Phillips Lytle LLP

December 14, 2017

VIA HAND DELIVERY
Village of Trumansburg Planning Board
c/o Mr. Rick Geiger, Chairman
Village Hall
56 E. Main Street
Trumansburg, NY 14886

Re: **Application for Preliminary Site Plan Review**
Ithaca Neighborhood Housing Services and Sundial Property Development, LLC/Claudia Brenners' Proposed Project at 46 South Street in the Village of Trumansburg, New York

Dear Chairman Geiger and Members of the Planning Board:

As you know, we represent Ithaca Neighborhood Housing Services ("**INHS**") in connection with the project at 46 South Street ("**Project**"), which involves the proposed development of a residential/mixed-use/mixed-income residential project on a nineteen (19) acre parcel of property located at 46 South Street in the Village of Trumansburg, New York ("**Site**"). The Project, which will be set on fifteen (15) individual lots, will consist of seventeen (17) market rate for-sale units, ten (10) affordable for-sale townhomes, six (6) affordable rental townhomes, and forty (40) rental apartments in a two story elevator building. The apartment building will include a 3,000 square foot community lounge which will house a kitchenette and laundry facilities for use by residents, as well as management and maintenance offices. The Trumansburg Community Nursery School, a 501c3 non-profit organization, will construct and operate a 4,500 square foot school on the Site. The goal of the Project is to create an intergenerational, mixed-income community where seniors can age in place and young families can purchase homes in the very competitive local housing market.

On behalf of INHS, and Sundial Property Development, LLC/Claudia Brenner ("**Applicants**"), we are submitting this letter of intent and application with supporting documentation for preliminary site plan review ("**Site Plan Application**"). We request that the Village of Trumansburg Planning Board ("**Planning Board**") commence its Preliminary Site Plan Review process. We also request that the Planning Board initiate an environmental review of the Project pursuant to Article 5 of the Village of Trumansburg Code ("**Code**"), as well as the State Environmental Quality Review Act, Article 8 of the New York Environmental Conservation Law, as amended and the

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regulations adopted pursuant thereto by the Department of Environmental Conservation of the State of New York, being 6 N.Y.C.R.R. Part 617, et. seq., as amended ("**SEQRA**") (collectively "**VEQRA/SEQRA**")

Enclosed you will find one (1) original and eight (8) copies of this LOI, with the following exhibits attached hereto and made part hereof:

Exhibit A:	Aerial Map
Exhibit B:	Site Survey
Exhibit C:	Detailed Site Plan/Preliminary Plat
Exhibit D:	Parts I & II of the Full Environmental Assessment Form ("**EAF**")
Exhibit E:	Civil Engineering Plans
Exhibit F:	Landscaping Plan
Exhibit G:	Site Lighting and Signage Plan
Exhibit H:	Building Elevations
Exhibit I:	Color Photographs of the Site
Exhibit J:	Project Renderings
Exhibit K:	Evidence of Site Control/Deeds
Exhibit L:	Estimated Project Construction Schedule
Exhibit M:	List Identifying Any Other Necessary Permits
Exhibit N:	Stormwater System Calculations
Exhibit O:	Narrative of Consistency With Comprehensive Plan/Zoning
Exhibit P:	Community Engagement and Outreach Materials
Exhibit Q:	Traffic Impact Study
Exhibit R:	Wetland Delineation
Exhibit S:	Phase I/II Environmental Site Assessment Summaries
Exhibit T:	Soil Boring/Geotechnical Report
Exhibit U:	Letters from Water/Sewer/Fire/School District
Exhibit V:	Flora/Fauna Study
Exhibit W:	SHPO Letter of No Impact
Exhibit X:	Community Letters of Support
Exhibit Y:	Case Study Summaries
Exhibit Z:	Projected Number of Residents
Exhibit AA:	Precedent Architectural Images

December 14, 2017

PROJECT DETAILS

Applicant:	Ithaca Neighborhood Housing Services ("**INHS**"); Sundial Property Development, LLC/Claudia Brenner
Attorney Contact:	Phillips Lytle LLP Attention: Adam S. Walters, Esq. One Canalside 125 Main Street Buffalo, NY 14203 Telephone: (716) 847-7023 E-mail: awalters@phillipslytle.com
Project Location:	46 South Street in the Village of Trumansburg, New York in an Area Zoned R1 Residential District
Property Owner:	Sundial Property Development, LLC
Project Description:	INHS proposes the development of a residential/mixed-use/mixed-income neighborhood project resulting in seventeen (17) market rate for-sale units, ten (10) affordable for-sale townhomes, six (6) affordable rental townhomes, and forty (40) rental apartments in a two story elevator building. The apartment building will include a 3,000 square foot community lounge which will house a kitchenette and laundry facilities for use by residents, as well as management and maintenance offices. The Trumansburg Community Nursery School, a 501c3 non-profit organization, will construct and operate a 4,500 square foot school on the Site.

PROJECT NARRATIVE

The Site consists of nineteen (19) acres located at 46 South Street in the Village of Trumansburg. See Aerial Map attached hereto as ***Exhibit A***. The Project is being developed by Sundial Property Development, LLC/Claudia Brenner, a local architect, and INHS, a 40 year old non-profit organization. Both Ms. Brenner and INHS have a history of working in the Village. INHS currently manages sixty (60) units of senior housing on Juniper Lane and four (4) units on Main Street in the Village. Ms. Brenner has been the architect of record on more than twenty (20) projects in the Village.

The Project consists of the new development of seventy-three (73) housing units and a nursery school. The housing will be a mix of for-sale and rental. The proposed unit mix includes seventeen (17) market rate for-sale units to be developed and sold by Ms. Brenner, ten (10) affordable for-sale homes sold by INHS, six (6) affordable rental townhomes, and forty (40) rental apartments in a two story elevator building owned and managed by INHS. The apartment building will include a 3,000 square foot community lounge which will house a kitchenette and laundry facilities for use by residents, as well as management and maintenance offices. The Trumansburg Community Nursery School, a 501c3 non-profit organization, will construct and operate a 4,500 square foot school on the Site.

The Applicants have undertaken an extensive pre-application public outreach process to help inform the community on Project plans and goals as well as to receive input and feedback on various aspects of the Project. Applicants have held three (3) community meetings and various small-group listening sessions, attended many Village Planning Board meetings to present preliminary plans and met with the Village Board of Trustees. Applicants have also had several one-on-one meetings with community members and presented to the Trumansburg Rotary Club. A detailed compilation of community engagement and outreach materials are attached hereto as ***Exhibit P, Community Engagement and Outreach Materials***. Community letters of support for the Project are attached hereto as ***Exhibit X, Community Letters of Support***.

Applicants' extensive pre-application public outreach has been invaluable in shaping the final Project concept proposed for preliminary site plan review. Project plans have evolved substantially since early Project concept plans were presented. Many of these

changes were reflected in Applicants' sketch plan submittal in August 2018. However, Applicants have made a number of significant changes to the Project since its Sketch Plan submittal. At the Sketch Plan conference with the Planning Board on August 24, 2017, numerous concerns were brought up by Planning Board members for the Applicants to consider. As a result of that meeting, and as a result of continued public feedback and comment, Applicants have developed a substantially revised site plan concept. ***See Exhibit C, Detailed Site Plan/Preliminary Plat***. Indeed, even the Project name, Hamilton Square, has been dropped, as it is no longer reflective of the Project design.

The new site plan addresses, specifically, the following concerns:

1. The new site plan clusters dwelling units and allows for two (2) small pocket neighborhood nodes. The number of buildings decreased from twenty-nine (29) to nineteen (19) while still maintaining the same number of total units. This continues to conform to the density requirements in the Village Code and also allows for a greater variety of housing types. Village Code requires that affordable and market rate units be spread throughout the site, rather than clustered together. While more of the affordable rentals are in a single building in the most recent site plan, there will be a range of incomes mixed throughout that building from low to middle income, with no differentiation in the quality of the units. In addition, the market rate homes and affordable rental and for sale townhomes are interspersed around the perimeter of the site. The two (2) pocket neighborhood nodes contain both affordable rental and for sale to further integrate the housing types.

2. Applicants revised the unit mix of the affordable rentals to increase the number of one (1) bedroom units, which are more senior-friendly. These units have been aggregated into a two (2) story apartment building at the center of the Site with a wide internal corridor, elevator, laundry room, and community lounge for socializing all contained within the building. There will be several handicapped accessible units, and all units will be adaptable, meaning that accessible features can be easily added. This building will be similar to existing buildings in the Village in similar neighborhood settings, the closest example being Juniper Manor I and II which includes sixty (60) units in two (2) buildings on 7.3 acres.

3. The revised unit mix also addresses concerns in the community about the number of people and vehicles in the development. By increasing the number of one (1) bedroom units and decreasing the number of three (3) bedrooms, the projected number of residents living at 46 South Street goes from 188 to 140, which reduces the estimated number of vehicles to 104.

4. Concerns were also raised about the level of site disturbance and amount of impervious surface. The revised site plan places the public road on the ridgeline of the Site, which means less cut and fill is required for road leveling. The decrease in number of buildings as well as the altered road path decreases the percentage of Site disturbance by thirteen (13) percent, and the plan decreases the public road by roughly two hundred (200) linear feet and eliminates several driveways. Less impervious surface will decrease the amount of run-off and improve drainage.

5. Planning Board members had questions about the amount of traffic generated by the Project, as well as the advisability of forming a road connection to South Street in an area with many mature trees and a wetland. The new plan removes the northern South Street vehicle entrance entirely and replaces it with a meandering pedestrian trail through the trees. The team created two (2) site plan concepts that were presented to the Planning Board on October 12th: one with all vehicles entering and exiting onto Pennsylvania Avenue and utilizing the 30 foot wide utility easement as an auxiliary fire access lane to South Street, and the second utilizing the utility easement as a private drive. The Planning Board indicated a strong preference for maintaining two (2) entrances into the Site from Pennsylvania Avenue and South Street. Applicants chose to move forward with the option utilizing the utility easement as a private drive. This option avoids disturbing wetlands and requires less infrastructure and stormwater management.

6. The new site plan pulls buildings closer to the core of the Site, which will result in deeper backyards and allow for greater conservation of existing vegetation around the perimeter of the Site, nearest the adjacent properties. Deeper lots will also enable a landscape strategy which is intended to provide an outer ring

forested landscape buffer. Along with the elimination of the original South Street entrance, this approach allows for the retention of up to forty (40) mature trees, while the original site plan called for these trees to be removed. The proposed landscaping plan will create a forested environment along those edges of the Site which are dominantly brush meadow now by planting tree "whips" (industry term for trees under 1" diameter at time of planting).

7. Several planning board members felt the previous design was too orthogonal or "urban". The revised site plan removes the linear public and private drives in favor of curved or meandering roadways. This approach creates a much more unique site plan with opportunities for additional landscaped areas and a larger and more meaningful natural area at the southern edge that serves to define the unique "natural" community character.

8. The stormwater management strategy has been refined to further enhance the natural appearance and serve a dual purpose as a passive recreation amenity with the possible creation of new wetlands. (***See Exhibit E, Civil Engineering Plans.***)

In addition to the concerns that resulted in the above Project changes, throughout the outreach process, Applicants have consistently heard several concerns about the Project. Specifically, concerns about density, compliance with the Village's affordable housing requirements, drainage and traffic have been repeatedly expressed. Thus, below you will find a brief discussion of how Applicants have worked to address each of the issues.

A. DENSITY

We understand through numerous discussions with the Village, and comments from the public, that the density of the proposed Project is a large concern and some have alleged that the Project violates Village Code density requirements. Code § 302 sets forth the dimensional requirements for all residential development in the residential zoning districts. Standards include minimum lot size, minimum yards, height and frontage. Id. The code explicitly states that there may be more than one principal

building, structure or use on the property. Code § 1003(117).[1] Section 703 of the Code states that no dwelling in any district shall provide less than 850 square feet. It also sets forth a table for minimum standards/square footage of the affordable units based upon the number of bedrooms in the dwelling. Code § 308.9(B). Finally, § 715 of the Code states that when there is more than one principal building on a lot in any district, the space between such buildings must be at least equal to the sum of the side yards required by such buildings or the sum of the rear and front yards as the case may be.

Based upon a review of the Code, and projecting the use of all available space on the Site, if the Applicants were to build the Site out at maximum capacity per the standards set forth in the Code (with no affordable housing component), the Site would allow for one-hundred eight (108) total units. A chart setting forth the total square footage of each lot and allowable units per the same is included below.

Lot #	Lot Square Footage	Maximumm Development Allowed	Maximum Development Allowed w/ Affordable Housing Bonus	Development Proposed
LOT 1	22634	2	4	2
LOT 2	86247	15	25	5
LOT 3	27532	2	5	3
LOT 4	27507	3	5	4
LOT 5	22511	2	4	2
LOT 6	27638	3	6	3
LOT 7	57156	8	15	0
LOT 8	38040	5	9	0
LOT 9	15753	1	2	1
LOT 10	16479	1	2	1
LOT 11	28836	3	6	3
LOT 12	317206	60	95	47
LOT 13	15651	1	2	0
LOT 14	15995	1	2	1
LOT 15	15654	1	2	1
TOTALS	734839	108	184	73

[1] **Principal Buildings, Structures and Uses.** Buildings, structures and uses that define the chief physical structures and uses of land on a site. *There may be more than one principal building, structure or use on a property;* a common example is an apartment complex that includes more than one building with apartments. (emphasis added).

However, § 308.6 (Affordable Housing) allows for reduced dimensional requirements on any particular lot. The allowed increase in density is directly related to the proportion of affordable units provided in the development. All development must provide a minimum of 20% affordable units, which then allows for the minimum lot area and minimum lot width to be calculated at 80% of the dimensional requirements. Where any development includes more than 20% affordable units, the minimum lot area and minimum lot width is the difference between the proportion of affordable units and 100%. The Code does not allow for a reduction in the dimensional requirements by more than 65%. Per the above chart, if the Applicants were to build the Site out at maximum capacity, utilizing the reduced dimensional requirements for each lot per the standards set forth in the Code, the Site would allow for one hundred eighty four (184) total units.

The Project consists of seventy three (73) total units. Thus, the proposed development represents less than 40 percent of the density allowable on the Site. INHS has designed the Project to be consistent with the Village Code, and spirit of the affordable house demands/requirements of the same. Given its proximity to Main Street and the Trumansburg Central School District campus, the proposed density seems highly appropriate for the Site. (A detailed analysis on consistency with the Comprehensive Plan is attached as ***Exhibit O*** hereto.) It has also been designed to be compatible with the Project Area and the surrounding neighborhood. In addition, the Applicants have worked to preserve a large amount of green space, and even set aside an entire lot, Lot 7 (***See Exhibit C, Detailed Site Plan/Preliminary Plat***), to remain undeveloped and provide for a scenic 640 foot walkway from the Site to South Street.

Overall, Applicants believe that the Project will create positive impacts to the growth and character of the area by providing for needed, market rate and affordable housing opportunities without impairing the character or quality of the existing community.

B. AFFORDABLE HOUSING REQUIREMENTS

During the pre-application public outreach process, many community members have expressed the view that Trumansburg does not need affordable housing and/or that the

Project does not comply with the Village's affordable housing provisions. In 2008, Village residents and the Village Board of Trustees came together in a series of meetings to spell out their collective vision for Trumansburg's future. Conversation centered on housing, economic development, and land use, among other topics. The Comprehensive Plan presents the first expression of interest in the creation of affordable housing in the Village. The Comprehensive Plan states that the median sales price of single family homes had increased by approximately 62 percent between 1995 and 2005, from $93,500 to $151,000. ***See Comprehensive Plan, p. 15***. More importantly, the Comprehensive Plan states, as a goal, that the Village must "[C]ontinue to develop residential neighborhoods of varying densities that offer a range of affordable housing options." Id.

In 2012, the Village revised its Code to further the implementation of the 2008 Comprehensive Plan. Thus, the Code now contains an affordable housing requirement that mandates that any new residential development with ten (10) or more units over a five-year period must provide at least twenty (20) percent of the projects total units as "affordable units". Affordable units are those that are rented at the Current Affordable Rate, which is defined as the most recently published Fair Market Rents as determined by the U.S. Department of Housing and Urban Development, or sold at the Current Affordable Price, defined as two-and-a-half (2.5) times the most recently published Median Family Income. The Code states that the purpose of the Affordable Housing Provision is to promote public welfare by providing safe, decent, and affordable housing for all incomes; to ensure enough housing, especially for low-income households; to mitigate housing shortage and balance the demand and supply of housing by constructing more housing units; and to integrate all residents of the County regardless of their income levels.

At this time, eighty (80) percent of the units are anticipated to be affordable under the Code definition. For a complete breakdown of the total number of units, see ***Exhibit Z, Projected Number of Residents.*** The affordable housing units are dispersed throughout the Project with the market rate units. ***See Exhibit C, Detailed Site Plan/Preliminary Plat***. Exterior appearance of, and interior materials for all affordable units will be constructed with similar design and materials as will be used in the market rate units pursuant to Village Code § 308 et seq.

Based upon these principles, the Project directly addresses the need for affordable housing outlined in the Comprehensive Plan and required by the Code as part of any new residential development with 10 or more units, by providing for sale and for rent options developed by a non-profit housing organization that will provide on-site management and maintenance and ensure affordable housing in Trumansburg.

C. DRAINAGE/STORMWATER

TG Miller Engineering PC is the Project civil engineer and responsible for designing the storm water management practices. TG Miller has been working to develop a Storm Water Pollution Prevention Plan ("**SWPPP**") and the Project will be required to obtain a SPDES Permit from the New York State Department of Environmental Conservation ("**NYSDEC**"). Conceptual stormwater designs are attached hereto as ***Exhibit E***. NYSDEC standards require the Project to mitigate stormwater rates of runoff to meet existing stormwater rates, or reduce proposed rates below existing rates where possible. The goal of these standards is to ensure that new projects maintain existing rates of runoff and do not adversely impact downstream neighbors. These standards also require practices to treat (or filter) the runoff to reduce pollutants such as sediments, nitrogen and phosphorous.

Prior to construction, all practices will be reviewed and approved by MRB, the Engineering firm retained by the Village to ensure that the stormwater management plan meets the State and Village requirements. The Project will construct ponds that hold water for a short duration (24 to 48 hours), then are empty during dry weather periods. The only permanent ponding areas may be small wetland marshes (depths of 6" to 18" in any constructed wetlands). And while deicing materials are not regulated, salt-tolerant plants will be selected per the guidelines found in the NYSDEC Stormwater Design Manual. In contrast, the ponds in the Village are mostly farm ponds that impound great volumes of water and are full most of the year.

The SWPPP and SPDES permit will only be issued if TG Miller can demonstrate that the amount of run-off post construction is equal to or less than the amount of run-off pre-construction. To better analyze the current conditions a geotechnical report was completed that included twenty (20) soil borings and two (2) percolation ('perc') tests on the Site to determine the depth of groundwater and soil characteristics. (See

Exhibit T, Soil Boring/Geotechnical Report). All of this information is being used to design a storm water management system that meets the stringent rules and regulations imposed by the NYSDEC. See ***Exhibit E, Civil Engineering Plans,*** for more detail on stormwater design.

D. TRAFFIC ANALYSIS

Traffic has been a significant concern during both the pre-application process with the Planning Board and throughout the public outreach process. In light of those concerns, the Applicants have commissioned a detailed traffic study, attached hereto as ***Exhibit Q, Traffic Impact Study***. Applicants would like to point out that the most recent, revised TIS includes two (2) additional intersections that were analyzed based upon feedback from the community. The Traffic Impact Study ("**TIS**") commenced with data gathering from the NYSDOT within the study area about existing traffic patterns. This information was supplemented with field data collection and observations of existing traffic patterns. Once existing traffic patterns were understood, an estimate of the amount of traffic that would be generated by the Project was created.

Access to the development will be provided via two (2) new roadway connections; one (1) along South Street and one (1) along Pennsylvania Avenue. Based upon the number of buildings and anticipated uses of same, the Project would generate approximately 27 entering/49 exiting vehicle trips during the weekday AM peak hour and 54 entering/51 exiting vehicle trips during the PM peak hour.

The TIS conducted an analysis of a total of five (5) intersections: (1) South Street/School House Lane; (2) Pennsylvania Avenue/Halsey Street-Elm Street; (3) South Street/Main Street (Rt. 96); (4) Rabbit Run Road/Main Street (Rt. 96); and (5) South Street/Whig Street. Intersections were analyzed to determine what impact the Project would have on Level of Service ("**LOS**"). LOS are calculated to provide an indication of the amount of delay that a motorist experiences while traveling along a roadway or through an intersection. A letter designation is used to describe LOS with LOS "A" representing the best operating condition and LOS "F" the worst. LOS "C" or better is considered desirable and LOS "D" is the minimum acceptable LOS in most cases. Changes in LOS are measured in seconds. **Table III** summarizes the trip generation estimate and **Table IV** reports LOS for each intersection.

While Rabbit Run Road/Main Street (Rt. 96) westbound LOS, South Street/Main Street (Rt. 96) northbound LOS, South Street and Whig Street eastbound LOS would experience a slight delay due the Project of 1.1, 2.1, 1.6 seconds respectively, and the South Street/School House Lane northbound LOS would experience a slight delay of only 0.4 seconds. Being so slight (2.1 seconds max), the TIS confirms that none of the Project impacts warrant any mitigation.

Sight distance investigation was also evaluated as part of the TIS. Sight distance is measured at intersections by the allowance of drivers to perceive the presence of potentially conflicting vehicles at an intersection. If the available sight distance for an entering or crossing vehicle is at least equal to the appropriate sight distance for the road, then drivers have sufficient sight distance to anticipate and avoid collisions. The TIS concluded that the available sight distance exceeds the desirable intersection sight distance and required stopping sight distance at the proposed new intersection locations along both South Street and Pennsylvania Avenue. Thus, the proposed new roadways shall be stop-controlled on their approaches to the adjacent roadways (South Street and Pennsylvania Avenue).

Overall, the TIS concludes that the existing transportation network can adequately accommodate the Project, and that no mitigation is necessary in connection with the development of the Site. Thus, the TIS clearly demonstrates that the Project will not have a significant adverse impact on the transportation network within or around the Site.

SITE PLAN REVIEW ANALYSIS

Section 812 of the Code requires INHS to undertake Site Plan Review prior to construction of new residential development. Thus, below you will find each Site Plan Review requirement set forth in the Code, along with an explanation describing how each has been addressed and, as applicable, an exhibit reference directing your attention to the relevant materials.

Section 812.2. Project Review Criteria. Site Plan Review shall, where applicable, include, but not be limited to:

General Criteria.

I. The arrangement, location, size, design, and general site compatibility of proposed buildings, landscaping, lighting, open spaces and buffers, and outdoor waste facilities, including:

1. If a trash compactor unit is to be used, this unit shall be attached to the building and be screened in with materials and colors that are consistent with the building that it serves. Also, an effort to minimize the noise of the compactor unit from adjacent properties shall occur.

Applicants' Response: *Not applicable.*

2. Dumpsters must be screened with materials and/or colors that are consistent with the building that it serves.

Applicants' Response: *Dumpsters serving apartments in the largest building at the core of the Site are shown in two (2) separate locations and are contained within trash enclosure fences with double locking swing gates. See* ***Exhibit C, Detailed Site Plan/Preliminary Plat****. The fences and gates will be constructed of opaque wood and/or metal panels that are aesthetically harmonious with the building façade materials.*

3. Loading docks, if attached to a building, must be screened with materials and colors that are consistent with the building that it serves (i.e. loading docks attached to a brick building must be screened with brick walls).

Applicants' Response: *Not applicable.*

4. If possible, antennas, satellite dishes, air handling units and other mechanical equipment placed on a roof should not be visible from the street.

Applicants' Response: *All equipment will be either mounted at grade or concealed on the roof to minimize visual impacts. All roof penetrations (vents, fans, etc.) will be located on the least visible roof so as to minimize visual impact.*

5. The usage of metal-sided buildings as façades for primary structures should be minimized, especially in highly visible areas and along principal commercial corridors.

Applicants' Response: *This project does not include any metal-sided building facades.*

6. All new construction or redevelopment of a property should, to the greatest practical extent, utilize materials and design that is either evocative or respectful of a historic/village setting. This should include wood and stone for primary façades.

Applicants' Response: *At this time, proposed facades will include areas with a stone base, as well as wood grained cement board 4" lap siding detailed to compliment the traditional wood lap siding found throughout the Village. The designs will utilize door/window/trim and fascia details that complement the historic nature of the Village. See* ***Exhibit H, Building Elevators****.*

II. The arrangement, location and adequacy of vehicular access and circulation, including intersections, road widths, pavement surfaces, off-street parking and loading areas, and traffic controls, including :

1. Provide automobile connections to adjacent lots and developments through shared access roads, linked parking, etc.

Applicants' Response: *Based on prior conversations with Village of Trumansburg representatives, in which the subdivision potential of a contiguous parcel located nearest the southwest corner of the property was identified; the proposed public road has been configured to allow for a future connection to this parcel and connects directly to Pennsylvania Avenue.*

2. Minimize entry points and curb cuts. Temporary curbcuts may be provided for individual sites, as they are developed. However, as additional sites are developed, such curbcuts may be abandoned in favor of a safe and conveniently located curbcut that serves multiple, adjoining businesses.

Applicants' Response: *The proposed public road connects directly to Pennsylvania Avenue and has been configured to minimize the number of curb cuts necessary to access private drives. See* ***Exhibit C, Detailed Site Plan/Preliminary Plat.***

III. The arrangement, location and adequacy of pedestrian and bicycle access and circulation, and appropriate provisions for handicapped persons, including:

1. Provide pedestrian connections between adjacent commercial developments through sidewalks, multi-use paths, etc.

Applicants' Response: *An approximately 675 foot long by five (5) foot wide pedestrian mulch path has been proposed to connect the project to the proposed South Street sidewalk. An approximately 845 foot long by five (5) foot wide ADA-compliant concrete sidewalk will run parallel to the private drive and connect to the proposed South Street sidewalk. See* ***Exhibit C, Detailed Site Plan/Preliminary Plat.*** *Collectively, these pedestrian facilities will provide uninterrupted pedestrian circulation routes to adjacent points of interest beyond, including but not limited to: Main Street businesses, the public library, and the public school campus located on the east side of South Street.*

2. Establish a pleasant, walkable environment for pedestrians through landscaped sidewalks and multiuse trails.

Applicants' Response: *The Site includes an extensive sidewalk/path system that will create a safe and pleasant walking experience and provide ease of pedestrian circulation throughout the Site. Sidewalks and paths have purposefully been located to allow for the retention of adjacent landscaped open spaces. See* ***Exhibit F, Landscaping Plan.***

3. Utilize a consistent theme of street trees, other landscaping elements, and pedestrian amenities to provide a unified streetscape.

Applicants' Response: *The entirety of the proposed public road has been developed to include: a nine (9) foot wide planting strip (i.e. vegetated area located between edge of road and sidewalk) regularly spaced deciduous shade trees (i.e. street trees set within a planting strip) and a five (5) foot wide sidewalk which will enhance the visual qualities*

and add uniformity and coherence to the roadway corridor. See ***Exhibit C, Detailed Site Plan/Preliminary Plat.***

4. Provide internal pedestrian connections (on site, from parking lots, to adjacent lots, etc.) through pedestrian walkways and access to and around development.

Applicants' Response: *The Site includes an extensive sidewalk/path system that will create a safe and pleasant walking experience and provide ease of pedestrian circulation throughout the Site, including access to shared parking areas located along private drives. See* ***Exhibit C, Detailed Site Plan/Preliminary Plat.***

5. Bicycle racks are encouraged and should be placed in easily observable locations.

Applicants' Response: *The Project will include a yet-to-be determined number of bicycle racks to be located in close proximity to the two (2) main entrances to the largest apartment building and exterior amenity area (on the east side of this building).*

6. Access to public transportation (Tompkins Consolidated Area Transit (TCAT), or other transit service) should be provided at visible, attractive, and safe locations in consultation with the relevant transit service providers.

Applicants' Response: The site is half a mile to Main Street where bus service is located. Additionally, *INHS has been in contact with TCAT regarding the possibility of adding a bus shelter at the intersection of Main and South Streets.*

7. The adequacy of provision for fire protection, storm water, sediment, erosion management, drainage, water supply, and sewerage disposal;

Applicants' Response: *The Village has indicated adequate capacity exists in the water distribution system, the sanitary sewer collection system and at the treatment plant. See* ***Exhibit U, Letters from Water/Sewer/Fire/School District.*** *The Conceptual Stormwater Plan includes temporary and permanent controls for erosion management as*

well as runoff and water quality treatment practices. See ***Exhibit E, Civil Engineering Plans.***

8. In the case of residential site plans, the arrangement, location and adequacy of any proposed open space and recreational facilities;

Applicants' Response: *Significant open space has been preserved throughout the site to allow for an equitable distribution of open space for all dwelling units. Extensive sidewalks, recreational trails and a community gathering space located east of the apartment building has been provided. Stormwater management facilities have been designed as bioretention basins and wetlands to contribute towards the creation of meaningful naturalized open spaces. See* ***Exhibit C, Detailed Site Plans/Preliminary Plat.***

9. The adequacy of arrangements for the protection of adjacent neighboring properties from any undue disturbance, such as may be caused by excessive or unreasonable noise, glare, vapors, smoke, fumes, dust, odors, or stormwater runoff;

Applicants' Response: *The conceptual stormwater plan addresses the control of stormwater runoff from the Site. All storm water generated by the site will be managed to match or decrease proposed levels of runoff from pre-development conditions as required by law. See* ***Exhibit E, Civil Engineering Plans.***

The proposed Project will not result in undue disturbances to neighboring properties. Street lights and path lights will be directed away (i.e. asymmetrical distribution) from surrounding properties and will be located to minimize any glare as observed from neighboring properties. See ***Exhibit G, Site Lighting Plan.*** *Fences and landscaping are proposed to further enhance the visual buffer between the proposed private drive connection to South Street and neighboring properties to the north and south. See* ***Exhibit F, Landscaping Plan.***

10. Determination under SEQRA and compliance with the State Environmental Quality Review Act and the Village Environmental Quality Review Law.

Applicants' Response: *Applicants have provided extensive environmental documentation and analysis on the Site and the Project. Applicants respectfully submit that following a complete review of the information provided in Exhibit D, Parts I & II of the Full EAF and EAF Part I, Section F, Additional Information, that the Planning Board will have all the relevant information to complete its SEQRA review. Upon review of all the aforementioned materials, Applicants respectfully submit that the issuance of a negative declaration under SEQRA for the Project would be appropriate.* ***See Exhibit D, Parts I & II of the Full EAF & EAF Part I, Section F, Additional Information.***

11. Conformance with the Village of Trumansburg Comprehensive Plan.

Applicants' Response: ***See Exhibit O, Narrative of Consistency With Comprehensive Plan/Zoning***

12. Compliance with this Article and any other applicable Village rules and regulations and policies.

Applicants' Response: *Acknowledged.*

Criteria for plant materials and maintenance. All projects shall provide for adequate types and arrangements of landscaping, both to enhance the site and to complement the architectural components of the development and to screen or buffer adjacent uses in public ways. Where possible and reasonable, trees shall be planted in a strip adjacent to the road. Specifications governing tree species, size, spacing and method and location of planting, as well as appropriate guarantees for tree health may be required. Where possible and reasonable, any trees greater than eight inches in diameter at breast height of desirable species and in good health and sound structure, as determined by the reviewer's designee, should be retained on the site and protected during development.

1. Deciduous trees shall have a caliper of at least 2 ½ inches at the time of planting unless specific exemptions to this are granted. Size of evergreen trees and shrubs shall be allowed to vary depending on location and type of plant material (species).

Applicants' Response: *All deciduous trees used as street trees and located within front yards will be at least 2 ½ inch caliper at the time of planting. Additional deciduous tree plantings located within side and rear yard areas, including the zone identified as "forest establishment" shall include, but not limited to, 2 ½ inch caliper at the time of planting. Evergreen trees and shrubs shall be adequately sized to provide screening when used for visual buffering. See* ***Exhibit F, Landscaping Plan.***

2. The owner shall replace dead, dying, and/or seriously damaged plant materials within a reasonable time period during the current (or immediate next) planting season. Any other damaged or missing elements, including but not limited to fences, bollards, signs, shrubs, street furniture, etc., of the approved plan must be similarly replaced by the owner. This will assure that landscaping remains in compliance with the final site plan as approved by the Planning Board.

Applicants' Response: *Parcels owned and/or managed by INHS will be maintained at a high level as exemplified by similar projects within the region, with the removal of dead, dying, and/or seriously damaged plant material occurring within the season of decline or the next immediate season. Repair and/or replacement of other damaged site elements represented in the approved final site plan will occur as necessary to continuously maintain the appearance of the approved site plan.*

3. Notwithstanding any provision in this chapter or any other village ordinance or regulation to the contrary, an approved site plan may not be modified without express written approval of the Planning Board except as approved by the Zoning Officer as specified herein above.

Applicants' Response: *Once approved, any further modifications to the site plan will be presented by the Applicant to the Planning Board for review and approval.*

4. All required street trees should be placed between the edge of the road and the parking area or front building line, whichever is closest.

Applicants' Response: *All proposed street trees are located within a planting strip in compliance with this stipulation. See* ***Exhibit F, Landscaping Plan.***

5. Parking areas located between structures and the road should be softened with a low growing hedge and/or an attractive fence or wall.

Applicants' Response: *Parking areas, not including private "double stacked" driveways, are located along private drives setback from the public road and buffered by planting areas. See* ***Exhibit C, Detailed Site Plan/Preliminary Plat.***

6. Large expanses of parking should be broken up with tree and shrub plantings.

Applicants' Response: *Parking areas have been distributed throughout the Site to purposefully disaggregate large areas of parking. No more than ten (10) contiguous parking spaces have been grouped (in two instances) without a landscaped buffer area that include trees and/or shrubs. Curved horizontal alignments have been used for private drives (and the parking they serve) to further diminish the visual impact of parking areas. See* ***Exhibit F, Landscaping Plan.***

7. A transition zone consisting of pedestrian amenities and landscaping should occur between buildings and parking areas.

Applicants' Response: *Landscaping and pedestrian amenities are provided in the areas between all parking areas and affordable rental and affordable for sale structures. See* ***Exhibit F, Landscaping Plan.***

Criteria for parking areas where applicable. The general criteria above shall apply also to parking area development. These are intended to be minimum criteria. The Board may make such additional reasonable conditions as it deems appropriate to carry out the intention of this ordinance. The following criteria shall apply:

1. There shall be screening or fencing between a parking area and adjacent properties and public ways, except where there is parking that is shared by more than one property or where commercial properties abut. In such cases the Board may require landscaping as it deems appropriate.

Applicants' Response: *Landscape screening has been provided for all parking except front yard double-stacked driveways. See* ***Exhibit F, Landscaping Plan.***

2. Additionally, the Planning Board will be guided by the parking standards set forth in Article XVII and may, as appropriate, require elements of those standards.

Applicants' Response: *Acknowledged.*

3. Natural Site Design. Site design shall recognize and respect the site's natural features, creating a balance between the program of the new development and the environmental impact. By recognizing and building with the existing topography, it becomes possible to integrate stormwater management into the design, lessen the amount of grading and erosion, and thereby lessen the environmental impact to surrounding areas. In addition, by incorporating the site's natural features into the site design, it becomes possible to create a more aesthetically relevant place that fits into its context.

Applicants' Response: *The site plan has been developed to work with the existing topography to the maximum extent practical. Stormwater management facilities have been designed to further enhance the natural qualities of the site and are situated at low points to work in concert with existing drainage patterns. See* ***Exhibit E, Civil Engineering Plans.***

4. Existing mature trees should be maintained, where possible, and species selected for planting should be appropriate for this region and microclimate of the setting.

Applicants' Response: *The Project has been developed to minimize impacts to the existing mature trees. See* ***Exhibit F, Landscaping Plan.***

5. Utilize native vegetation and avoid invasive species.

Applicants' Response: *Plant lists have been developed to utilize primarily native plant material. Refer to sheet L-104.* ***See Exhibit F, Landscaping Plan.***

6. Development should minimize and balance cut and fill, utilize gentle grading and avoid abrupt grade transitions. Any grade changes shall be in keeping with the general appearance of neighboring developed areas.

Applicants' Response: *Grading has been developed to take into account existing contours, high groundwater conditions and to provide gentle grade transitions while minimizing the limit of disturbance.* ***See Exhibit E, Civil Engineering Plans.***

7. Utilize sensitive construction practices and erosion control (limit soil erosion and disturbance).

Applicants' Response: *Acknowledged.*

8. Natural drainage ways, contours and landforms should be respected and disturbance to these areas should be minimized.

Applicants' Response: *The natural drainage way flowing from the northwest to the southeast has been maintained. See* ***Exhibit E, Civil Engineering Plans.***

9. Utilization of "green techniques" for handling stormwater and runoff are encouraged where feasible, such as bio-retention swales, pervious paving materials and pervious alternatives to asphalt and concrete, such as modular paving systems or reinforced grass block (or other "dust-free" materials).

Applicants' Response: *The Conceptual Stormwater Plan for the Project integrates green stormwater techniques including heavy tree planting, disconnected rooftops, vegetated swales, rain gardens, bioretention filters and stormwater wetlands. See* ***Exhibit E, Civil Engineering Plans.***

Section 812.3(2). Site Plan Review Procedures.

I. Each application for site plan approval shall contain, at a minimum, the following information:

1. Name and address of applicant;

Applicants' Response: ***See Page 3, Project Details.***

2. Name and address of owner(s) of record, if different from the applicant;

Applicants' Response: ***See Exhibit K, Evidence of Site Control/Deeds.***

3. Name and address of person or firm preparing the site plan map;

Applicants' Response: ***See Exhibit D, Detailed Site Plan/Preliminary Plat.***

4. Current zoning classification of property;

Applicants' Response: *The Site is zoned R1, Residential District.*

5. Applicable application fee(s);

Applicants' Response: *Applicant has confirmed with the Village Planner that there is no application fee in connection with Site Plan Review.*

6. The number of copies of materials required to be submitted.

Applicants' Response: *Applicant has submitted one (1) original and eight (8) copies of the Application.*

7. Detailed site plan showing all elements integral to the proposed project, at a scale of no less than one inch equals 100 feet, including, but not limited to:

   (a) north arrow, scale, and submitted date;

   Applicants' Response: ***See Exhibit C, Detailed Site Plan/Preliminary Plat.***

   (b) property lines, including metes and bounds;

Applicants' Response: ***See Exhibit C, Detailed Site Plan/Preliminary Plat.***

(c) name and addresses of all property owners of all parcels abutting the site, or within 500 feet of the perimeter boundary of the site, including owners of easements or right-of-way, together with tax parcel numbers for all such owners;

Applicants' Response: ***See Exhibit C, Detailed Site Plan/Preliminary Plat.***

(d) current and proposed zoning and uses on adjacent properties;

Applicants' Response: ***See Exhibit C, Detailed Site Plan/Preliminary Plat.***

(e) location of adjacent public and private streets and highways;

Applicants' Response: ***See Exhibit C, Detailed Site Plan/Preliminary Plat.***

(f) size and locations of all existing and proposed buildings and structures, including locations of access drives, parking and pedestrian facilities, and off-street loading facilities;

Applicants' Response: ***See Exhibit C, Detailed Site Plan/Preliminary Plat.***

(g) existing vegetation on the site;

Applicants' Response: ***See Exhibit C, Detailed Site Plan/Preliminary Plat.***

(h) existing and proposed overhead and underground utilities;

Applicants' Response: ***See Exhibit C, Detailed Site Plan/Preliminary Plat.***

(i) existing and proposed easements, right-of-ways, covenants, and deed restrictions;

Applicants' Response: ***See Exhibit C, Detailed Site Plan/Preliminary Plat.***

(j) location and design of all water and sewerage facilities;

Applicants' Response: ***See Exhibit C, Detailed Site Plan/Preliminary Plat.***

(k) location of all existing streams or drainage ways, water bodies and wetlands;

Applicants' Response: ***See Exhibit C, Detailed Site Plan/Preliminary Plat.***

(l) grading and drainage plan showing proposed topography at appropriate contour intervals;

Applicants' Response: ***See Exhibit E, Civil Engineering Plans.***

(m) proposed landscaping, size, height and location of all signs and exterior lighting;

Applicants' Response: ***See Exhibit F, Landscaping Plan.***

(n) an area map showing existing roads and highways in the general vicinity of the project site, and including any zoning district boundaries located within five hundred (500) feet of the site perimeter;

Applicants' Response: ***See Exhibit A, Aerial Map.***

(o) elevation plans at a scale of 1/4" for all exterior facades of the proposed structure(s) and/or existing facades, plus additions showing design features and indicating type and color of material to be used;

Applicants' Response: ***See Exhibit H, Building Elevations.***

(p) an Environmental Assessment Form, as determined at the sketch conference, with Part 1 filled out; and

Applicants' Response: ***See Exhibit D, Parts I & II of the Full Environmental Assessment Form ("EAF").***

(q) identification of any federal, state, or county permits required for the project's execution.

Applicants' Response: ***Exhibit M, List Identifying Any Other Necessary Permits.***

8. The Planning Board may require topography, including existing topography and proposed topography, a detailed traffic impact study for large developments or those in heavy traffic areas, to include:

(a) the projected number of motor vehicle trips to enter or leave the site, estimated for daily and peak hour traffic levels;

Applicants' Response: ***See Exhibit Q, Traffic Impact Study.***

(b) the projected traffic flow pattern including vehicular movements at all major intersections likely to be affected by the proposed use of the site;

Applicants' Response: ***See Exhibit Q, Traffic Impact Study.***

(c) the impact of this traffic upon existing abutting public and private ways in relation to existing road capacities;

Applicants' Response: ***See Exhibit Q, Traffic Impact Study.***

(d) Existing and proposed daily and peak traffic hour levels as road capacity levels.

Applicants' Response: ***See Exhibit Q, Traffic Impact Study.***

9. The Planning board reserves the right to request additional information related to the above submission material as considered necessary. Depending upon the scope and complexity of the project, applicants may be required or encouraged to engage the services of one or more licensed design professionals and other experts such as architects, engineers, ecologists, landscape architects, or surveyors at the applicant's expense.

Applicants' Response: *Applicant will endeavor to provide any other information or documentation that the Planning Board and/or Planning Staff may deem necessary or appropriate for a full and proper consideration and disposition of the Application.*

10. The Planning Board reserves the right to waive the submission of any of the above said materials.

Applicants' Response: *Acknowledged.*

GENERAL MUNICIPAL LAW ("GML") REFERRAL

To the extent that this Application requires referral under GML 239-m, this matter may need to be reviewed by the Tompkins County Planning Department, and we ask that this Application be so submitted, if required.

CONCLUSION

On behalf of the Applicants, we respectfully request that the Planning Board initiate Site Plan Review by determining that the Site Plan Application contains all information

December 14, 2017

required by the Village site plan regulations. In addition, we also request that the Planning Board initiate the VEQRA/SEQRA process by declaring its intent to be lead agency. We look forward to discussing this Application, as well as answering any questions in connection with the same, at the Planning Board's next regularly scheduled meeting on Thursday, January 25, 2017.

In the meantime, if you have any questions with the information contained herein, please do not hesitate to contact the undersigned.

Very truly yours,

Phillips Lytle LLP

By

Adam S. Walters

cc: Matt Johnston, Village Planner
Joseph L. Bowes, Director of Real Estate Development, INHS
Alena Fast, Real Estate Developer, INHS
Claudia Brenner, Architect

Doc #01-3079191.2

Exhibit A

Context Diagram

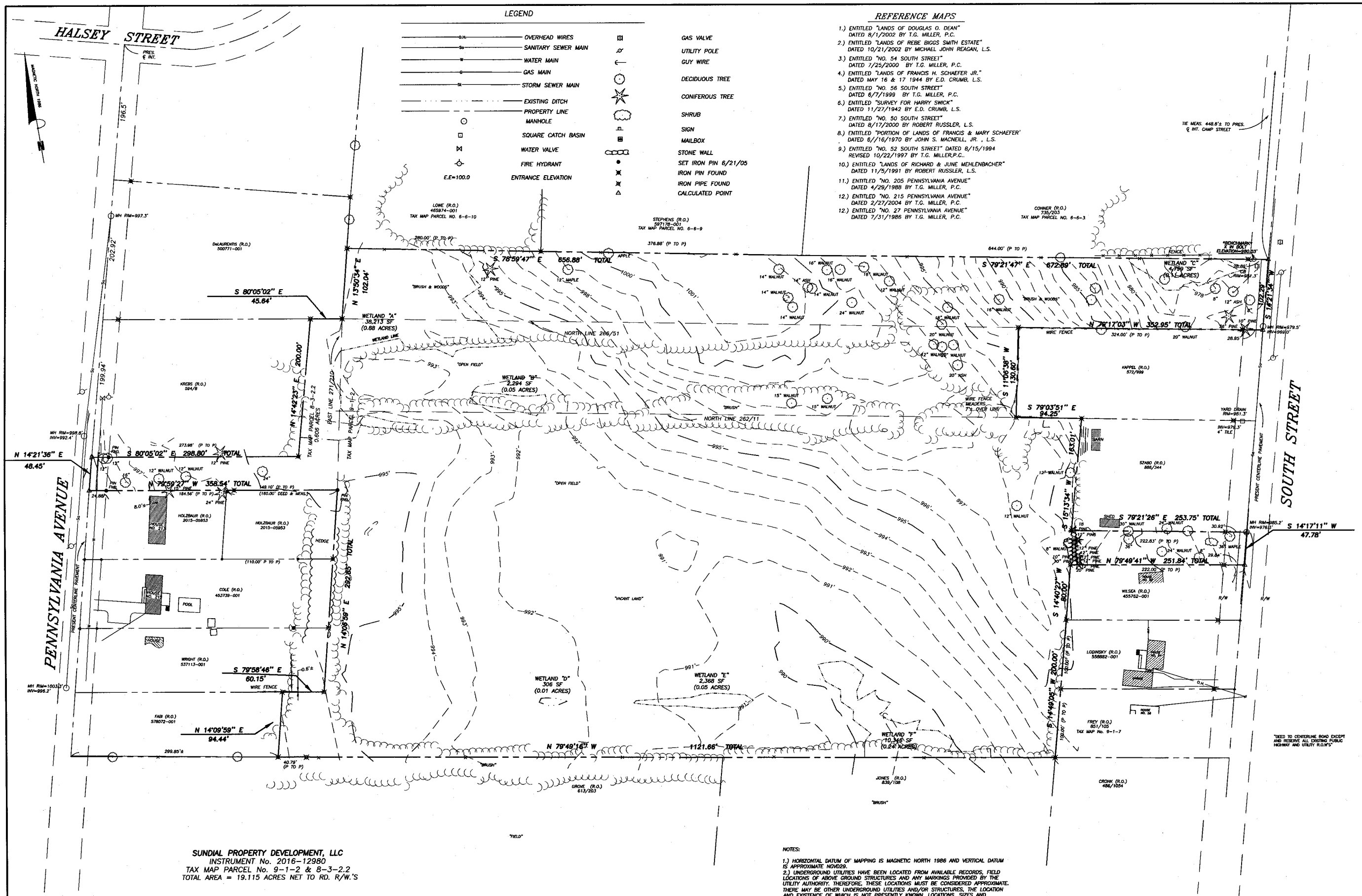
Hamilton Square Neighborhood

46 South St, Village of Trumansburg, New York

LEGEND

- Walking Distance to Schools
- Walking Distance to Main Street
- Safe Routes to School
- Existing Sidewalks
- Planned Sidewalks

Exhibit B



SUNDIAL PROPERTY DEVELOPMENT, LLC
INSTRUMENT No. 2016-12980
TAX MAP PARCEL No. 9-1-2 & 8-3-2.2
TOTAL AREA = 19.115 ACRES NET TO RD. R/W.'S

NOTES:

1.) HORIZONTAL DATUM OF MAPPING IS MAGNETIC NORTH 1986 AND VERTICAL DATUM IS APPROXIMATE NGVD29.
2.) UNDERGROUND UTILITIES HAVE BEEN LOCATED FROM AVAILABLE RECORDS, FIELD LOCATIONS OF ABOVE GROUND STRUCTURES AND ANY MARKINGS PROVIDED BY THE UTILITY AUTHORITY. THEREFORE, THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE. THERE MAY BE OTHER UNDERGROUND UTILITIES AND/OR STRUCTURES, THE LOCATION AND EXISTENCE OF WHICH IS NOT PRESENTLY KNOWN. LOCATIONS, SIZES AND MATERIALS OF UNDERGROUND UTILITIES ARE BASED ON BEST AVAILABLE EVIDENCE AS NOTED ABOVE. VERIFY ALL UTILITIES PRIOR TO DESIGN OR CONSTRUCTION.
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4.)WETLAND DELINEATIONS SHOWN HEREON PERFORMED BY LECAIN ENVIRONMENTAL SERVICES.

