RIDGEWOOD ROAD, ITHACA, NY

LYON DRILLING CO.

BORING LOG

Boring No. P1A
Project No.
Sheet 1 of 1
Date Started 02/22/14
Date Completed 02/22/14
Driller HARRY LYON

Drill Rig CME 45B ATV
Casing 3 1/4" I.D. HOLLOW STEM AUGERS
Casing Hammer: Wt. ____ lb. Fall ____ in.
Soil Sampler 2" SPLIT SPOON
Sample Hammer: Wt. 140 lb. Fall 30 in.
Rock Sampler:
Other:

Weather Conditions: 40 SNOWY

Boring Location AS STAKED, BY CLIENT
Surface Elevation

Ground Water Observations

Date	Time	Casing at	Hole at	Water at

Depth	Sample Number	Sample Depth From (Ft)	Sample Depth To (Ft)	Sample Type	SOIL Blows on Sampler 0'/0.5'	0.5'/1.0'	1.0'/1.5'	1.5'/2.0'	N	Rock Recovery Ft.	Rock Recovery %	RQD	Sample Recovery	MATERIAL DESCRIPTION	Depth of Change	REMARKS
														TOPSOIL	0.4	0-.7 FROST
														MOIST BROWN FINE TO COARSE SAND. SOME		
	1	3.0	5.0	S	4	3	5	4	8				0.8	FINE GRAVEL. LITTLE SILT	2.0	ADDITIONAL SOIL
														MOIST BROWN FINE SAND. SOME SILT		BAGGED FROM AUGER
5														LITTLE MEDIUM SAND TO FINE GRAVEL		CUTTINGS
														BORING TERMINATED AT 5.0		
																INSTALLED 4" I.D. PVC
																AT 5.0'
																SEE PERK TEST
10																DATA SHEET
15																
20																
25																
30																
35																
40																
45																
50																

Client ELWYN & PALMER

Project HIGHLAND APARTMENTS

Location 1 RIDGEWOOD ROAD, ITHACA, NY

LYON DRILLING CO.

BORING LOG

Boring No. P2
Project No.
Sheet 1 of 1
Date Started 02/19/14
Date Completed 02/19/14
Driller HARRY LYON

Drill Rig CME 45 BATV
Casing 3 1/4" I.D. HOLLOW STEM AUGERS
Casing Hammer: Wt. _____ lb. Fall _____ in.
Soil Sampler 2" SPLIT SPOON
Sample Hammer: Wt. 140 lb. Fall 30 in.
Rock Sampler:
Other:

Weather Conditions: 35 OVERCAST

Boring Location AS STAKED, BY CLIENT
Surface Elevation

Ground Water Observations

Date	Time	Casing at	Hole at	Water at

Depth	Sample Number	Sample Depth From (Ft)	Sample Depth To (Ft)	Sample Type	SOIL Blows on Sampler 0'/0.5'	0.5'/1.0'	1.0'/1.5'	1.5'/2.0'	N	RQD	Rock Recovery Ft.	Rock Recovery %	Sample Recovery	MATERIAL DESCRIPTION	Depth of Change	REMARKS
	1	0.0	2.0	S	14	5	4	3	9				1.0	TOPSOIL	0.4	0-.7 FROST
														MOIST BROWN FINE TO COARSE SAND. SOME		
	2	2.0	2.5	S									0.4	FINE GRAVEL	2.2	
5														MOIST BROWN FINE SAND. SOME MEDIUM TO COARSE SAND. SOME SILT		4" PVC PIPE SET AT 2.5'
														BORING TERMINATED AT 2.5		
																.25 CLEARING
10																
15																
20																
25																
30																
35																
40																
45																
50																

Client ELWYN & PALMER

Project HIGHLAND APARTMENTS

Location 1 RIDGEWOOD ROAD, ITHACA, NY

LYON DRILLING CO.

BORING LOG

Boring No. P2A
Project No.
Sheet 1 of 1
Date Started 2/222/14
Date Completed 02/22/14
Driller HARRY LYON

Drill Rig CME 45B ATV
Casing 3 1/4" I.D. HOLLOW STEM AUGERS
Casing Hammer: Wt. ____ lb. Fall ____ in.
Soil Sampler 2" SPLIT SPOON
Sample Hammer: Wt. 140 lb. Fall 30 in.
Rock Sampler:
Other:

Weather Conditions: 40 SNOWY

Boring Location AS STAKED, BY CLIENT
Surface Elevation

Ground Water Observations

Date	Time	Casing at	Hole at	Water at

Depth	Sample Number	Sample Depth From (Ft)	Sample Depth To (Ft)	Sample Type	SOIL Blows on Sampler 0'/0 5'	0.5'/1.0'	1 0'/1 5'	1 5'/2 0'	N	Rock Recovery Ft.	Rock Recovery %	RQD	Sample Recovery	MATERIAL DESCRIPTION	Depth of Change	REMARKS
														TOPSOIL	0.6	0-.4 FROST
														MOIST BROWN FINE SAND. SOME MEDIUM TO		
	1	3.0	5.0	S	5	7	6	5	13				0.7	COARSE SAND. LITTLE FINE GRAVEL. TRACE		ADDITIONAL SOIL
														ROOTS	1.5	BAGGED FROM AUGER
5														MOIST BROWN FINE TO COARSE SAND. SOME		CUTTINGS
														SILT. LITTLE FINE GRAVEL WITH OCCASIONAL		
														COBBLES		INSTALLED 4" I.D. PVC
														BORING TERMINATED AT 5.0'		AT 5.0'
10																SEE PERK TEST
																DATA SHEET
15																
20																
25																
30																
35																
40																
45																
50																