T. G. MILLER P.C.
ENGINEERS AND SURVEYORS
203 NORTH AURORA STREET
TEL (607) 272-6477
ITHACA, NEW YORK 14850

BOUNDARY & TOPOGRAPHIC MAP

SHOWING LANDS OF SUNDIAL PROPERTY DEVELOPMENT, LLC

LOCATED AT NO. 46 SOUTH STREET

VILLAGE OF TRUMANSBURG, TOMPKINS COUNTY, NEW YORK

DATE	REVISION	BY
6/21/17	ADDED WETLAND INFORMATION	JSB
8/1/17	REVISED WETLAND INFORMATION	JSB
12/13/17	REVISED WETLAND INFORMATION	DAB

Warning

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DARRIN A. BROCK, L.S.
N.Y.S. LICENSE No. 050597

SIGNATURE
LICENSED LAND SURVEYOR

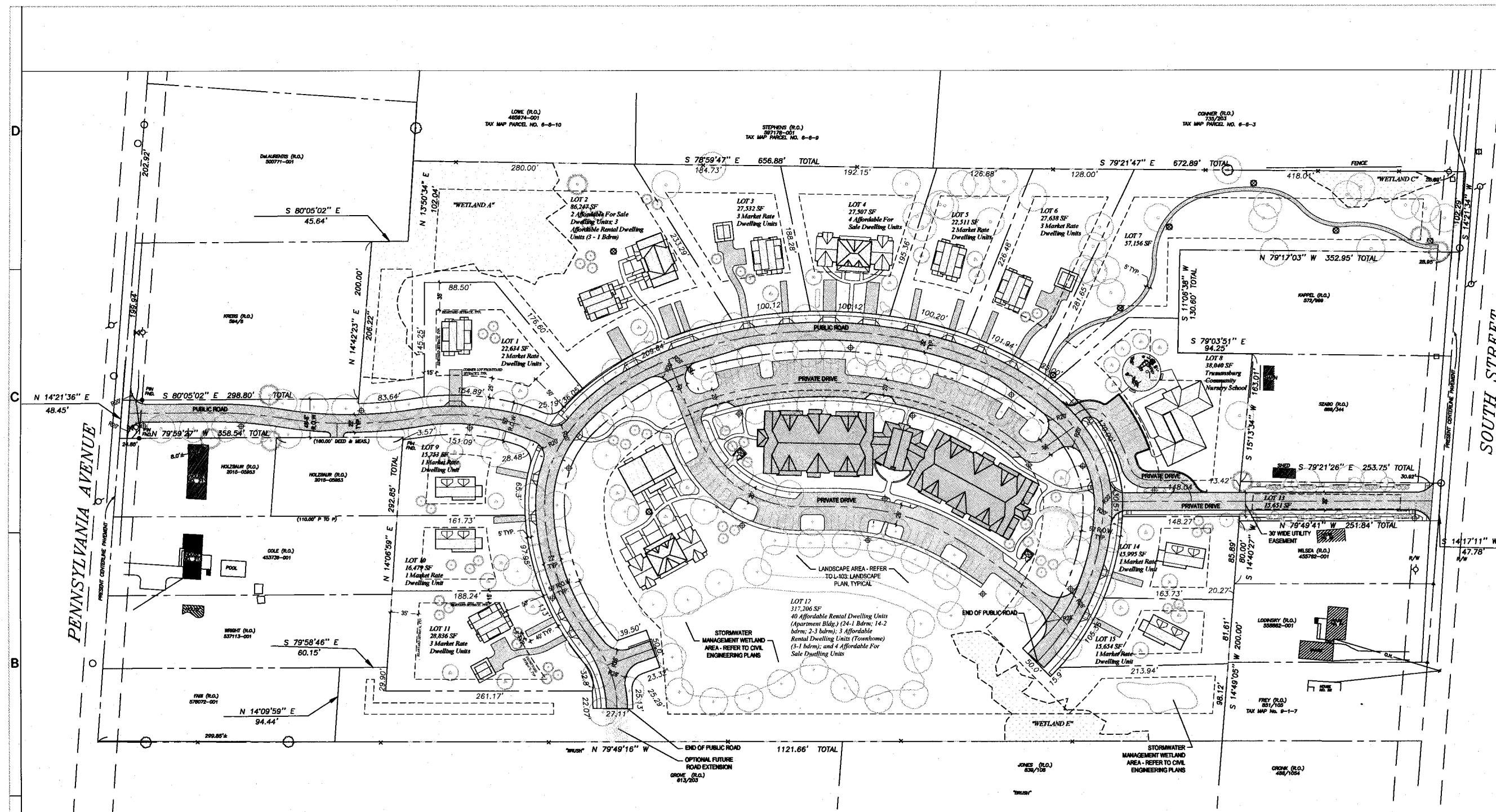
SEAL

PROJECT

SHEET TITLE
BOUNDARY & TOPOGRAPHIC

DATE: 4/10/2017	JOB No. S15748
SCALE: 1"= 60'	
DRAWN BY: DLD	SHEET 1 OF 1
CHECKED: JSB	

Exhibit C



PROJECTED CONSTRUCTION SCHEDULE				
YEAR	MARKET RATE UNITS	AFFORDABLE FOR SALE UNITS	AFFORDABLE RENTAL UNITS	NURSERY SCHOOL
2019	Phase 1a - 4 UNITS	PHASE 1b- 8 UNITS (LOTS 2 & 12)*	PHASE 1c- 46 UNITS (LOTS 2 & 12)*	PHASE 1d (LOT 8)*
2020	Phase 2a - 4 UNITS			
2021	Phase 3a - 4 UNITS			
2022	Phase 4a - 5 UNITS	PHASE 2b - 4 UNITS (LOT 4)**		

* PHASE 1b - 1d (NOVEMBER 2019 - JANUARY 2021) WILL INCLUDE ALL SITE WORK.
** PHASE 2b (APRIL 2022 - AUGUST 2022).

MATERIALS LEGEND

- SHREDDED MULCH TRAIL
- CONCRETE PAVEMENT
- ASPHALT PAVEMENT
- 6" CURB
- DUMPSTER WITH ENCLOSURE
- 42" HIGH WOOD FENCE AND GATE
- 72" HIGH WOOD PRIVACY FENCE
- STREET LIGHT
- PEDESTRIAN PATH LIGHT
- TRAFFIC SIGN (REFER TO SIGNAGE PLAN)
- CROSSWALK WITH STOP BAR PAVEMENT MARKINGS
- PLAYGROUND WITH WOOD CHIPS
- SITE WALLS

0 60' 120'
Scale: 1" = 60'-0"

TROWBRIDGE WOLF MICHELS
TWLA
LANDSCAPE ARCHITECTS
5001 W. Genesee St., Ste. 201 Ithaca, NY 14850
607-277-1400 Fax 607-277-6092

HOLT ARCHITECTS
Architecture
Planning
Interior Design
519 W State Street
Ithaca NY 14850
p 607.273.7600 f 607.273.0475

T.G. MILLER, P.C.
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203 NORTH AURORA STREET
ITHACA, NEW YORK 14850
www.tgmillerpc.com
607-272-6477 tel.
607-273-6322 fax

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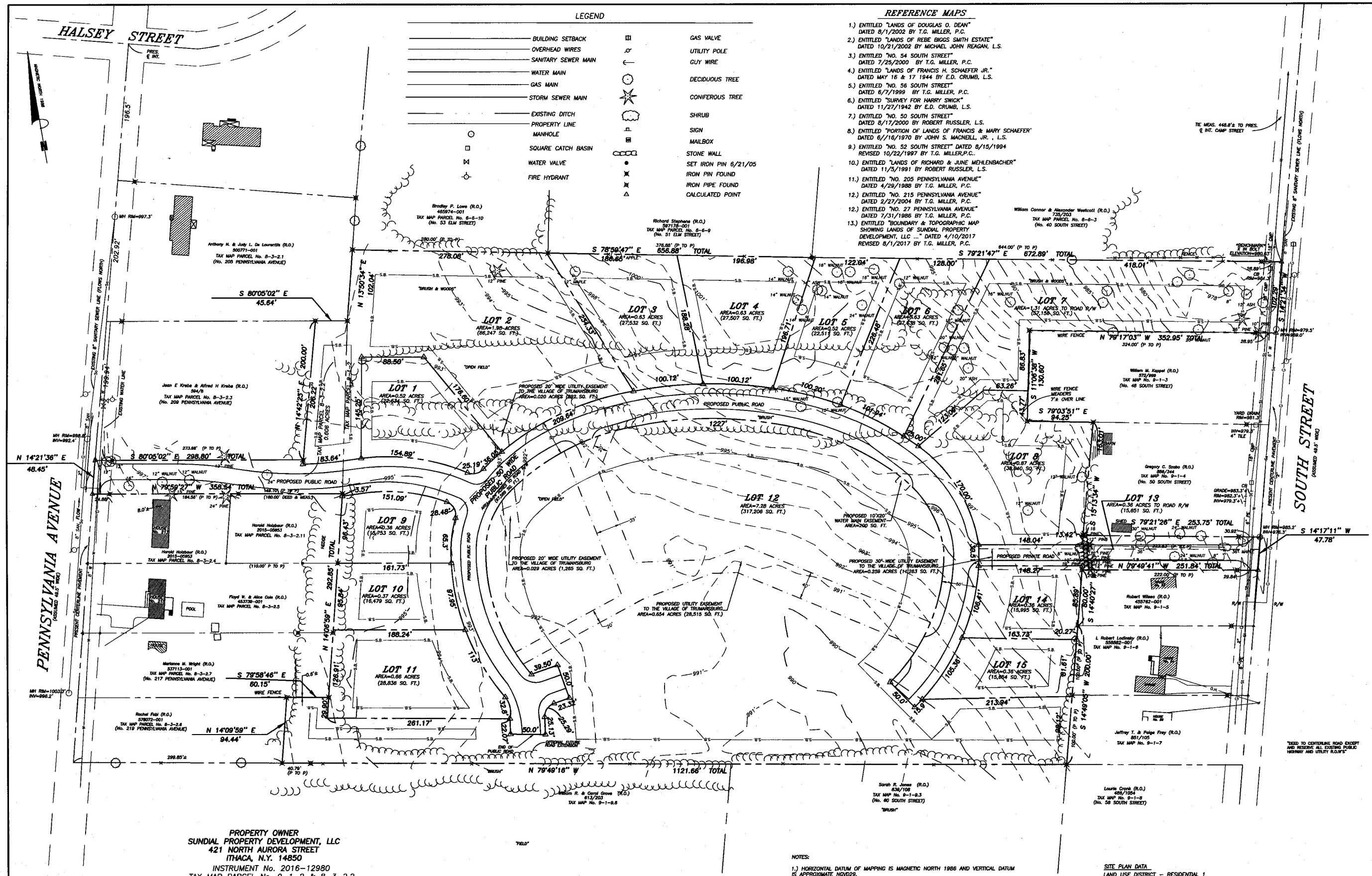
TROWBRIDGE WOLF MICHELS LANDSCAPE ARCHITECTS, LLP

Ithaca Neighborhood Housing Services &
Sundial Property Development LLC
46 South Street
Trumansburg, New York

DATE:	12/13/2017
PROJECT:	17003
DRAWN BY:	RK
CHECKED:	

SITE MATERIALS PLAN

L-101



REFERENCE MAPS

1.) ENTITLED "LANDS OF DOUGLAS O. DEAN" DATED 8/1/2002 BY T.G. MILLER, P.C.
2.) ENTITLED "LANDS OF REBE BIGGS SMITH ESTATE" DATED 10/21/2002 BY MICHAEL JOHN REAGAN, L.S.
3.) ENTITLED "NO. 54 SOUTH STREET" DATED 7/25/2000 BY T.G. MILLER, P.C.
4.) ENTITLED "LANDS OF FRANCIS H. SCHAEFER JR." DATED MAY 16 & 17 1944 BY E.D. CRUMB, L.S.
5.) ENTITLED "NO. 56 SOUTH STREET" DATED 6/7/1999 BY T.G. MILLER, P.C.
6.) ENTITLED "SURVEY FOR HARRY SWICK" DATED 11/27/1942 BY E.D. CRUMB, L.S.
7.) ENTITLED "NO. 50 SOUTH STREET" DATED 8/17/2000 BY ROBERT RUSSLER, L.S.
8.) ENTITLED "PORTION OF LANDS OF FRANCIS & MARY SCHAEFER' DATED 6//16/1970 BY JOHN S. MACNEILL, JR. , L.S.
9.) ENTITLED "NO. 52 SOUTH STREET" DATED 8/15/1994 REVISED 10/22/1997 BY T.G. MILLER,P.C..
10.) ENTITLED "LANDS OF RICHARD & JUNE MEHLENBACHER" DATED 11/5/1991 BY ROBERT RUSSLER, L.S.
11.) ENTITLED "NO. 205 PENNSYLVANIA AVENUE" DATED 4/29/1988 BY T.G. MILLER, P.C.
12.) ENTITLED "NO. 215 PENNSYLVANIA AVENUE" DATED 2/27/2004 BY T.G. MILLER, P.C.
12.) ENTITLED "NO. 27 PENNSYLVANIA AVENUE" DATED 7/31/1986 BY T.G. MILLER, P.C.
13.) ENTITLED "BOUNDARY & TOPOGRAPHIC MAP SHOWING LANDS OF SUNDIAL PROPERTY DEVELOPMENT, LLC ..." DATED 4/10/2017 REVISED 8/1/2017 BY T.G. MILLER, P.C.

NOTES:

1.) HORIZONTAL DATUM OF MAPPING IS MAGNETIC NORTH 1986 AND VERTICAL DATUM IS APPROXIMATE NGVD29.
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4.)WETLAND DELINEATIONS SHOWN HEREON PERFORMED BY LECAIN ENVIRONMENTAL SERVICES.
5.)ORIGINAL FIELD WORK PERFORMED ON 8/7/2017.

SITE PLAN DATA

LAND USE DISTRICT – RESIDENTIAL 1

T. G. MILLER P.C.
ENGINEERS AND SURVEYORS
203 NORTH AURORA STREET
TEL (607) 272-6477
ITHACA, NEW YORK 14850

ITHACA NEIGHBORHOOD HOUSING SERVICES & SUNDIAL PROPERTY DEVELOPMENT LLC
46 SOUTH STREET
VILLAGE OF TRUMANSBURG, TOMPKINS COUNTY, NEW YORK

DATE	REVISION	BY

Warning

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DARRIN A. BROCK, L.S.
N.Y.S. LICENSE No. 050597

SIGNATURE
LICENSED LAND SURVEYOR

SEAL

PROJECT

SHEET TITLE
PRELIMINARY PLAT

DATE: 12/13/2017	JOB No. S15748B
SCALE: 1"= 60'	
DRAWN BY: DLD	SHEET 1 OF 1
CHECKED: JSB	

Exhibit D

Full Environmental Assessment Form
Part 1 - Project and Setting

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Sponsor Information.

Name of Action or Project: 46 South Street- working name		
Project Location (describe, and attach a general location map): 46 South Street, Trumansburg, NY 14886		
Brief Description of Proposed Action (include purpose or need): Subdivision of 19.115 acre parcel into 15 parcels to include single family homes, multifamily townhomes, and an apartment building in a mix of rental and for-sale units. Construction of a nursery school to be owned by Trumansburg Community Nursery School. Development of new street right-of-way to be deeded to the Village of Trumansburg.		
Name of Applicant/Sponsor: Ithaca Neighborhood Housing Services	Telephone: 607-277-4500 E-Mail: jbowes@ithacanhs.org	
Address: 115 West Clinton Street		
City/PO: Ithaca	State: NY	Zip Code: 14850
Project Contact (if not same as sponsor; give name and title/role):	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:
Property Owner (if not same as sponsor): Sunday Property Development, LLC	Telephone: 607-227-9626 E-Mail: cbrenner@claudiabrennerdesign.com	
Address: 421 N. Aurora Street		
City/PO: Ithaca	State: NY	Zip Code: 14850

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Council, Town Board, or Village Board of Trustees ☑Yes☐No	Section 567-j of the NY Real Property Tax Law	Projected 12/1/18
b. City, Town or Village Planning Board or Commission ☑Yes☐No	Planning Board: SEQR/VEQR; Subdivision, & Site Plan Review	SEQR/VEQR, Subdivision, Site Plan Review: 12/15/17
c. City Council, Town or Village Zoning Board of Appeals ☐Yes☑No		
d. Other local agencies ☑Yes☐No	Village of Trumansburg Water Dept for new service	Projected application date: October 2018
e. County agencies ☑Yes☐No	Tompkins County Community Development Funds	Projected application date: August 2018
f. Regional agencies ☐Yes☑No		
g. State agencies ☑Yes☐No	NYSDEC: SWPPP SHPO, NYS HCR, NYS HTFC	NYSDEC: TBD SHPO: 2/2017, NYS HCR/HTFC 12/18
h. Federal agencies ☑Yes☐No	U.S. Army Corps of Engineers	Projected application date: February 2018

i. Coastal Resources.

i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☐Yes☑No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☐Yes☑No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes☑No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☐Yes☑No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☑Yes☐No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☑Yes☐No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☐Yes☑No

If Yes, identify the plan(s):

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐Yes☑No

If Yes, identify the plan(s):

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
Residential 1

b. Is the use permitted or allowed by a special or conditional use permit? ☑ Yes ☐ No

c. Is a zoning change requested as part of the proposed action? ☐ Yes ☑ No
If Yes,
i. What is the proposed new zoning for the site? _____

C.4. Existing community services.

a. In what school district is the project site located? Trumansburg Central School District

b. What police or other public protection forces serve the project site?
Tompkins County Sheriff's Department, Village of Trumansburg Police

c. Which fire protection and emergency medical services serve the project site?
Village of Trumansburg Fire Department, Village of Trumansburg EMS

d. What parks serve the project site?
Playground area located at Trumansburg Central school within 1/2 mile. Taughannock State Park located within three miles.

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? Residential

b. a. Total acreage of the site of the proposed action? 19.115 acres
b. Total acreage to be physically disturbed? 14.910 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 19.115 acres

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☑ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? ☑ Yes ☐ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
New street right-of-way; single and multi family residential
ii. Is a cluster/conservation layout proposed? ☐ Yes ☑ No
iii. Number of lots proposed? 15
iv. Minimum and maximum proposed lot sizes? Minimum 15,654 Maximum 317,206 SF

e. Will proposed action be constructed in multiple phases? ☑ Yes ☐ No
i. If No, anticipated period of construction: _____ months
ii. If Yes:
- Total number of phases anticipated 4
- Anticipated commencement date of phase 1 (including demolition) 11 month 2019 year
- Anticipated completion date of final phase 11 month 2023 year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases:

The roadway must be installed for each phase to begin. The rental portion, nursery school, and some of the affordable for sale homes would be developed in one phase. The for sale portion will be developed in smaller phases as lots sell and financing is secured.

f. Does the project include new residential uses? ☑ Yes ☐ No

If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase	4	1	2	44
At completion of all phases	4	12	5	52

g. Does the proposed action include new non-residential construction (including expansions)? ☑ Yes ☐ No

If Yes,

i. Total number of structures 1

ii. Dimensions (in feet) of largest proposed structure: 24 height; 86 width; and 78 length

iii. Approximate extent of building space to be heated or cooled: 4,500 square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☑ Yes ☐ No

If Yes,

i. Purpose of the impoundment: Temporary storage of stormwater runoff

ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☑ Other specify: Surface water from new development

iii. If other than water, identify the type of impounded/contained liquids and their source.

iv. Approximate size of the proposed impoundment. Volume: 0.85 million gallons; surface area: 1.24 acres

v. Dimensions of the proposed dam or impounding structure: 3.5' max height; 740' total length

vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete):

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? (Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite) ☐ Yes ☑ No

If Yes:

i. What is the purpose of the excavation or dredging?

ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?

- Volume (specify tons or cubic yards):
- Over what duration of time?

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them.

iv. Will there be onsite dewatering or processing of excavated materials? ☐ Yes ☐ No

If yes, describe.

v. What is the total area to be dredged or excavated? acres

vi. What is the maximum area to be worked at any one time? acres

vii. What would be the maximum depth of excavation or dredging? feet

viii. Will the excavation require blasting? ☐ Yes ☐ No

ix. Summarize site reclamation goals and plan:

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☑ Yes ☐ No

If Yes:

i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): Likely jurisdictional wetlands A and B and likely isolated wetlands D and E as shown on the Boundary and Topographic Map. The USACE review of the jurisdictional status of all site wetlands is in process.

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:
Likely jurisdictional wetland A - Fill in 0.03 acres. Likely jurisdictional wetland B - Fill in 0.05 acres. Total fill of likely jurisdictional wetlands = 0.08 acres. Likely isolated wetland D - Fill in 0.01 acres. Likely isolated wetland E - Fill in 0.05 acres. Total fill of likely isolated wetlands = 0.06 acres.

iii. Will proposed action cause or result in disturbance to bottom sediments? ☑ Yes ☐ No
If Yes, describe: Sediments to be removed prior to filling activities.

iv. Will proposed action cause or result in the destruction or removal of aquatic vegetation? ☐ Yes ☑ No
If Yes:

- acres of aquatic vegetation proposed to be removed: _____
- expected acreage of aquatic vegetation remaining after project completion: _____
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): _____
- proposed method of plant removal: _____
- if chemical/herbicide treatment will be used, specify product(s): _____

v. Describe any proposed reclamation/mitigation following disturbance:
No mitigation necessary for filling isolated wetlands or filling less than 0.10 acres of jurisdictional wetlands. ACOE permits to be obtained.

c. Will the proposed action use, or create a new demand for water? ☑ Yes ☐ No
If Yes:

i. Total anticipated water usage/demand per day: 11,000 gallons/day

ii. Will the proposed action obtain water from an existing public water supply? ☑ Yes ☐ No
If Yes:

- Name of district or service area: Village of Trumansburg
- Does the existing public water supply have capacity to serve the proposal? ☑ Yes ☐ No
- Is the project site in the existing district? ☑ Yes ☐ No
- Is expansion of the district needed? ☐ Yes ☑ No
- Do existing lines serve the project site? ☑ Yes ☐ No

iii. Will line extension within an existing district be necessary to supply the project? ☑ Yes ☐ No
If Yes:

- Describe extensions or capacity expansions proposed to serve this project:
  The extension of approximately 3,100 LF of 8" ductile iron water main.
- Source(s) of supply for the district: Village wells

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐ Yes ☑ No
If, Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- Proposed source(s) of supply for new district: _____

v. If a public water supply will not be used, describe plans to provide water supply for the project: _____

vi. If water supply will be from wells (public or private), maximum pumping capacity: 1360 gallons/minute.

d. Will the proposed action generate liquid wastes? ☑ Yes ☐ No
If Yes:

i. Total anticipated liquid waste generation per day: 11,000 gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each):
Sanitary wastewater

iii. Will the proposed action use any existing public wastewater treatment facilities? ☑ Yes ☐ No
If Yes:

- Name of wastewater treatment plant to be used: Village of Trumansburg
- Name of district: Village of Trumansburg
- Does the existing wastewater treatment plant have capacity to serve the project? ☑ Yes ☐ No
- Is the project site in the existing district? ☑ Yes ☐ No
- Is expansion of the district needed? ☐ Yes ☑ No

- Do existing sewer lines serve the project site? ☑Yes ☐No
- Will line extension within an existing district be necessary to serve the project? ☑Yes ☐No

  If Yes:
  - Describe extensions or capacity expansions proposed to serve this project: _____

  Extensions of gravity sewers from the site to South Street.

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐Yes ☑No

If Yes:
- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge, or describe subsurface disposal plans):

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☑Yes ☐No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

_____ Square feet or 4.63 acres (impervious surface)

_____ Square feet or 19.11 acres (parcel size)

ii. Describe types of new point sources. Ditches, pipes, swales and curbs

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

On-site stormwater management facilities

- If to surface waters, identify receiving water bodies or wetlands: _____

  N/A
- Will stormwater runoff flow to adjacent properties? ☑Yes ☐No

iv. Does proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☑Yes ☐No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☐Yes ☑No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐Yes ☑No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐Yes ☐No

ii. In addition to emissions as calculated in the application, the project will generate:
- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☑No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☑No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

_____

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☐Yes ☑No

If Yes:

i. When is the peak traffic expected (Check all that apply): ☐ Morning ☐ Evening ☐Weekend ☐ Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of semi-trailer truck trips/day: _____

iii. Parking spaces: Existing _____ Proposed _____ Net increase/decrease _____

iv. Does the proposed action include any shared use parking? ☐Yes ☐No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe:

_____

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☐Yes ☐No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☐Yes ☐No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☐Yes ☐No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☐Yes ☐No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):

_____

iii. Will the proposed action require a new, or an upgrade to, an existing substation? ☐Yes ☐No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: 7:00-7:00
- Saturday: 8:30-5:00
- Sunday: _____
- Holidays: _____

ii. During Operations:

- Monday - Friday: 8:00-5:00
- Saturday: _____
- Sunday: _____
- Holidays: _____

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☑ Yes ☐ No

If yes:

i. Provide details including sources, time of day and duration:

During construction: typical noise associated with construction activities of this type. Construction within normal operating hours.

ii. Will proposed action remove existing natural barriers that could act as a noise barrier or screen? ☐ Yes ☑ No

Describe: _____

n.. Will the proposed action have outdoor lighting? ☑ Yes ☐ No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

Refer to project lighting plan.

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☐ Yes ☑ No

Describe: _____

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐ Yes ☑ No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures: _____

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☐ Yes ☑ No

If Yes:

i. Product(s) to be stored _____

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally describe proposed storage facilities: _____

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☑ No

If Yes:

i. Describe proposed treatment(s):

ii. Will the proposed action use Integrated Pest Management Practices? ☑ Yes ☐ No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☐ Yes ☐ No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: _____ tons per _____ (unit of time)
- Operation : _____ tons per _____ (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction: _____
- Operation: _____

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction: _____
- Operation: _____

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☐ No

If Yes: provide name and location of facility: _____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility: _____

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☐ Urban ☐ Industrial ☐ Commercial ☑ Residential (suburban) ☑ Rural (non-farm)
☐ Forest ☑ Agriculture ☐ Aquatic ☐ Other (specify): _____

ii. If mix of uses, generally describe:

The surrounding properties are primarily suburban residential in use. Directly adjacent is a vacant field.

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	0	4.63	+4.63
• Forested	5.52	2.68	-2.84
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	12.255	7.215	-5.05
• Agricultural (includes active orchards, field, greenhouse etc.)	0	0	0
• Surface water features (lakes, ponds, streams, rivers, etc.)	0	0	0
• Wetlands (freshwater or tidal)	1.34	1.26	-0.08
• Non-vegetated (bare rock, earth or fill)	0	0	0
• Other Describe: Lawn- no mow	0.00	3.33	+3.33

c. Is the project site presently used by members of the community for public recreation? ☐Yes ☑No

i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☑Yes ☐No

If Yes,

i. Identify Facilities:

Trumansburg Central Schools

e. Does the project site contain an existing dam? ☐Yes ☑No

If Yes:

i. Dimensions of the dam and impoundment:

- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____

iii. Provide date and summarize results of last inspection:

_____

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐Yes ☑No

If Yes:

i. Has the facility been formally closed? ☐Yes ☐ No

- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

_____

iii. Describe any development constraints due to the prior solid waste activities: _____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐Yes ☑No

If Yes:

i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

_____

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☐Yes ☑ No

If Yes:

i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐Yes ☐No

☐ Yes – Spills Incidents database Provide DEC ID number(s): _____

☐ Yes – Environmental Site Remediation database Provide DEC ID number(s): _____

☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures: _____

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☐Yes ☑No

If yes, provide DEC ID number(s): _____

iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

_____

Phase I and Phase II Environmental Site Assessments have been performed on the project site. While a Recognized Environmental Condition (REC) was initially identified in the Phase I ESA, subsequent investigation in the Phase II ESA found that identified analytes were within NYSDEC allowable limits for Residential Use, and the recommendation was made by Seeler Engineering, PC that the REC be closed.

v. Is the project site subject to an institutional control limiting property uses? ☐Yes ☑No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐Yes ☐No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? >25 feet

b. Are there bedrock outcroppings on the project site? ☐Yes ☑No
If Yes, what proportion of the site is comprised of bedrock outcroppings? _____%

c. Predominant soil type(s) present on project site:

Rhinebeck silt loam	47.1 %
Howard gravelly loam	33.2 %
Ovid silt loam	67 %

d. What is the average depth to the water table on the project site? Average: 0-17 feet

e. Drainage status of project site soils:
☑ Well Drained: 33 % of site
☐ Moderately Well Drained: ____ % of site
☑ Poorly Drained 67 % of site

f. Approximate proportion of proposed action site with slopes:
☑ 0-10%: 95 % of site
☑ 10-15%: 4 % of site
☑ 15% or greater: 1 % of site

g. Are there any unique geologic features on the project site? ☐Yes ☑No
If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☑Yes ☐No

ii. Do any wetlands or other waterbodies adjoin the project site? ☑Yes ☐No

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☑Yes ☐No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name _____ Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name Wetlands A-F: ACOE completing jurisdiction determination Approximate Size 1.34 acres
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☐Yes ☑No

If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? ☐Yes ☑No

j. Is the project site in the 100 year Floodplain? ☐Yes ☑No

k. Is the project site in the 500 year Floodplain? ☐Yes ☑No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☐Yes ☑No
If Yes:

i. Name of aquifer: _____

m. Identify the predominant wildlife species that occupy or use the project site: _____

n. Does the project site contain a designated significant natural community? ☐Yes ☑No

If Yes:

i. Describe the habitat/community (composition, function, and basis for designation): _____

ii. Source(s) of description or evaluation: NYSDEC Environmental Resource Mapper suggested that the Calcareous shoreline outcrop rare ecological community may be present. Further site investigation determined that this community is associated with the shores of Taughannock Creek, which does not occur on this site.

iii. Extent of community/habitat:

- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☐ Yes ☑No

Refer to the attached rare Flora and Fauna Survey.

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐Yes ☑No

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐Yes ☑No

If yes, give a brief description of how the proposed action may affect that use: _____

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐Yes ☑No

If Yes, provide county plus district name/number: _____

b. Are agricultural lands consisting of highly productive soils present? ☐Yes ☑No

i. If Yes: acreage(s) on project site? _____

ii. Source(s) of soil rating(s): USDA Forest Service Productivity Index PI=10/11

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐Yes ☑No

If Yes:

i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature

ii. Provide brief description of landmark, including values behind designation and approximate size/extent: _____

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐Yes ☑No

If Yes:

i. CEA name: _____

ii. Basis for designation: _____

iii. Designating agency and date: _____

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on, or has been nominated by the NYS Board of Historic Preservation for inclusion on, the State or National Register of Historic Places? ☐ Yes ☑ No

If Yes:

i. Nature of historic/archaeological resource: ☐ Archaeological Site ☐ Historic Building or District

ii. Name: _____

iii. Brief description of attributes on which listing is based: _____

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☐ Yes ☑ No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐ Yes ☑ No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☑ Yes ☐ No

If Yes:

i. Identify resource: Cayuga Lake Scenic Byway

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): Scenic byway around Cayuga Lake

iii. Distance between project and resource: 2 miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐ Yes ☑ No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐ Yes ☐ No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

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

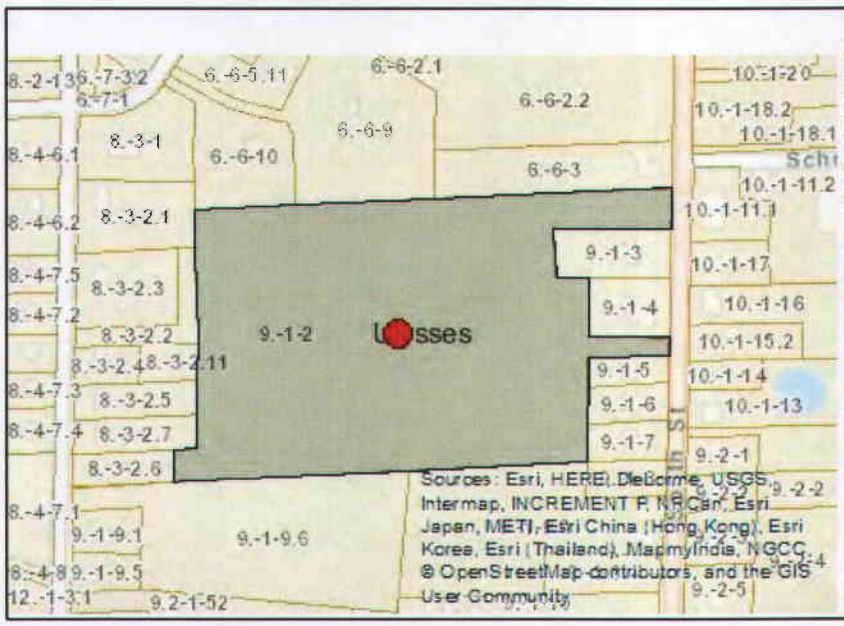
Applicant/Sponsor Name Ithaca Neighborhood Housing Services Date 12/13/2017

Signature _____ Title Director of Real Estate Development

PRINT FORM

EAF Mapper Summary Report

Tuesday, March 21, 2017 10:40 AM

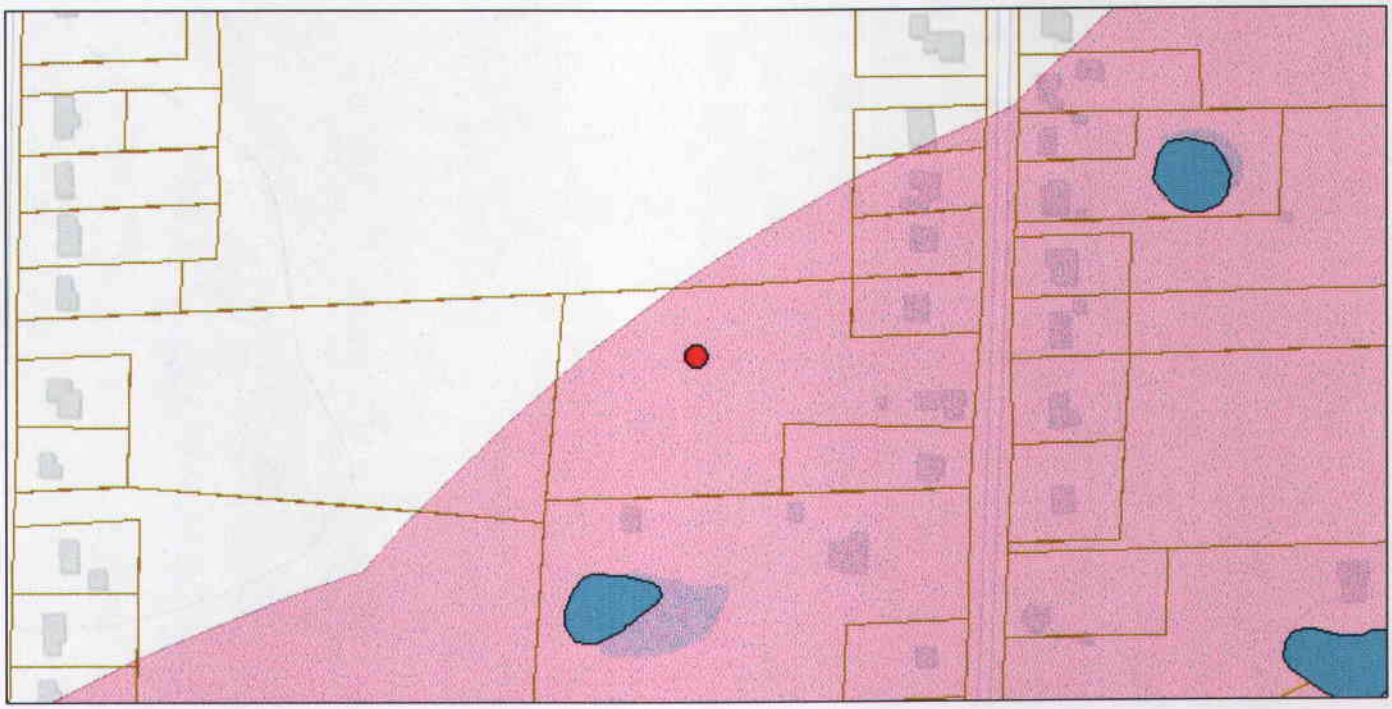


Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.

B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	No
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	No
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.2.j. [100 Year Floodplain]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.2.k. [500 Year Floodplain]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.2.l. [Aquifers]	No
E.2.n. [Natural Communities]	Yes
E.2.n.i [Natural Communities - Name]	Calcareous Shoreline Outcrop

E.2.n.i [Natural Communities - Acres]	27.5
E.2.o. [Endangered or Threatened Species]	No
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National Register of Historic Places]	Yes - Digital mapping data for archaeological site boundaries are not available. Refer to EAF Workbook.
E.3.e.ii [National Register of Historic Places - Name]	Camp, Hermon, House
E.3.f. [Archeological Sites]	No
E.3.i. [Designated River Corridor]	No

Environmental Resource Mapper



The coordinates of the point you clicked on are:

UTM 18	Easng:	363636.454	Northing:	4710447.901
Longitude/Latude	Longitude:	-76.660	Latude:	42.534

County: Tompkins
Village: Trumansburg
USGS Quad: TRUMANSBURG

DEC Region

Region 7:
(Central New York) Broome, Cayuga, Chenango, Cortland, Madison, Onondaga, Oswego, Tioga and Tompkins counties. For more information visit hp://w ww.dec.ny.gov/about/615.html.

Natural Communities in the Vicinity

Natural Community Name: Calcareous shoreline outcrop
Location: Taughannock Ravine
Ecological System: Uplands

If your project or action is within or near an area with a rare animal, a permit may be required if the species is listed as endangered or threatened and the department determines the action may be harmful to the species or its habitat.

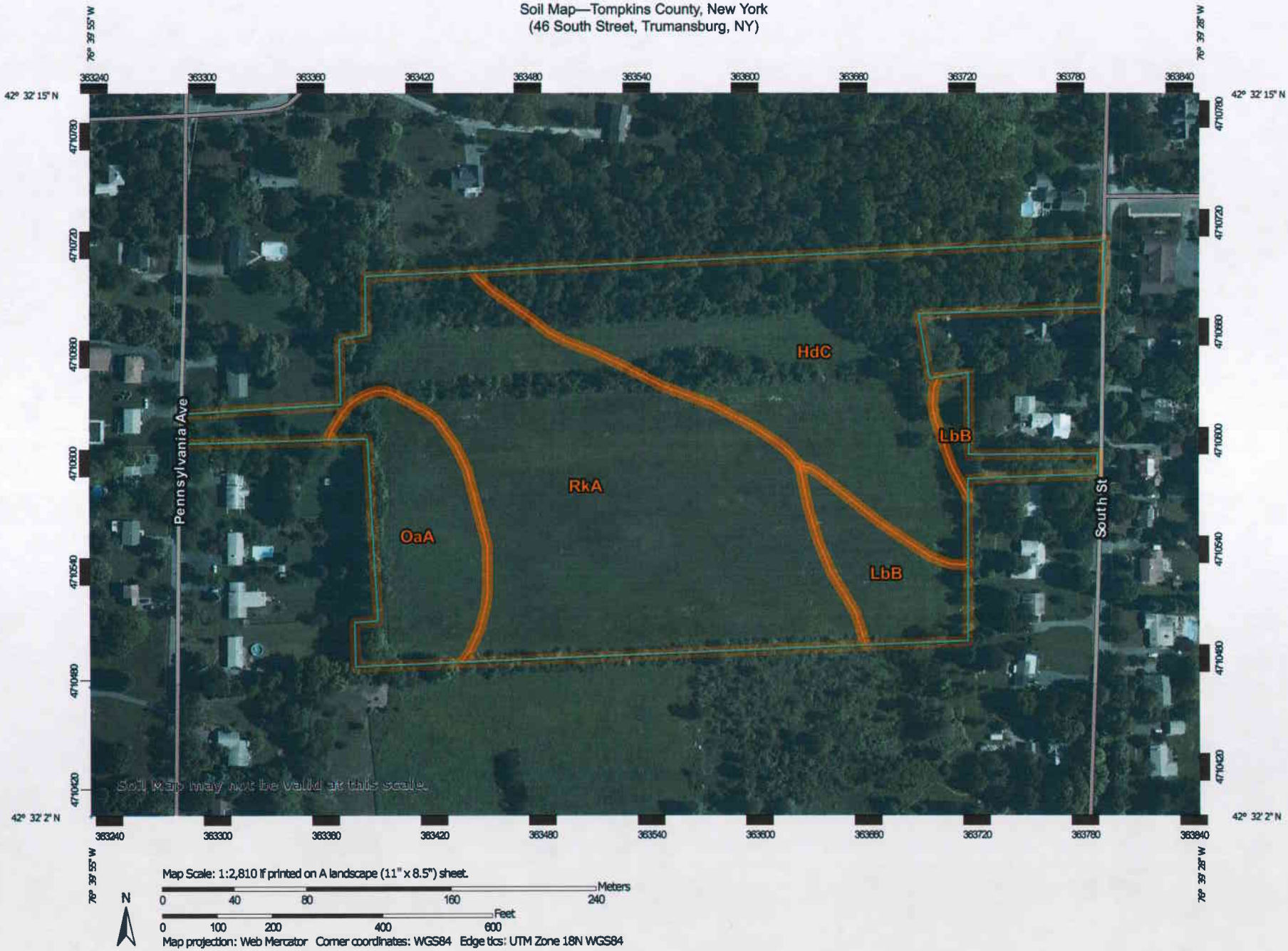
If your project or action is within or near an area with rare plants and/or significant natural communities, the environmental impacts may need to be addressed.

The presence of a unique geological feature or landform near a project, unto itself, does not trigger a requirement for a NYS DEC permit. Readers are advised, however, that there is the chance that a unique feature may also show in another data layer (ie. a wetland) and thus be subject to permit jurisdiction.

Please refer to the "Need a Permit?" tab for permit information or other authorizations regarding these natural resources.

Disclaimer: If you are considering a project or action in, or near, a wetland or a stream, a NYS DEC permit may be required. The Environmental Resources Mapper does not show all natural resources which are regulated by NYS DEC, and for which permits from NYS DEC are required. For example, Regulated Tidal Wetlands, and Wild, Scenic, and Recreational Rivers, are currently not included on the maps.

Soil Map—Tompkins County, New York
(46 South Street, Trumansburg, NY)



MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

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

Special Point Features

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

Water Features

- Streams and Canals

Transportation

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

Background

- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Tompkins County, New York
Survey Area Data: Version 11, Sep 24, 2016

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

Date(s) aerial images were photographed: Jun 2, 2010—Oct 8, 2010

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

Map Unit Legend

Tompkins County, New York (NY109)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
HdC	Howard gravelly loam, 5 to 15 percent simple slopes	6.3	33.2%
LbB	Lansing gravelly silt loam, 3 to 8 percent slopes	1.6	8.4%
OaA	Ovid silt loam, 0 to 6 percent slopes	2.1	11.2%
RkA	Rhinebeck silt loam, 0 to 2 percent slopes	9.0	47.1%
Totals for Area of Interest		**19.1**	**100.0%**

I. Site Description

The Site consists of nineteen (19) acres of undeveloped land at 46 South Street in the Village and is generally bounded by undeveloped land and residential properties to the north, residential properties and South Street to the east, undeveloped lands and residential property to the south, and Pennsylvania Avenue and residential properties to the west. See ***Exhibit A, Aerial Map***.

The Site is currently undeveloped land covered with grass and brush including some wooded areas and scattered trees. The average elevation of the Site is 995 feet, with relatively flat grades sloping slightly downward from northeast to southwest with the lowest point at the southeasterly corner of the Site. Elevations drop significantly beyond the property to 970 feet and further to the northeast to 381 feet at Cayuga Lake. Given the elevation change of the Site, and the waterbodies identified, groundwater flow is calculated to flow to the north, east and south from the center of the Site. It is expected that groundwater levels will vary with location and with seasonal fluctuations in precipitation and runoff.

Site soils are classified as gravelly-loam, hydraulic group Class A. Soil borings from the Site indicate native soils generally consisting of silts with lesser amounts of sand, gravel and clay with occasional cobbles and/or rock fragments. Bedrock was not encountered within the depths explored but a review of historical data indicates that the bedrock underlying the Site consists of shales and siltstones of the Genesee group. ***See Exhibit S, Phase I/II Environmental Site Assessments.***

II. Analysis of Environmental Impacts

A. Impacts on Land and Geological Features

The Site is undeveloped and is situated within an overall residential neighborhood type setting. The majority of the Site is grass and brush covered with some wooded areas and scattered trees. The Project entails the development of a residential/mixed-use/mixed-income neighborhood project resulting in seventeen (17) market rate for-sale units, ten (10) affordable for-sale townhomes, six (6) affordable rental townhomes, and forty (40) rental apartments in a two story elevator building. The apartment building will include a 3,000 square foot community lounge which will house a kitchenette and laundry facilities for use by residents, as well as management and maintenance offices. The Trumansburg Community Nursery School, a 501c3 non-profit organization, will construct and operate a 4,500 square foot school on the Site. Construction activities associated with the Project would not have a significant impact to topography. Except for grading and excavation work associated with foundations for buildings and associated parking lots, the slope of the land would not be significantly altered by the Project and there would be no construction on steep slopes.

The Project would not involve construction on land where there is a potential to impact groundwater and no bedrock was encountered within the depths explored. Moreover, there are no unusual land forms (cliffs, dunes, minerals, fossils, caves) within the Site. Accordingly the Project would not have a significant adverse impact on land or geological features within or around the Site.

B. Impacts to Surface Water

As part of the Project, the Applicant's commissioned a wetland delineation study, attached to the Site Plan Application as ***Exhibit R, Wetland Delineation***. At various points during Project progression, potential impacts to wetlands were contemplated due to the Site layout and available space. However, Project modifications have minimized impacts to wetlands to the greatest extent practicable, particularly on the northwest corner of the Site. The changes have resulted in 0.03 acres of fill in likely jurisdictional wetland A, 0.05 acres of fill in likely jurisdictional wetland B, 0.01 acres of fill in likely isolated wetland D, and 0.06 acres of fill in likely isolated wetland E. Thus, the total fill of likely jurisdictional wetlands is 0.08 acres, and the total fill of likely isolated wetlands is 0.06 acres. Accordingly, the Project will not result in a significant adverse impact to wetlands.

C. Impacts on Groundwater

The Project would not result in any use of groundwater. All water required for the Project would be supplied by the Village of Trumansburg, and existing capacity is more than sufficient to supply the demand. Additionally, the Project would not involve any wastewater discharges to groundwater. While an extension of approximately 1800 LF 8" ductile iron water main will be necessary to connect the existing mains on Pennsylvania Avenue and South Street and an 8" ductile iron main loop along the private road, the Site is in the existing water service district and an expansion of the district will not be needed for the Project. Accordingly, the Project would not have a significant adverse impact to groundwater within or around the Site and, in fact, would result in improvements to groundwater quality.

D. Impacts on Flooding

The Project would not result in development on lands subject to flooding, nor is the Site located within a 100 or 500-year floodplain. During construction activities, various standard soil erosion and sedimentation controls would be implemented as required to control construction-related runoff. As part of Project, various types of stormwater drainage systems would be installed as necessary to collect and treat runoff from the Site in accordance with State requirements. ***See Exhibit E, Civil Engineering Plans*** for conceptual stormwater designs.

TG Miller Engineering PC is the Project civil engineer and responsible for designing the storm water management practices. TG Miller has been working to develop a Storm Water Pollution Prevention Plan ("**SWPPP**") and the Project will be required to obtain a SPDES Permit from the New York State Department of Environmental Conservation ("**NYSDEC**"). NYSDEC standards require the Project to mitigate stormwater rates of runoff to meet existing stormwater rates, or reduce proposed rates below existing rates where possible. Prior to construction, all practices will be reviewed and approved by MRB, the Engineering firm retained by the Village to ensure that the stormwater management plan meets the State and Village requirements. Accordingly, the Project would not have a significant adverse impact on flooding within or around the Site.

E. Impacts on Air

The Project would not have any significant adverse air quality impacts. The Project does not entail the types of activities or operations that require the Applicant to acquire an Air Facility Permit or that are associated with a significant potential for air emissions. Any impacts to air from construction activities will be minor, and temporary in nature. Accordingly, the Project would not have a significant adverse impact upon air quality within or around the Site.

F. Impacts on Plants and Animals

The Project will not result in an adverse impact to natural resources, including flora or fauna. A flora and fauna survey was conducted by botanist F. Robert Wesley between May 30th and June 5th, 2017. A thorough search of the Site revealed no species or ecological communities listed as rare, threatened or endangered by New York State. No federally listed species were found or have ever been recorded on the Site. Mr. Wesley's findings letter is attached, as well as confirmation from the NYS Department of Environmental Conservation that there are no known occurrences of the Northern long-eared bat in Tompkins County, and thus, no restrictions on clearing trees. ***See Exhibit V, Flora and Fauna Study***. Accordingly, the Project would not have a significant adverse impact on plants and animals or natural communities within or around the Site.

G. Impacts on Agricultural Resources

The proposed Project is not located in, or near, any agricultural land and/or resources. As a result, the Project would not have a significant adverse impact upon agricultural resources within or around the Site.

H. Impacts on Aesthetic Resources

The Project will not be visible from any officially designated federal, state or local scenic or aesthetic resource. While the Site is currently undeveloped, the Project will be

consistent with surrounding uses which are residential in nature. Accordingly, the Project is not anticipated to create any significant adverse impacts to aesthetic resources.

I. Impacts on Historic and Archaeological Resources

The Project does not contain, nor is it adjacent to, a building, archeological site or district which is listed on, or that has been nominated to the State or National Register of Historic Places. The Site is not in an area designated as sensitive for archeological sites by the NYS Historic Preservation Office. ***See Exhibit W, SHPO Letter of No Impact.*** Accordingly, the Project is not anticipated to create any significant adverse impacts to historical or archeological resources.

J. Impacts on Open Space and Recreation

The Site is not presently used by the community or the neighborhood as open space, or as a recreation area. However, the Project has been designed to preserve green space and includes the construction of recreation space in the form of a playground for the development. The Project will create positive impacts on open space and recreation. Accordingly, the Project would not have a significant adverse impact on open space or recreation within or around the Site.

K. Impacts on Critical Environmental Areas

There are no state-designated Critical Environmental Areas ("**CEAs**") on the Site. As a result, the Project would not have a significant adverse impact on any Critical Environmental Areas within or around the Site.

L. Impacts on Transportation

The Applicants have commissioned a detailed traffic study, attached hereto as ***Exhibit Q, Traffic Impact Study***. The Traffic Impact Study ("TIS") commenced with data gathering from the NYSDOT within the study area about existing traffic patterns. This information was supplemented with field data collection and observations of existing traffic patterns. Once existing traffic patterns were understood, an estimate of the amount of traffic that would be generated by the Project was created.

Access to the development will be provided via two (2) new roadway connections; one (1) along South Street and one (1) along Pennsylvania Avenue. Based upon the number of buildings and anticipated uses of same, the Project would generate approximately 27 entering/49 exiting vehicle trips during the weekday AM peak hour and 54 entering/51 exiting vehicle trips during the PM peak hour.

The TIS conducted an analysis of a total of five (5) intersections: (1) South Street/School House Lane; (2) Pennsylvania Avenue/Halsey Street-Elm Street; (3) South Street/Main

Street (Rt. 96); (4) Rabbit Run Road/Main Street (Rt. 96); and (5) South Street/Whig Street. Intersections were analyzed to determine what impact the Project would have on Level of Service ("**LOS**"). Applicants would like to point out that the revised TIS includes two (2) additional intersections that were analyzed based upon feedback from the community. LOS are calculated to provide an indication of the amount of delay that a motorist experiences while traveling along a roadway or through an intersection. A letter designation is used to describe LOS with LOS "A" representing the best operating condition and LOS "F" the worst. LOS "C" or better is considered desirable and LOS "D" is the minimum acceptable LOS in most cases. Changes in LOS are measured in seconds. **Table III** summarizes the trip generation estimate and **Table IV** reports LOS for each intersection.

While Rabbit Run Road/Main Street (Rt. 96) westbound LOS, South Street/Main Street (Rt. 96) northbound LOS, South Street and Whig Street eastbound LOS would experience a slight delay due the Project of 1.1, 2.1, 1.6 seconds respectively, and the South Street/School House Lane northbound LOS would experience a slight delay of 0.4 seconds. Being so slight (2.1 seconds max), the TIS confirms that none of the changes warrant any mitigation.

Sight distance investigation was also evaluated as part of the TIS. Sight distance is measured at intersections by the allowance of drivers to perceive the presence of potentially conflicting vehicles at an intersection. If the available sight distance for an entering or crossing vehicle is at least equal to the appropriate sight distance for the road, then drivers have sufficient sight distance to anticipate and avoid collisions. The TIS concluded that the available sight distance exceeds the desirable intersection sight distance and required stopping sight distance at the proposed new intersection locations along both South Street and Pennsylvania Avenue. Thus, the proposed new roadways shall be stop-controlled on their approaches to the adjacent roadways (South Street and Pennsylvania Avenue).

Overall, the TIS concludes that the existing transportation network can adequately accommodate the Project, and that no mitigation is necessary in connection with the development of the Site. Thus, the TIS clearly demonstrates that the Project will not have a significant adverse impact on the transportation network within or around the Project Area.

M. <u>Impacts on Energy</u>

The Project will result in an increase in energy usage. Existing utility lines serve the Site and no significant improvements are necessary to accommodate the Project. In addition, the use of modern lighting equipment, efficient heating, ventilation and air conditioning systems will help make energy usage at the Site even more efficient.

The Tompkins County Energy Roadmap is an important tool in the efforts to reduce energy use and transition to renewable energy. The Project plans to follow the recommendations under the Roadmap's five (5) elements, discussed in more detail below. The units owned and sold by INHS can commit to these recommendations. However, since the market rate housing will be designed and built specifically by individual purchasers, those decisions can be strongly encouraged by architect Claudia Brenner, but the commitment would need to be made by the future owner.

1. Water fixtures will meet EPA's water sense requirements. Permanent appliances will be ENERGY STAR rated.

2. INHS is exploring the use of heat pumps as an alternative to gas including discussions with HeatSmart Tompkins, requesting pricing of heat pump systems from installers and getting cost estimates of annual utility usage of these systems from consultants.

3. The roofs of the apartment building will be suitable for solar installation, as will some of the townhomes.

4. The building envelopes will be insulated to R25-R34 to achieve energy savings significantly greater than code requires. All INHS new construction is either LEED or Enterprise Green Criteria certified.

5. INHS will install occupancy sensors and LED lighting where appropriate. All outdoor lights will be on photocells.

6. INHS will install high efficiency heating and cooling systems. Equipment will be located in utility closets rather than attics or basements.

7. INHS will work with an energy modeling firm to employ whole building energy modeling in order to optimize building energy performance. All INHS buildings are designed to meet LEED certification and Indoor air Plus certification and Water Sense certification.

Accordingly, the Project would not have a significant adverse impact upon energy at around the Site.

N. Impacts on Noise, Odor and Light

a. Noise

The Project is not expected to appreciably increase ambient noise levels, nor does the Project involve the types of activities that create significant noise as the Project is residential in nature. In addition, the noise level from the Project would be expected to

be consistent with the existing noise environment at and around the Site. In fact, the proposed parking will be contained on-Site reducing any impact to noise on the surrounding community. Any impacts to noise from construction activities will be minor, and temporary in nature. Construction noise will also be minimized with the utilization of mufflers, temporary sound barriers and enclosures. Any excessive noise or vibratory work will be scheduled accordingly to minimize disturbance to surrounding property owners. Accordingly, the Project would not have a significant adverse impact upon noise at around the Site.

b. Odor

The Project is not expected to create odors, nor does the Project involve the types of activities that create significant odors as the Project is residential in nature. A fully developed Site will not generate any significant odors. Any impacts to noise and/or odor from construction activities will be minor, and temporary in nature. Accordingly, the Project would not have significant adverse impacts on odors within or around the Site.

c. **Light**

The proposed development of the Site would introduce additional exterior lighting at the Site. While light levels would be greater than the current lighting conditions, all proposed exterior lighting has been designed to blend with the existing artificial ambient lighting of the area and to avoid any effects to adjoining residential properties. In addition, the Project is completely compliant with lighting requirements set forth in the Code. ***See Exhibit G, Site Lighting & Signage Plan.*** Overall, the use of newer technologies for lighting and the proper location and orientation of lighting fixtures would ensure that lighting from the Project would not have a significant adverse impact upon light pollution at or around the Site.

O. Impacts on Human Health

The Project does not entail the types of activities or operations that are associated with a significant potential for affecting public health, such as storing large amounts of hazardous or toxic materials. Accordingly, the Project would not have a significant adverse impact on public health within or around the Site.

P. Consistency with Community Plans/Community Character

In 2008, Village residents and the Village Board of Trustees came together in a series of meetings to spell out their collective vision for Trumansburg's future. Conversation centered on housing, economic development, and land use, among other topics. In 2012, the Village revised its Code to further the implementation of the 2008 Comprehensive Plan. The Village Code labels 46 South Street as R-1, Residential. R-1

Residential allows for the development of Single-Family and Multi-Family Dwellings, among other varied uses.

Modifications to Village Code also resulted in an affordable housing requirement that mandates that any new residential development with ten (10) or more units over a five-year period must provide at least twenty (20) percent of the projects total units as "affordable units". The Code states that the purpose of the Affordable Housing Provision is to promote public welfare by providing safe, decent, and affordable housing for all incomes; to ensure enough housing, especially for low-income households; to mitigate housing shortage and balance the demand and supply of housing by constructing more housing units; and to integrate all residents of the County regardless of their income levels.

Based upon these principles, the Project directly addresses the need for affordable housing outlined in the Comprehensive Plan by providing for sale and for rent options developed by a non-profit housing organization that will provide on-site management and maintenance and ensure that the properties remain affordable in perpetuity. The Project will create positive impacts to the growth and character of the area by providing for needed, market rate and affordable housing opportunities without impairing the character or quality of the existing community. In addition, the Project is consistent with surrounding uses which are residential in nature. Accordingly, the Project will not create any significant adverse impacts to the growth or character of the community.

Q. Construction Impacts

a. Noise

During construction activities, the Project would temporarily generate noise that exceeds background levels. However, any increase in noise levels during the construction phase would be short-term activities which take place during daylight working hours, when noise sensitivity is lowest. Overall, there would be potential temporary and minor impacts associated with noise during the demolition and construction phases of the Project.

b. Air Quality During Construction

Construction-related air quality impacts would be limited to temporary increases in fugitive dust, which would be reduced by Project design, and the construction contractor's work plans. No significant odors are anticipated during construction. Odors and dust would be monitored during construction activities, and corrective actions instituted if action levels are exceeded. Overall, there would be potential temporary and minor impacts associated with air quality impacts during construction.

c. Traffic During Construction

Construction activities may have temporary impacts on local traffic patterns. However, construction would be phased over time and the majority of construction activities would take place within the perimeter of the Site, and would not impact off-site traffic. Overall, there would be potential temporary and minor impacts associated with traffic during the demolition and construction phases of the Project.

d. Storm Water Management During Construction

During construction activities, various surface water and sedimentation controls would be implemented. A conceptual stormwater management plan will be prepared for the Project. Controls would be established in accordance with the conceptual stormwater management plan, and an erosion and sediment control plan would be developed by the construction contractor. Overall, there would be potential temporary and minor impacts associated with stormwater management during the construction phases of the Project.

e. Summary of Construction Impacts

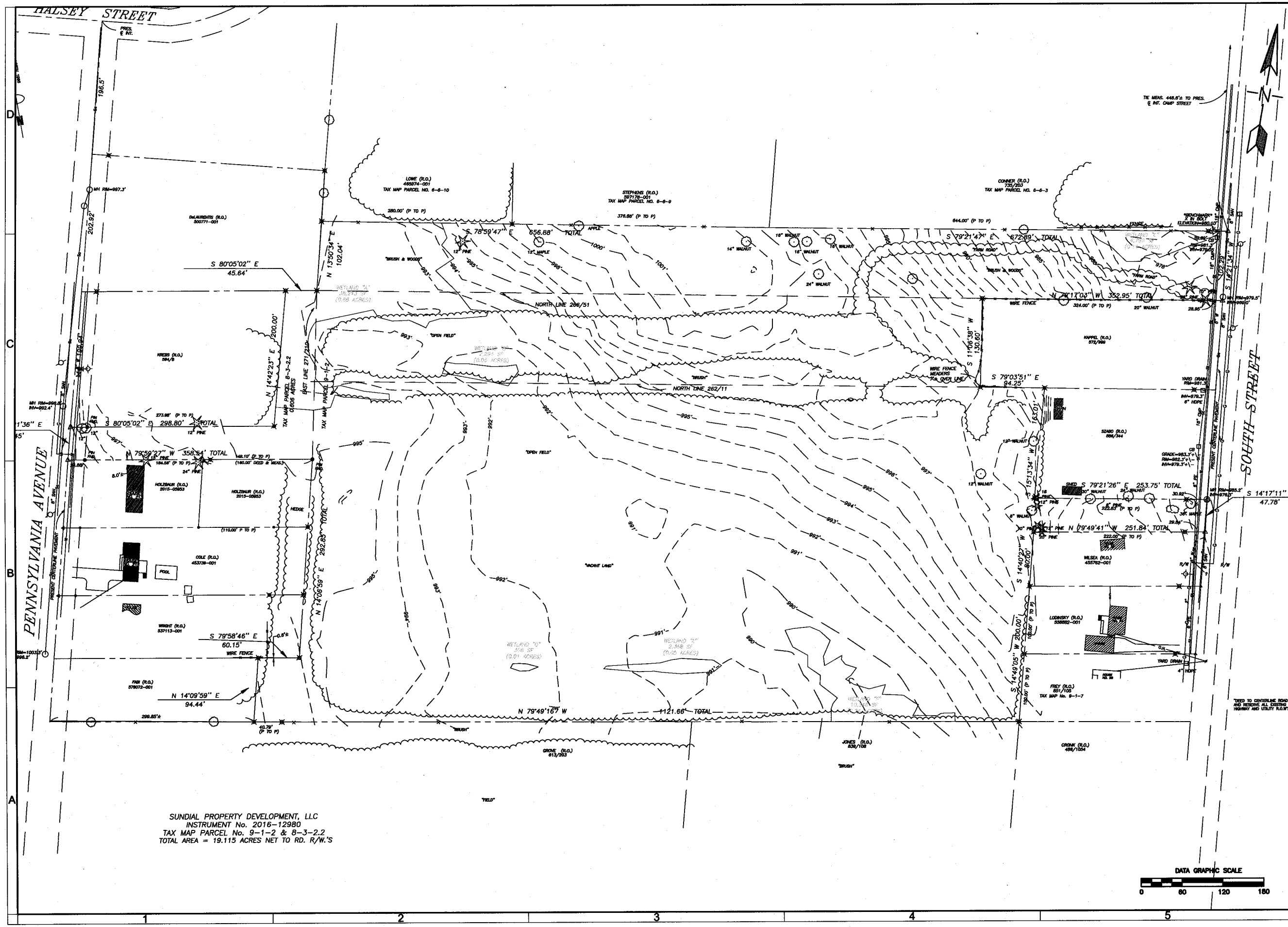
As discussed above, overall, during the demolition and construction phases of the Project, there would be potential temporary and minor impacts associated with noise, air quality, traffic and stormwater management within or around the Site.

III. Conclusion

Applicant's maintain that following a complete review of the information provided in ***Exhibit D, Parts I & II of the Full EAF and EAF Part I, Section F, Additional Information***, as well as the analysis discussed above, that the Planning Board will have all the relevant information to complete its SEQRA review. Upon review of all the aforementioned materials, Applicant's respectfully submit that the issuance of a negative declaration under SEQRA for the Project would be appropriate.

Doc #01-3083750.1

Exhibit E



SUNDIAL PROPERTY DEVELOPMENT, LLC
INSTRUMENT No. 2016-12980
TAX MAP PARCEL No. 9-1-2 & 8-3-2.2
TOTAL AREA = 19.115 ACRES NET TO RD. R/W.'S

TWLA
LANDSCAPE ARCHITECTS
1001 W. Seneca St., Ste. 101 Ithaca, NY 14850
607-277-1450 Fax 607-277-8050

HOLT ARCHITECTS
Architecture
Planning
Interior Design
619 W State Street
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607-273-6322 fax

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED LANDSCAPE ARCHITECT TO ALTER ANY ITEM ON THIS DOCUMENT WHO ALTERS THIS DOCUMENT IS REQUIRED BY LAW TO AFFIX HIS OR HER SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS OR HER SIGNATURE AND A SPECIFIC DESCRIPTION OF ALTERATIONS.

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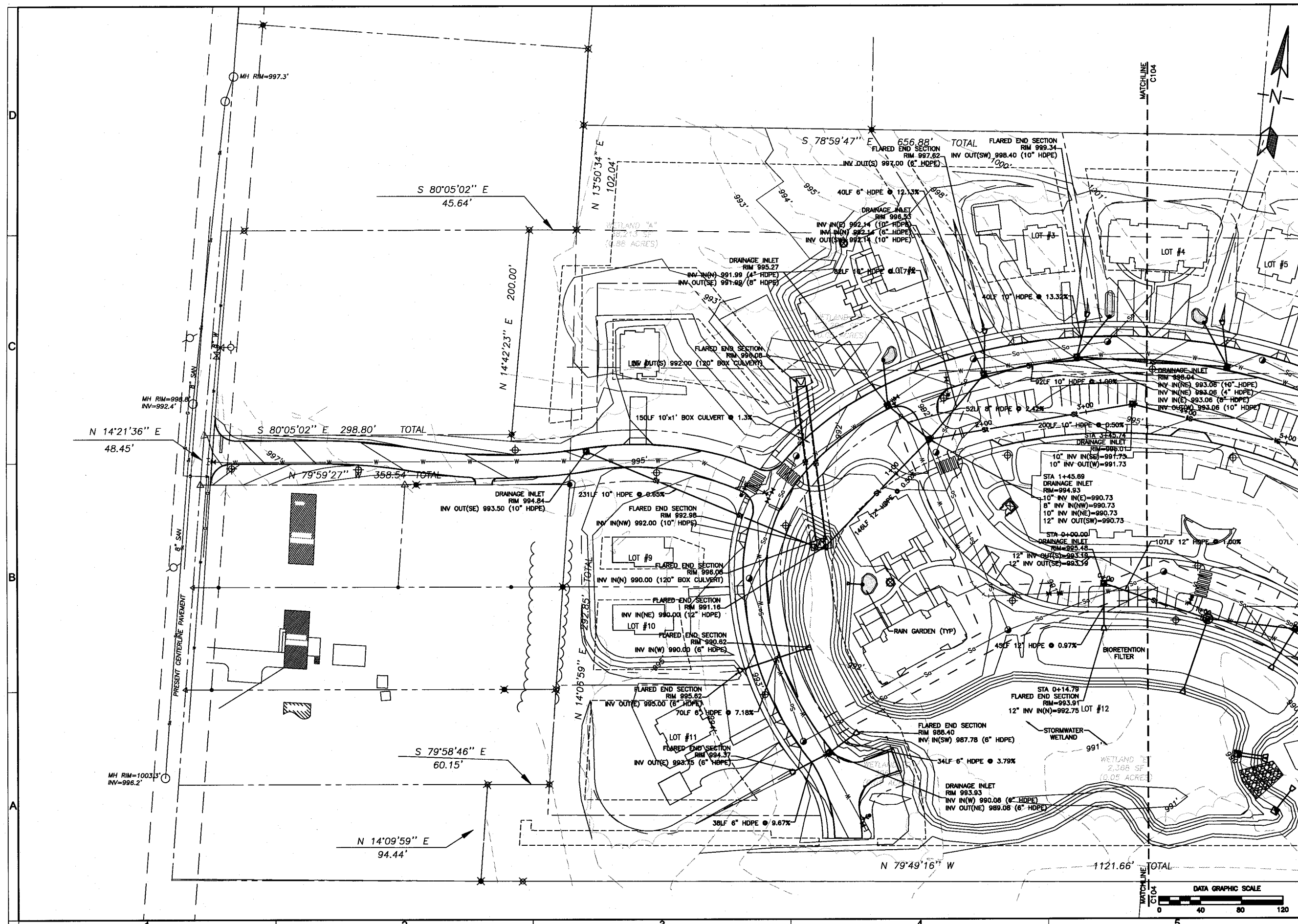
TROWBRIDGE WOLF MICHNELS LANDSCAPE ARCHITECTS, LLP

Ithaca Neighborhood Housing Services &
Sundial Property Development LLC
46 South Street
Trumansburg, New York

DATE:	12/13/2017
PROJECT:	17003
DRAWN BY:	RK
CHECKED:	

EXISTING CONDITIONS PLAN

C101



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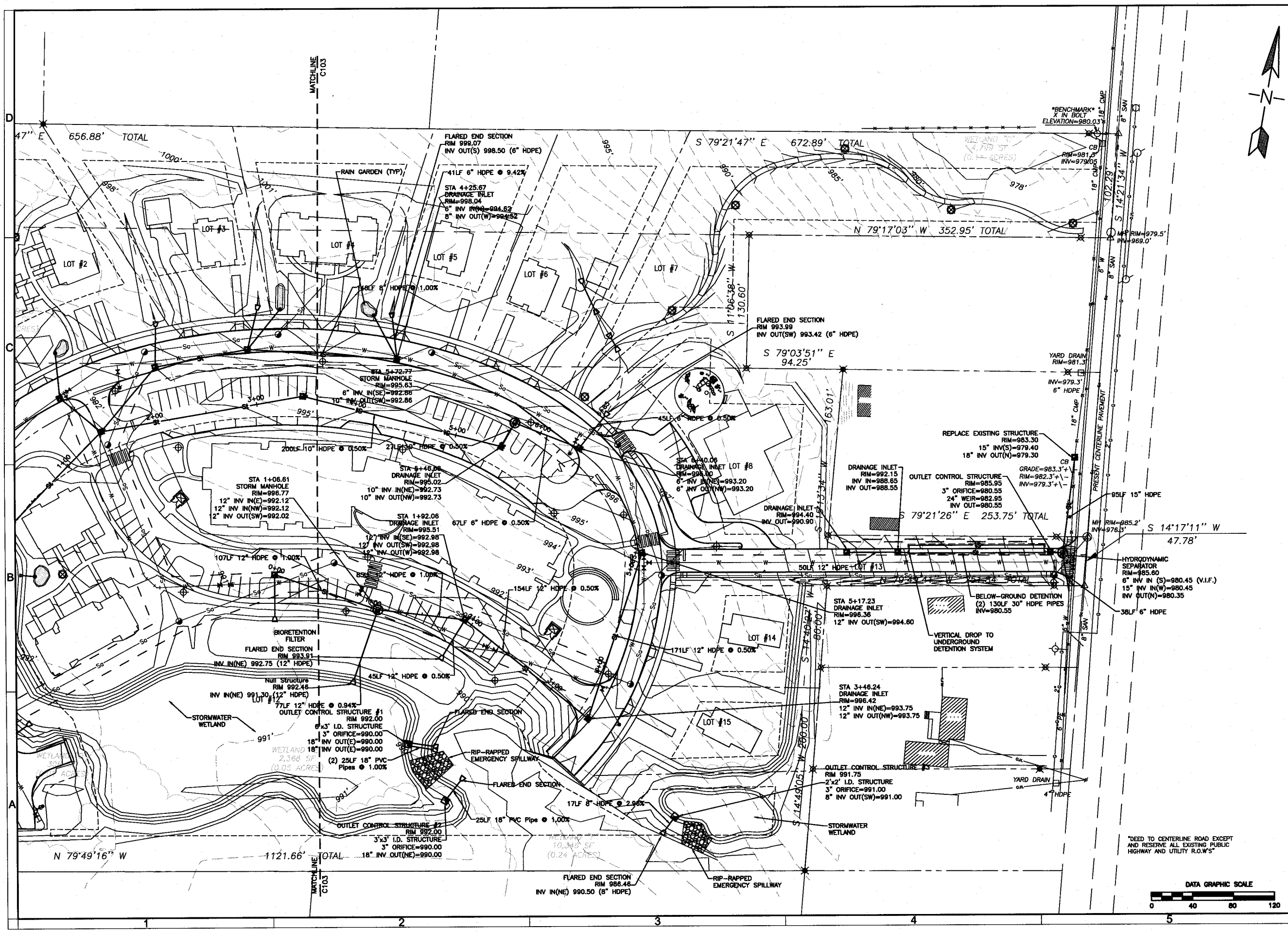
DRAINAGE PLAN

C103



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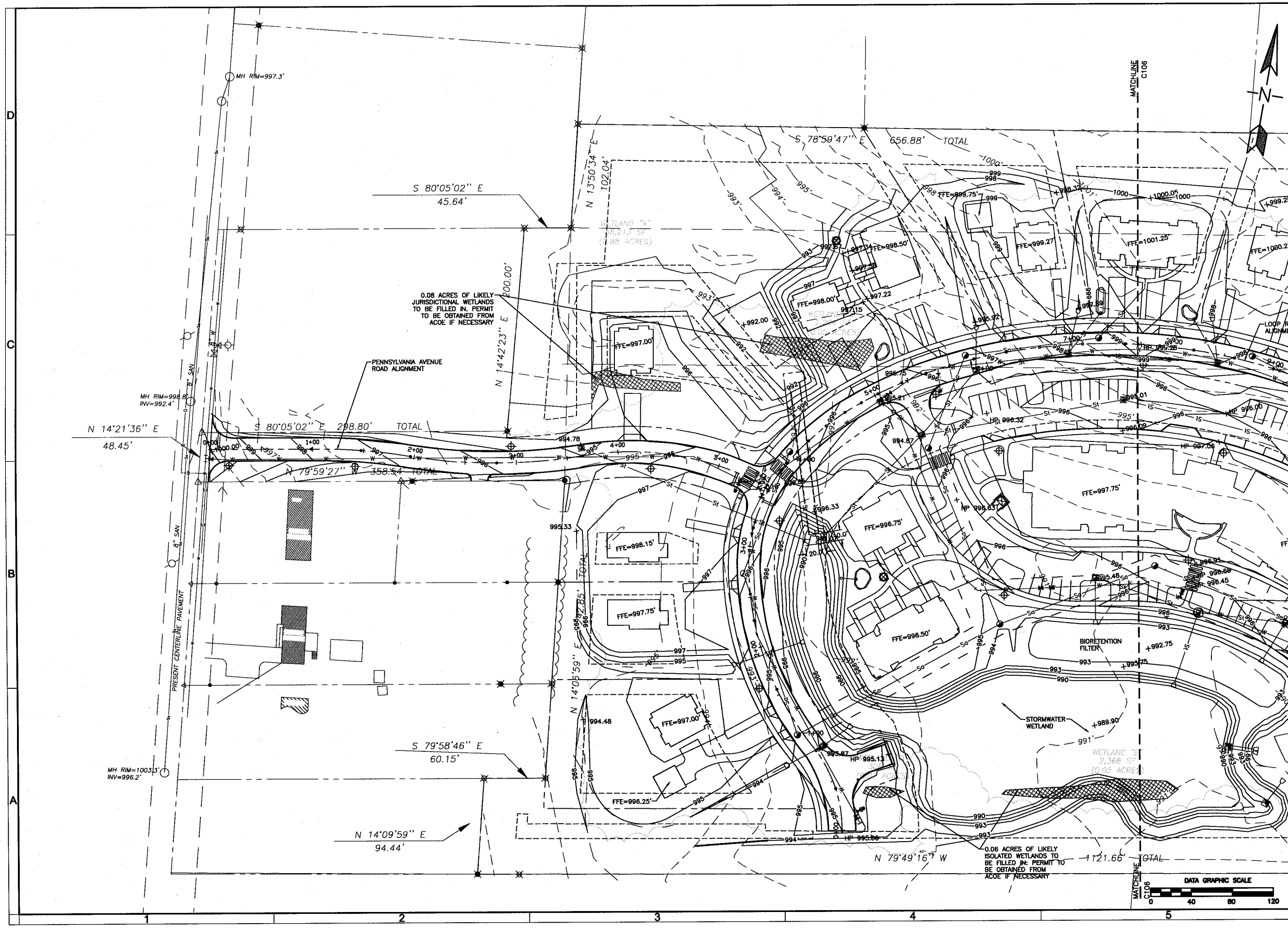
DRAINAGE PLAN

C104



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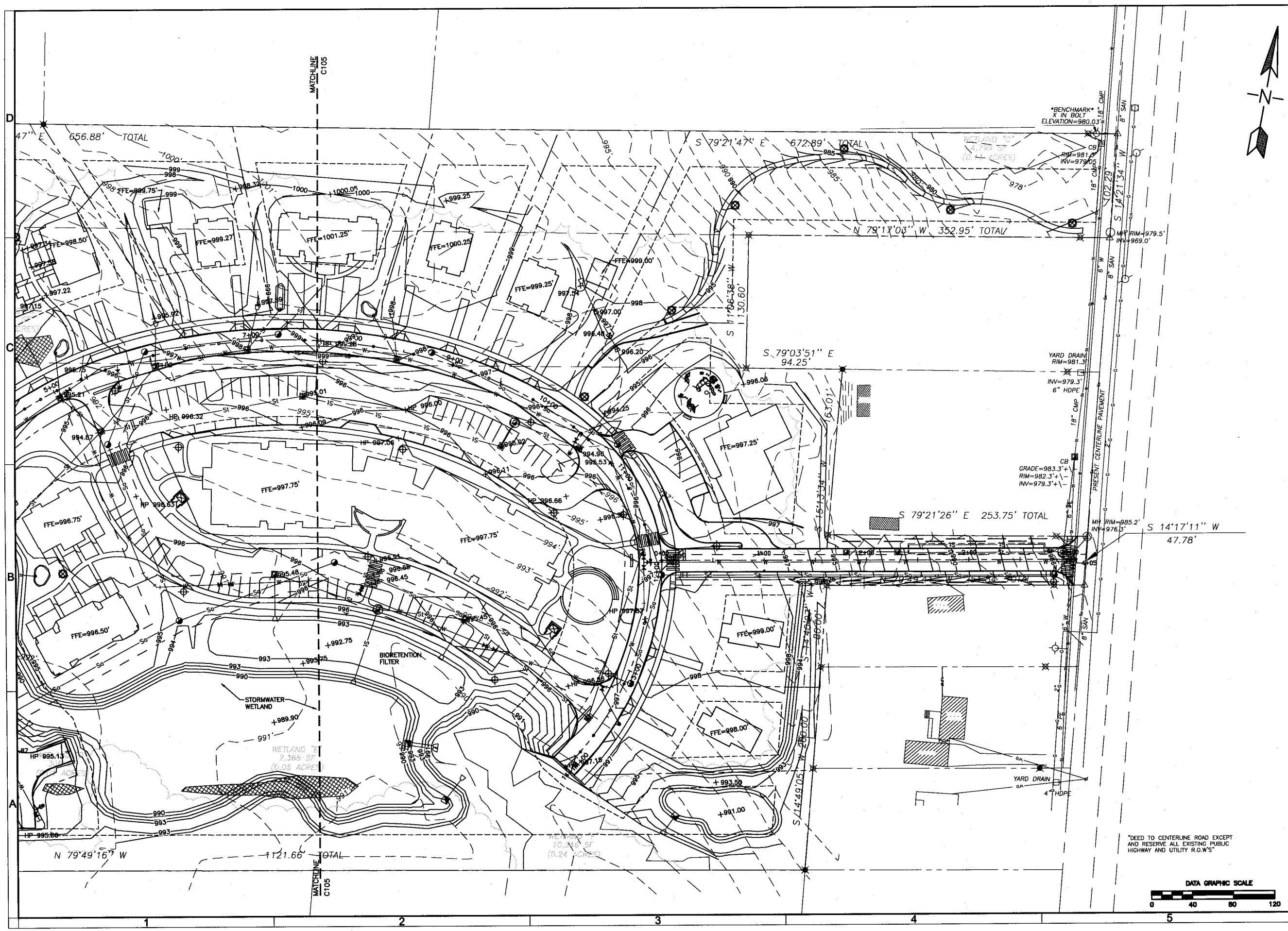
GRADING PLAN

C105



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GRADING PLAN

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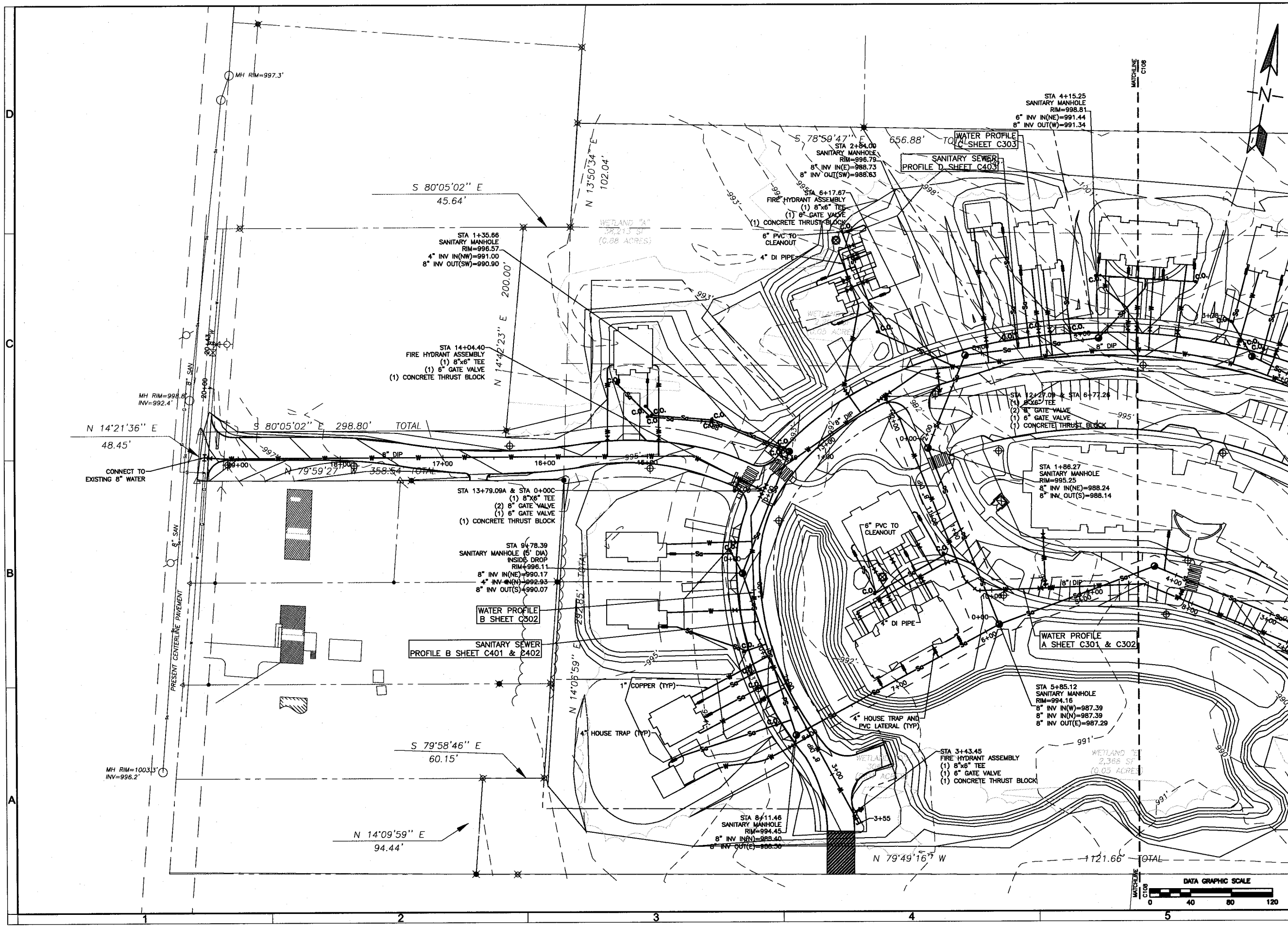

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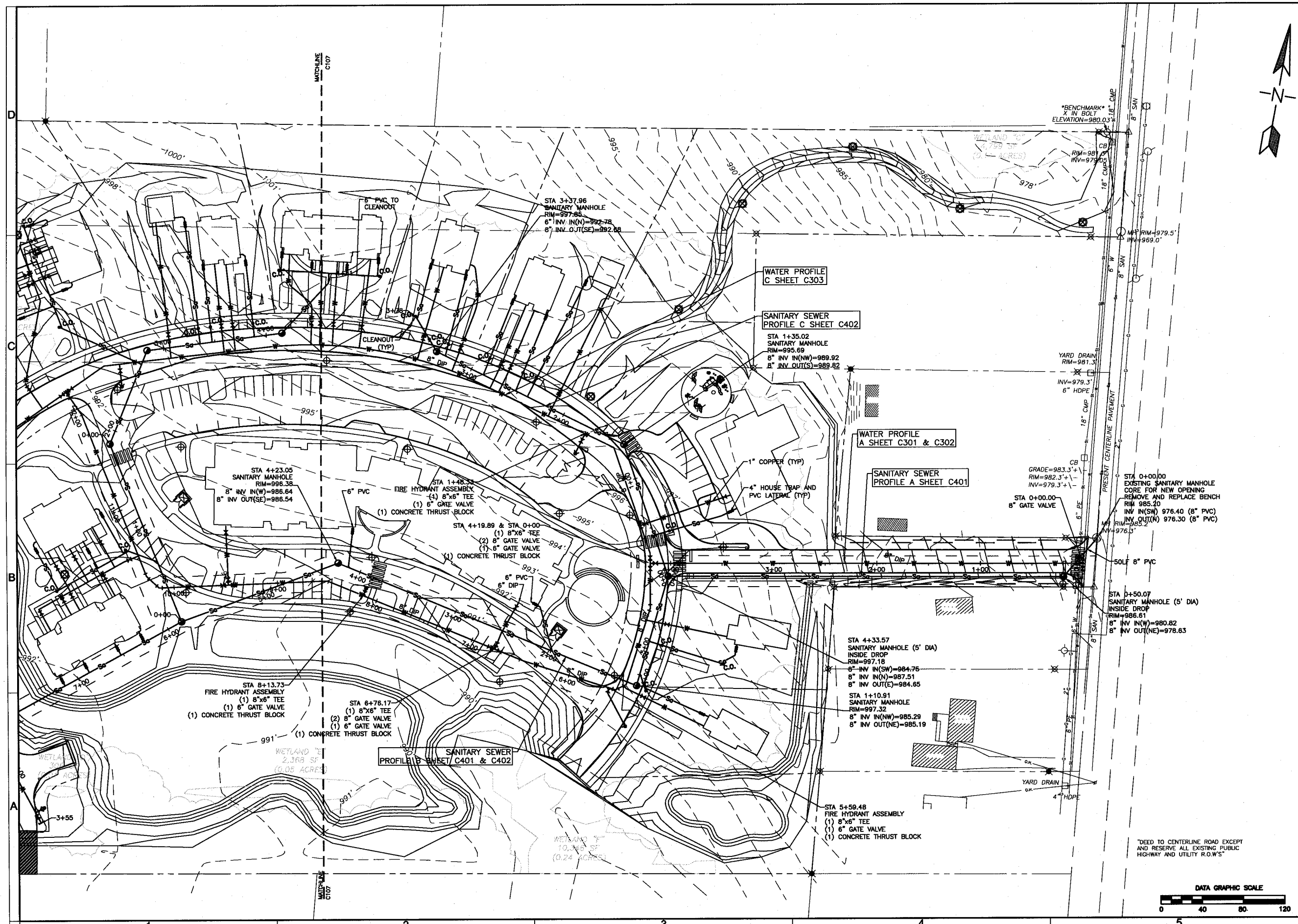
UTILITY
PLAN

C107



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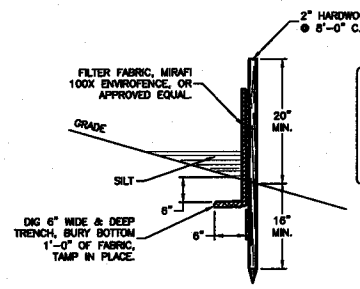
UTILITY PLAN

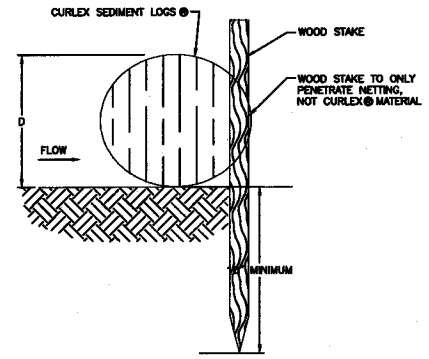
C108



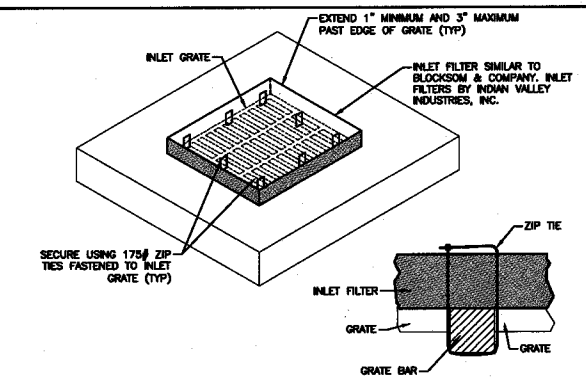
NOTES

1. WHEN TWO SECTIONS OF FABRIC ADJOIN EACH OTHER OVERLAP BY 6 INCHES AND FOLD.
2. PERFORM MAINTENANCE AS NEEDED AND REMOVE SILT WHEN BULGES DEVELOP IN THE SILT FENCE.

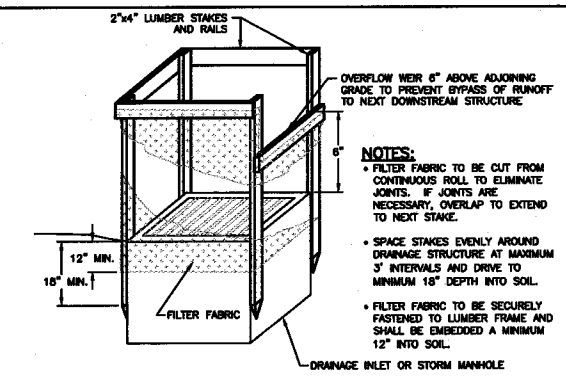
1 SILT FENCE
NOT TO SCALE



2 SEDIMENT CONTROL LOGS
NOT TO SCALE



IN PAVEMENT

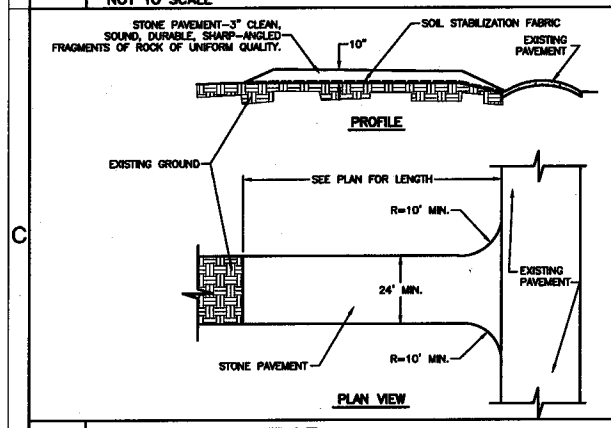


NOTES:

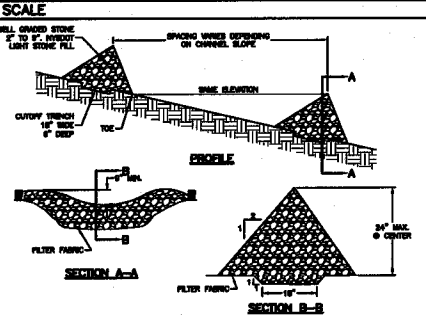
- FILTER FABRIC TO BE CUT FROM CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NECESSARY, OVERLAP TO EXTEND TO NEXT STAKE.
- SPACE STAKES EVENLY AROUND DRAINAGE STRUCTURE AT MAXIMUM 3' INTERVALS AND DRIVE TO MINIMUM 18" DEPTH INTO SOIL.
- FILTER FABRIC TO BE SECURELY FASTENED TO LUMBER FRAME AND SHALL BE EMBEDDED A MINIMUM 12" INTO SOIL.

IN LANDSCAPE

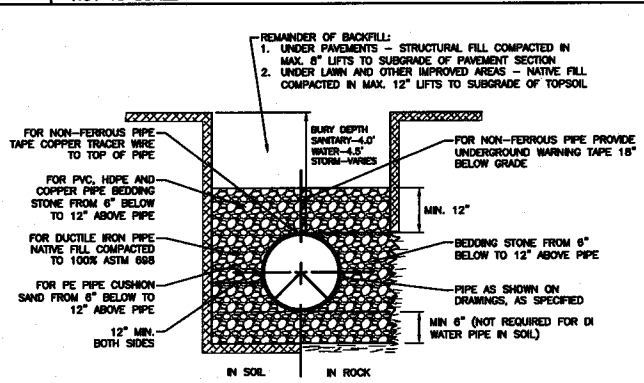
3 INLET FILTERS
NOT TO SCALE



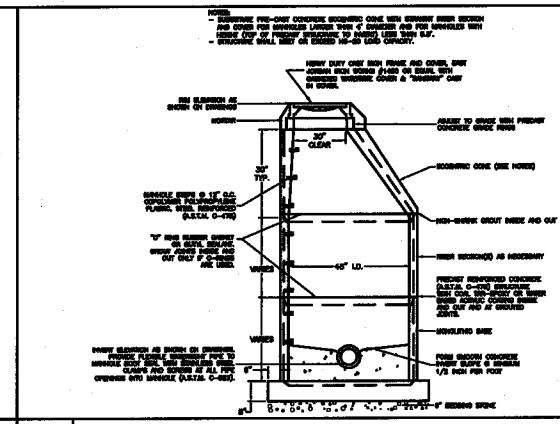
4 TRACKING PAD
NOT TO SCALE



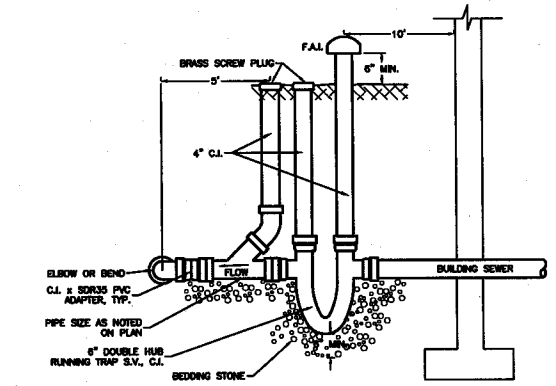
5 ROCK CHECK DAM
NOT TO SCALE



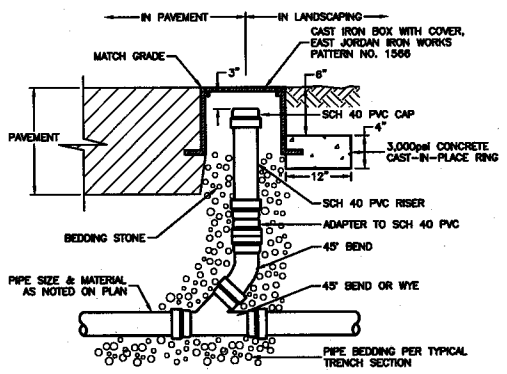
6 TRENCH
NOT TO SCALE



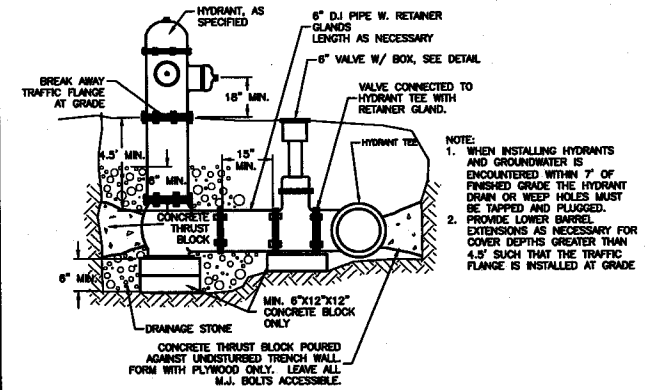
7 SANITARY MANHOLE
NOT TO SCALE



8 SANITARY TRAP
NOT TO SCALE

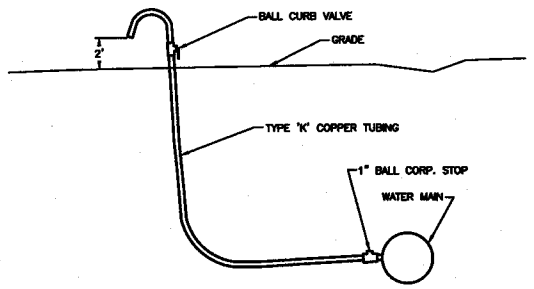


9 CLEANOUT
NOT TO SCALE

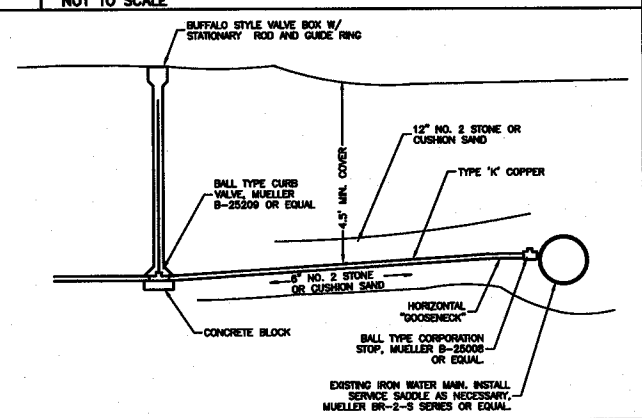


10 HYDRANT ASSEMBLY
NOT TO SCALE

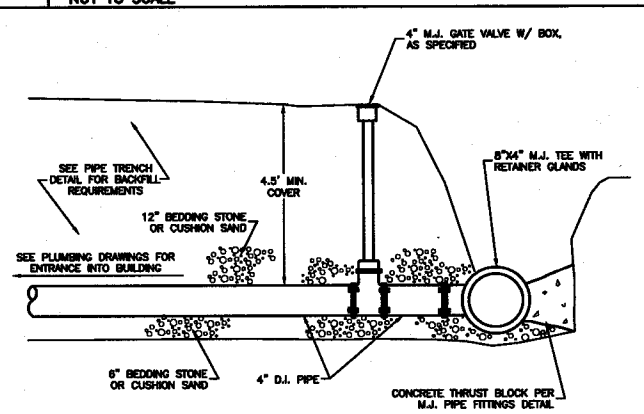
NOTE: DISCONNECT AT MAIN AND REMOVE ALL TUBING AND FITTINGS AND INSTALL BRASS PLUG IN MAIN AFTER COMPLETION OF TESTING AND DISINFECTION. BACKFILL AND RESTORE SURFACE.



11 SAMPLING TAP
NOT TO SCALE



12 SERVICE COPPER
NOT TO SCALE



13 SERVICE LARGE DIAMETER
NOT TO SCALE

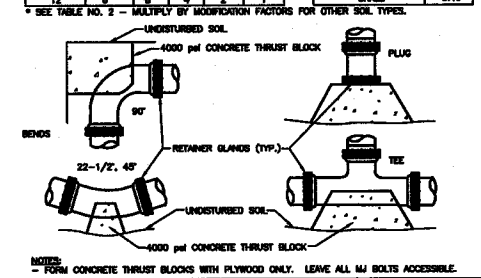
TABLE NO. 1
MINIMUM THRUST BLOCK AREAS REQUIRED AT PIPE FITTINGS IN GRAVEL-SILT-CLAY MIXTURE SOIL TYPES.*

PIPE DIAMETER-INCHES	THRUST BLOCK AREA – S.F.				
	TEE OR PLUG	90° BEND	45° BEND	22-1/2° BEND	11-1/4° BEND
4 – 5	2	2	1	1	--
6	3	3	2	1	1
10	4.5	6	3	2	1
12	5	8	4	2	1

TABLE NO. 2
THRUST BLOCK AREA MODIFICATION FACTORS FOR VARIOUS SOILS

SOIL TYPE	FACTOR
MUCK, PEAT	------
SOFT CLAY	4.00
SAND	2.00
SAND & GRAVEL	1.33
GRAVEL-SILT-CLAY MIX	1.00
SHALE	0.40

* SEE TABLE NO. 2 – MULTIPLY BY MODIFICATION FACTORS FOR OTHER SOIL TYPES.



NOTES:
– FORM CONCRETE THRUST BLOCKS WITH PLYWOOD ONLY. LEAVE ALL MJ BOLTS ACCESSIBLE.

14 THRUST BLOCK
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DETAILS

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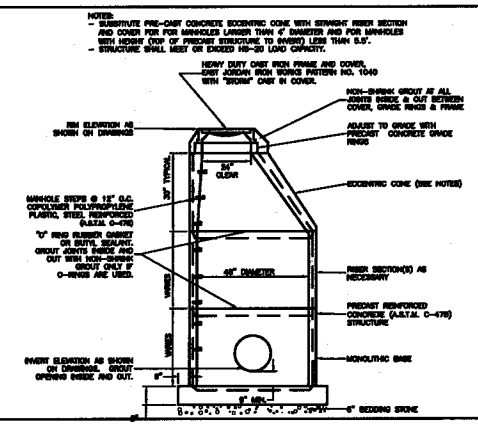
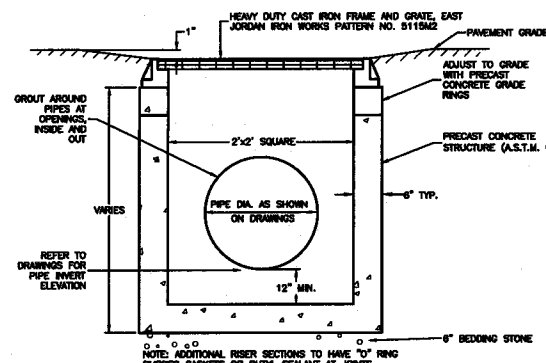
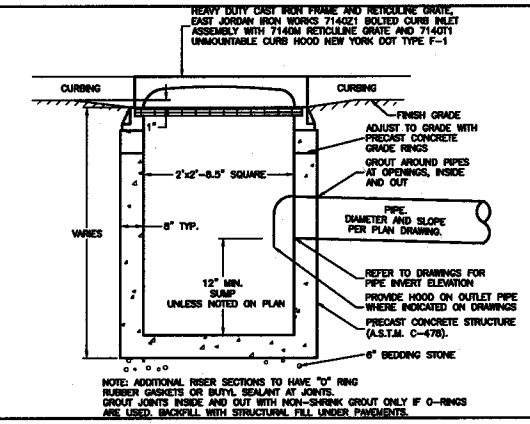


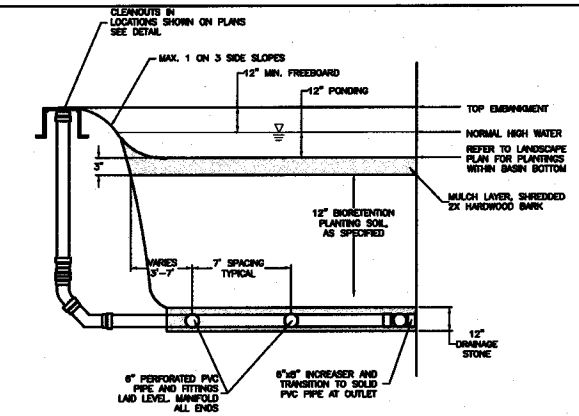
1 **STORM MANHOLE**
NOT TO SCALE



2 **DRAINAGE INLET**
NOT TO SCALE

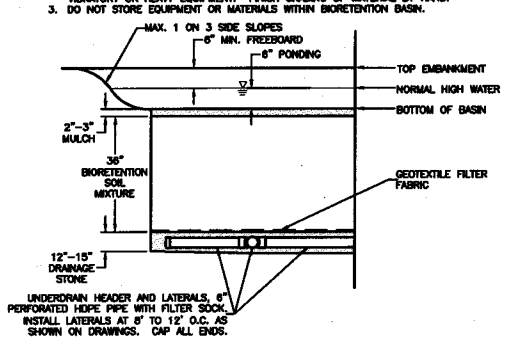


3 **CURB INLET**
NOT TO SCALE

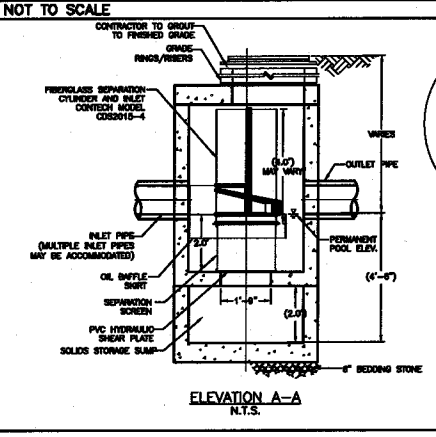


4 **RAIN GARDEN**
NOT TO SCALE

NOTES:
1. DO NOT INSTALL UNDERDRAIN, PLANTING SOIL AND MULCH UNTIL ALL CONTRIBUTING DRAINAGE AREAS HAVE BEEN STABILIZED.
2. PLACE PLANTING SOIL IN 12" LIFTS OR GREATER. COMPACT SOILS BY SATURATING EACH LAYER WITH WATER UNTIL WATER FLOWS THROUGH THE UNDERDRAIN. DO NOT COMPACT WITH VIBRATORY OR HEAVY EQUIPMENT. FINISH GRADING OF MATERIAL BY HAND.
3. DO NOT STORE EQUIPMENT OR MATERIALS WITHIN BIORETENTION BASIN.



5 **BIORETENTION FILTER**
NOT TO SCALE



ELEVATION A–A
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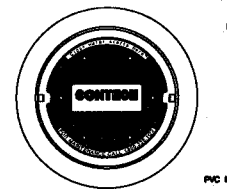
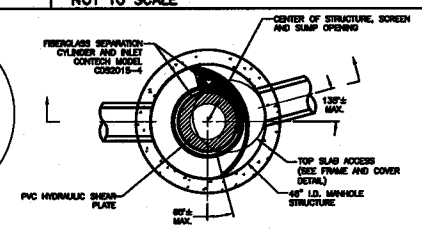


FRAME AND COVER
(24" DIAMETER)
N.T.S.



PLAN VIEW B–B
N.T.S.

GENERAL NOTES
1. SEPARATOR UNIT TO BE CONTECH MODEL #CDS-4, OR EQUAL.
2. CONTRACTOR TO VERIFY ALL MATERIALS UNLESS NOTED OTHERWISE.
3. DIMENSIONS MARKED WITH ( ) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
4. FOR FIBERGLASS DIAMETER WITH METALLIC STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT MANUFACTURER REPRESENTATIVE.
5. WHERE QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
6. STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, HAVE WITH GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. CASTINGS SHALL MEET HS20 (AASHTO M 306) AND BE CAST WITH THE MANUFACTURER LOGO.
7. IF REQUIRED, PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.

INSTALLATION NOTES
A. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE MANHOLE STRUCTURE (LIFTING CLUTCHES PROVIDED).
B. CONTRACTOR TO JOB JOINT SEALANT BETWEEN ALL STRUCTURES, SECTIONS, AND ANNULAR STRUCTURE.
C. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. SEAL PIPE INSERTS WITH ELASTOMERIC SEALS.
D. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS SAFE TO ENTER, HOLDING WATER TO FLOATING INVERT MINIMAL. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE SHEETS ARE GROUTED.

6 **HYDRODYNAMIC SEPARATOR**
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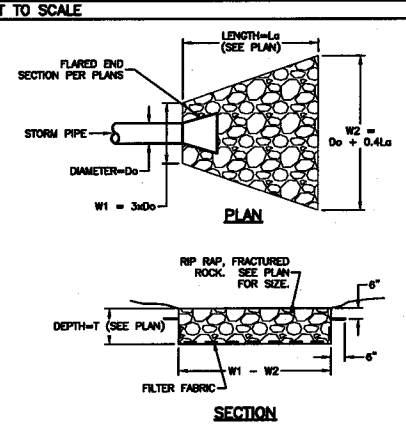
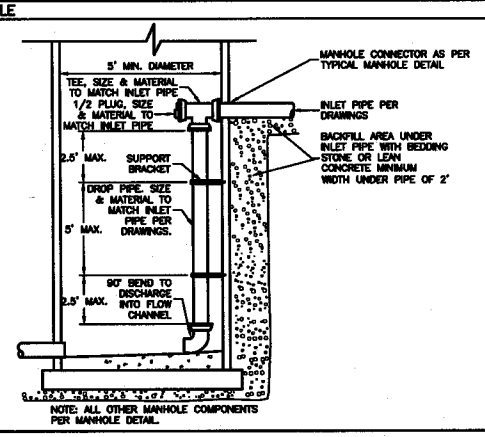


7 **FLARED END SECTION**
NOT TO SCALE



8 **SANITARY DROP MANHOLE**
NOT TO SCALE

9 **DETAIL**
NOT TO SCALE

10 **DETAIL**
NOT TO SCALE

11 **DETAIL**
NOT TO SCALE

12 **DETAIL**
NOT TO SCALE

13 **DETAIL**
NOT TO SCALE

14 **DETAIL**
NOT TO SCALE

15 **DETAIL**
NOT TO SCALE

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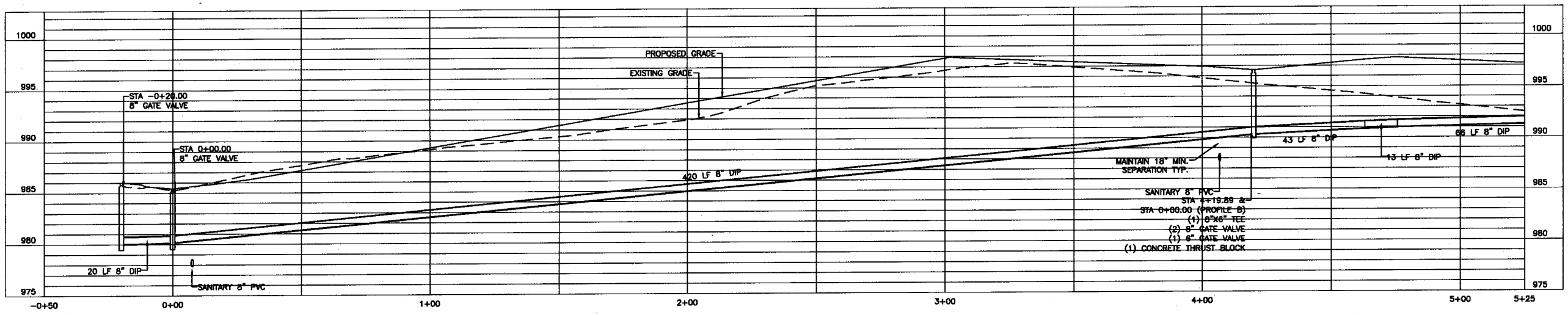
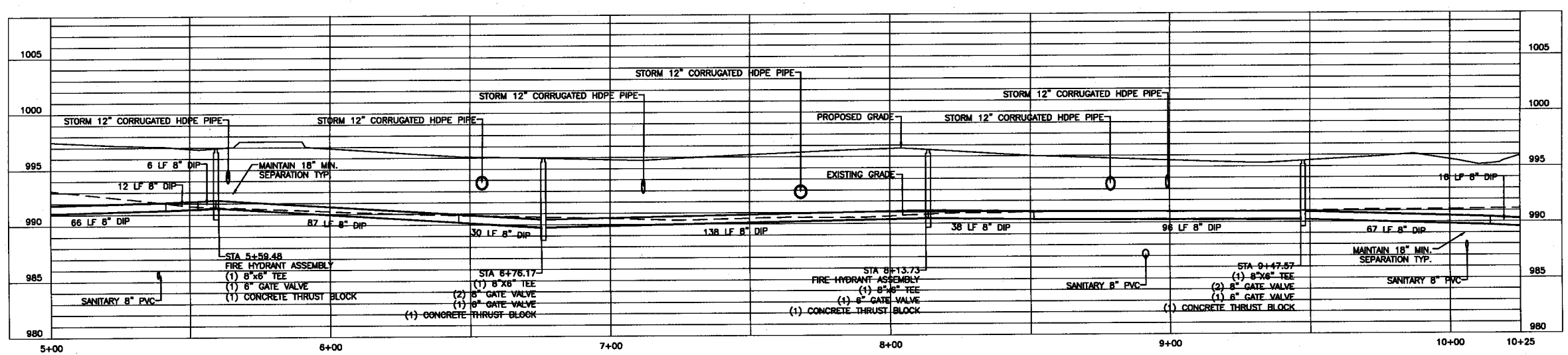
DETAILS

C202



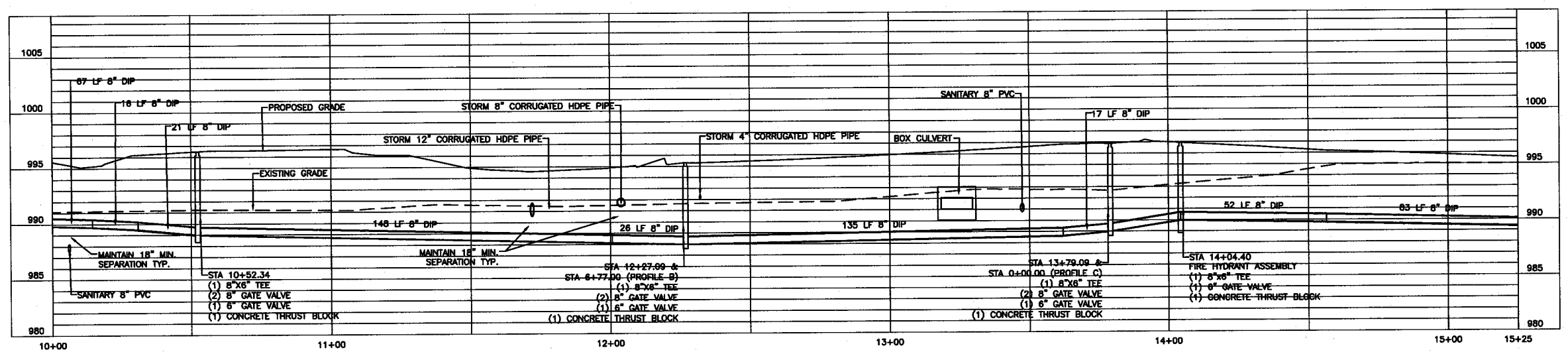
1 **WATER PROFILE - A**

SCALE: 1"=20' HORZ; 1"=5' VERT



2 **WATER PROFILE - A**

SCALE: 1"=20' HORZ; 1"=5' VERT



3 **WATER PROFILE - A**

SCALE: 1"=20' HORZ; 1"=5' VERT

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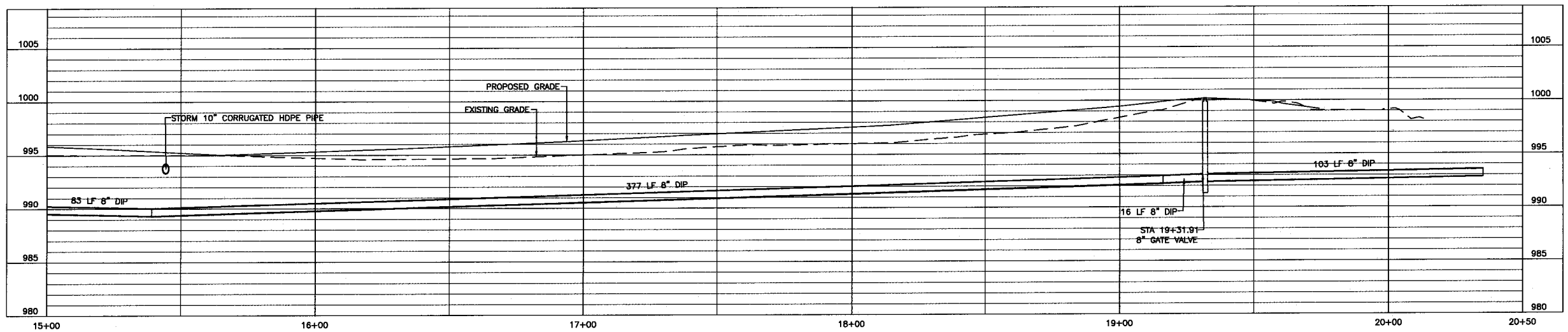
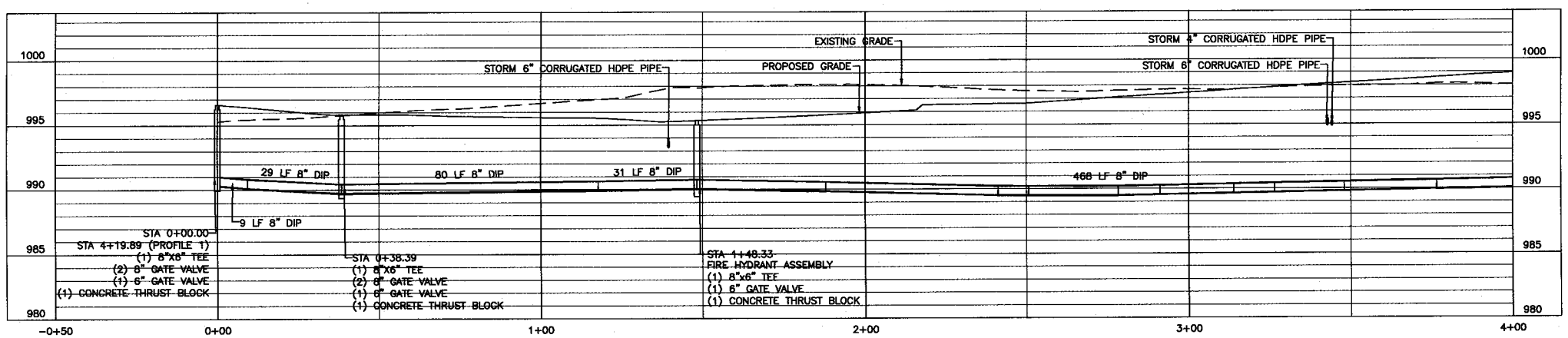
WATER PROFILES

C301



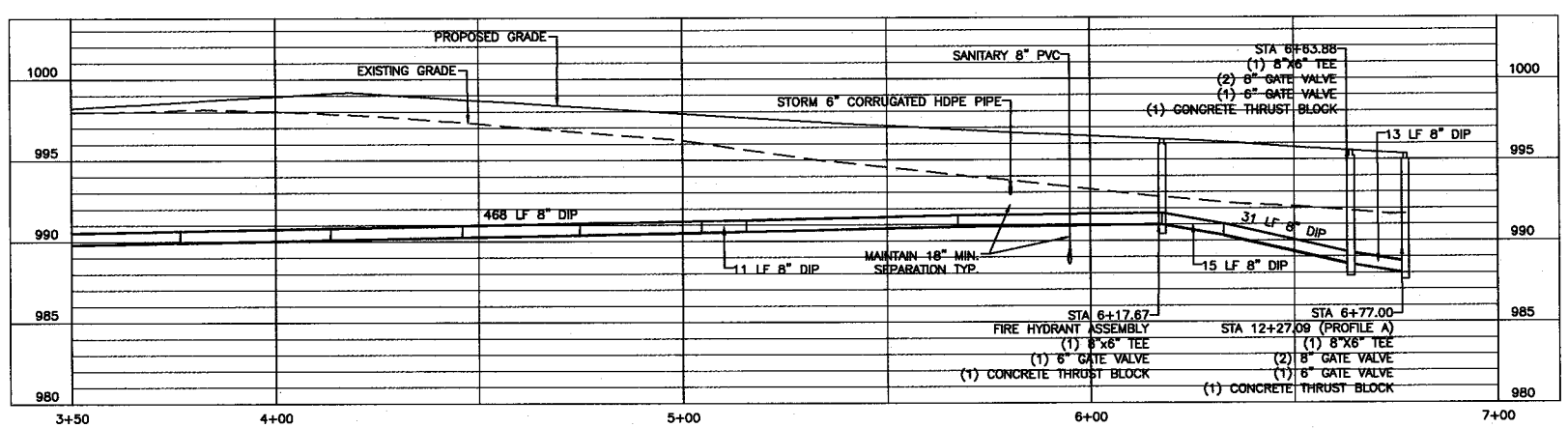
1 **WATER PROFILE – A**

SCALE: 1"=20' HORZ; 1"=5' VERT



2 **WATER PROFILE – B**

SCALE: 1"=20' HORZ; 1"=5' VERT



3 **WATER PROFILE – B**

SCALE: 1"=20' HORZ; 1"=5' VERT

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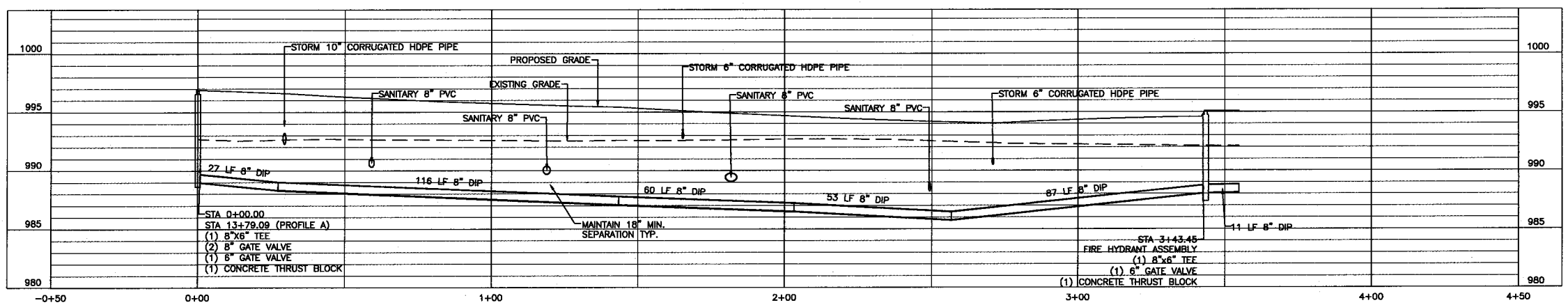
WATER PROFILES

C302



1 **WATER PROFILE - C**

SCALE: 1"=20' HORZ; 1"=5' VERT

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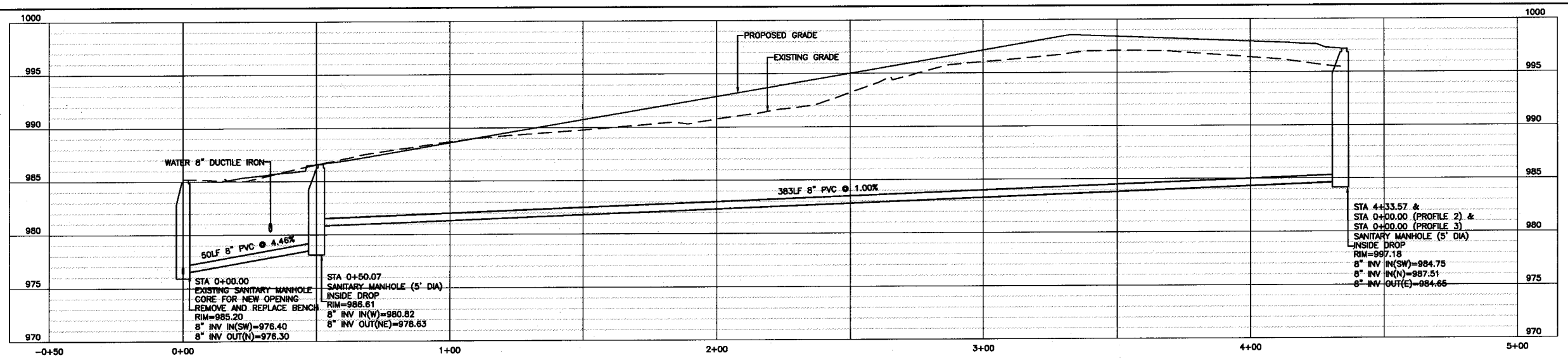
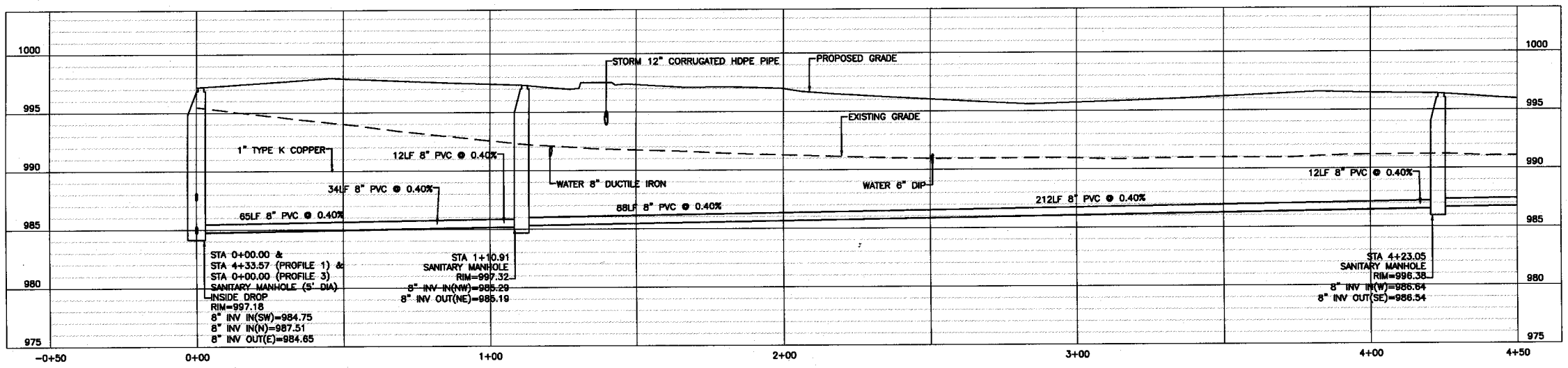
WATER PROFILES

C303



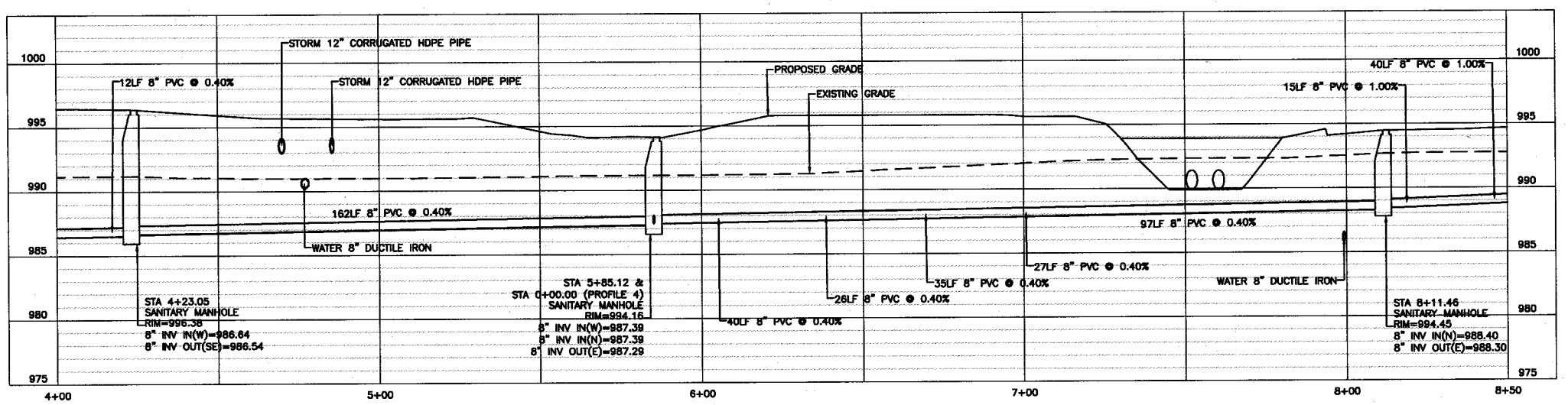
1 **SANITARY PROFILE – A**

SCALE: 1"=20' HORZ; 1"=5' VERT



2 **SANITARY PROFILE – B**

SCALE: 1"=20' HORZ; 1"=5' VERT



3 **SANITARY PROFILE – B**

SCALE: 1"=20' HORZ; 1"=5' VERT

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SANITARY PROFILES

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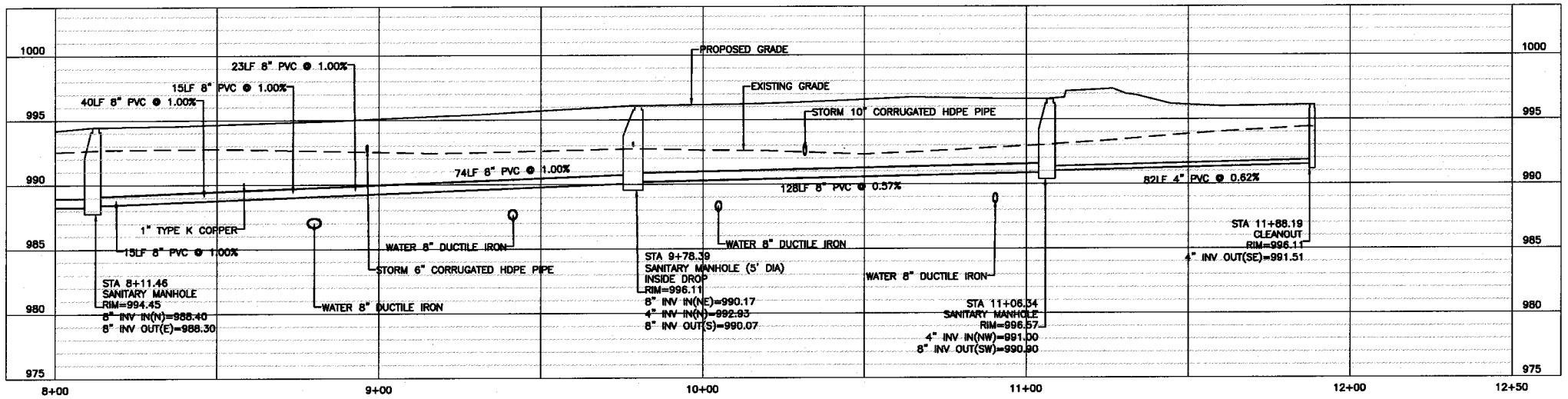
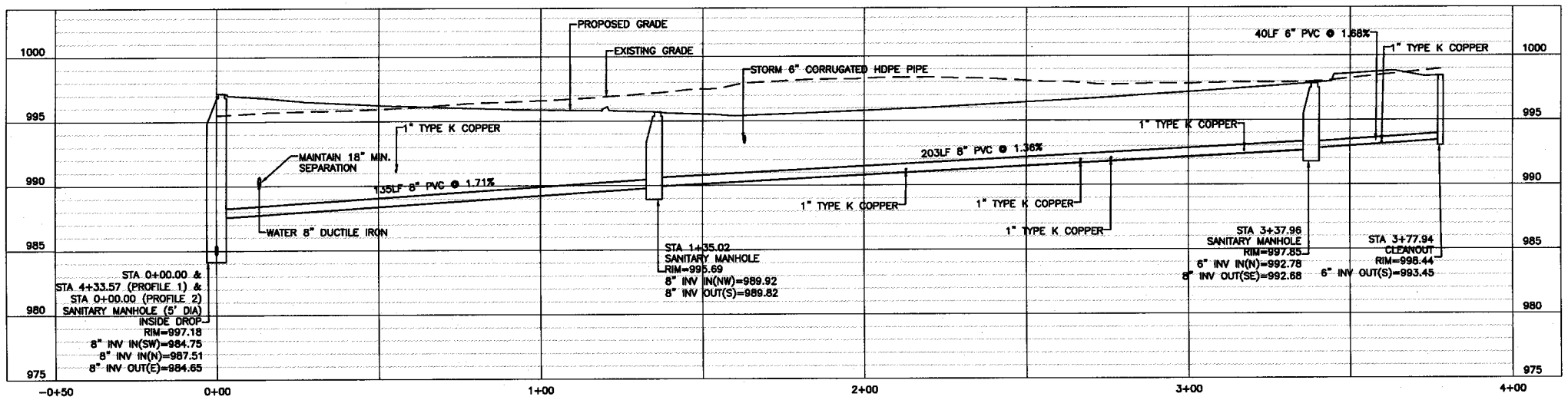


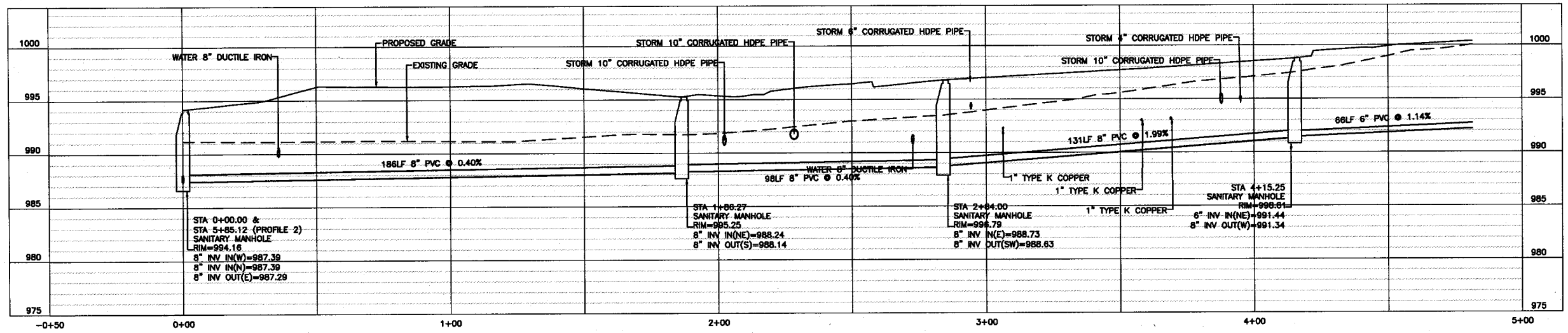
1 **SANITARY PROFILE – B**

SCALE: 1"=20' HORZ; 1"=5' VERT



2 **SANITARY PROFILE – C**

SCALE: 1"=20' HORZ; 1"=5' VERT



3 **SANITARY PROFILE – D**

SCALE: 1"=20' HORZ; 1"=5' VERT

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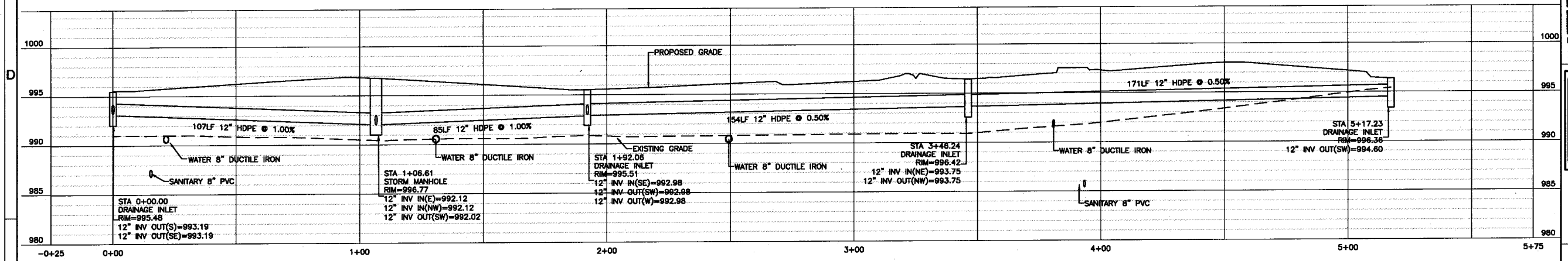
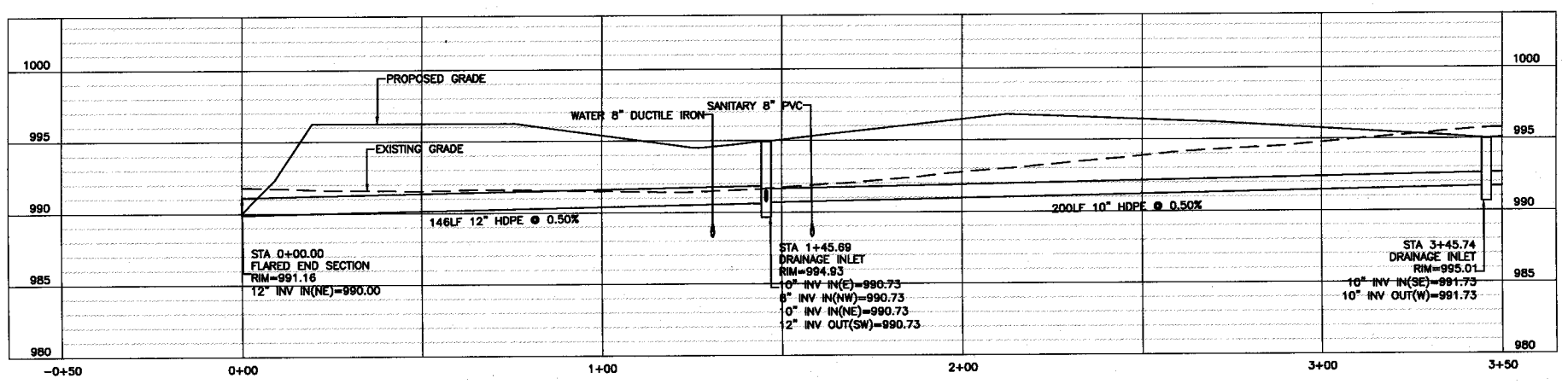


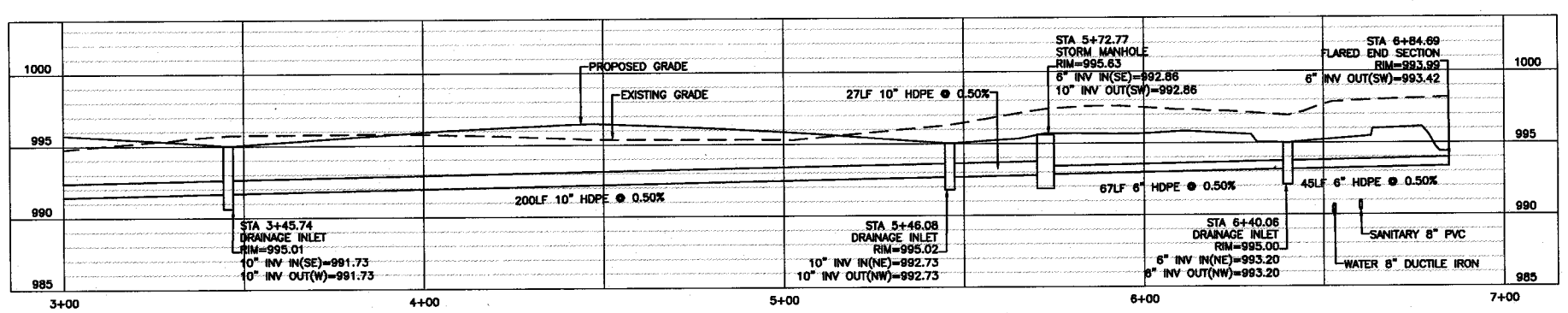
1 **STORM PROFILE – A**

SCALE: 1"=20' HORZ; 1"=5' VERT



2 **STORM PROFILE – B**

SCALE: 1"=20' HORZ; 1"=5' VERT



3 **STORM PROFILE – B**

SCALE: 1"=20' HORZ; 1"=5' VERT

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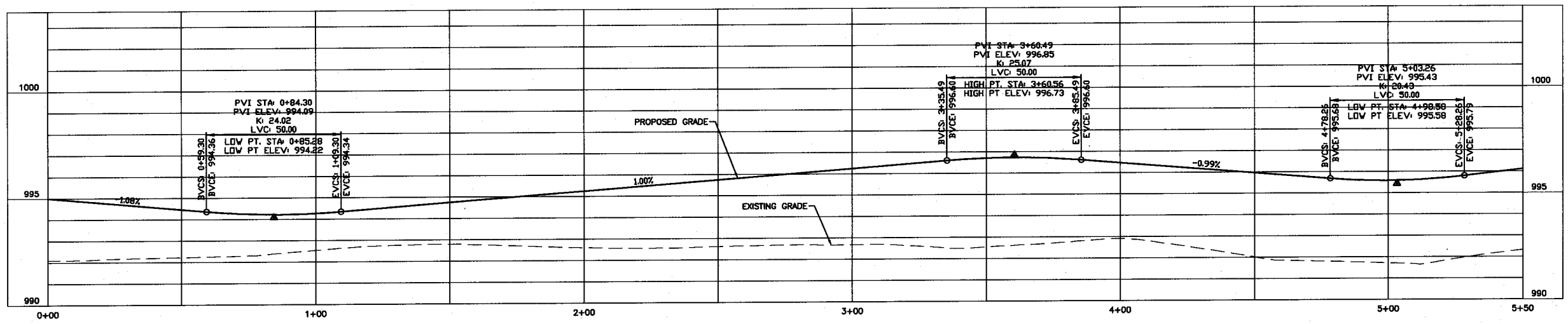
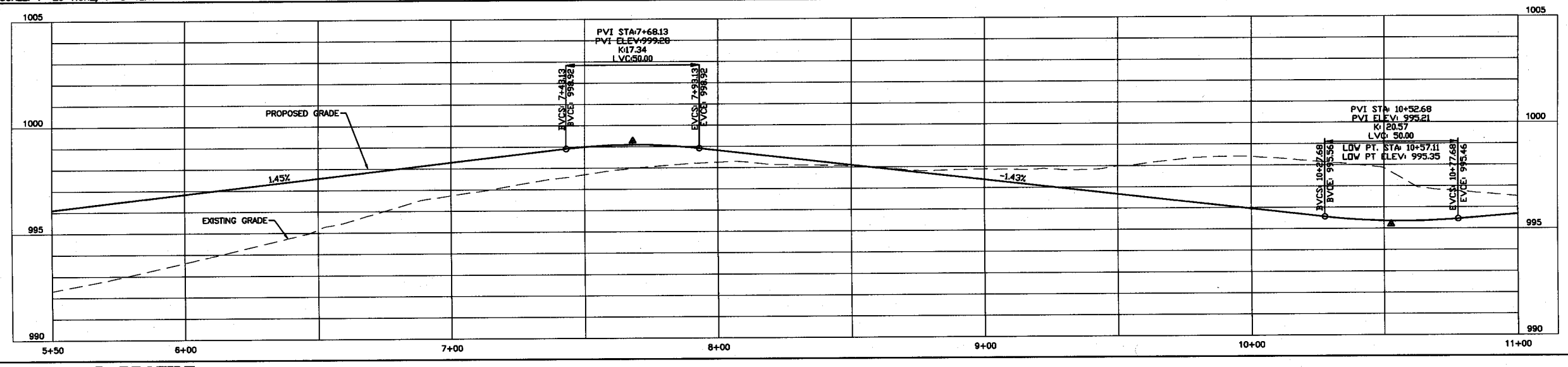
STORM PROFILES

C501



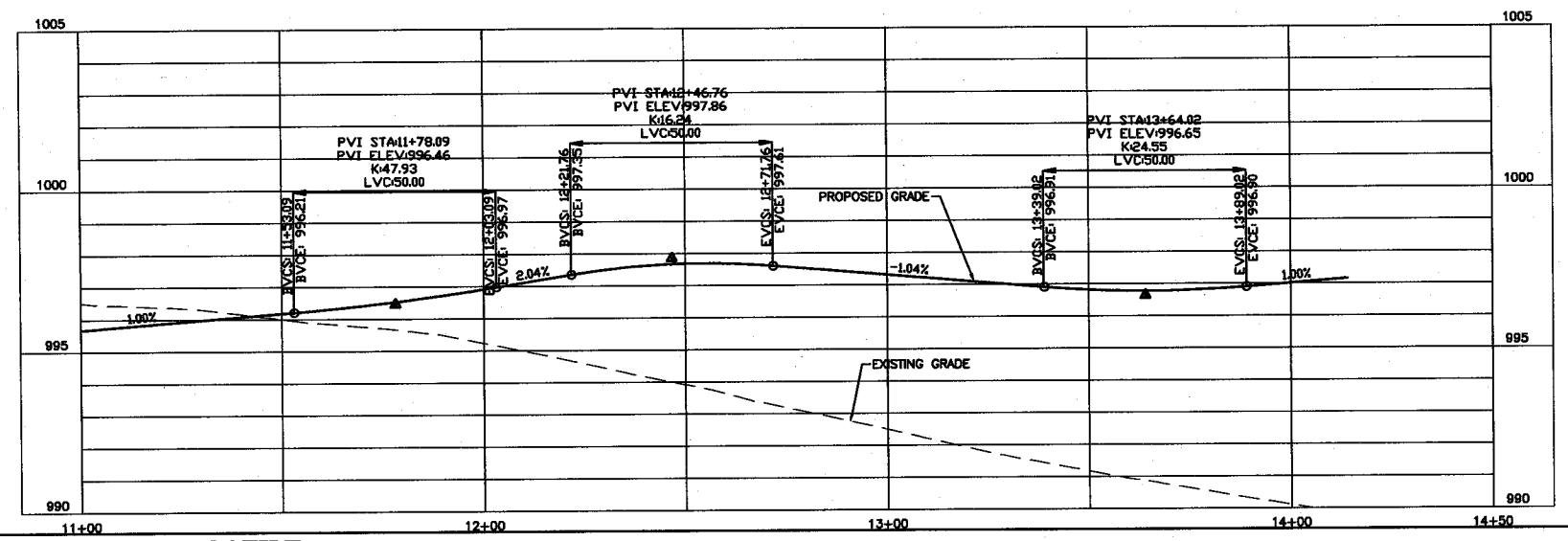
1 **LOOP ROAD PROFILE**

SCALE: 1"=20' HORZ; 1"=5' VERT



2 **LOOP ROAD PROFILE**

SCALE: 1"=20' HORZ; 1"=5' VERT



3 **LOOP ROAD PROFILE**

SCALE: 1"=20' HORZ; 1"=5' VERT

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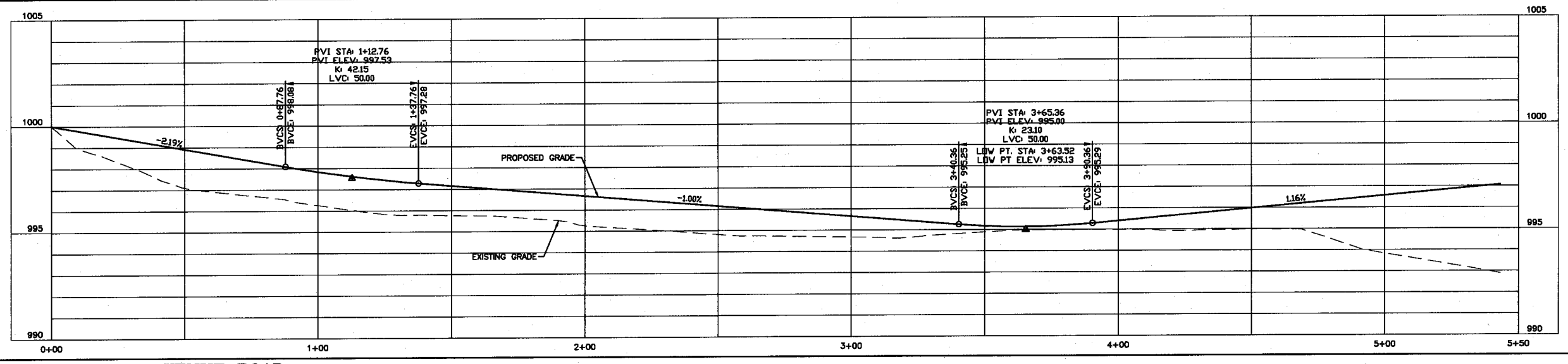
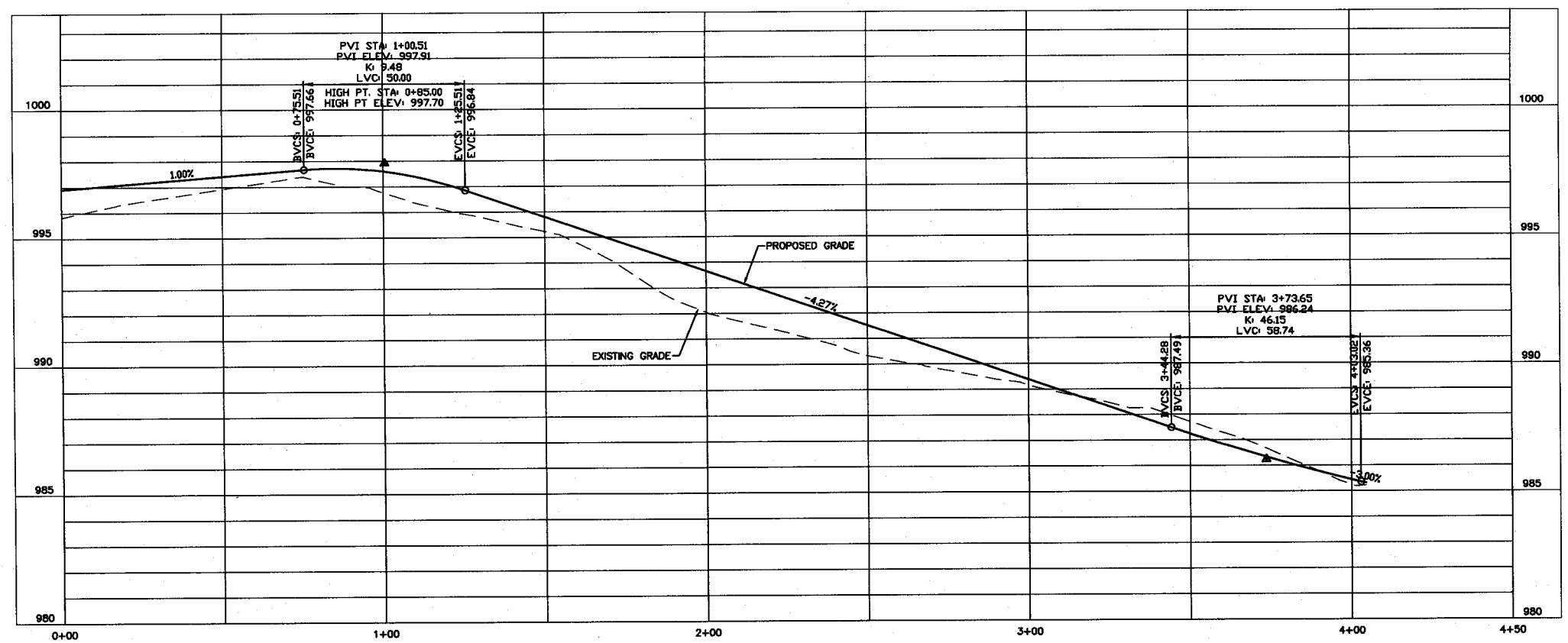
ROAD PROFILES

C601



1 **PENNSYLVANIA AVENUE ROAD**

SCALE: 1"=20' HORZ; 1"=5' VERT



2 **SOUTH STREET DRIVE**

SCALE: 1"=20' HORZ; 1"=5' VERT

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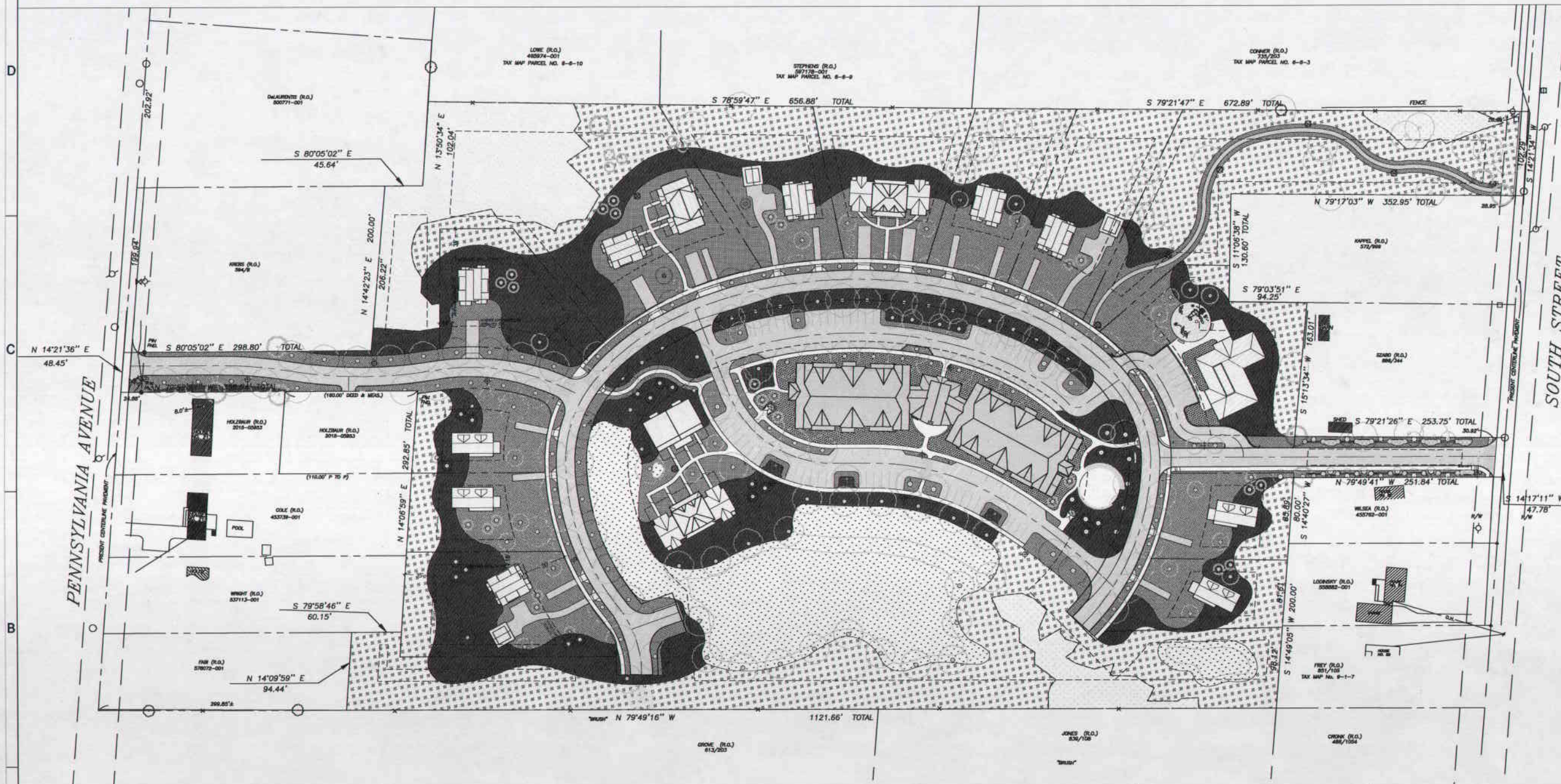
ROAD PROFILES

C602

Exhibit F



DRAWING NOTES:
1. REFER TO L-104 FOR LISTS OF TYPICAL PLANT MATERIAL SPECIFIC TO ZONE.

LANDSCAPE LEGEND

- EXISTING SHADE TREE (8" CALIPER OR GREATER)
- EXISTING EVERGREEN TREE (8" CALIPER OR GREATER)
- STREET AND SHADE TREES
- ORNAMENTAL TREES
- EVERGREEN TREES
- NO-MOW LAWN SEED MIX ZONE
- WILDFLOWER MEADOW SEED MIX ZONE
- WOODLAND EDGE SEED MIX WITH NATURALIZED PLANTINGS AND INTER-PLANTED WITH SHADE TREES ZONE
- STORMWATER MEADOW SEED MIX ZONE
- FOUNDATION PLANTINGS

0 50 100
Scale: 1" = 50'-0"

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LANDSCAPE PLAN

L-103

Native status and frequency in the Cayuga region is taken from: Wesley, F. R., S. Gardescu, and P. L. Marks. 2008. Vascular plant species of the Cayuga Region of New York State. Cornell University. Ithaca, NY. <http:

STREET AND SHADE TREES

BOTANICAL NAME	COMMON NAME	MATURE HEIGHT	MATURE WIDTH	Species native to Cayuga region?	Species frequency in Cayuga region?
Acer rubrum 'Frank Jr.'	Redpointe® Red Maple	45'	30'	Native	Common
Acer saccharum 'Bailsta'	Fall Fiesta® Sugar Maple	50'	40'	Native	Common
Acer x freemanii 'Celzam'	Celebration® Freeman Maple	50'	40'	Native	Frequent
Catalpa speciosa 'Hiawatha 2'	Heartland® Catalpa	50'	25'	Non-native	Scarce
Gymnocladus dioicus 'J. C. McDaniel'	Prairie Titan® Kentucky Coffee-tree	50'	40'	Non-native	Rare
Liriodendron tulipifera 'JFS-Oz'	Emerald City® Tulip Tree	55'	25'	Native	Frequent
Quercus bicolor 'JFS-KW12'	American Dream® Swamp White Oak	50'	40'	Native	Scarce
Quercus shumardii	Shumard Oak	50'	40'		
Taxodium distichum 'Prairie Sentinel'	Prairie Sentinel Pond Cypress	60'	15'		
Tilia americana 'DTR 123'	Legend® American Linden	40'	30'	Native	Common

ORNAMENTAL TREES

BOTANICAL NAME	COMMON NAME	MATURE HEIGHT	MATURE WIDTH	Species native to Cayuga region?	Species frequency in Cayuga region?
Amelanchier laevis 'JFS-Arb'	Spring Flurry® Serviceberry	28'	20'	Native	Common
Cercis canadensis 'Northern Strain'	Northern Strain Redbud	25'	25'	Non-native	Frequent
Cercis canadensis 'Royal White'	Royal White Redbud	25'	25'	Non-native	Frequent
Cornus × 'KN 30-8'	Venus® Dogwood	25'	20'		
Crataegus crus-galli 'Cruzam'	Crusader® Hawthorn	15'	15'	Native	Frequent
Magnolia virginiana 'Northern Belle'	Northern Belle Sweetbay Magnolia	20'	20'		
Malus × zumi 'Calocarpa'	Zumi Calocarpa Crabapple	20'	24'		

EVERGREEN TREES

BOTANICAL NAME	COMMON NAME	MATURE HEIGHT	MATURE WIDTH	Species native to Cayuga region?	Species frequency in Cayuga region?
Abies concolor	White Fir	40'	20'		
Juniperus virginiana 'Idyllwild'	Idyllwild Juniper	15'	5'	Native	Frequent
Pinus flexilis 'Vanderwolf's Pyramid'	Vanderwolf's Pyramid Pine	40'	20'		
Pinus strobus	Eastern White Pine	50'	20'	Native	Common

FOUNDATION PLANTINGS

BOTANICAL NAME	COMMON NAME	MATURE HEIGHT	MATURE WIDTH	Species native to Cayuga region?	Species frequency in Cayuga region?
Amelanchier canadensis 'Glenform'	Rainbow Pillar Serviceberry	20'	15'		
Betula nigra 'Little King'	Fox Valley® Dwarf River Birch	10'	10'	Native	Rare
Callicarpa x 'NCCX2'	Pearl Glam® Beautyberry	4'	4'		
Calycanthus 'Aphrodite'	Aphrodite Sweetshrub	6'	6'		
Cornus racemosa 'Huzam'	Huron™ Gray Dogwood	4'	4'	Native	Common
Cornus stolonifera 'Farrow'	Arctic Fire™ Red Twig Dogwood	4'	4'	Native	Common
Cotoneaster procumbens 'Gerald'	Little Dipper® Cotoneaster	1'	4'		
Diervilla lonicera 'Copper'	Copper Bush Honeysuckle	3'	3'	Native	Common
Hydrangea arborescens 'Haas' Halo'	Haas' Halo Smooth Hydrangea	3'	4'	Native	Rare
Ilex glabra 'Ilexfarrowtinsiory'	Strongbox™ Inkberry Holly	3'	3'		
Itea virginica 'SMNIVDFC'	Scentlandia™ Virginia Sweetspire	3'	3'		
Juniperus virginiana 'Grey Owl'	Grey Owl Juniper	3'	6'	Native	Frequent
Myrica pensylvanica 'Morton' & 'Morton Male'	Silver Sprite™ Bayberry & pollinator	5'	6'	Native	Rare
Panicum virgatum 'Shenandoah'	Shenandoah Switchgrass	2'	2'	Native	Scarce
Physocarpus opulifolius 'SMPOTW'	Tiny Wine® Ninebark	4'	4'	Native	Scarce
Schizachyrium scoparium 'Standing Ovation'	Standing Ovation Little bluestem	3'	1.5'	Native	Frequent
Solidago rugosa 'Fireworks'	Fireworks Wrinkleleaf Goldenrod	3'	3'	Native	Common

NATURALIZATION PLANTINGS

BOTANICAL NAME	COMMON NAME	MATURE HEIGHT	MATURE WIDTH	Species native to Cayuga region?	Species frequency in Cayuga region?
Aesculus parviflora	Bottlebrush buckeye	10'	10'		
Aesculus pavia	Red Buckeye	10'	10'		
Cephalanthus occidentalis 'SMCOSS'	Sugar Shack® Buttonbush	3'	3'	Native	Frequent
Ilex verticillata 'Spravy' & 'FarrowMrP'	Berry Heavy® Winterberry & Mr. Poppins® po	6'	6'	Native	Frequent
Lindera benzoin	Spicebush	8'	8'	Native	Frequent
Populus tremuloides 'NE Arb'	Prairie Gold® Aspen	40'	15'	Native	Common
Rhus aromatica 'Gro-Low'	Gro-Low Aromatic Sumac	2'	6'	Native	Frequent
Rhus copallina 'Morton'	Prairie Flame™ Sumac	6'	6'	Native	Rare
Rhus typhina 'Dissecta'	Cut-Leaf Staghorn Sumac	~15'	~15'	Native	Common
Sassafras albidum	Sassafras	40'	30'	Native	Frequent
Symphoricarpos albus	Snowberry	~4'	~4'	Native	Scarce

VINES

BOTANICAL NAME	COMMON NAME	MATURE HEIGHT	MATURE WIDTH	Species native to Cayuga region?	Species frequency in Cayuga region?
Celastrus scandens 'Bailumn'	Autumn Revolution™ Bittersweet			Native	Scarce
Parthenocissus quinquefolia 'Troki'	Red Wall® Virginia Creeper			Native	Common
Wisteria macrostachya 'Blue Moon'	Blue Moon Wisteria				

Native status and frequency in the Cayuga region is taken from: Wesley, F. R., S. Gardescu, and P. L. Marks. 2008. Vascular plant species of the Cayuga Region of New York State. Cornell University. Ithaca, NY. <http:

STORMWATER MEADOW SEED MIX*

BOTANICAL NAME	COMMON NAME	Species native to Cayuga region?	Species frequency in
Agrostis scabra	Rough Bentgrass/Ticklegrass	Native	Frequent
Asclepias incarnata	Swamp Milkweed	Native	Frequent
Aster novae-angliae (Symphyotrichum novae-angliae)	New England Aster	Native	Common
Bidens aristosa	Tickseed Sunflower/Bur Marigold	Non-native	Rare
Carex lurida	Lurid Sedge	Native	Common
Carex scoparia	Blunt Broom Sedge	Native	Common
Cornus amomum	Silky Dogwood	Native	Common
Elymus riparius	Riverbank Wild Rye	Native	Frequent
Elymus virginicus	Virginia Wild Rye	Native	Frequent
Eupatorium maculatum (Eutrochium maculatum)	Spotted Joe Pye Weed	Native	Common
Eupatorium perfoliatum	Boneset	Native	Common
Festuca rubra	Creeping Red Fescue	Non-native	Frequent
Helenium autumnale	Common Sneezeweed	Native	Frequent
Panicum dichotomiflorum	Smooth Panic Grass	Native	Common
Panicum virgatum	Switch Grass	Native	Scarce
Sambucus canadensis	American Elderberry	Native	Common
Scirpus atrovirens	Green Bulrush	Native	Common
Verbena hastata	Blue Vervain	Native	Common
Viburnum dentatum	Arrow Wood Viburnum	Native	Common

New England Roadside Matrix Wet Meadow Seed Mix from New England Wetland Plants, Inc. Mix can be customized as needed to provide desired

WILDFLOWER MEADOW SEED MIX*

BOTANICAL NAME	COMMON NAME	Species native to Cayuga region?	Species frequency in
Asclepias syriaca	Common Milkweed	Native	Common
Aster laevis (Symphyotrichum laeve)	Smooth Blue Aster	Native	Frequent
Aster novae-angliae (Symphyotrichum novae-angliae)	New England Aster	Native	Common
Baptisia australis	Wild Blue False Indigo		
Chamaecrista fasciculata	Partridge Pea		
Coreopsis lanceolata	Lance Leaved Coreopsis	Non-native	Scarce
Desmodium canadense	Showy Tick Trefoil	Native	Frequent
Elymus canadensis	Canada Wild Rye	Native	Frequent
Elymus virginicus	Virginia Wild Rye	Native	Frequent
Eupatorium maculatum (Eutrochium maculatum)	Spotted Joe Pye Weed	Native	Common
Eupatorium purpureum (Eutrochium purpureum)	Purple Joe Pye Weed	Native	Frequent
Euthamia graminifolia (Solidago graminifolia)	Grass Leaved Goldenrod	Native	Common
Festuca rubra	Creeping Red Fescue	Non-native	Frequent
Helenium autumnale	Common Sneezeweed	Native	Frequent
Heliopsis helianthoides	Ox Eye Sunflower	Native	Frequent
Liatris spicata	Spiked Gayfeather/Marsh Blazing Star		
Monarda fistulosa	Wild Bergamot	Native	Frequent
Penstemon digitalis	Beard Tongue	Non-native	Common
Rudbeckia hirta	Black Eyed Susan	Non-native	Common
Schizachyrium scoparium	Little Bluestem	Native	Frequent
Solidago juncea	Early Goldenrod	Native	Common
Sorghastrum nutans	Indian Grass	Native	Scarce
Tradescantia ohiensis	Ohio Spiderwort		
Verbena hastata	Blue Vervain	Native	Common
Zizia aurea	Golden Alexanders	Native	Frequent

New England Showy Wildflower Seed Mix from New England Wetland Plants, Inc. Mix can be customized as needed to provide desired species

WOODLAND EDGE SEED MIX*

BOTANICAL NAME	COMMON NAME	Species native to Cayuga region?	Species frequency in
Agrostis perennans	Upland Bentgrass	Native	Common
Aquilegia canadensis	Eastern Columbine	Native	Frequent
Asclepias syriaca	Common Milkweed	Native	Common
Aster cordifolius (Symphyotrichum cordifolium)	Blue Wood Aster	Native	Common
Chamaecrista fasciculata	Partridge Pea		
Desmodium canadense	Showy ticktrefoil	Native	Frequent
Elymus canadensis	Canada Wild Rye	Native	Frequent
Elymus virginicus	Virginia Wildrye	Native	Frequent
Eupatorium maculatum (Eutrochium maculatum)	Spotted Joe Pye Weed	Native	Common
Euthamia graminifolia (Solidago graminifolia)	Grass Leaved Goldenrod	Native	Common
Festuca rubra	Creeping Red Fescue	Non-native	Frequent
Geum canadense	White Avens	Native	Common
Heliopsis helianthoides	Ox Eye Sunflower	Native	Frequent
Panicum clandestinum	Deer Tongue	Native	Rare
Penstemon digitalis	Beard Tongue	Non-native	Common
Solidago caesia	Blue Stem Goldenrod	Native	Common
Zizia aurea	Golden Alexanders	Native	Frequent

New England Semi-Shade Grass and Forbs Mix from New England Wetland Plants, Inc. Mix can be customized as needed to provide desired species

NO MOW LAWN SEED MIX*

BOTANICAL NAME	COMMON NAME	Species native to Cayuga region?	Species frequency in
Festuca brevipila	Hard Fescue		
Festuca ovina	Sheep Fescue	Non-native	Frequent
Festuca rubra	Red Fescue	Non-native	Frequent
Festuca rubra subs. fallax	Chewings Fescue	Non-native	Frequent
Festuca rubra var. rubra	Creeping Red Fescue	Non-native	Frequent

No Mow Lawn Seed Mix from Prairie Nursery, Inc. Mix can be customized as needed to provide desired species composition

DRAWING NOTES:
1. REFER TO L-103 FOR PLANTING ZONES.

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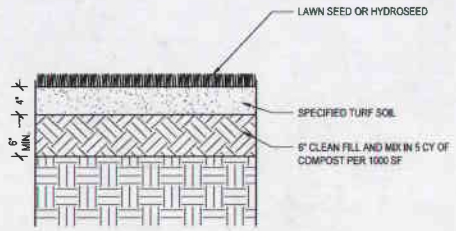
Ithaca Neighborhood Housing Services &
Sundial Property Development LLC
46 South Street
Trumansburg, New York

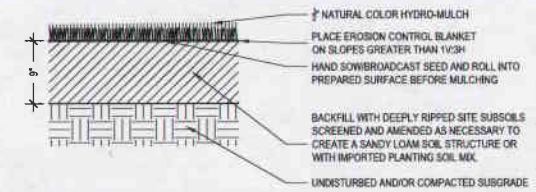
DATE:	12/13/2017
PROJECT:	17003
DRAWN BY:	RK
CHECKED:	

LANDSCAPE PLANT LISTS

L-104

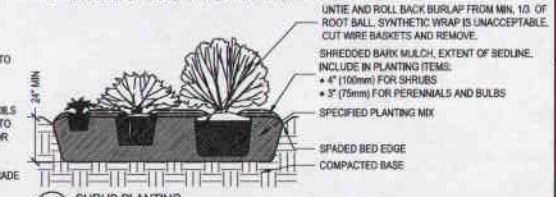


17 NO MOW LAWN
Scale: 1"=1'-0"

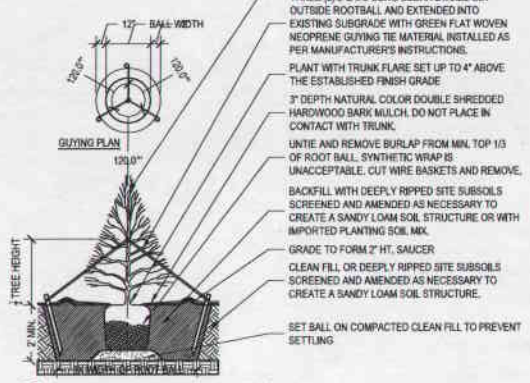


16 MEADOW ESTABLISHMENT
Scale: 1"=1'-0"

NOTES:
1. PLANT AT SAME DEPTH AS PREVIOUSLY PLANTED IN NURSERY OR CONTAINER
2. PROVIDE COMPACTED BASE UNDER ROOT BALL ONLY TO PREVENT SETTLING
3. ENTIRE BED SHALL BE EXCAVATED AND BACKFILLED WITH PLANTING MIX.

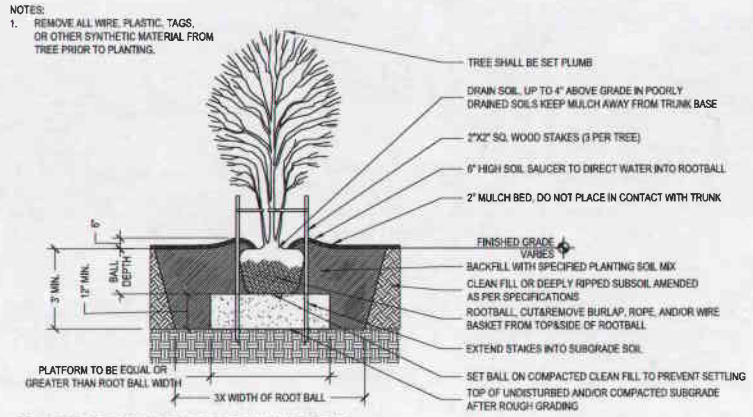


15 SHRUB PLANTING
Scale: 1/4"=1'-0"

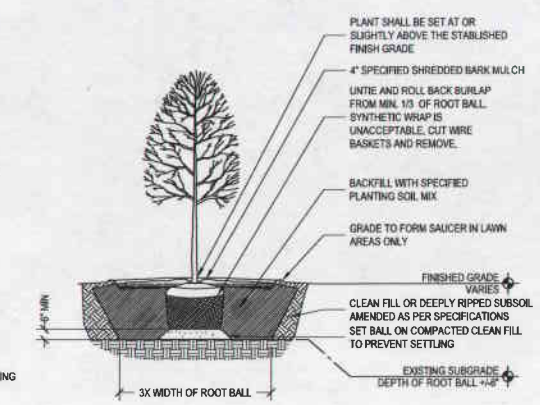


14 EVERGREEN SHRUB/TREE PLANTING
Scale: 1/4"=1'-0"

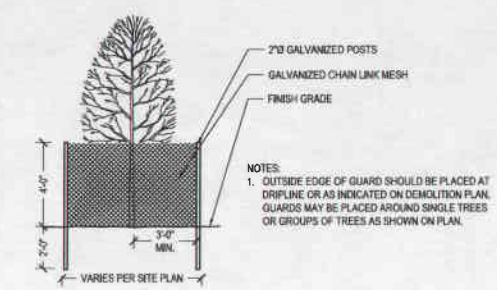
NOTES:
1. REMOVE ALL WIRE, PLASTIC, TAGS, OR OTHER SYNTHETIC MATERIAL FROM TREE PRIOR TO PLANTING.



13 MULTI-STEM ORNAMENTAL TREE/SHRUB PLANTING
Scale: 1/4"=1'-0"



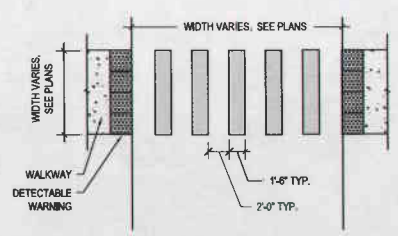
12 DECIDUOUS TREE PLANTING
Scale: 1/4"=1'-0"



NOTES:
1. OUTSIDE EDGE OF GUARD SHOULD BE PLACED AT DRIPLINE OR AS INDICATED ON DEMOLITION PLAN. GUARDS MAY BE PLACED AROUND SINGLE TREES OR GROUPS OF TREES AS SHOWN ON PLAN.

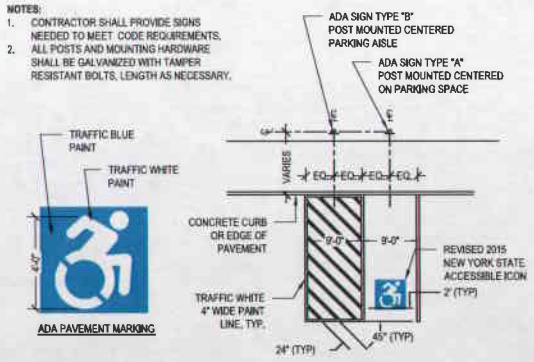
11 TREE PROTECTION
Scale: 1/4"=1'-0"

NOTES:
1. MARKING FOR CROSSWALKS SHALL BE ACCORDING TO REQUIREMENTS AS OUTLINED IN SECTION 3B OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.
2. CROSSWALKS WIDTH SHALL BE A MINIMUM OF 8' OR EQUAL TO THE WIDTH OF THE SIDEWALK IT CONNECTS.
3. MARKINGS ARE TO BE PAINTED WHITE.
4. CONTRACTOR SHALL PROVIDE ALL NEW SIGNS NEEDED TO MEET CODE REQUIREMENTS.
5. SEE L-102 FOR LOCATIONS



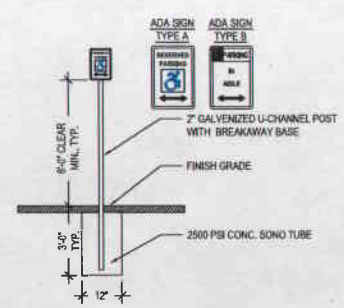
10 CROSSWALK MARKINGS
1/8" = 1'-0"

NOTES:
1. CONTRACTOR SHALL PROVIDE SIGNS NEEDED TO MEET CODE REQUIREMENTS.
2. ALL POSTS AND MOUNTING HARDWARE SHALL BE GALVANIZED WITH TAMPER RESISTANT BOLTS, LENGTH AS NECESSARY.



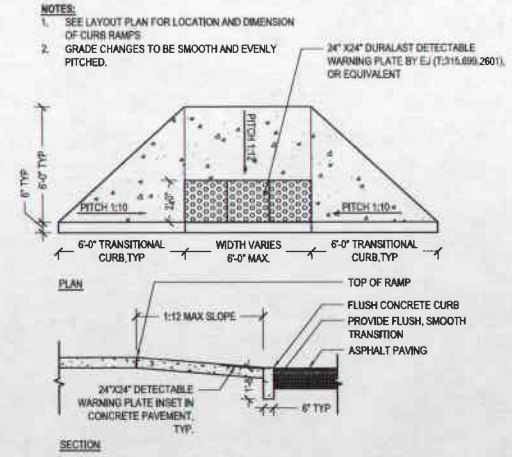
9 ADA PAVEMENT MARKINGS
Scale: N.T.S.

NOTES:
1. POSTS AND MOUNTING HARDWARE SHALL BE GALVANIZED TAMPER RESISTANT BOLTS, LENGTH AS NECESSARY.



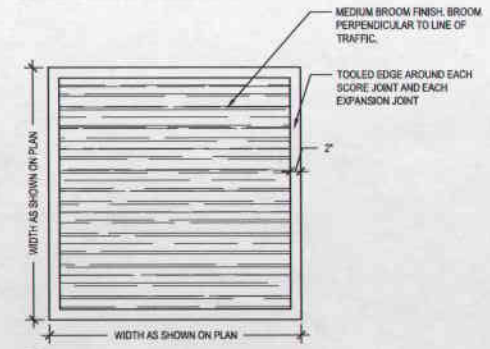
8 SITE SIGNAGE
Scale: 1/4"=1'-0"

NOTES:
1. SEE LAYOUT PLAN FOR LOCATION AND DIMENSION OF CURB RAMPS
2. GRADE CHANGES TO BE SMOOTH AND EVENLY PITCHED.



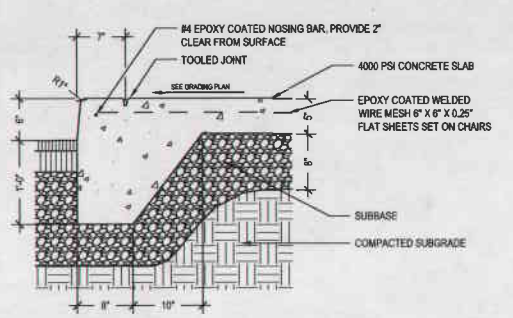
7 CURB RAMP
Scale: 1/4"=1'-0"

NOTES:
1. SEE PLANS FOR LOCATION OF JOINTS.
2. BROOM PERPENDICULAR TO LINE OF TRAFFIC.

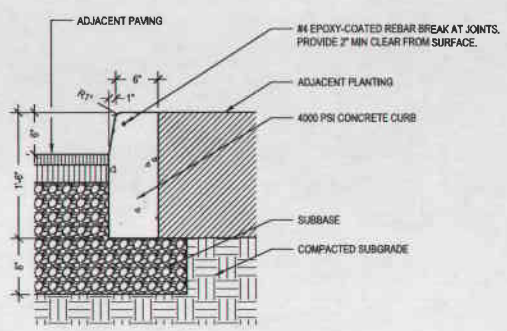


6 TYPICAL CONCRETE BROOM FINISH DETAIL
Scale: 3/4"=1'-0"

NOTES:
1. INTEGRAL CURB TO OCCUR ADJACENT TO PARKING AREAS AS SHOWN ON LAYOUT PLAN.
2. CONCRETE SURFACE TO RECEIVE MEDIUM BROOM FINISH PERPENDICULAR TO DIRECTION OF TRAFFIC.

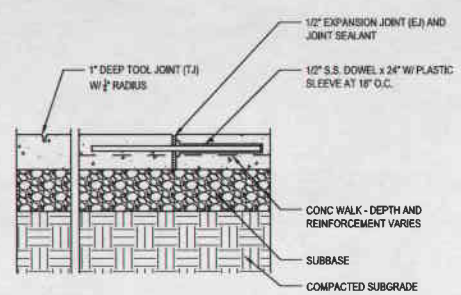


5 CONCRETE CURB INTEGRAL
Scale: 1"=1'-0"

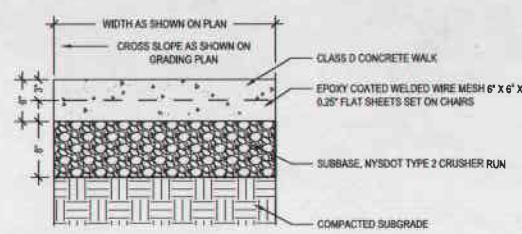


4 6" CONCRETE CURB
Scale: 1"=1'-0"

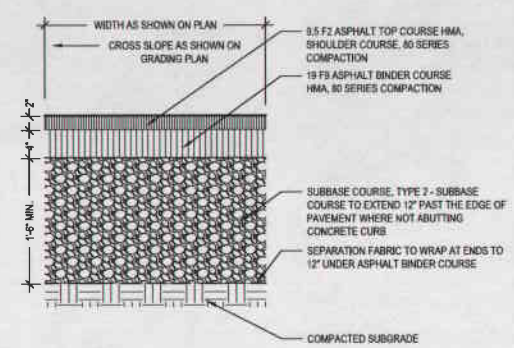
NOTES:
1. OVERLAP MESH SHEETS 1'-0" MIN.



3 TYPICAL CONCRETE JOINTS
Scale: 1"=1'-0"



2 CONCRETE PAVEMENT
Scale: 1"=1'-0"



1 ASPHALT PAVEMENT
Scale: 1"=1'-0"

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Ithaca Neighborhood Housing Services &
Sundial Property Development LLC
46 South Street
Trumansburg, New York

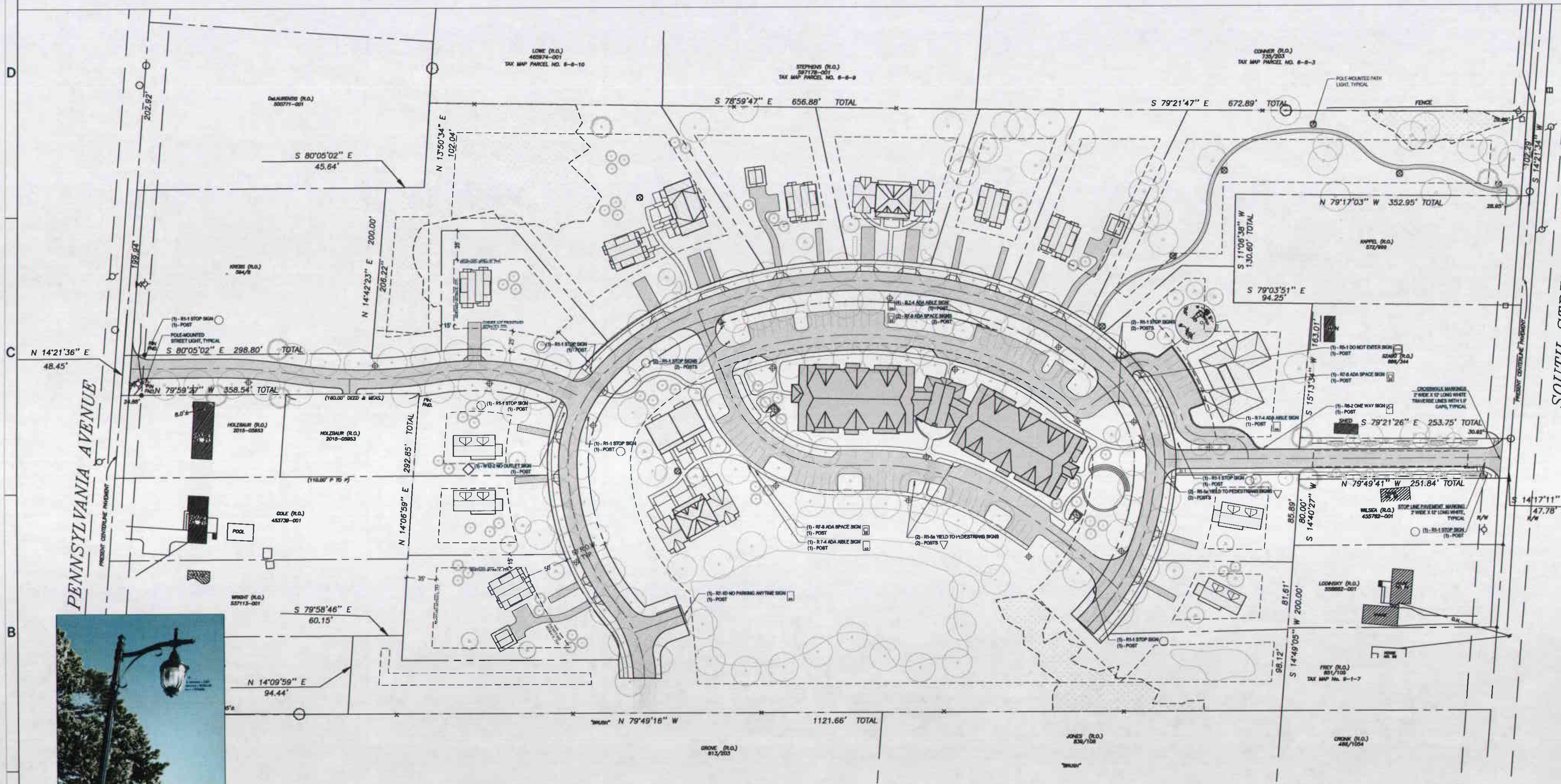
DATE:	12/13/2017
PROJECT:	17003
DRAWN BY:	RK
CHECKED:	

SITE DETAILS

L-105

File: T:\PROJECTS\INHS Trumansburg\ACAD\17003_L-Details.dwg Plot Date: 12/13/2017

Exhibit G



HARMONIA SERIES POLE-MOUNTED STREET & PATH LIGHTS
LUMINAIRE MODEL: Z65B (32" H x 19.5" W)
20' HT. POLE (STREET) / 12' POLE (PATH) & BASE: P135-B105
(TRADITIONAL FLUTED STRAIGHT SHAFT) WITH M20A MOUNT

LIGHTING AND SIGNAGE SCHEDULE

QTY.	SYMBOL	TYPE	DESCRIPTION
21	◆	STREET LIGHT	APPROX. 20' HT., HPS OR MH LAMPING, ASYMMETRICAL DISTRIBUTION
7	●	PATH LIGHT	APPROX. 12' HT., HPS OR MH LAMPING, SYMMETRICAL DISTRIBUTION
11	○	STOP SIGN	MUTCD R1-1 SIGN MOUNTED ON GALVANIZED POLE
4	▽	YIELD TO PEDESTRIANS SIGN	MUTCD R1-5a STANDARD SIGN MOUNTED ON GALVANIZED POLE
1		ONE-WAY SIGN	MUTCD R6-2 STANDARD SIGN MOUNTED ON GALVANIZED POLE
1		DO NOT ENTER SIGN	MUTCD R5-1 STANDARD SIGN MOUNTED ON GALVANIZED POLE
4/3		ADA PARKING SIGNS	MUTCD R7-8 (SPACE), R7-4 (AISLE) STANDARD SIGNS MOUNTED ON GALVANIZED POLE
1	◇	NO OUTLET SIGN	MUTCD W12-2 STANDARD SIGN MOUNTED ON GALVANIZED POLE
1		NO PARKING ANY TIME SIGN	MUTCD R7-1D STANDARD SIGN MOUNTED ON GALVANIZED POLE

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Ithaca NY 14850
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T.G. MILLER, P.C.
ENGINEERS AND SURVEYORS
203 NORTH AURORA STREET
ITHACA, NEW YORK 14850
www.tgmillerpc.com
607-272-6477 tel.
607-273-6322 fax

NOTICE:
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED LANDSCAPE ARCHITECT TO ALTER ANY ITEM ON THIS DOCUMENT WHO ALTERS THIS DOCUMENT IS REQUIRED BY LAW TO AFFIX HIS OR HER SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS OR HER SIGNATURE AND A SPECIFIC DESCRIPTION OF ALTERATIONS.

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TROWBRIDGE WOLF MICHAELS LANDSCAPE ARCHITECTS, LLP

Ithaca Neighborhood Housing Services &
Sundial Property Development LLC

46 South Street

Trumansburg, New York

DATE:	12/13/2017
PROJECT:	17003
DRAWN BY:	RK
CHECKED:	

SITE LIGHTING & SIGNAGE PLAN

L-102

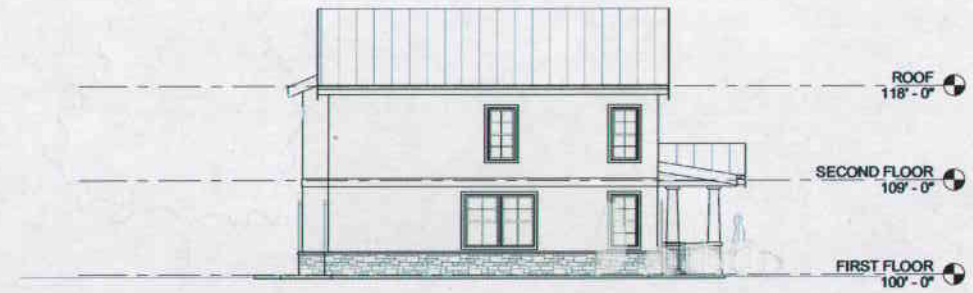
Exhibit H

ITHACA NEIGHBORHOOD HOUSING SERVICES
46 SOUTH STREET, TRUMANSBURG NY

EXTERIOR ELEVATIONS - BLDG 'C1'

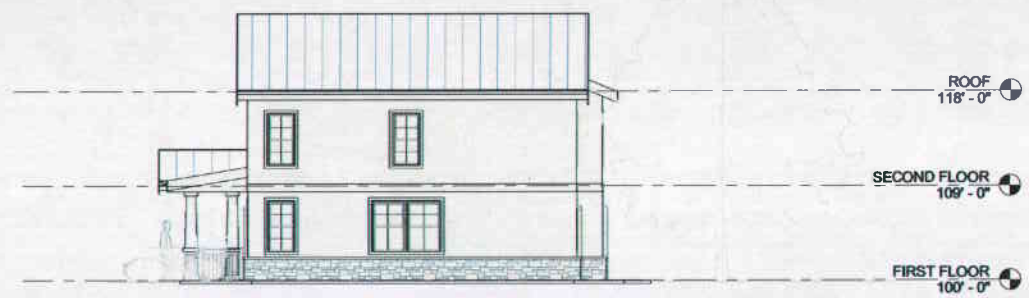
12/08/17
1/8" = 1'-0"
17029
AP109

1 NEW - SOUTH
1/8" = 1'-0"

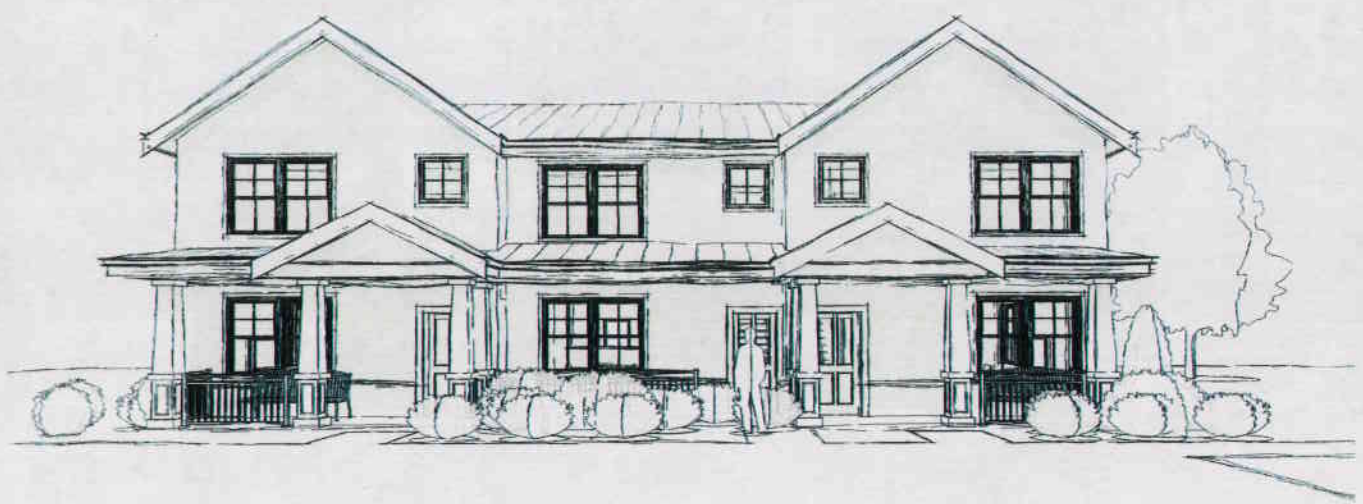


3 NEW - WEST
1/8" = 1'-0"

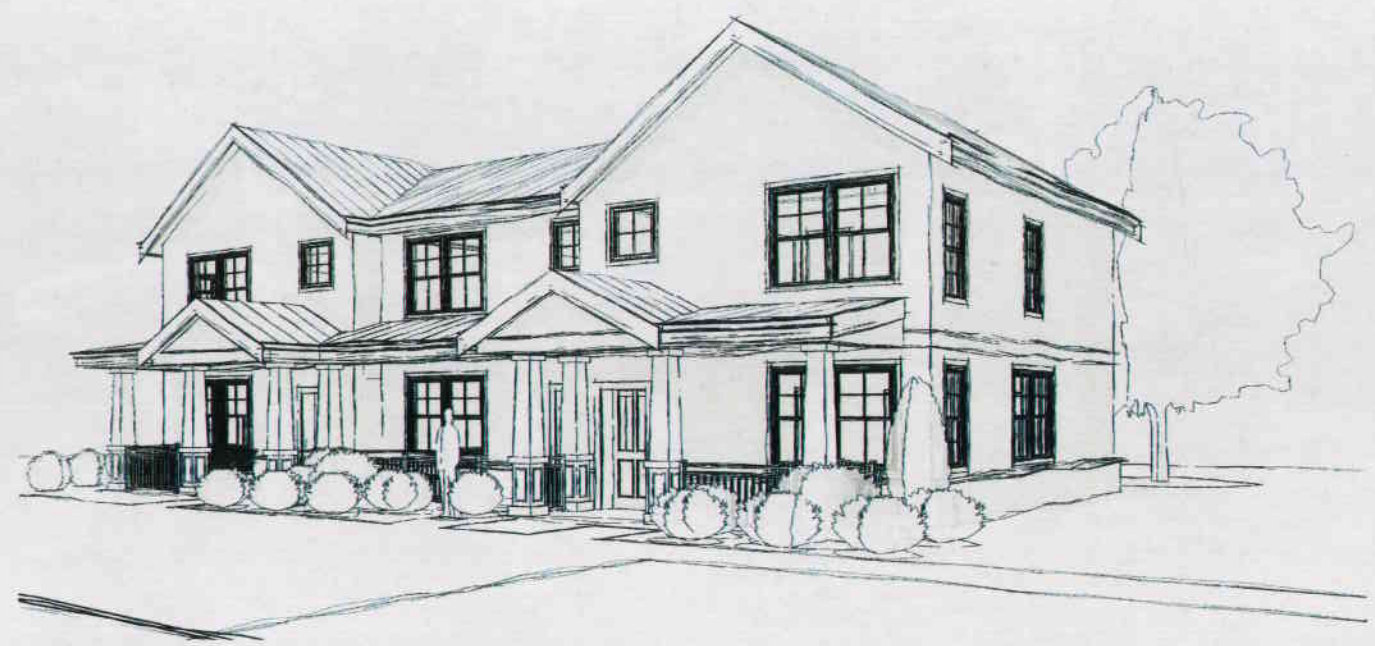
2 NEW - NORTH
1/8" = 1'-0"



4 NEW - EAST
1/8" = 1'-0"



5 STREET ELEVATION - BLDG 'C1'



6 PERSPECTIVE - NW CORNER

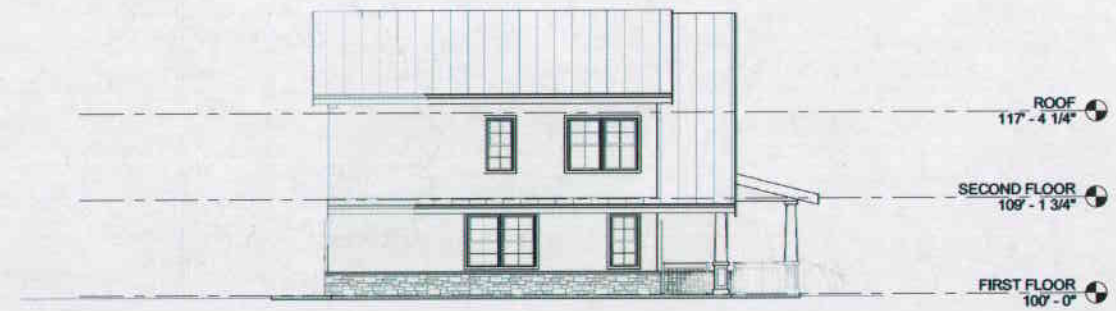
HOLT ARCHITECTS

ITHACA NEIGHBORHOOD HOUSING SERVICES
46 SOUTH STREET, TRUMANSBURG NY

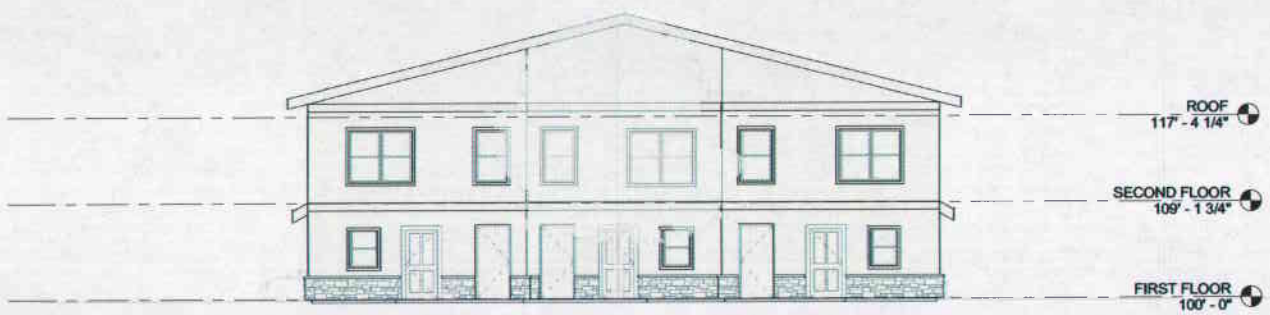
EXTERIOR ELEVATIONS - BLDG 'C2'

12/08/17
1/8" = 1'-0"
17029
AP110

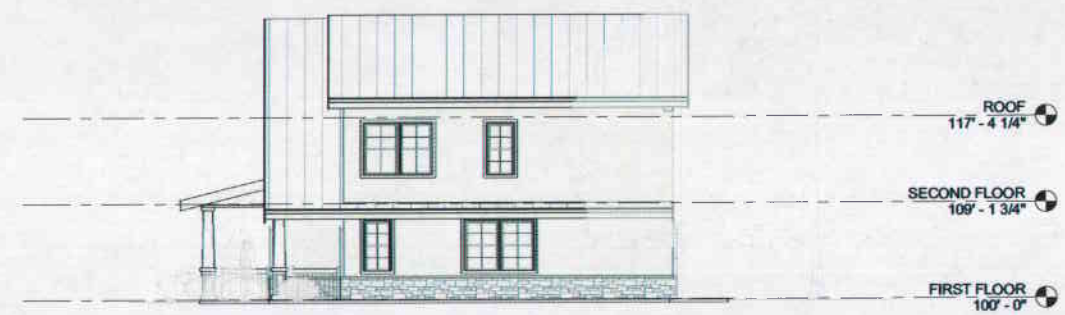
1 ELEVATION - PLAN SOUTH
1/8" = 1'-0"



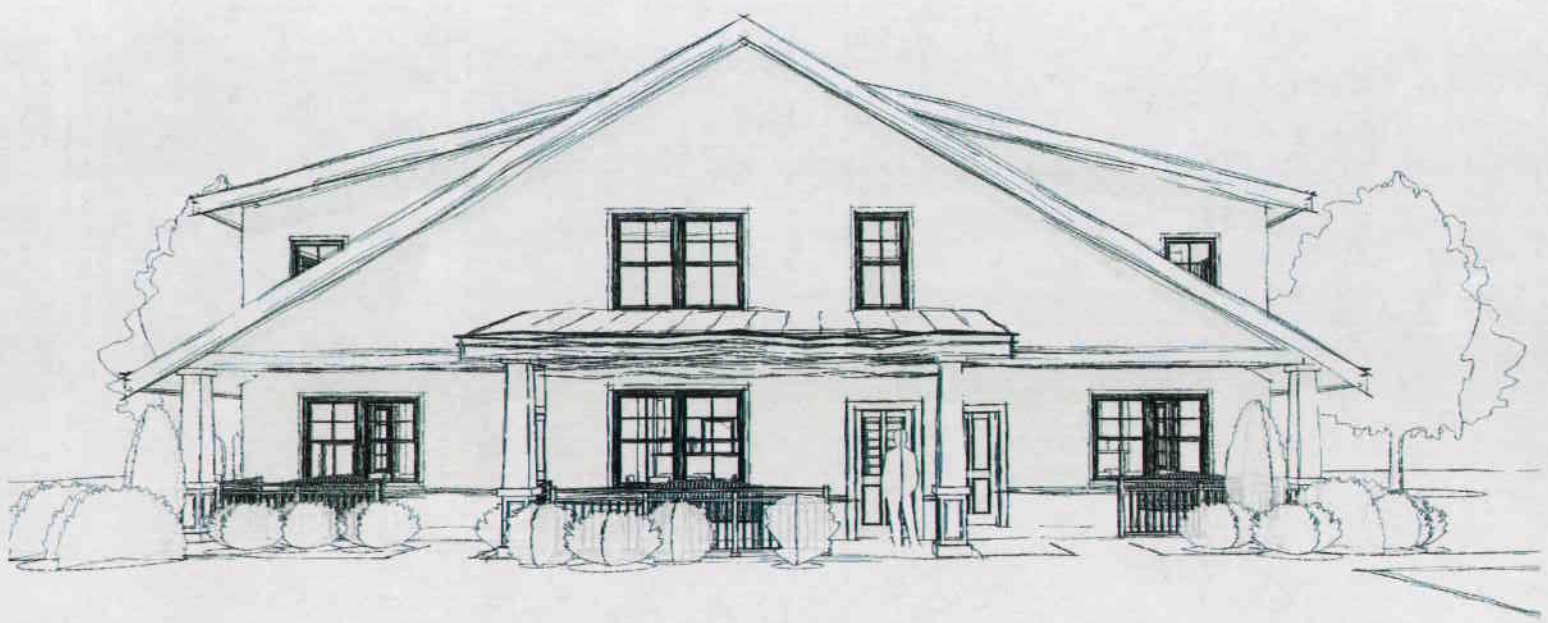
3 ELEVATION - PLAN WEST
1/8" = 1'-0"



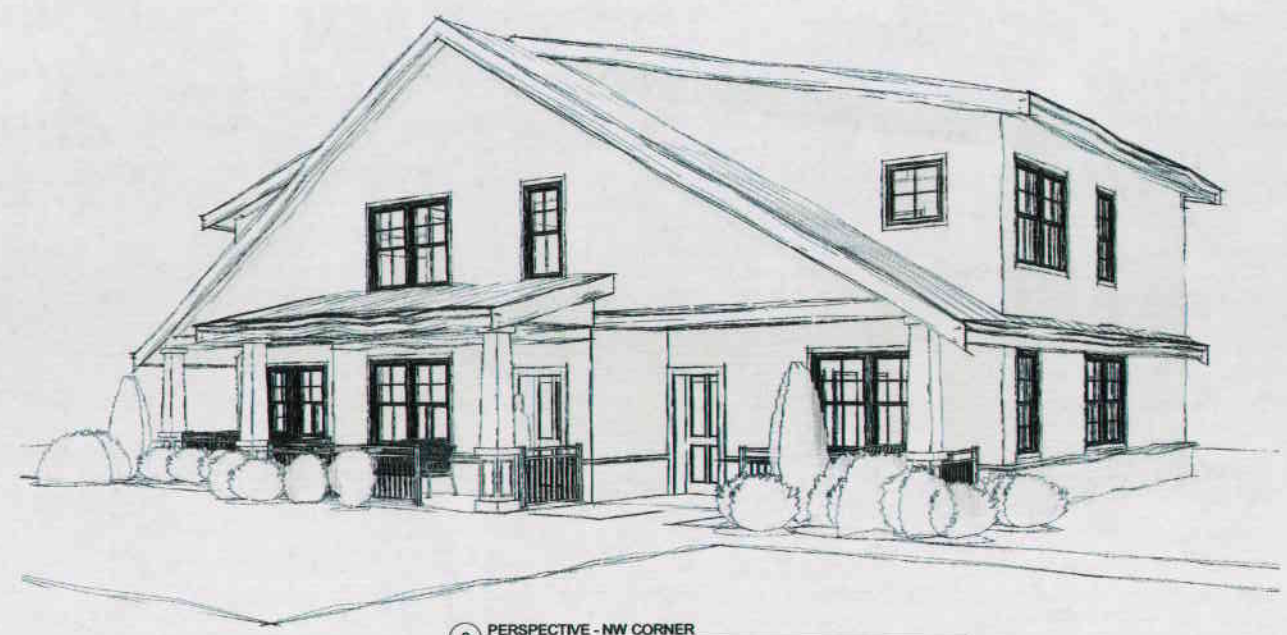
2 ELEVATION - PLAN NORTH
1/8" = 1'-0"



4 ELEVATION - PLAN EAST
1/8" = 1'-0"



5 STREET ELEVATION - BLDG 'C2'

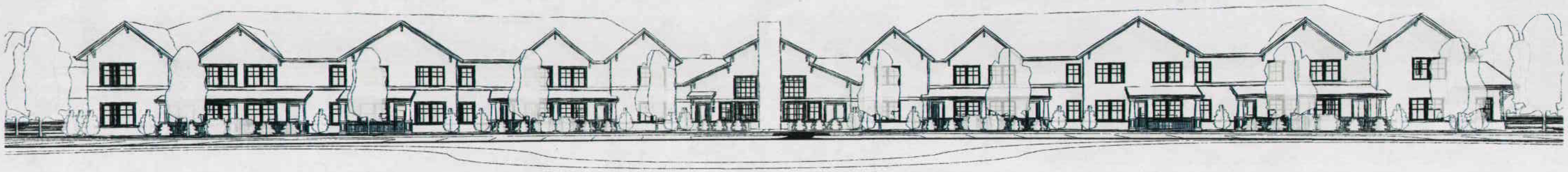


6 PERSPECTIVE - NW CORNER

HOLT ARCHITECTS

PERSPECTIVES

1 3D View - FRONT ELEVATION WHOLE



2 3D View - BACK ELEVATION WHOLE

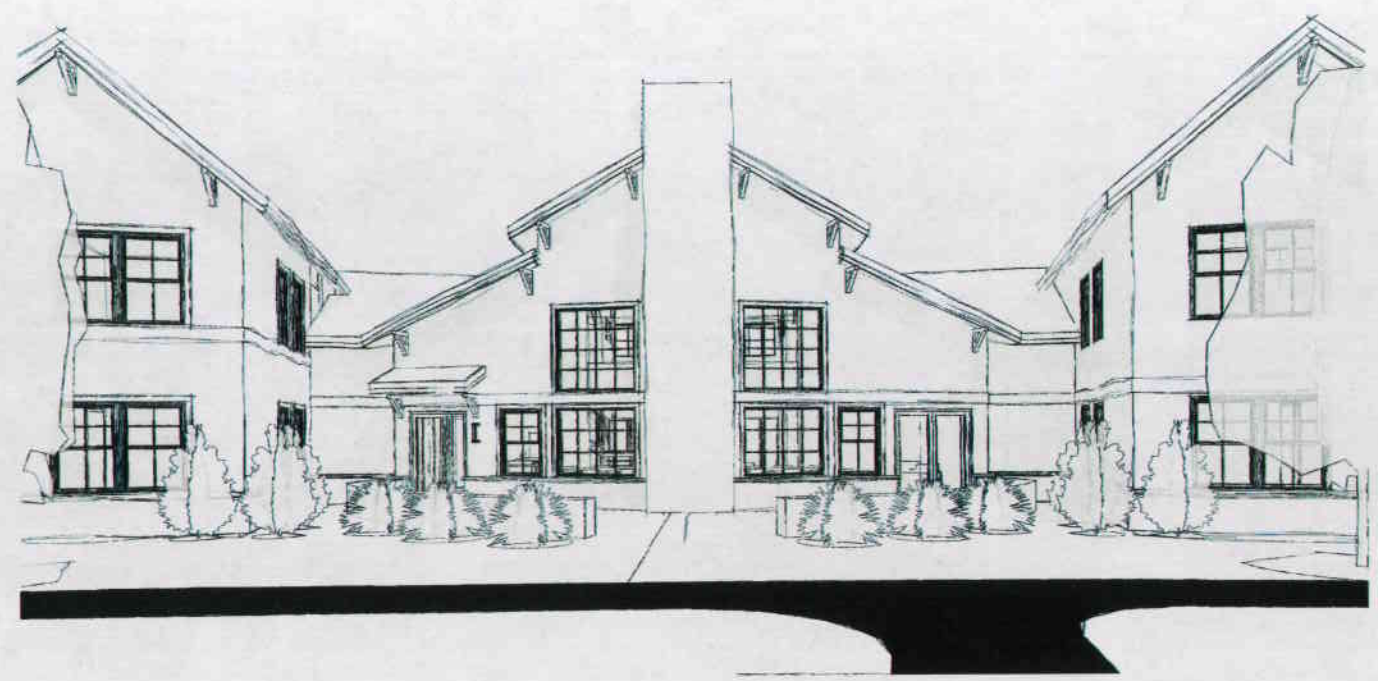
HOLT ARCHITECTS

PERSPECTIVES

1 PERSPECTIVE - FRONT ENTRANCE

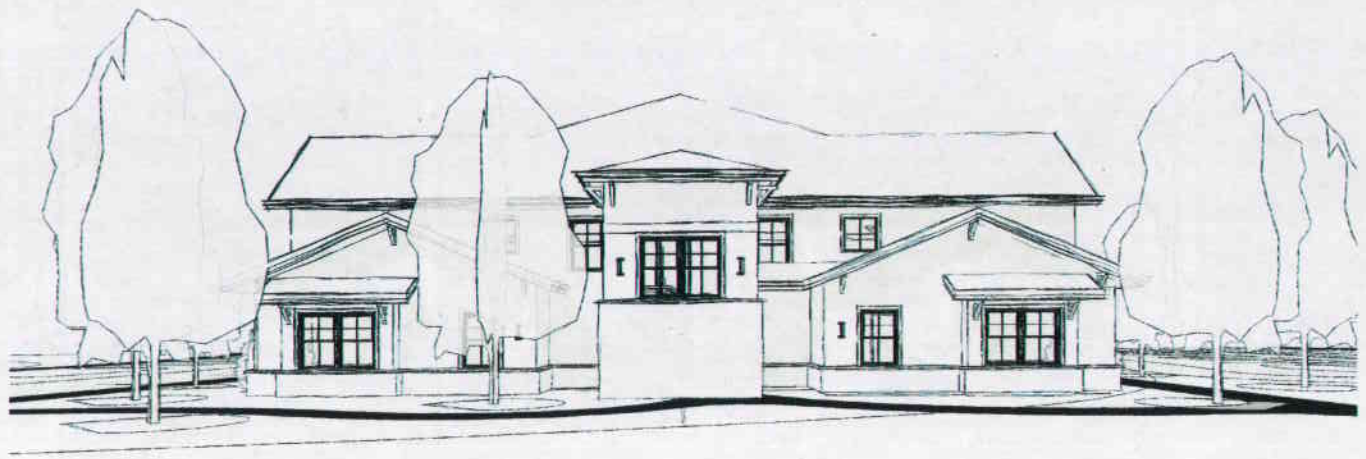
2 PERSPECTIVE - BUILDING 'A' STREET VIEW

3 PERSPECTIVE - BACK ELEVATION WHOLE



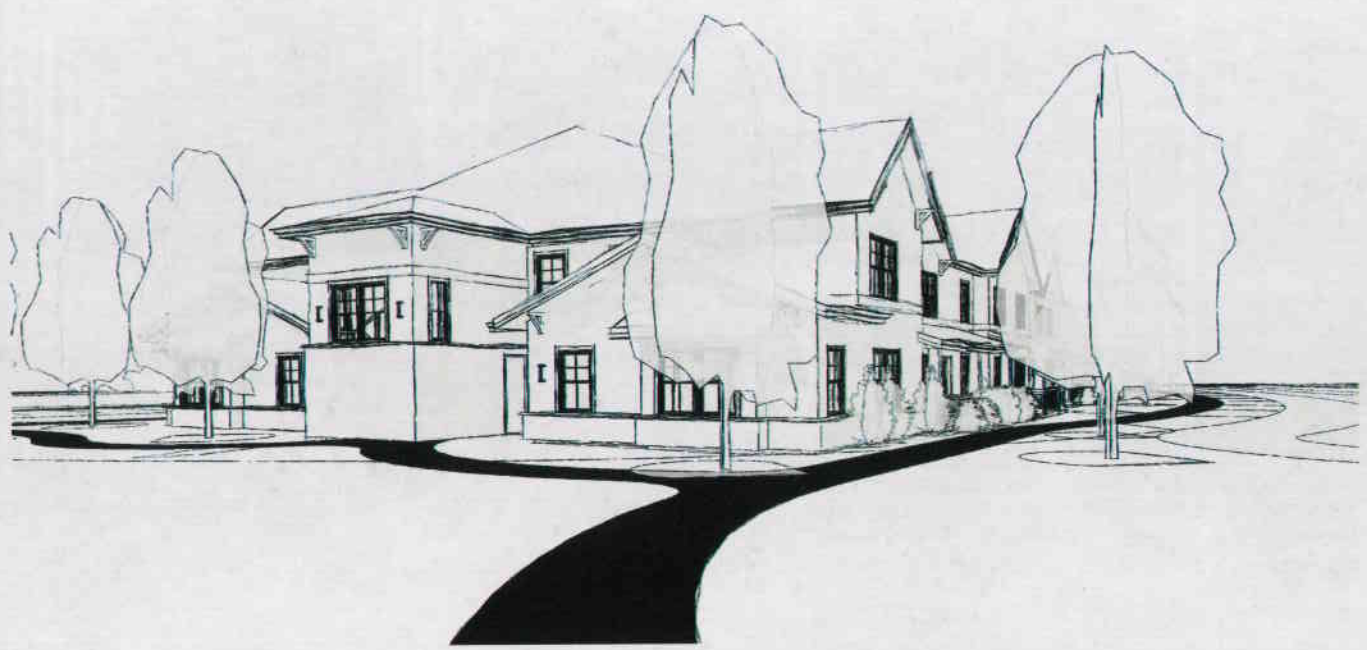
4 PERSPECTIVE - REAR ENTRANCE

PERSPECTIVES



1 PERSPECTIVE - BUILDING 'B' END ELEVATION

2 PERSPECTIVE - PORCHES



3 PERSPECTIVE - BUILDING 'B' END

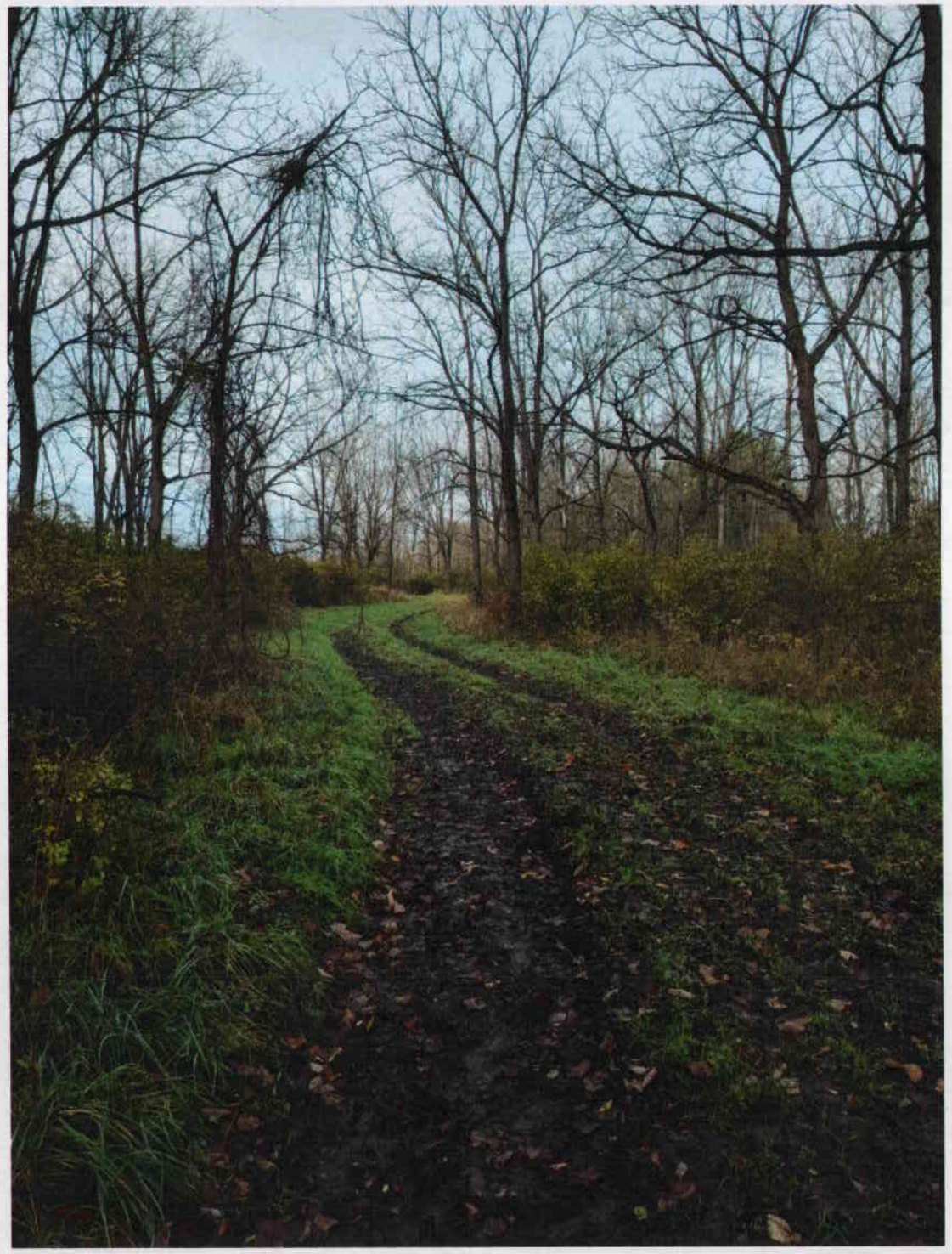
4 PERSPECTIVE - REAR ELEVATION

Exhibit I

46 South Street Site Photos

Northeast entrance to site

46 South Street Site Photos



Farm road leading into site from northeast corner

46 South Street Site Photos

End of farm road looking south

46 South Street Site Photos

End of farm road looking at northwest corner

46 South Street Site Photos

End of farm road looking east

46 South Street Site Photos

Eastern side of the site

46 South Street Site Photos

View of western side of the site

46 South Street Site Photos

Southeast corner of site

46 South Street Site Photos

View of eastern side of site where private drive would exit onto South St

46 South Street Site Photos

View of western side of site from the southeast corner

46 South Street Site Photos

View of northern side of site from the southeast corner

46 South Street Site Photos

View of southwest corner of site

46 South Street Site Photos

Looking east from southwest corner of site

46 South Street Site Photos

Looking at northwest corner from southwest corner of site

46 South Street Site Photos

View of western side of site where public road would exit onto Pennsylvania Ave

46 South Street Site Photos

Looking east from northwest corner of site

46 South Street Site Photos

Looking towards northwest corner from northern side of site

46 South Street Site Photos

View of hedgerow bisecting site from east to west

46 South Street Site Photos

View of proposed private drive location on eastern side of site

46 South Street Site Photos

View of proposed private drive location on eastern side of site

Exhibit J

Illustrative Rendering, View looking west along proposed Private Drive from South Street intersection

Illustrative Rendering, View looking west along proposed Pedestrian Trail through existing woodlands in Lot 7

Exhibit K

RECEIVED

DEC 08 2017 BY: KMO

COPY

Department of Assessment

128 East Buffalo Street

Jay Franklin
Director

Irene Kehoe
Assistant Director

TAX SEARCH FOR CONSOLIDATION

Requirements for consolidation:

1. Identical ownership of all parcels to be consolidated
2. All parcels to be contiguous (adjoining), may cross roads
3. All parcels to be located in the same Municipality, Special District and School District
4. All taxes need to be current and paid in full

NOTE: If you plan on splitting the consolidated parcels in the future, it is advised you should call your local Zoning or Planning Department to verify you will be able to split the combined parcels.

CITY _____ TOWN Ulysses VILLAGE Trumansburg

RESIDENTIAL yes COMMERCIAL _____

PARCELS TO BE CONSOLIDATED:

1. 9-1-2
2. 8-3-2.2
3. _____
4. _____
5. _____
6. _____

OWNER(S) OF RECORD

Sundial Property Development LLC

FOR TAX/ASSESSMENT ROLL YEAR: 2018

All taxes are paid on each of the parcels to be consolidated ☑ yes ☐ no

CONSOLIDATION REQUESTED BY: [signature] 607-275-0715

Signature & Date 12-8-17 Phone Number

***Please Note: Consolidation requests made by March 1st will take effect for the current year Final Assessment Roll. Consolidation requests made after will take effect the following year.**

COMMENTS: _____

For Office Use Only

RPA: _____ PARCEL TO BE KNOWN AS: _____

☐ Finance ☐ Input ☐ Mapping ☐ Processed

Mail Address:
128 East Buffalo Street
Ithaca, New York 14850
http://www.tompkins-co.org/assessment/

Tel: 607-274-5517
Fax: 607-274-5507
assessment@tompkins-co.org

Tompkins County Clerk Recording Page

Return To

KLAUSNER ADAM

Maureen Reynolds, County Clerk
Tompkins County Clerk
320 North Tioga Street
Ithaca, NY 14850
(607) 274-5431

Document Type: **DEED**

Receipt Number: 16-144318

Grantor (Party 1)
BRENNER, CLAUDIA T

Grantee (Party 2)
SUNDIAL PROPERTY DEVELOPMENT LLC

Fees	
Recording Fee	$20.00
Pages Fee	$30.00
State Surcharge	$20.00
TP-584 Form Fee	$5.00
RP-5217 Form Fee	$250.00
Total Fees Paid:	$325.00

Transfer Amt: $0.00

Instrument #: 2016-12980
Transfer Tax #: 000647

Property located in **Ulysses**

State of New York
County of Tompkins

Recorded on October 28th, 2016 at 2:57:05 PM with
a total page count of **6.**

Maureen Reynolds

Tompkins County Clerk

This sheet constitutes the Clerk's endorsement required by section 319 of the Real Property Law of the State of New York

Do Not Detach

CO 10/28/2016 02:57:06 PM

Title Not Examined

QUIT CLAIM DEED

THIS INDENTURE** made the 28th **day October, Two Thousand Sixteen

BETWEEN

CLAUDIA T. BRENNER of 133 Glenside Road, Ithaca, New York 14850

Party of the first part,

and

SUNDIAL PROPERTY DEVELOPMENT, LLC a New York limited liability company with offices at 133 Glenside Road, Ithaca, New York 14850,

Party of the second part,

WITNESSETH that the party of the first part, in consideration of ONE AND NO/100 Dollar ($1.00) lawful money of the United States, and other good and valuable consideration paid by the party of the second part, does hereby remise, release and quitclaim unto the party of the second part, her heirs and assigns forever,

ALL THAT TRACT OR PARCEL OF LAND *described in Schedule A attached hereto and made a part hereof.*

TOGETHER with the appurtenances and all the estate and rights of the party of the first part in and to said premises.

TO HAVE AND TO HOLD the premises herein granted unto the parties of the second, her heirs and assigns forever.

IN WITNESS WHEREOF, the party of the first part has hereunto set her hand and seal the day and year first above written.

IN PRESENCE OF

CLAUDIA T. BRENNER

STATE OF NEW YORK)
COUNTY OF TOMPKINS);

On this 28th day of October, 2016 before me, the subscribers, personally appeared CLAUDIA T. BRENNER personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individuals(s) acted, executed the instrument.

ADAM KLAUSNER
Notary Public, State of New York
Qualified in Tompkins County
No. 02KL6032452
My Commission Expires 11-01-2017

Notary Public

Schedule A

PARCEL I

ALL THAT TRACT OR PARCEL OF LAND, situate in the Village of Trumansburg, Tompkins County, New York, bounded as follows: On the east by South Street; on the south by Percy Hillard (now or formerly); on the west by Howard Aiken (now or formerly); on the north by lands of Harry Swick (now or formerly); CONTAINING 15 acres of land be the same more or less.

ALSO ALL THAT TRACT ORPARCELOF LAND, situate in the Village of Trumansburg, Town of Ulysses, County of Tompkins and State of New York, bounded and described as follows:

BEGINNING at a point which is three hundred forty-six (346) feet north seventy-three (73) degrees west from the southeast corner of the premises conveyed to Harry Swick and Hattie M. Swick by the Tompkins County Trust Company by deed dated May 23, 1938 and recorded May 26, 1938 in Book 247 of Deeds at page 482, in Tompkins County Clerk's Office; thence running north seventy-three (73) degrees west along a line of stone fence posts a distance of nine hundred eighty-four (984) feet to a point; thence running north nineteen (19) degrees east a distance of one hundred thirty-four (134) feet to a point; thence running south seventy-six (76) degrees east along a fence a distance of nine hundred seventy-eight (978) feet to a point; thence running south fourteen (14) degrees west a distance of one hundred thirty-two (132) feet more or less to the point or place of beginning; containing approximately three (3) acres of land. The intention hereof, however, is to convey approximately three (3) acres from the westerly part of the premises conveyed to Harry Swick and Hattie M. Swick by the Tompkins County Trust Company by deed dated May 23, 1938 and recorded May 26, 1938 in Book 247 of Deeds at page 482 in Tompkins County Clerk's Office. The description of the conveyed parcel is made in accordance with a survey and map of the conveyed premises made by E. D. Crumb, licensed land surveyor, dated November 27, 1942, a copy of which map is filed in the Tompkins County Clerk's office and to which reference is made for a more particular description of the parcel.

ALSO ALL THAT TRACT OR PARCEL OF LAND, situate in the Village of Trumansburg, County of Tompkins and State of New York, more particularly bounded and described as follows: BEGINNING in the center of the highway leading from Waterburg to Trumansburg, known as South Street; at the northeast corner of the premises now or formerly of L. Waring, said point of beginning being approximately nine chains south along the center tine of South Street from its intersection with the centerline of Lawn Street; running thence 86 degrees west 20 chains to lands now or formerly owned by David Biggs; running thence north 7 degrees 30 minutes east one chain and 50 links; running thence south 86 degrees east 20 chains on such line to the center of the said highway; running thence south 8 degrees west one chain 50 links to the point or place of beginning.

SUBJECT TO the rights of the public in and to so much of the above described premises as lies within the boundaries of the public highway. The above.described premises are designated as 46 South Street, in the Village of Trumansburg, County of Tompkins and State of New York.

EXCEPTING the premises described in the Deed from Francis H. Schaefer Jr. and Mary H. Schaefer to George W. Frank and Barbara T. Frank dated May 12, 1950 and recorded in the Tompkins County Clerk's Office on May 13, 1950 in Book 331 of Deeds at Page 204.

ALSO EXCEPTING the premises described in the Deed from Francis H. Schaefer and Mary H. Schaefer to Martha DeLaurentis dated July 9, 1950 and recorded in the Tompkins County Clerk's Office on July 11, 1950 in Book 333 of Deeds at Page 142.

ALSO EXCEPTING the premises described in the Deed from Francis H. Schaefer and Mary H Schaefer to Charles F. Breswitz and Hazel R. Breswitz dated June 16, 1952 and recorded in the Tompkins County Clerk's Office on June 17, 1952 in Book 378 of Deeds at Page 384.

ALSO EXCEPTING the premises described in the Deed from Francis H. Schaefer Jr. and Mary H Schaefer to Donald R. Beaman and Sarah G. Beaman dated September 25, 1964 and recorded in the Tompkins County Clerk's Office on September 25, 1964 in Book 453 of Deeds at Page 265.

The above described premises are known as 46 South Street, Trumansburg, New York 14886, Village of Trumansburg tax map number 9.-1-2.

PARCEL II

ALSO ALL THAT TRACT OR PARCEL OF LAND, situate in the Village of Trumansburg, County of Tompkins and State of New York, bounded and described as follows: BEGINNING at a point at the intersection of the center lines of Halsey Street and Pennsylvania Avenue in said Village thence south 8 degrees west along the center of Pennsylvania Avenue a distance of one thousand thirty-one and ninety-one one hundredths (1031.91) feet to a point; thence south 86 degrees east a distance of three hundred thirty-eight and fifty-eight one hundredths (338.58) feet along the lands of Percy Hilliard (now or formerly) to an iron pin (said course passing through an iron pin set in the east side of Pennsylvania Avenue 25 feet from the center thereof; thence north 8 degrees 15 minutes east along an old fence a distance of eight hundred fourteen (814) feet to an iron pin; thence continuing along said course and fence a distance of two hundred seventeen (217) feet to an iron pin; thence north 54 degrees 10 minutes west a distance of one hundred twenty and eight tenths (120.8) feet to the center of Elm Street (said course passing through an iron pin set at the side of Elm Street at a point 22 feet distant from the center thereof); thence in a southwesterly direction along the center of Elm Street a distance of approximately eighty (80) feet to a point at the curve in said street; thence north 85 degrees 10 minutes west along the center of the street a distance of one hundred ninety-eight (198) feet to the place of beginning; containing 7.73 acres of land. For a more complete description of said premises reference is hereby made to a survey of E.D. Crumb dated May 16-17,1944.

EXCEPTING from the above-referenced parcel the premises described in the Deed from Francis H. Schaefer Jr. and Mary H. Schaefer to Elbert W. Randall and Theresa Randall dated June 12, 1944 and recorded in the Tompkins County Clerk's Office on June 20, 1944 in Book 271 of Deeds at Page 212.

ALSO EXCEPTING from the above referenced parcel the premises described in the Deed from Francis H. Schaefer Jr. and Mary H. Schaefer to Ralph Thomas and Rose Thomas dated November 10, 1969 and recorded in the Tompkins County Clerk's Office on November 12, 1969 in Book 484 of Deeds at Page 841.

ALSO EXCEPTING from the above referenced parcel the premises described in the Deed from Francis H. Schaefer Jr. and Mary H. Schaefer to Lewis E. Ough and Marilyn E. Ough dated June 19, 1970 and recorded in the Tompkins County Clerk's Office on July 16, 1970 in Book 488 of Deeds at Page 256.

ALSO EXCEPTING from the above referenced parcel the premises described in the Deed from Francis H. Schaefer Jr. and Mary H. Schaefer to Ralph Thomas and Rose Thomas dated June 19, 1970 and recorded in the Tompkins County Clerk's Office on July 16, 1970 in Book 488 of Deeds at Page 258.

ALSO EXCEPTING from the above referenced parcel the premises described in the Deed from Francis H. Schaefer Jr. and Mary H. Schaefer to David O. Merilahti and Arlene M. Merilahti dated June 19, 1972 and recorded in the Tompkins County Clerk's Office on June 19, 1972 in Book 500 of Deeds at Page 782.

ALSO EXCEPTING from the above referenced parcel the premises described in the Deed from Francis H. Schaefer Jr. and Mary H. Schaefer to John D. Megivern dated June 19, 1972 and recorded in the Tompkins County Clerk's Office on July 11, 1972 in Book 531 of Deeds at Page 318.

ALSO EXCEPTING from the above-referenced parcel the premises described in the Deed from Francis H. Schaefer and Mary H. Schaefer to Richard H. Mehlenbacher and June C. Mehlenbacher dated September 1, 1972 and recorded in the Tompkins County Clerk's Office on September 10, 1972 in Book 502 of Deeds at Page 741.

ALSO EXCEPTING from the above referenced parcel the premises described in the Deed from Francis H. Schaefer Jr. and Mary H. Schaefer to John D. Megivern dated May 18, 1973 and recorded in the Tompkins County Clerk's Office on May 25, 1973 in Book 537 of Deeds at Page 726.

ALSO EXCEPTING from the above referenced parcel the premises described in the Deed from Francis H. Schaefer Jr. and Mary H. Schaefer to Floyd W. Cole and Linda L. Cole dated August 6, 1975 and recorded in the Tompkins County Clerk's Office on August 14, 1975 in Book 546 of Deeds at Page 1137.

ALSO EXCEPTING from the above referenced parcel the same premises described in the Deed from Francis H. Schaefer Jr. and Mary H. Schaefer to Christian Abrahamsen and Margaret Abrahamsen dated August 6, 1975 and recorded in the Tompkins County Clerk's Office on August 14, 1975 in Book 546 of Deeds at Page 1139.

ALSO EXCEPTING from the above-referenced parcel the same premises described in the Deed from Francis H. Schaefer Jr. and Mary H. Schaefer to Blair E. Hoover and Cathy L. Hoover dated September 14, 1978 and recorded in the Tompkins County Clerk's Office on September 14, 1978 in Book 567 of Deeds at Page 16.

The above described premises are known as Pennsylvania Avenue, Trumansburg, New York 14886, Village of Trumansburg tax map number 8.-3-2.2.

THE ABOVE REFERENCED PROPERTY IS MORE MODERNLY DESCRIBED AS FOLLOWS:

ALL THAT TRACT OR PARCEL OF LAND situate in the Village of Trumansburg, County of Tompkins, State of New York, being bounded and described as follows:

BEGINNING at a point in the present center line of South Street, said point being located approximately 448.8' Southerly of the present center line intersection with Camp Street;

RUNNING THENCE South 14° 21' 34" West along the present center line of South Street for a distance of 102.29' to a point;

RUNNING THENCE North 79° 17' 03" West passing through an iron pipe found at a distance of 28.95' and continuing for a total distance of 352.95' to an iron pipe found;

RUNNING THENCE South 11° 06' 38" West for a distance of 130.60' to an iron pipe found;

RUNNING THENCE South 79° 03' 51" East for a distance of 94.25' to an iron pin found;

RUNNING THENCE South 15° 13' 34" West for a distance of 163.01' to an iron pipe found;

RUNNING THENCE South 79° 21' 26" East passing through an iron pipe found at a distance of 222.83', and continuing for a total distance of 253.75' to a point;

RUNNING THENCE South 14° 17' 11" West along the present center line of South Street for a distance of 47.78' to a point;

RUNNING THENCE North 79° 49' 41" West passing through an iron pipe found at a distance of 29.84' and continuing for a total distance of 251.84' to an iron pipe found;

RUNNING THENCE South 14° 40' 27" West for a distance of 80.00' to an iron pipe found;

RUNNING THENCE South 14° 49' 05" West passing through an iron pipe found at a distance of 100.00' and continuing for a total distance of 200.00' to an iron pin found;

RUNNING THENCE North 79° 49' 16" West for a distance of 1121.66' to an iron pin found;

RUNNING THENCE North 14° 09' 59" East for a distance of 94.44' to an iron pipe found;

RUNNING THENCE South 79° 58' 46" East for a distance of 60.15' to an iron pipe found;

RUNNING THENCE North 14° 06' 59" East for a distance of 292.85' to an iron pin set;

RUNNING THENCE North 79° 59' 27" West passing through an iron pin found at a distance of 149.10' passing through an iron pin set at an additional distance of 184.56' and continuing for a distance of 24.88' to a point, said course having a total distance of 358.54';

RUNNING THENCE North 14° 21' 36" East along the present center line of Pennsylvania Avenue for a distance of 48.45' to a point;

RUNNING THENGE South 80° 05' 02" East passing through an iron pin set at a distance of 24.82' and continuing for a total distance of 298.80' to an iron pin found;

RUNNING THENCE North 14° 42' 23" East for a distance of 200.00' to an iron pipe found;

RUNNING THENCE South 80° 05' 02" East for a distance of 45.64' to an iron pipe found;

RUNNING THENCE North 13° 50' 34" East for a distance of 102.04' to an iron pipe found;

RUNNING THENCE South 78° 59' 47" East passing through an iron pin found at a distance of 280.00' and continuing for a total distance of 656.88' to an iron pin found;

RUNNING THENCE South 79° 21' 47" East passing through an iron pipe found at a distance of 644.00' and continuing for a total distance of 672.89' to the point and place of beginning.

Said parcel containing 19.115 acres net to the road right of way.

SUBJECT TO covenants, restrictions, easements and encumbrances of record.

For a more particular description thereof, reference is hereby made to a survey map entitled "Survey Map Showing Francis Schaefer Estate Located at No. 46 South Street, Village of Trumansburg, Tompkins County: New York," dated 6/21/2005 and revised 10/7/2015, prepared by T.G. Miller, P.C., Engineers and Surveyors, Ithaca, New York, incorporated herein by reference.

BEING the same premises conveyed to Claudia T. Brenner from George H. Schaefer, Mary S. Eldridge, Francis H. Schaefer III and Rose Anne Schaefer by deed dated February 27, 2016 and recorded in the Tompkins County Clerk's Office on March 11, 2016 at Instrument #2016-02917.

Exhibit L

PROJECTED CONSTRUCTION SCHEDULE

YEAR	MARKET RATE UNITS	AFFORDABLE FOR SALE UNITS	AFFORDABLE RENTAL UNITS	NURSERY SCHOOL
2019	4 UNITS	PHASE I - 6 UNITS (LOTS 2&12)	PHASE I - 46 UNITS (LOTS 2&12)	PHASE I - (LOT 8)
2020	4 UNITS			
2021	4 UNITS			
2022	5 UNITS	PHASE II - 4 UNITS (LOT 4)		

* PHASE I (NOVEMBER 2019 - JANUARY 2021) WILL INCLUDE ALL SITE WORK.
** PHASE II (APRIL 2022 -AUGUST 2022)

Doc #01-3087359.1

Exhibit M

LIST IDENTIFYING REQUIRED PERMITS FROM OTHER GOVERNMENTAL BODIES

1. SPDES General Permit for Stormwater Discharges – NYSDEC
2. Water Quality Certification - NYSDEC
3. Application for Approval of Plans for Public Water Supply Improvement – NYSDOH/Tompkins County Health Department
4. Application for Approval of Plans for a Wastewater Disposal System – NYSDEC
5. Letter of No Impact to Historic/Cultural Resources - NY State Office of Parks, Recreation and Historic Preservation
6. Nationwide Permit for Wetland Disturbance – US Army Corps of Engineers
7. (Potential) Special Use Permit - Zoning Board of Appeals

Doc #01-3087535.1

Exhibit N

This Exhibit, Stormwater System Calculations, will be submitted under separate cover.

Exhibit O

To: Village of Trumansburg Planning Board
RE: Hamilton Square – Environmental Review
Date: 6/16/17
From: Ithaca Neighborhood Housing Services and Claudia Brenner

Summary of Trumansburg Comprehensive Plan, Zoning Code and 2015 Housing Study.

This document summarizes how the Hamilton Square development addresses the need for housing identified in the Village's 2008 Comprehensive Plan, Zoning Code and 2015 Housing Study.

The Village of Trumansburg is a highly desirable place to live within Tompkins County. The walkable downtown, vibrant Main Street, and tight-knit community make it an ideal place to live and work. The Village's 2008 Comprehensive Plan, Zoning Code and 2015 Housing Study each point to the need for additional housing of various styles and price points. Ithaca Neighborhood Housing Services (INHS) and Claudia Brenner aim to reduce the impediments to homeownership and affordable living in Trumansburg by creating a neighborhood of quality housing that is affordable to families and individuals at a range of incomes.

The new neighborhood, between South Street and Pennsylvania Avenue, will offer market rate for-sale homes, affordable for-sale homes, and affordable rental units. The project includes dedicated recreational areas, open green space, storm water management practices a sidewalk network connecting to South Street and off-street parking. The new homes will include 1, 2 and 3 and potentially 4 bedroom homes suitable for individuals, small and large families. This will truly be an intergenerational community providing fully accessible one bedroom homes for seniors interested in downsizing as well as opportunities for families.

The 2008 Village of Trumansburg Comprehensive Plan, 2015 State of Trumansburg Housing Report, and the Village Zoning Ordinance of 2012 all highlight the noticeable lack of a diversity of housing options including affordable housing and the community's desire to develop a greater quantity of housing options.

2008 Village of Trumansburg Comprehensive Plan

In 2008, Village members and the Board of Trustees came together in a series of meetings to spell out their collective vision for Trumansburg's future. Conversation centered on housing, economic development, and land use, among other topics. The Comprehensive Plan presents the first expression of interest in the creation of affordable housing in the Village. This desire appears to be driven by the steep increase in the median sales price of single family homes and the needs of seniors who often find themselves in homes that offer more space than they need and require more care than they can afford.[i]

The comprehensive plan states that the median sales price of single family homes had increased by approximately 62 percent between 1995 and 2005, from $93,500 to $151,000.[ii] In 2008, 25 percent of homeowners and 37 percent of renters within the village struggled to find affordable housing, according to a study conducted by the U.S. Department of Housing and Urban Development.[iii] The comprehensive plan highlights that when residents are required to dedicate more than 30 percent of their income to housing costs, the upper limit at which housing is considered "affordable," they are left with even less money to pay for other necessities such as food, clothing, and transportation.[iv]

Hamilton Square directly addresses the need for affordable housing outlined in the plan by providing for sale and for rent options developed by a non-profit housing organization that will provide on-site management and maintenance and ensure that the properties remain affordable in perpetuity.

Housing options are limited for seniors living in Trumansburg and often fail to meet their budget and space needs. As of 2008, 59 percent of the village's residential housing stock had been built before 1940, 23 percent of homes had been built between 1940 and 1979, and 18 percent of homes had been built after 1980.[v] The village expected its largest population growth to occur within the 45-64 years of age and 65 and over population.[vi]

Home repairs for older homes are often time and labor intensive, yet a growing number of older people have expressed a desire to age in place and receive medical care in their homes rather than at a health care facility.[vii] Since income tends to decline as people age, it will be important that seniors have affordable rental and owner options so that they can concentrate expenditures on maintaining their health, rather than on maintaining an aging home.[viii]

The Hamilton Square development will provide one bedroom homes that are at grade and fully accessible. A mix of homes for rent and for sale will ensure that seniors have options. Walking paths throughout the development and a sidewalk network connecting the site to Main Street will provide access to services within a short walk or drive.

Overall, the Comprehensive Plan expresses clear support for an increase in the supply of housing: "Communities such as the Village of Trumansburg are capable of supporting additional housing because of their water and sewer infrastructure, downtown business core, and established road system."[ix] In fact the recent upgrade to the water system was designed to ensure that additional development, such as Hamilton Square, could move forward and be accommodated.

The discussion about affordability was not limited to the chapter on housing, but rather affordability shows up again in the chapter on land use where it establishes a goal to: "Continue to develop residential neighborhoods of varying densities that offer a range of affordable housing options."[x] Hamilton Square addresses this goal specifically by providing single family homes, duplexes, tri- and fourplexes of one or two stories. The project varies densities and provides a range of housing options.

Based on a thorough analysis of the conditions of the housing stock and the needs of the village's population, the village board and its residents agreed that by 2028, Trumansburg would be home to, "...a variety of architectural styles and a range of affordable options. An integrated network of streets and sidewalks safely connect the commercial core with adjacent residential neighborhoods. Safe and accessible downtown housing, available on the upper floors of street-level retail and service businesses, encourages a vibrant, active community experience.
The neighborhoods are enhanced through a shared understanding of features and practices that give Trumansburg its special character. New house construction is integrated into older residential neighborhoods. Zoning ordinance assures that new house construction provides off-street parking with safe sidewalks and streets that ensure safe vehicular traffic. Multi-unit senior housing is

located close to downtown amenities and provides and affordable option for retirees. A variety of housing densities and types offer diverse housing options while allowing for efficient installation of infrastructure and roads."[xi]

"Working towards this vision, our **housing goals** are to:

1. Maintain a variety of architectural styles, housing densities, and housing options that meet the needs of a variety of socio-economic situations.
2. Establish streets and sidewalks that provide a safe connection between downtown and adjacent residential neighborhoods.
3. Promote new housing construction that is in harmony with existing neighborhoods, provides off-street parking and sidewalks and allows for efficient installation of infrastructure, roads, and green space.
4. Encourage safe and accessible housing on the upper floors of downtown commercial buildings.
5. Establish additional affordable housing for seniors in close proximity to downtown amenities."[xii]

Hamilton Square addresses goals #1,2,3 and 5 above by providing a variety of housing styles, densities and types for seniors and families; including a new road and sidewalk system that will connect to the existing system and provides green space and off street parking.

Zoning Ordinance of the Village of Trumansburg of 2012

In 2012, the Village of Trumansburg revised its Zoning Ordinance to further the implementation of the 2008 Comprehensive Plan. The Village Zoning Code labels 46 South Street as R-1, Residential. R-1 Residential allows for the development of Single-Family and Multi-Family Dwellings, among other varied uses.

The Village of Trumansburg has an affordable housing provision that mandates, according to Section 308 of the Village Zoning Code, any new residential development with 10 or more units over a five-year period must provide at least 20 percent of the projects total units as affordable units. Affordable units are those that are rented at the Current Affordable Rate, which is defined as the most recently published Fair Market Rents as determined by the U.S. Department of Housing and Urban Development, or sold at the Current Affordable Price, defined as two-and-a-half (2.5) times the most recently published Median Family Income (Section 100).

The Zoning Ordinance states that the purpose of the Affordable Housing Provision is, "... to promote public welfare by providing safe, decent, and affordable housing for all incomes; to ensure enough housing, especially for low-income households; to mitigate housing shortage and balance the demand and supply of housing by constructing more housing units; and to integrate all residents of the County regardless of their income levels."[xiii]

Hamilton Square conforms to the Zoning Ordinance as written by including over 20 percent affordable options at a variety of income levels for low and moderate income families and seniors. In fact, this Zoning Ordinance is not only encouraging affordable housing development it is *requiring* a property owner to build affordable housing.

State of Trumansburg Housing 2015

In 2015 Stefan and Jennifer Lutter were commissioned to provide an updated analysis of the Trumansburg housing market. The authors compared rent rates and the cost of homeownership in 2015 with the expenses that had been recorded in the 2008 Village of Trumansburg Comprehensive Plan. Additionally, the authors administered an online and print survey that asked 153 village residents about the features of the village that they found attractive, the amount of money they would be willing to spend to rent or own a home, and the type of new residential development that they found preferable. The survey added local perspective to their longitudinal market analysis and gave clear direction on how future development ought to progress.

Lutter and Lutter found that while homeownership and rental rates had remained roughly the same since 2000, the cost to own or rent a home in the village had increased dramatically. In 2000, a majority of renters paid $300-$749 in rent yet in 2015 the median gross rent for the village was $950.[xiv] The median sales price of a home in the village in 2015 was $196,600. This represents an additional 30 percent increase in the median sales price since the 2008 Comprehensive Plan was published, when the median sales price was $151,000.[xv]

In the resident survey, more than 70 percent of respondents said they would be willing to pay $500-1,000 in rent and 40 percent of respondents said they would look for a home at or below $175,000.[xvi] These responses hint at the fact that current residents, particularly anyone who has not moved in a decade or longer, may be unaware of the current cost of living in Trumansburg today – the median rent is already at the upper limits of what respondents would ideally pay, and the median sales price has surpassed what nearly half of survey respondents would like to pay for a home.

Even if families and individuals can afford to move to or remain in Trumansburg, they face an increasingly competitive market. In the past 5 years there has been an average of 18 annual sales transactions, meaning residents at all incomes may find it difficult to secure housing that meets changing size and affordability needs over time.[xvii] The limited mobility of residents could be relieved by adding housing to the market, and survey responses offer practical feedback on the type of development residents would like to see added to Trumansburg's housing stock.

When residents were asked to rate the importance of certain features of new development, 90 percent of respondents listed affordability as "very important" or "important."[xviii] Walkability and consistency with community character tied for the second highest number of positive responses, at 88.81 percent.[xix] Residents listed single family homes and senior housing as the most desirable style of residential development, and they exhibited a strong preference for medium density housing similar to the development style of 5-11 Whig Street.[xx]

In an open response section of the survey where residents could provide additional comments, 18 respondents mentioned affordability and a number of comments discussed a need for smaller, affordable homes that would promote homeownership among young families and allow older residents to remain in a familiar community.[xxi]

Conclusion

It is clear from the documents outlined above that Trumansburg has several factors impacting affordability:

- increasing sales prices and rental rates,
- an older housing stock with high repair and maintenance costs,
- very few existing homes for sale each year, and
- few newly built homes.

These factors make becoming a homeowner and renting in Trumansburg difficult for individuals and families, particularly seniors and young families, at all income levels. Adding new market rate homeowner units, as well as mixed-income rental and homeowner units, will relieve some pressure from Trumansburg's tight housing market and create the following village-wide benefits:

- Establish a new mixed-income neighborhood that can accommodate the diverse incomes, ages, and abilities of Village residents.
- Increase the diversity of housing types and densities.
- Increase the number of accessible dwelling units for seniors, both for rent and for sale.
- Increase the property taxes generated from the 20 acre site.
- Add users to the village's new water system.
- Attract consumers to local businesses, restaurants, and other Village amenities located on Main Street.
- Create new village amenities, including walking trails and a playground open to the entire community.

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[i] Village of Trumansburg Comprehensive Plan, p. 15, 16
[ii] Village of Trumansburg Comprehensive Plan, p. 15
[iii] Village of Trumansburg Comprehensive Plan, p. 15
[iv] Village of Trumansburg Comprehensive Plan, p. 15
[v] Village of Trumansburg Comprehensive Plan, p. 13
[vi] Village of Trumansburg Comprehensive Plan, p. 16
[vii] Village of Trumansburg Comprehensive Plan, p. 16
[viii] Village of Trumansburg Comprehensive Plan, p. 16
[ix] Village of Trumansburg Comprehensive Plan, p. 16
[x] Village of Trumansburg Comprehensive Plan, p. 38
[xi] Village of Trumansburg Comprehensive Plan, p. 17
[xii] Village of Trumansburg Comprehensive Plan, p. 17
[xiii] Zoning Ordinance of the Village of Trumansburg of 2012, p. 6
[xiv] State of Trumansburg Housing, p. 4, 9
[xv] State of Trumansburg Housing, p. 10 & Village of Trumansburg Comprehensive Plan, p. 15
[xvi] State of Trumansburg Housing, p. 9-10
[xvii] State of Trumansburg Housing, p. 5
[xviii] State of Trumansburg Housing, p. 8
[xix] State of Trumansburg Housing, p. 8
[xx] State of Trumansburg Housing, p. 9, 10
[xxi] State of Trumansburg Housing, p. 11, 9

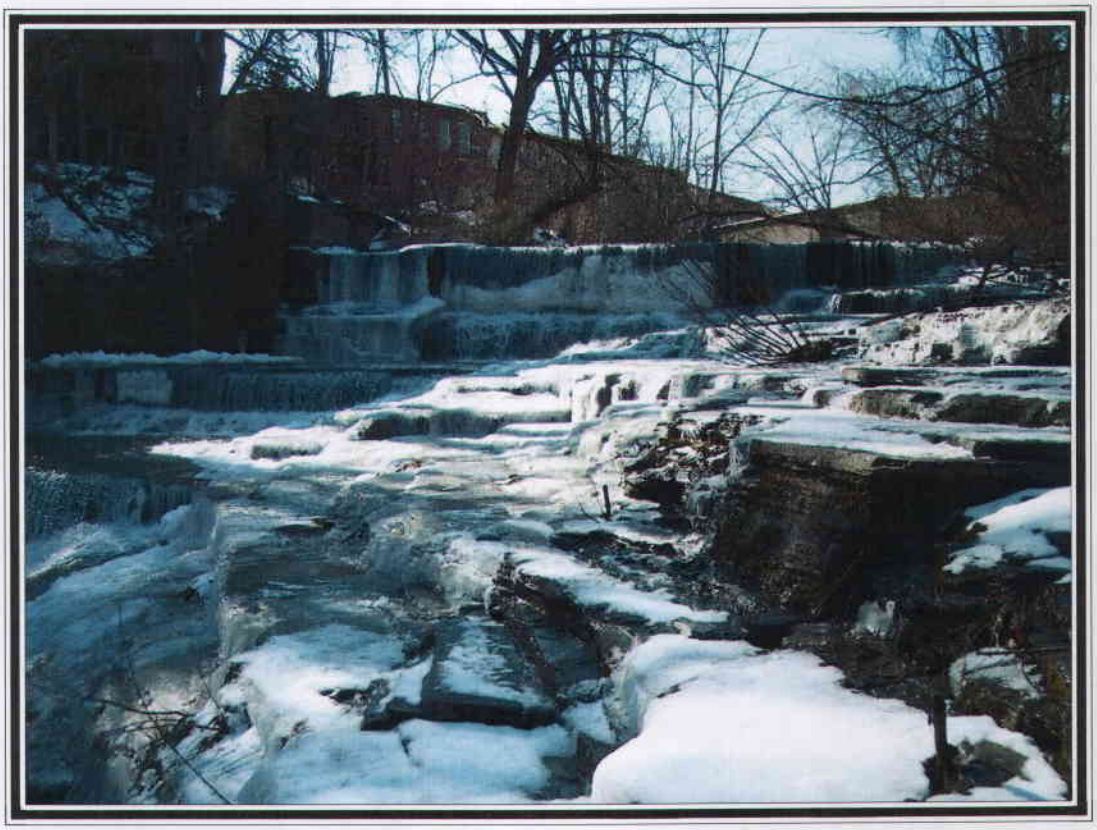
Village of Trumansburg Comprehensive Plan

Comprehensive Plan

&

Implementation and Monitoring Plan

Adopted by the Trumansburg Village Board of Trustees
February 11, 2008



Village of Trumansburg
56 East Main Street
Trumansburg, New York 14886
607.387.6501

Table 2. Units on Parcel, Village of Trumansburg, 2006

Units on Parcel	Number of Units	Number of Structures
1 unit	466	466
2 units	98	49
3-4 units	93	31
5-9 units	28	4
10-19 units	0	0
20 or more units	24	1
TOTAL	**709**	**551**

Source: Tompkins County Solid Waste Permits.

Table 3. Gross Rent, Village of Trumansburg, 2000

Specified renter-occupied units: GROSS RENT	Number	Percentage
Less than $200	24	9%
$200 to $299	39	15%
$300 to $499	83	32%
$500 to $749	78	30%
$750 to $999	27	10%
$1,000 to $1,499	6	2%
$1,500 or more	0	0%
No cash rent	4	2%
TOTAL	**261**	

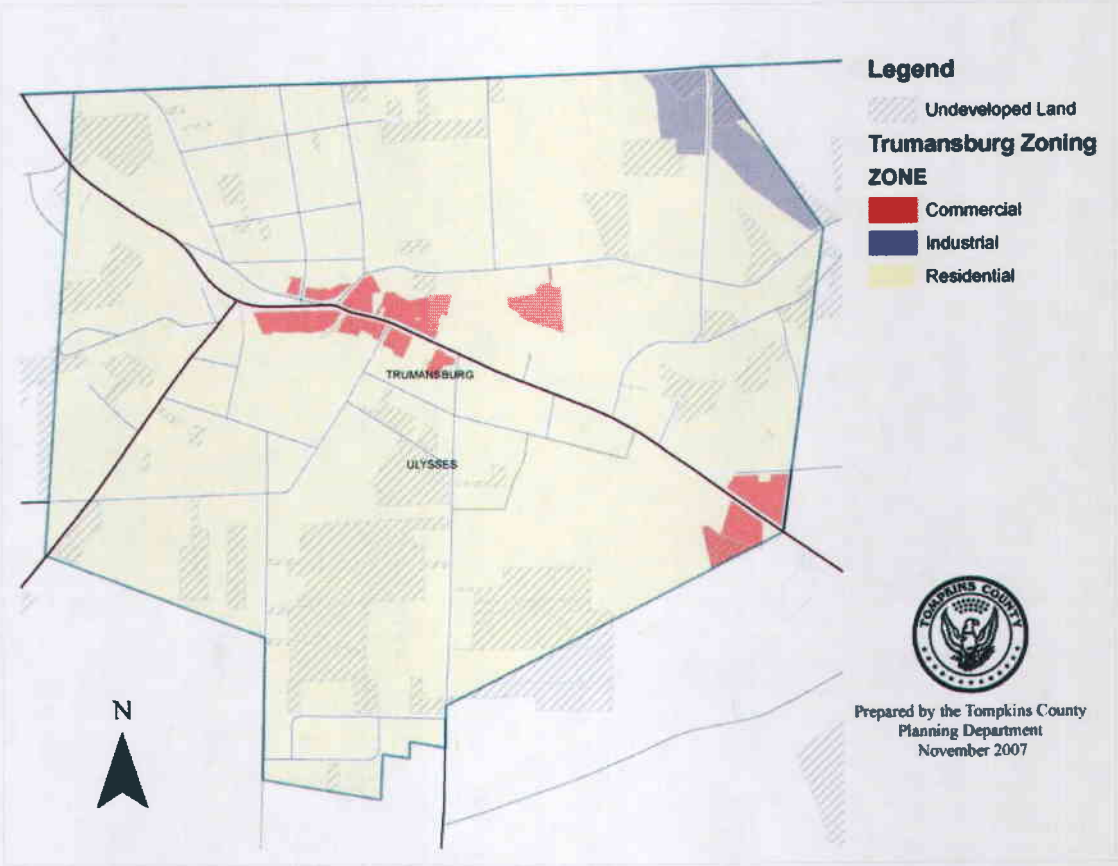
Source: U.S. Census 2000.

EXISTING HOUSING STOCK

Similar to most rural communities in New York State, Trumansburg has a high percentage of older homes. As housing units in the Village continue to age, they require greater maintenance and upkeep than newer homes. Approximately 59 percent of all residential housing in Trumansburg was built before 1940 (416 homes) and 23 percent was built between 1940 and 1979 (167 homes). The remaining 18% of homes were built since 1980.

As the housing stock ages, upkeep and maintenance becomes more difficult. House maintenance repairs such as flooring insulation, windows and roofs are costly and labor intensive. Ensuring that the aging housing stock is maintained and reducing barriers to rehabilitation can revitalize neighborhoods and strengthen community character. There are a variety of programs

Map 3. Undeveloped Land in Trumansburg, 2007



HOUSING AFFORDABILITY

Housing is becoming more expensive in the Village, reflecting the growing issue of housing affordability in Tompkins County. The median sales price of single-family homes sold in the Village between 1995 and 1997 was $93,500. The median sales price of homes sold between 2003 and 2005 was $151,000, an increase of 61.5 percent. Median sales prices rose 62.2 percent over the same time period in the County as a whole.

The generally accepted definition of "affordable" is that a household should pay no more than 30 percent of its annual income on housing. According to the U.S. Department of Housing and Urban Development, 25 percent of homeowners and 37 percent of renters in Trumansburg have affordability problems. Families at the lowest end of the income spectrum had the greatest difficulty affording housing. Approximately 61 percent of families earning between 30 percent and 50 percent of the Village Median family income (154 families) spent more than one third of their income on housing. When households spend more than they can afford on housing they may not have enough left over for other necessities such as food, clothing, and transportation.

The Tompkins County Affordable Housing Needs Assessment, sponsored by the Tompkins County Planning Department, identifies a current lack of affordable housing across Tompkins County, including Trumansburg, and forecasts that the need for such housing will increase over the next decade. Housing unit demand for the County is forecast to increase at a rate of approximately 300 units per year. Communities, such as the Village of Trumansburg are capable of supporting additional housing because of their water and sewer infrastructure, downtown business core and established road system. Given recent trends in the housing market and increasing construction costs, the market will not be able to provide units that are affordable to households without assistance from local and County government, community organizations and local institutions.

HOUSING FOR SENIORS

In the coming decade, the United States will embark upon significant demographic changes, as the Baby Boom generation becomes the Elder Boom generation. This population will place demands on government, service systems, and the community-at-large in a multitude of ways. Tompkins County is no exception to these trends.

In 1999, about one-tenth (9,257) of county residents were over age 65, an increase of 10 percent in the last decade. The County is expected to add a total of 5,600 net new residents over the next 10 years at an average annual population growth rate of 0.6%. According to these projections, the age group making the largest contribution to the county's overall population growth is the 45-64 years age category. The second greatest increase is in the 65 and older age group. Not surprisingly, these household projections follow the same age profile as the overall population projections with the older age categories providing the greatest household growth.

As people age, their incomes tend to decline. Low and low-moderate income seniors will need affordable housing options. Most seniors want to stay in their homes, or "age in place," as long as they can. Coordinated services such as Meals on Wheels, grocery delivery, snow removal and home repairs will allow seniors to stay in their homes longer. Many seniors may also wish to move into smaller homes to reduce costs and regular upkeep.

As the oldest group ages, its members are showing a strong preference for receiving personal care services in a residential environment rather than a health care setting. Assisted living is the fastest growing and fastest changing sector of senior housing. Private-pay assisted living units have been added to the market, but there is a lack of subsidized units for seniors needing high levels of personal care. Affordability of assisted living facilities and services is a major issue for many seniors. Currently, all of the facilities in Tompkins County that provide high levels of care are high-end options.

Housing

20-Year Vision

In 2028, housing in Trumansburg includes a variety of architectural styles and a range of affordable options. An integrated network of streets and sidewalks safely connect the commercial core with adjacent residential neighborhoods. Safe and accessible downtown housing, available on the upper floors of street-level retail and service businesses, encourages a vibrant, active community experience.

The neighborhoods are enhanced through a shared understanding of features and practices that give Trumansburg its special character. New house construction is integrated into older residential neighborhoods. Zoning ordinance assures that new house construction provides off-street parking with safe sidewalks and streets that ensure safe vehicular traffic. Multi-unit senior housing is located close to downtown amenities and provides an affordable option for retirees. A variety of housing densities and types offer diverse housing options while allowing for efficient installation of infrastructure and roads.

Working towards this vision, our **housing goals** are to:

1. Maintain a variety of architectural styles, housing densities and housing options that meet the needs of a variety of socio-economic situations.
2. Establish streets and sidewalks that provide a safe connection between downtown and adjacent residential neighborhoods.
3. Promote new housing construction that is in harmony with existing neighborhoods, provides off-street parking and sidewalks and allows for efficient installation of infrastructure, roads and green space.
4. Encourage safe and accessible housing on the upper floors of downtown commercial buildings.
5. Establish additional affordable housing for seniors in close proximity to downtown amenities.

LAND USE

20-Year Vision

In 2028, Trumansburg has zoned tracts of land identified for commercial and residential development. Additional acreage acquired by the Village, protected as agriculture, wetlands, green space and recreation areas, preserve contiguous physical and visual connections to the surrounding rural landscape. All new building construction along the Main Street corridor has ample parking behind their structures (where permissible) so that building setbacks are consistent with existing historic buildings and street parking is more accessible. Residential zones of varying densities offer a range of housing options that are affordable for low to middle income households.

Through the cooperative planning efforts of residents and business owners, the Village, as a self-sustaining, creative and friendly community, is protected from unwanted, unnecessary development. Established zoning regulations, which provide sufficient infrastructure, enable small businesses to thrive while embracing Trumansburg's upstate New York rural character.

Working towards this vision, our **land use goals** are to:

1. Protect agriculture land, wetlands and green-space that provides contiguous physical and visual connections to the surrounding rural landscape without imposing economic hardships on landowners.
2. Promote new construction along Main Street with setbacks that are consistent with existing historic buildings and ample parking located preferably behind the structure.
3. Continue to develop residential neighborhoods of varying densities that offer a range of affordable housing options.
4. Promote a variety of economic development that serves the needs of the Village residents.

ZONING ORDINANCE
of the
Village of Trumansburg, New York

ARTICLE I - INTRODUCTION

Section 101. Purpose. For the purpose of promoting the health, safety, morals, or the general welfare of the community, and to lessen congestion in the streets; to secure from fire, panic and other dangers; to provide adequate light and air; to prevent the overcrowding of land; to avoid undue concentration of population; to safeguard homes by preserving the attractive environment of residential areas; to conserve property values in all areas; to implement the Village of Trumansburg Comprehensive Plan, including to maintain a quiet, rural village; to facilitate the adequate provision of transportation, water, sewerage, schools, parks and other public requirements in the Village Law, under and pursuant to Article 6-A, Chapter 64 of the Consolidated Laws; the size of buildings and other structures, the percentage of lot that may be occupied, the size of yard, the density of population and the use of buildings, structures and land for trade, industry and residence or other purposes, are hereby restricted and regulated as hereinafter provided:

Section 102. Validity. The invalidity of any section of provision of this ordinance shall not invalidate any other section or provision thereof.

Section 103. Repealer. All zoning ordinances adopted by the Village of Trumansburg prior to the effective date of this ordinance, together with all changes and amendments thereto are hereby repealed and declared to be of no effect.

Section 104. Short Title. This ordinance shall be known as the Zoning Ordinance of the Village of Trumansburg of 2012.

Section 105. When Effective. This ordinance shall be in force and effect immediately upon adoption, posting and publication as provided by law.

Section 106. Amendments. This ordinance may be amended as provided by law.

Section 107. Establishment of Districts. For the purpose of this ordinance, the Village of Trumansburg, New York, is hereby divided in to the following districts:

Residential Districts
- a. Residential 1 District
- b. Residential 2 District

Commercial Districts
- c. Downtown Commercial District
- d. West Gateway Commercial District
- e. East Gateway Mixed Use District

Industrial Districts
- f. Commercial Industrial District
- g. Mixed Use Industrial District

Conservation Overlay Districts
- h. Stream Buffer Conservation Overlay District
- i. Wetland Conservation Overlay District

Section 306. Outdoor Storage. There shall be no outdoor storage of rubbish in connection with any of the uses permitted.

Section 307. Exterior Lighting. Property owners shall make reasonable attempts to design, construct and install exterior lighting in such a manner as to minimize the impact on adjoining properties.

Section 308. Affordable Housing Provisions

1. Purpose. The purpose of this section is to promote public welfare by providing safe, decent, and affordable housing for all incomes; to ensure enough housing, especially for low-income households; to mitigate housing shortage and balance the demand and supply of housing by constructing more housing units; and to integrate all residents of the County regardless of their income levels.

2. Affordable Housing Required. All new residential developments of 10 or more units over a five-year period, whether for-sale units or rental units, but not including manufactured home parks, are required to provide at least 20% of the project's total units as affordable units. If the formula results in any decimal fraction, the result shall be rounded to the nearest whole number. If the fraction is 0.5, the result shall be rounded up.

3. Location of Affordable Units. The Village highly encourages developers to construct affordable units within the project area, as required by this ordinance. If constructed within the project area, affordable units shall be dispersed throughout the project with the market rate units. However, developers may choose to construct affordable units in another site within the Village. The reduced dimensional requirement provisions of this section shall not apply if the developer chooses to construct the required affordable units off-site.

4. Income Requirements. All affordable units shall be rented or sold to low-income households. No specific mix of income ranges is required.

5. Cost Requirements. All affordable units shall be rented or sold at or below the Current Affordable Rent or the Current Affordable Price, respectively. No specific mix of housing prices is required.

6. Reduced Dimensional Requirements
   a. Reductions Permitted. Developers shall be allowed reduced dimensional requirements in exchange for the provision of affordable housing. A reduction in the minimum lot size and/or the minimum lot width will be permitted. In order to preserve the character of community, the development shall meet the all other dimensional requirements of this ordinance.
   b. Calculation of Reduced Dimensional Requirements. The allowed increase in density shall be related to the proportion of affordable units provided in the development. Where the development provides the minimum required 20% affordable units, the minimum lot area and the minimum lot width shall be calculated at 80% of the minimum required by relevant district regulations. Where the development provides more than the minimum number of required affordable units, the minimum lot area and minimum lot width shall be the difference between the proportion of affordable units and 100%. In no event shall the minimum lot area and minimum lot widths be reduced to less than 65% of the minimum required by the relevant district regulations.

7. Completion of construction: All affordable units shall be constructed concurrently with the market rate units. Progress rate of affordable units shall be the same as that of the market rate units.

8. Exterior appearance: Affordable units shall be constructed with similar exterior design and materials that are used in the market rate units. Similar landscaping shall be applied to both affordable units and the market rate units.

9. Interior appearance: Interior materials and amenities in the affordable units may be different from those used in the market rate units, provided that:
   a. The mix of unit size (in terms of number of bedrooms) shall be equivalent between affordable units and market rate units.

December 2015

State of Trumansburg Housing

A report on housing in the Village of Trumansburg since the 2008 Comprehensive Plan

Prepared by Stefan & Jennifer Lutter

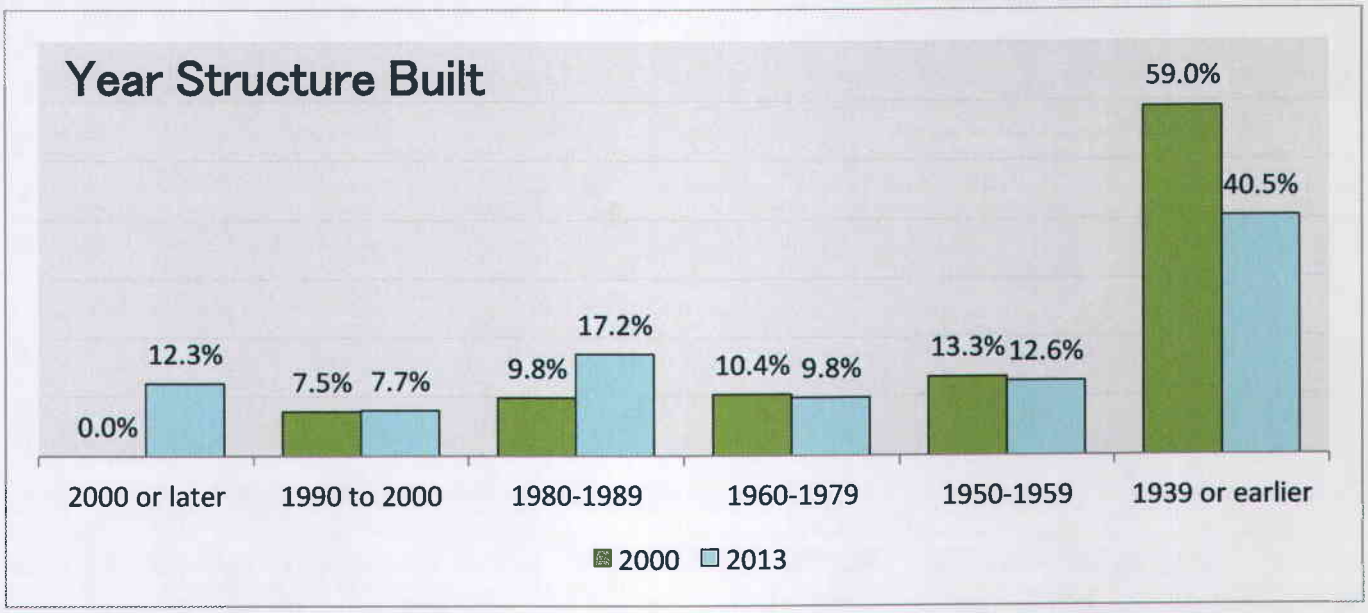


Figure 3: Year Structure Built (ACS 2013)

The older housing stock of the Village can make home maintenance and paying for utilities difficult for seniors or new homeowners. As the graph above indicates, a significant number of units are over 80 years old. Not only are many of these homes in need of costly updates, but they are also larger homes. This can make their sale price higher, particularly so when the previous owner completed significant updates. Size, cost, and maintenance issues make these difficult properties to own for lower income families and seniors.

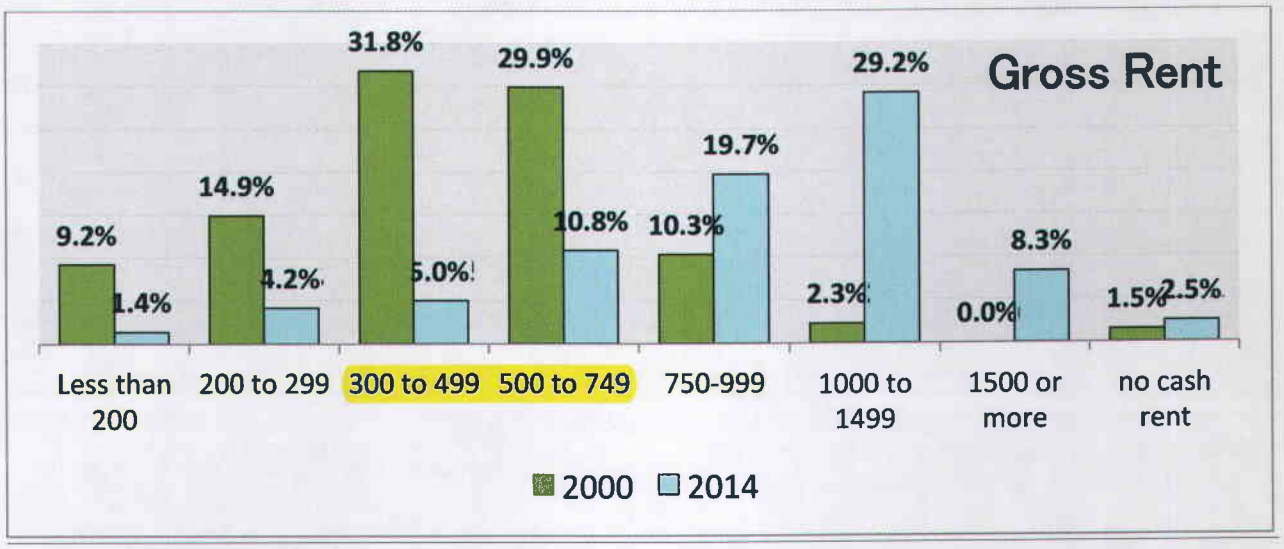


Figure 4: Gross Rent (ACS 2014)

Figures 4 and 5 show the upward trend in both gross rent and median home sale in the village. Trumansburg's median home sale price of $196,700 in 2015 is set to be an increase of $61,000 dollars from 2004's figure. The trend countywide looks to be headed upward again after taking a stumble during the recession (2009-2014).

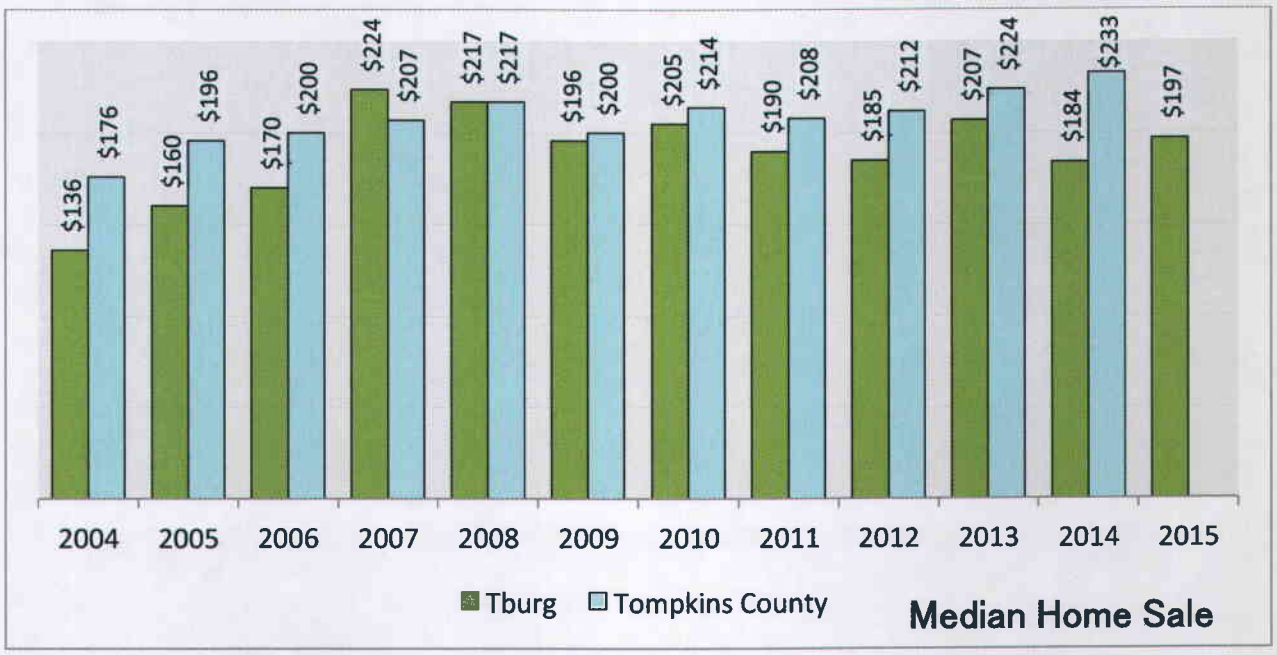


Figure 5: Median Home Sale Price*

This table shows the number of units sold annually in the Village. This, coupled with sale price, shows how competitive the market is and how difficult it can be for anyone interested in moving to Trumansburg (or staying in Trumansburg) to do so. There are very few houses on the market at any given time, and even fewer that are considered affordable for low and moderate income households.

Trumansburg, Number of Units Sold Annually

Year	Number of Units Sold
2004	18
2005	19
2006	21
2007	24
2008	9
2009	10
2010	26
2011	20
2012	24
2013	14
2014	13
2015	16

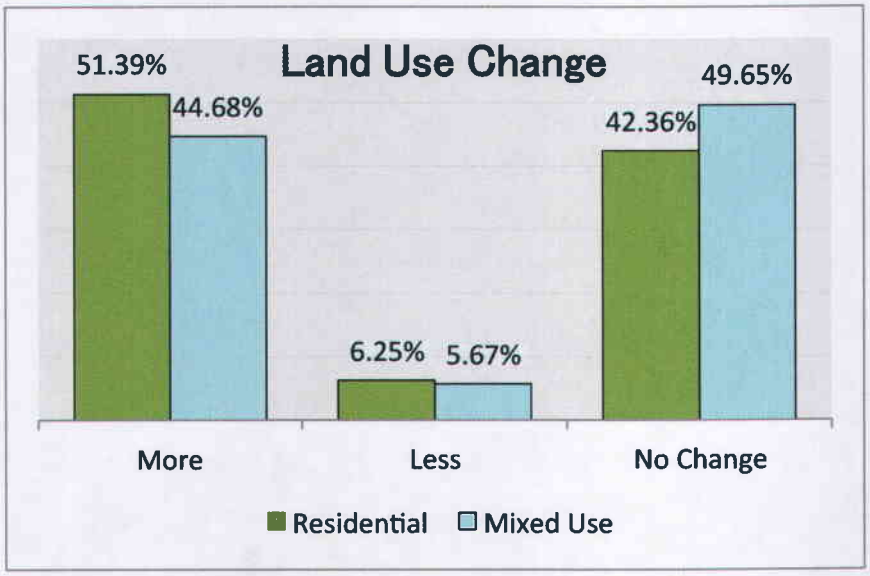
Median Home Value

2000- $112,200 (Census 2000)

2014- $201,700 (ACS 2014)

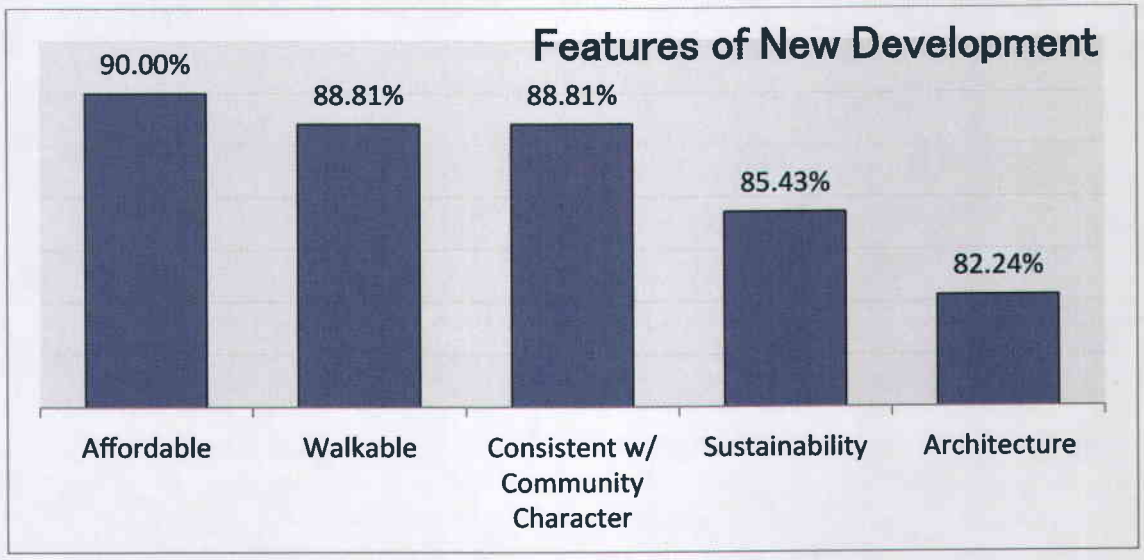
Median home value has increased 79% over the past fifteen years.

Question 2: Please indicate whether you would like to see more, less, or no change in the following land uses.



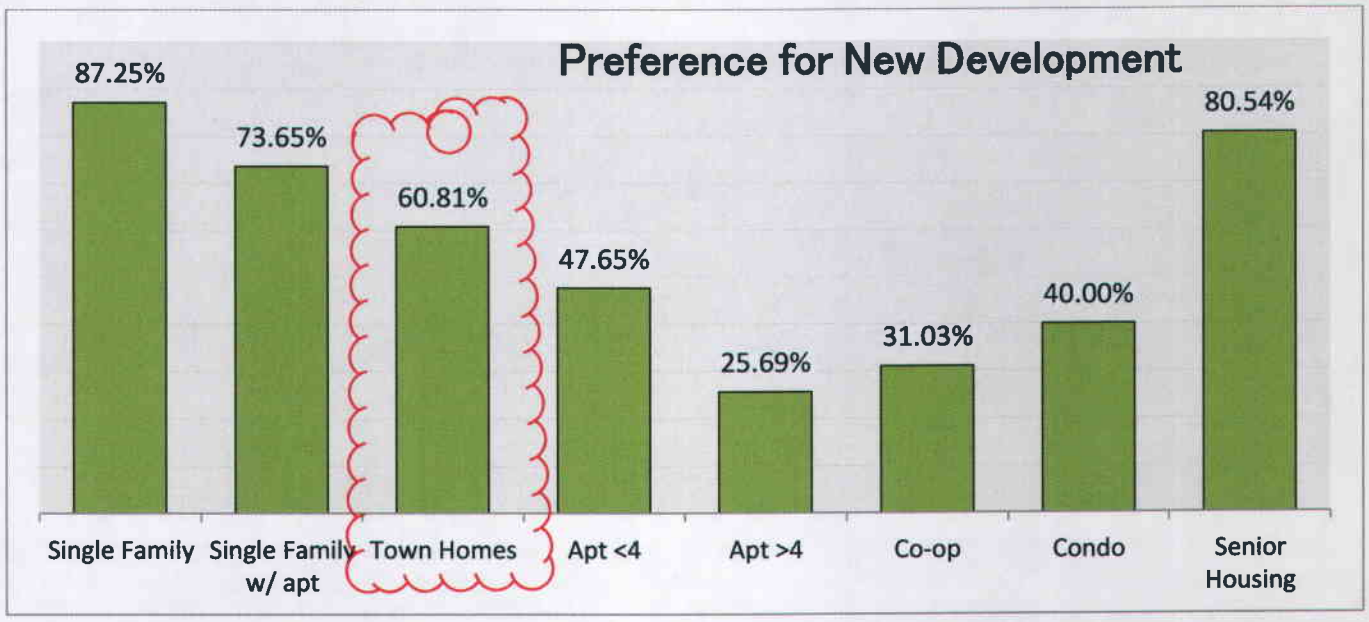
This question sought to provide a rough gauge of how residents interpreted overall land use in the village. Nearly all respondents indicated that they would like to see either no change or an increase in mixed use and residential development, with the highest percentage indicating a need for more residential development (51.39%). This theme recurs throughout the survey, including in the comments section, where people repeatedly indicated the need to increase population in order to make the Village more affordable for all.

Question 3: Please rate the importance of the below features for new development in Trumansburg.



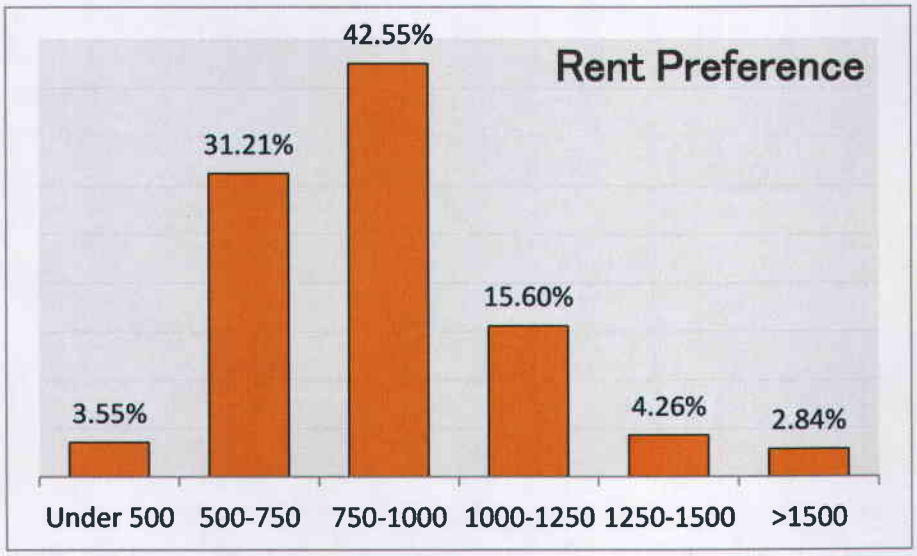
This question asked about the importance of certain features of new development. The graph displays the positive response for each variable (very important or somewhat important). There is a clear preference towards affordability, walkability and consistence with existing community character. Of slightly lesser importance are sustainability and architectural features.

Question 4: If new development occurred in Trumansburg, please rate the styles listed below by how desirable you would find them.

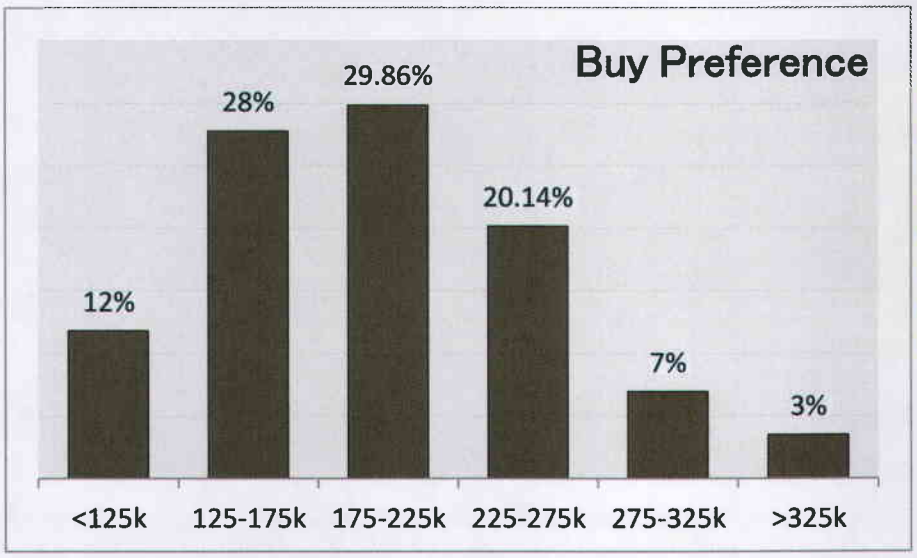


This graph displays housing type preference (percent answering either 'very desirable' or 'desirable') for new development, and illustrates a community need for more single family homes and more senior housing. There were several comments discussing a need for smaller, affordable homes that were easier to afford for young families and easier to afford and maintain for folks moving into old age that would like to remain in Trumansburg. As development size increased, desirability went down, keeping with the response in Question 3 indicating a preference for consistence with community character. Many streets on Trumansburg are primarily single family houses.

Question 5 and 6 – If you were interested in renting or buying, how much would you pay?



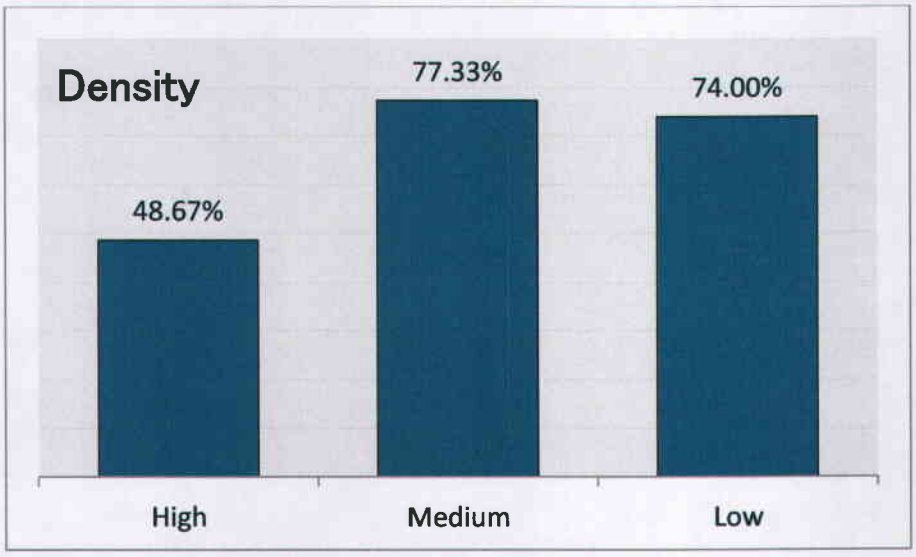
These questions sought to compare what respondents would like to pay with what the current prices are in Trumansburg. For rent, over 70% of respondents indicated a willingness to pay somewhere between $500 and $1000 per month. In reality, the highest proportion of rentals fall in the $1000-$1499 range (27.2%). Median Gross rent is currently $950.



The situation for purchase price was similar to that of rent. A significant portion (40%) indicated that they would look for a home under $175,000. Median home value is $201,700, and median sale price in 2015 is $196,600, a price that a considerable portion of respondents came in below.

Both rent and home price have increased considerably over the past decade in Trumansburg, to the extent that the cost of living is beyond what many would-be residents can afford, and beyond the price residents who moved to the village over ten years or so ago can afford. The increase in home valuation and corresponding rise in taxes may be causing many of the affordability concerns for residents who already call Trumansburg home, and did so before the rise in cost of living.

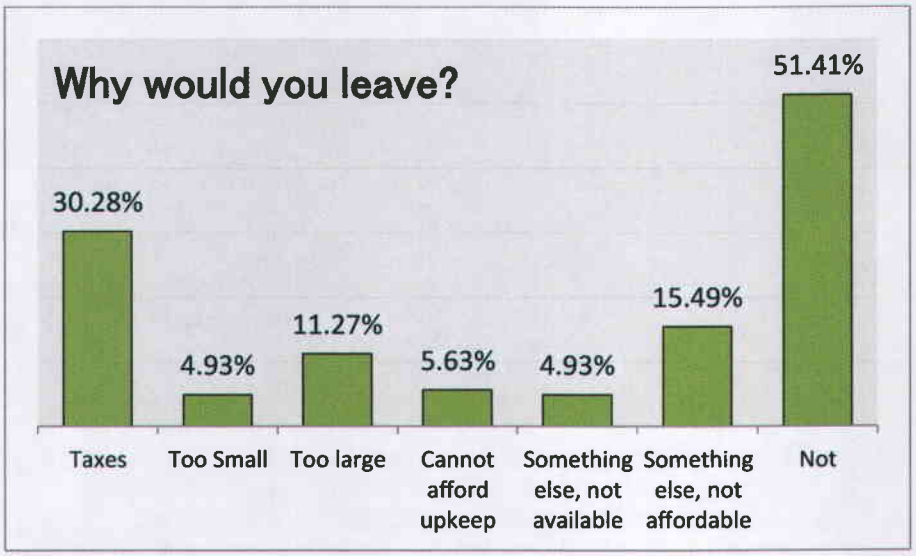
Question 7: Please rate not on home appearance but on distance between homes (density).

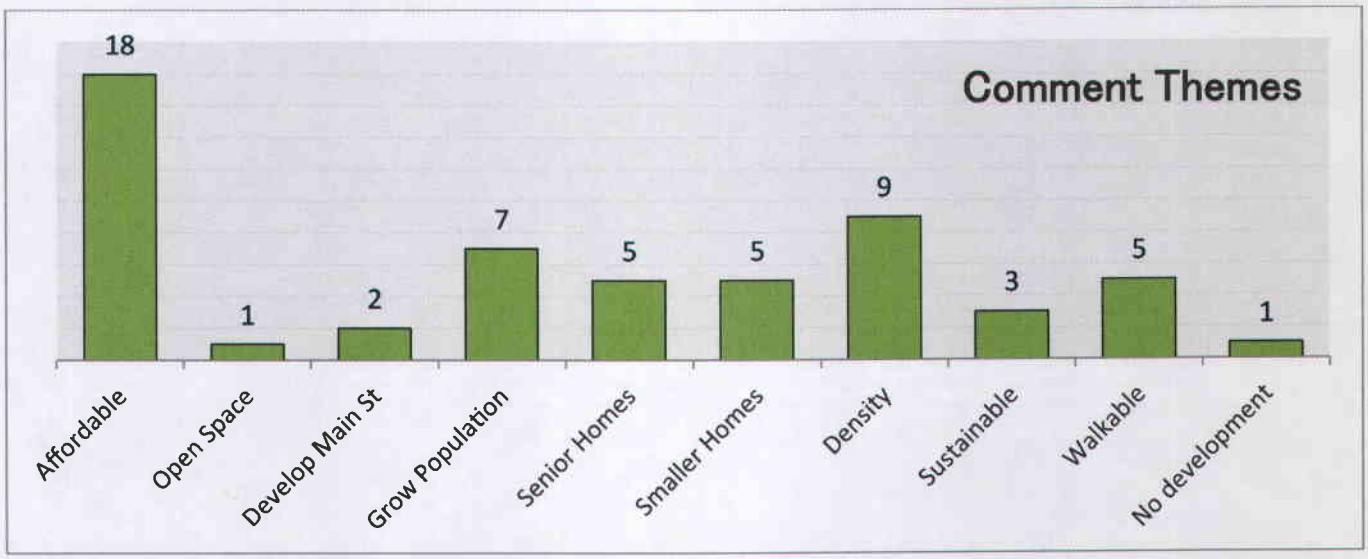


Despite a high acknowledgement of walkable, affordable, and lively neighborhoods prior in the survey, high density (described to respondents as a section of Main St) received the lowest preference. Though medium (described as 5-11 Whig St, an area with small lot size and particularly small minimum frontage) scored the highest, low density (South St past the historical society) scored very well. Thus, there is a disconnect between what respondents enjoy about a place and what the built environment is that provides those very things they enjoy. This is not isolated to Trumansburg, but is rather one of the more common conundrums to community planning: people tend to like the benefits of slightly higher density areas, but usually do not indicate a preference toward higher density itself. This survey illustrates that.

Still, the 'Medium Density' used in the survey is an excellent livable neighborhood density, yet is not possible to recreate under current Trumansburg zoning. That being said, many comments mentioned a need for denser development, particularly in relation to growing population to offset taxes.

Question 8 & 9: If you are considering leaving the village, which of these describes your situation? And Comments.





For both the final question and the comments we see affordability rise to the top, with taxes a concern for 30% of respondents and affordability coming up in 18 individual comments.

Exhibit P

Community Engagement and Outreach

Ithaca Neighborhood Housing Services and Claudia Brenner have provided numerous community engagement and outreach opportunities in an effort to obtain input from community members. The process began in May 2017 with an open house at the Trumansburg Fire Hall, and we are still continuing to listen to public comments and answer questions. The following summarizes our efforts, followed by a compilation of all of the materials presented to date.

Community Engagement: Past Events

Community Meeting One

When: May 2nd, 2017 from 4-7pm
Where: Village Fire Hall

Approximately 100 people attended this open house meeting over the course of three hours. INHS and Claudia Brenner presented three site plan concepts, architectural styles, stormwater management design, massing diagrams, and information on affordable housing. We provided sticky notes so community members could comment on what they liked and did not like about each of the images and concepts. Project team members were on hand to answer questions as well.

Planning Board Meeting

When: May 18th, 2017 at 7pm
Where: Village Hall

INHS and Claudia Brenner provided a sketch plan presentation to the Planning Board on May 18th, 2017 as a way to introduce the Board to the project and obtain initial feedback on the site plan. Some Board members expressed a preference for the different housing types (affordable rental and for-sale and market rate for-sale) to be mixed together throughout the site rather than in their own discrete areas. Subsequent site plans incorporated this feedback.

Listening Sessions One & Two

When: June 28, 2017 from 3:00pm to 7:00pm & June 28, 2017 from 1:00pm to 4:00pm
Where: Village Hall

INHS invited Trumansburg residents to participate in small group listening sessions where they could share their concerns, comments, and questions about Hamilton Square. Listening sessions accommodated up to four people and lasted 30 minutes.

55 people attended the listening sessions and many were interested in hearing the main themes that emerged. A summary of the primary themes was posted on our website and is included below.

Listening Session Themes

Taxes: Residents asked general questions about how INHS rental properties are taxed and others wanted to know specific tax details for INHS's Community Land Trust.

Density: Some residents felt that Hamilton Square would be too urban and that it would alter the character of the village. Those residents stated a preference for more for-sale homes with a decrease in rentals. Others were excited about the number of new housing opportunities.

Seniors: Many residents highlighted the housing needs of seniors who want to age in community, particularly those who are not low income.

Traffic: Residents in the immediate vicinity of the project thought it would increase the level of traffic within the village and suggested INHS look into traffic calming solutions.

Drainage: Residents whose properties are adjacent to the site had concerns about drainage and water leaving the site.

Frequently Asked Questions

When: July 7, 2017
Where: Project Website, https://www.southstreetproject.org/

On July 7 we posted a FAQ on the project website. The document provides additional clarification for anyone who was unable to attend our listening sessions or community meeting. The document also provides a deeper discussion of technical topics that are difficult to cover in community meetings, such as tax calculations and property ownership.

Community Meeting Two: Presentation followed by Q & A session

When: July 13, 2017 from 7:00pm to 9:00pm
Where: Trumansburg Conservatory of Fine Arts

Approximately 150 people attended our second community meeting where we presented an updated site plan and facilitated a Q & A session. The presentation addressed many of the questions community members had brought up, including site drainage, the screening and selection process for renters, the pricing and income limits for affordable for-sale townhomes, and the design of the townhomes.

Claudia Brenner presented examples of affordable homes she had built for INHS as well as market rate, age-in-place homes she designed for other clients.

The Trumansburg Community Nursery School announced they are planning to purchase property at Hamilton Square so they can move into a larger facility and expand their services.

<u>Community Meeting Themes</u>

Traffic: Residents are concerned that Hamilton Square will increase the volume of traffic along South Street and Pennsylvania Avenue. Village members were also concerned about children walking to school along South Street and questioned whether additional traffic calming measures would be needed to ensure their safety.

Taxes: Some residents believe that 46 South Street, if developed as planned, will fail to realize its full tax generating potential. Others feel they need more information before they can determine whether the project will create a tax benefit or burden.

Support: A number of residents said they would like to see the project move forward and that Hamilton Square would help families and individuals currently living in the village access healthy housing.

INHS's Role: Residents asked questions about INHS's role in the management and maintenance of rental properties. There were additional questions about the development timeline and the land lease agreement for the Community Housing Trust.

Project Pace: Some residents stated that the development process has progressed too quickly and that they felt blindsided at the initial community meeting.

Density: Some residents expressed concern about the number of units at Hamilton Square and believe that the development is not in keeping with the Comprehensive Plan or the character of the village.

Planning Board Meeting: Sketch Plan Presentation

When: July 27, 2017 from 7:00pm to 9:00pm
Where: Trumansburg Fire Hall

INHS' Director of Real Estate, Joe Bowes, and architect and land owner, Claudia Brenner, provided an updated sketch plan presentation in preparation for our official planning board submission. The presentation included our new subdivision plan, but otherwise was quite similar to the presentation given at the July 13th community meeting.

Rotary Club Presentation

When: August 3, 2017
Where: Town of Ulysses VFW

INHS Real Estate Developer Alena Fast and architect and land owner Claudia Brenner were invited to provide an overall project presentation to the Rotary Club, followed by Q &A.

Listening Session Two

When: August 8, 2017 from 4:00pm-8:30pm
Where: Village Hall

Additional listening sessions were held at the Village Hall to accommodate residents who were unable to attend the first set of listening sessions held in July. Topics of conversation included the positive impact of additional residents on Main Street businesses, and questions about how the project would architecturally integrate into the neighborhood.

Community Meeting Three: Traffic Presentation followed by Q & A session

When: August 17, 2017 from 7:00pm-9:00pm
Where: Trumansburg Conservatory of Fine Arts

Steve Ferranti of traffic engineering firm SRF & Associates presented on the results of the traffic study commissioned for 46 South Street. The presentation was followed by a Q & A session.

Comment Themes

1. Several residents felt that Rabbit Run Road and the intersection of Whig Street and South Street should be included in the study because of already occurring problems with speeding and congestion. INHS will commission a traffic study update to include these intersections.

2. Pedestrian safety, especially for children, was a popular topic. The latest on sidewalks is that the Village will be installing sidewalks from Whig Street to School House Lane this fall, but currently has no plans to extend the sidewalk down to Tamarack Lane. *Update 12/12/17: the sidewalk project came in under budget, so the Village is hoping to continue sidewalks down to Tamarack Lane in the spring of 2018.

3. The study focused on the peak travel times of 7-8am and 4:45-5:45pm. Some residents felt that we should provide more information on traffic counts for other times of day, such as school drop off and pick up.

4. We heard a couple of questions about how the addition of snow could impact increased pedestrian traffic.

5. Questions were asked about the types of traffic included in the analysis and whether it accounted for school buses, garbage trucks, and construction traffic.

Open House:

When: August 19, 2017 from 11:00am-1:00pm
Where: 206 and 208 Hancock Street

Trumansburg residents were invited to an open house at INHS' newest development in downtown Ithaca where they could tour two of our new for-sale townhomes and talk with INHS staff. Five Trumansburg residents attended.

Planning Board Meeting

When: August 24, 2017
Where: Fire Hall

INHS and Claudia Brenner presented a revised subdivision sketch plan. This was the first step in the months-long Planning Board review process. There will be several opportunities for public comment throughout this process. As a result of this meeting and the comments received from the public over the past several months, the project team decided on a complete redesign of the site plan.

Planning Board Work Session

When: October 12, 2017
Where: Trumansburg Elementary School Auditorium

INHS and Claudia Brenner presented a revised site plan to address concerns raised by Planning Board members and the public.

Planning Board Meeting

When: October 26, 2017
Where: Trumansburg Elementary School Auditorium

INHS and Claudia Brenner answered questions about the revised site plan concept and asked for direction from the Planning Board as to which of the road design concepts they preferred.

Attached Materials Include:

- Community Meeting 1
  - Postcard
  - Meeting Boards
  - Pictures
  - Comment Cards
- Community Meeting 2
  - Postcard
  - Presentation
  - Picture
  - Comment Cards
- Planning Board Presentation
  - Presentation
- 46 South Street Website Screenshot
- FAQ document posted to website
- Ithaca Voice Facebook Comments
  - Comments posted to the Ithaca Voice's Facebook article about the July 13th Community Meeting. These are included to provide a sense of the public discourse around the project.

You are invited to a community visioning meeting!

Ithaca Neighborhood
HOUSING SERVICES

Purpose of the Meeting: INHS is partnering with architect Claudia Brenner to create the Hamilton Square Neighborhood, an exciting new residential development at 46 South Street. Hamilton Square will include the construction of a new Village Street; a mix of market rate for-sale, affordable for-sale and rental homes; walking trails and open space. We are inviting the community to provide input on public amenities, architecture, and neighborhood appearance. This is the first of two open houses.

Where: Trumansburg Fire Hall, 74 West Main Street

When: Tuesday, May 2, 2017 from 4:00pm to 7:00pm. This is an "open house" style meeting, please feel free to come at any time during the meeting and stay as long as you like.

Please Note: Light refreshments will be served.

If you have questions please email Alena Fast, Real Estate Developer: afast@ithacanhs.org

Meeting Purpose + Goals

PURPOSE:

- Introduce the community to a proposed new residential neighborhood in the village of Trumansburg, NY. Include: for sale, rental, market rate, and affordable housing.

GOALS:

- Include the perspectives of the community at large and neighborhood residents to inform and shape the site plan.
- Provide project background and key constraints.
- Determine precedents that residents feel are appropriate for the site.
- Introduce concepts and strategies for sustainable design.

Ithaca Neighborhood HOUSING SERVICES

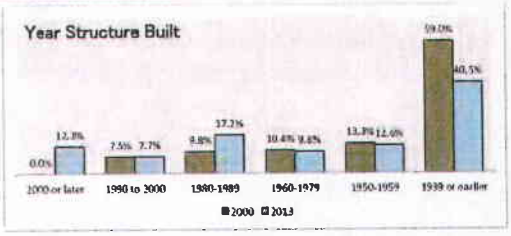
Hamilton Square Neighborhood

Community Need + Affordable Housing

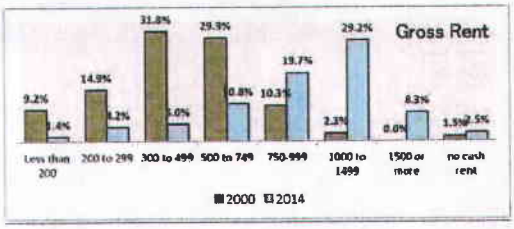
Housing Quick Facts:

1. The housing market has changed significantly in the years since the 2008 Comprehensive Plan was completed. The increased demand for housing in the Ithaca area combined with Trumansburg's small market, attractive school district, high quality housing, and recent improvements to the downtown have increased demand for housing in the Village.
2. The Village of Trumansburg has a distinct character that the majority of its residents cite as a major reason for choosing to live there. Simple design standards, or even a set of best practices for what the community would like to see encouraged, is something the Village can provide to developers.

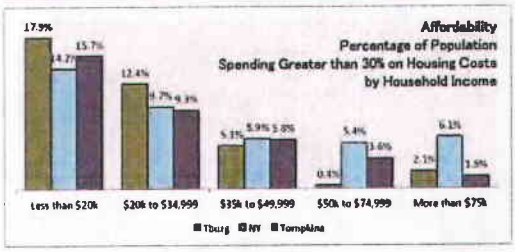
YEAR STRUCTURE BUILT



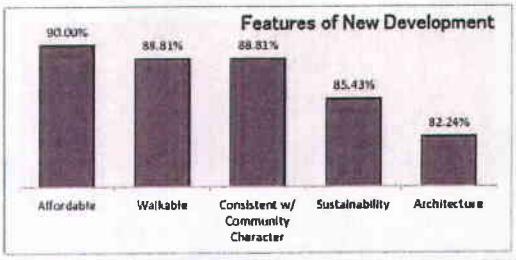
GROSS RENT



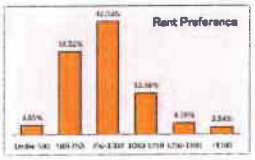
AFFORDABILITY



FEATURES OF NEW DEVELOPMENT



RENTER VS. OWNER PREFERENCE



Graphs, Text, and Information taken from:
Trumansburg's December 2015 Housing Report

T.G. MILLER, P.C.

Project Vision + Constraints

- Include the perspectives of the community at large and neighborhood residents to inform and shape the plan.
- Create connections between the redeveloped site and surrounding community amenities.
- Meet INHS's mission of providing affordable housing for first time home buyers and renters.
- Develop a plan that is financially feasible and meets the requirements of conventional and public lenders.
- Design a site and buildings to meet and exceed the LEED for Homes and EnergyStar standards.
- Address the need to provide a Village Road that bisects the site.
- Address the needs to manage stormwater quality and quantity on the site.

KEY FUTURE DATES

5/2/2017:
Meeting One: Visioning & Project Background

6/4/2017:
Meeting Two: Confirmation of Vision and Site Analysis

6/2017 - 10/2017:
Public Approval Process

6/2017 - 12/2017
Applications for Financing

10/2018 - 9/2019
Construction Period

Community Examples

Stone Quarry Apartments

Spencer Rd.
Ithaca, NY

Hancock Street Redevelopment

210 Hancock St.
Ithaca, NY

Belle Sherman Cottages

Mitchell St.
Ithaca, NY

Community Examples

Cedar Creek

Floral Ave.
Ithaca, NY

Commonland Community

Perry Lane
Ithaca, NY

Holly Creek

Holly Creek Lane
Ithaca, NY

Other Examples

Photo taken from Union Studio Arch's Website
Architect: Union Studio

Capitol Square

Providence, RI

Salveo Residences

36th Avenue W
Seattle, WA

Photo taken from Daily Journal of Commerce's Website
Architect: Nicholson Kovalchick Architects

Higham Hill Road Townhomes

Seattle, WA

Photo taken from Shugart Wassie Wickwire's Website
Architect: Shugart Wassie Wickwire

Site Examples (Parking Styles)

Sideyard Driveways

Belle Sherman Cottages
Ithaca, NY

Permeable Paving

On-street Parallel Parking

Parking spaces located behind planted bump outs

Head In Parking

Maplewood Apartments
Ithaca, NY

Permeable Paving

Site Examples (Green Infrastructure/Stormwater Management)

Vegetated Swales

- Backyards
- Sideyards
- Open Space

Retention Areas

- Rain Gardens

Street Edge Alternative

Curb side bioswales

Site Examples (Open Space Amenities)

Neighborhood Park & Open Space

Sidewalks & Trails

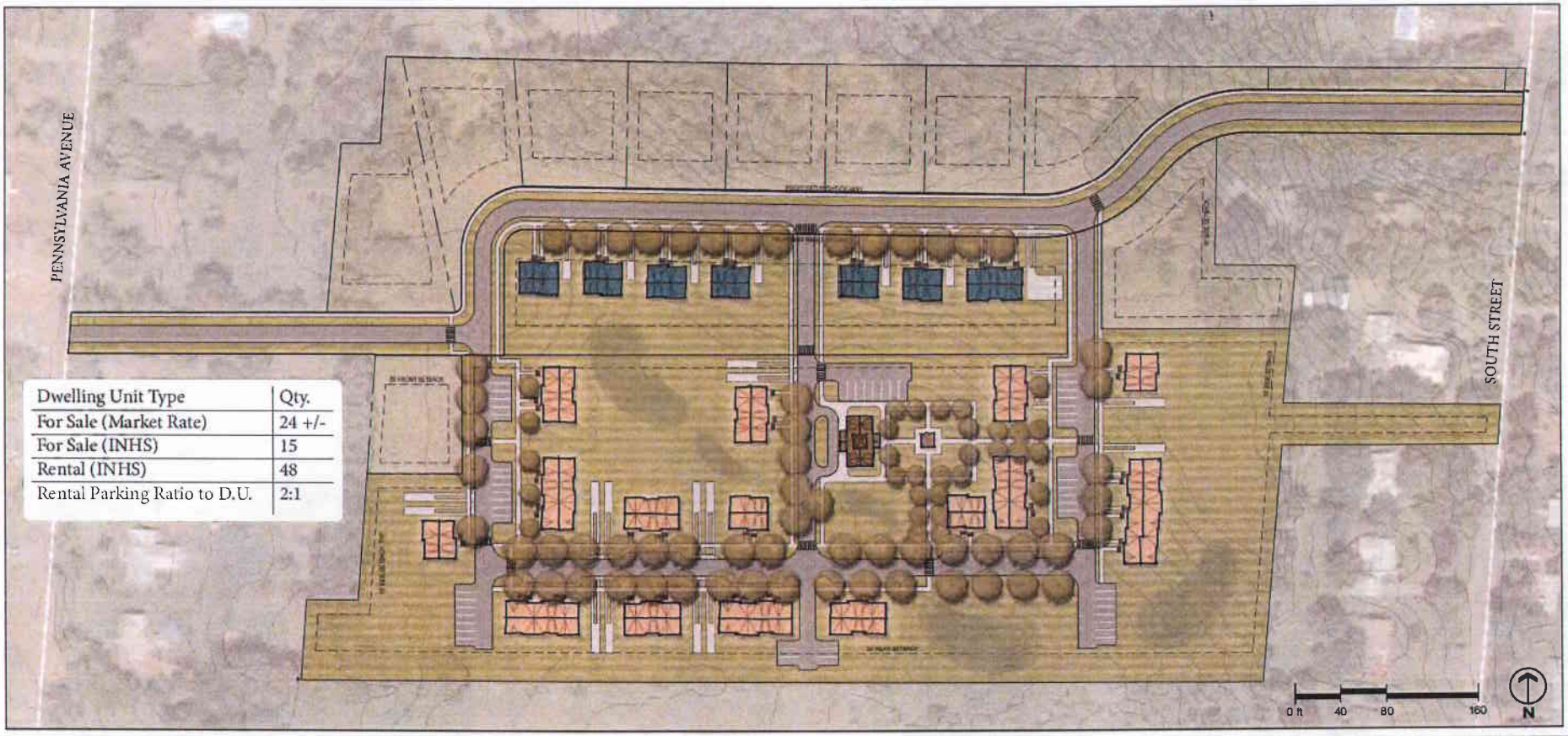
Walkable Neighborhood

Community Center Plaza/ Courtyard

Ithaca Neighborhood HOUSING SERVICES

Hamilton Square Neighborhood

Concept 1



Dwelling Unit Type	Qty.
For Sale (Market Rate)	24 +/-
For Sale (INHS)	15
Rental (INHS)	48
Rental Parking Ratio to D.U.	2:1

T.G. MILLER P.C.

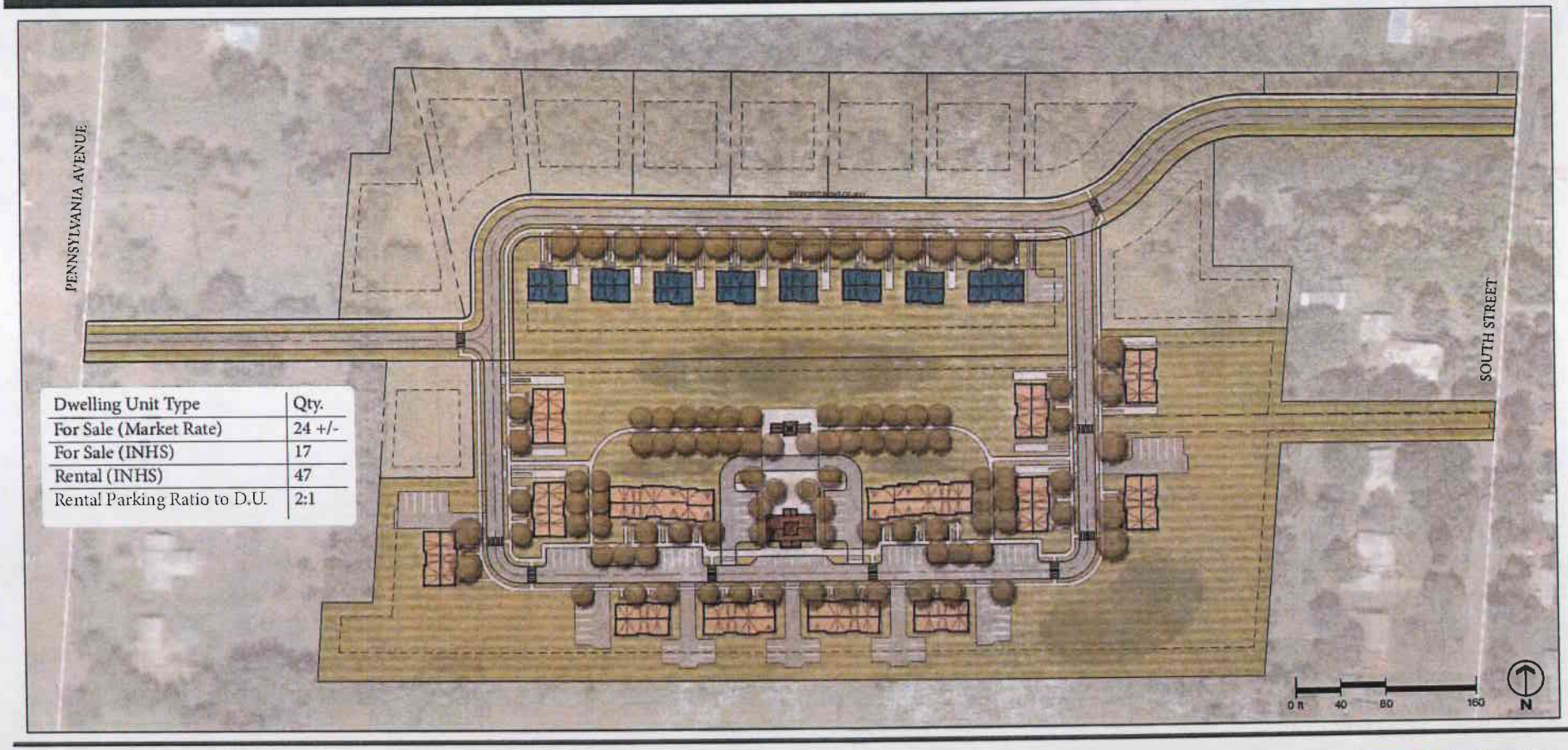
TWLA

HOLT ARCHITECTS

Ithaca Neighborhood HOUSING SERVICES

Hamilton Square Neighborhood

Concept 2



Dwelling Unit Type	Qty.
For Sale (Market Rate)	24 +/-
For Sale (INHS)	17
Rental (INHS)	47
Rental Parking Ratio to D.U.	2:1

T.G. MILLER P.C.

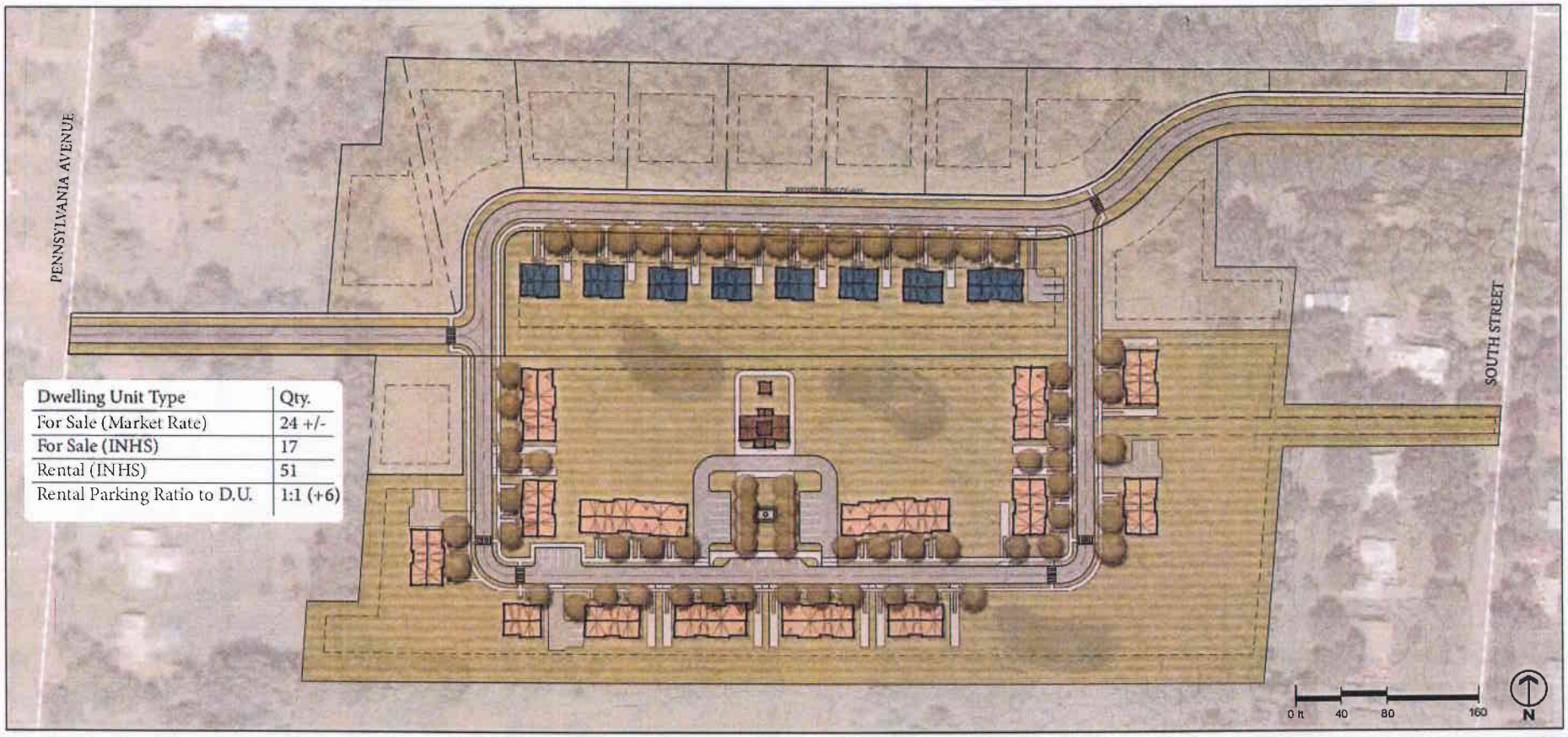
TWLA

HOLT ARCHITECTS

Ithaca Neighborhood HOUSING SERVICES

Hamilton Square Neighborhood

Concept 3



Dwelling Unit Type	Qty.
For Sale (Market Rate)	24 +/-
For Sale (INHS)	17
Rental (INHS)	51
Rental Parking Ratio to D.U.	1:1 (+6)

T.G. MILLER, P.C.

TWLA

HOLT ARCHITECTS

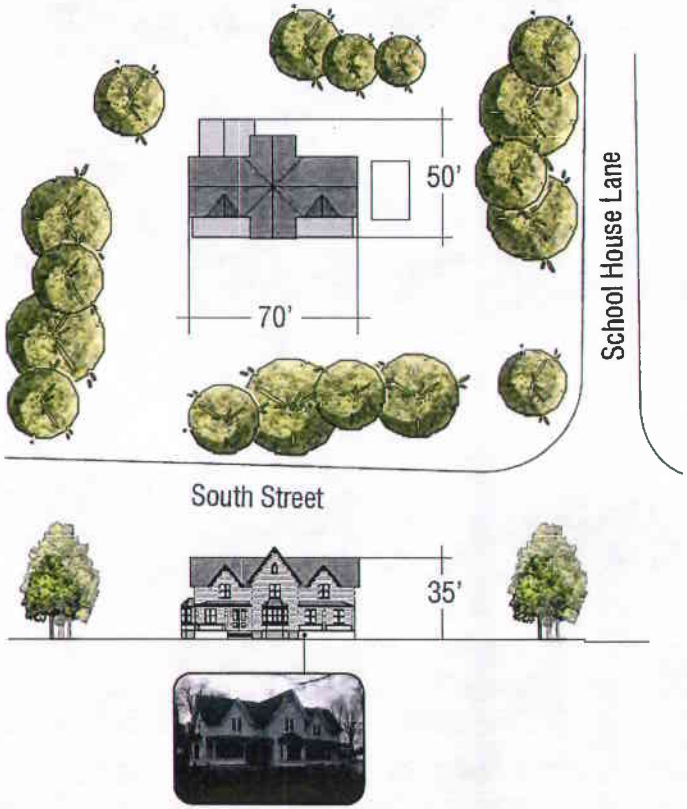
Project Massing + Scale Comparison

Current Trumansburg Neighborhood Street Scape + Scale
(Elm Street)

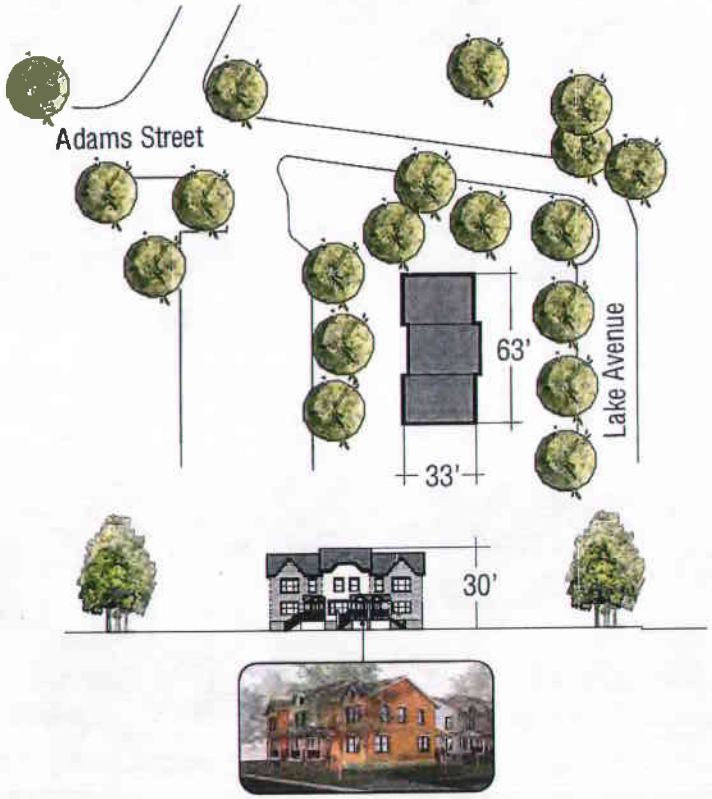
Proposed Massing Precedent of 2 and 4 Unit Type Townhouse Buildings

Proposed Massing Precedent of 6 and 8 Unit Type Townhouse Buildings

Project Massing + Scale Comparison



Example Trumansburg House (South Street)



Example Massing Precedent (Hancock Street)

Hamilton Square Development
COMMENT:

Major Concerns about traffic @ South ST. entrance.
Many Morning Commuters + school buses on school house lane + All going the same exit
Stop sign? Traffic light
Trash/utility traffic as well

Your Name (optional): _____

Hamilton Square Development
COMMENT:

Concerned about traffic management onto South St. - intersection is tight by school drive entry getting in & out can be difficult when school is opening

Your Name (optional): _____

Hamilton Square Development
COMMENT:

Don't skimp on parking; assigned + visitor or you will regret it.

Your Name (optional): _____

Hamilton Square Development
COMMENT:

Connect to rest of Town via sidewalks
Be part of neighborhood
NOT closed in!

Your Name (optional): _____

Hamilton Square Development
COMMENT:

PREFER SITE ORG OF CONCEPT #1. (IDENTIFIABLE "SUB" NEIGHBORHOODS) MORE INTERESTING DISTRIBU. OF UNITS & LANDSCAPE

~~[illegible]~~ A LITTLE TOO MUCH "GEOMETRY" IN ALL CONCEPTS. VARY SETBACKS. DEVELOP LANDSCAPE SPATIALLY.

Your Name (optional): [redacted]

Hamilton Square Development
COMMENT:

Glad to see that Sue R. is on Committee.
We are concerned about the drainage. Hopefully the planned ponds will help.

Your Name (optional): [redacted]

Hamilton Square Development
COMMENT:

Thank You for being so open at this very early stage in planning.

☺

Your Name (optional): _____

Hamilton Square Development
COMMENT:

Love, Love the project. We need ↑ mixed income, Age, ability housing.

only criticism - some presentors spoke to things they didn't quite know so some inaccurate info was getting out. i.e. 5 vs. 19 acres.

Your Name (optional): _____

Hamilton Square Development
COMMENT:

- does not have the feel of our village
- Keep buildings low
- Make sure that neighborhood stays green.

Your Name (optional): _____

Hamilton Square Development
COMMENT:

HOPE YOU AREN'T TOO CONSERVATIVE WITH BLDG. DESIGN. TAKE SOME RISKS. THIS IS A SELF-CONTAINED NEIGHBORHOOD THAT CAN DEVELOP ITS OWN (RESPECTFUL) DESIGN VOCABULARY.

Your Name (optional): _____

Hamilton Square Development
COMMENT:

Handouts for the public summarizing the project goals, benefits, concepts, priorities, and quantifiable data would be much appreciated (acres, units $/per unit, village conf etc.).

Your Name (optional) [redacted] _____

Hamilton Square Development
COMMENT:

Needs to look like real individual Houses as much as possible

Your Name (optional): _____

Hamilton Square Development
COMMENT:

- Not advertised sufficiently
- More home ownership – vested in community
- Pt emergency services – will not be sufficient

Your Name (optional): _____

Hamilton Square Development
COMMENT:

Get them to pay
For the South St. Sidewalk?

Your Name (optional): _____

Hamilton Square Development
COMMENT:

Too many people in a small area.

Your Name (optional): _____

Hamilton Square Development
COMMENT: This was not advertised well for the whole community at-large. People who ~~live~~ do not live adjacent to property should also have been notified by postcard or a "public" notice in Thorp Free Press. There was nothing! All residents needed to know about this. I live on Bradley St + the only reason I knew this was happening was a friend who lives on Tamarac told me about it. This affects the entire village

Your Name (optional): [redacted]

Hamilton Square Development
COMMENT:

Walkable Neighborhood
is important everyone
feels comfortable walking in
different Neighborhoods Now

Your Name (optional): _____

Hamilton Square Development

COMMENT:

I support the concept overall.
Layouts + street design seems to emphasize divisions (rental, INTS-owner, market rate) would be much nicer and more progressive to integrate

Should have covered parking space/area (i.e. ECO village), so people can keep bike, skis, etc

In terms of ecological/energy design, please spec out using heat pumps for heating and hot water!

Your Name (optional): _____

Hamilton Square Development

COMMENT:

I'm surprised / disappointed there isn't / aren't village meetings to discuss this as a proposal as per usual.
It was I have learned so much in the past from "public comments" and enjoy the privilege

Your Name (optional): [redacted]

This is more significant than LEED for reducing greenhouse gases.

Hamilton Square is a poor name, This is a creative and individualist community, would like to see something more in character

---

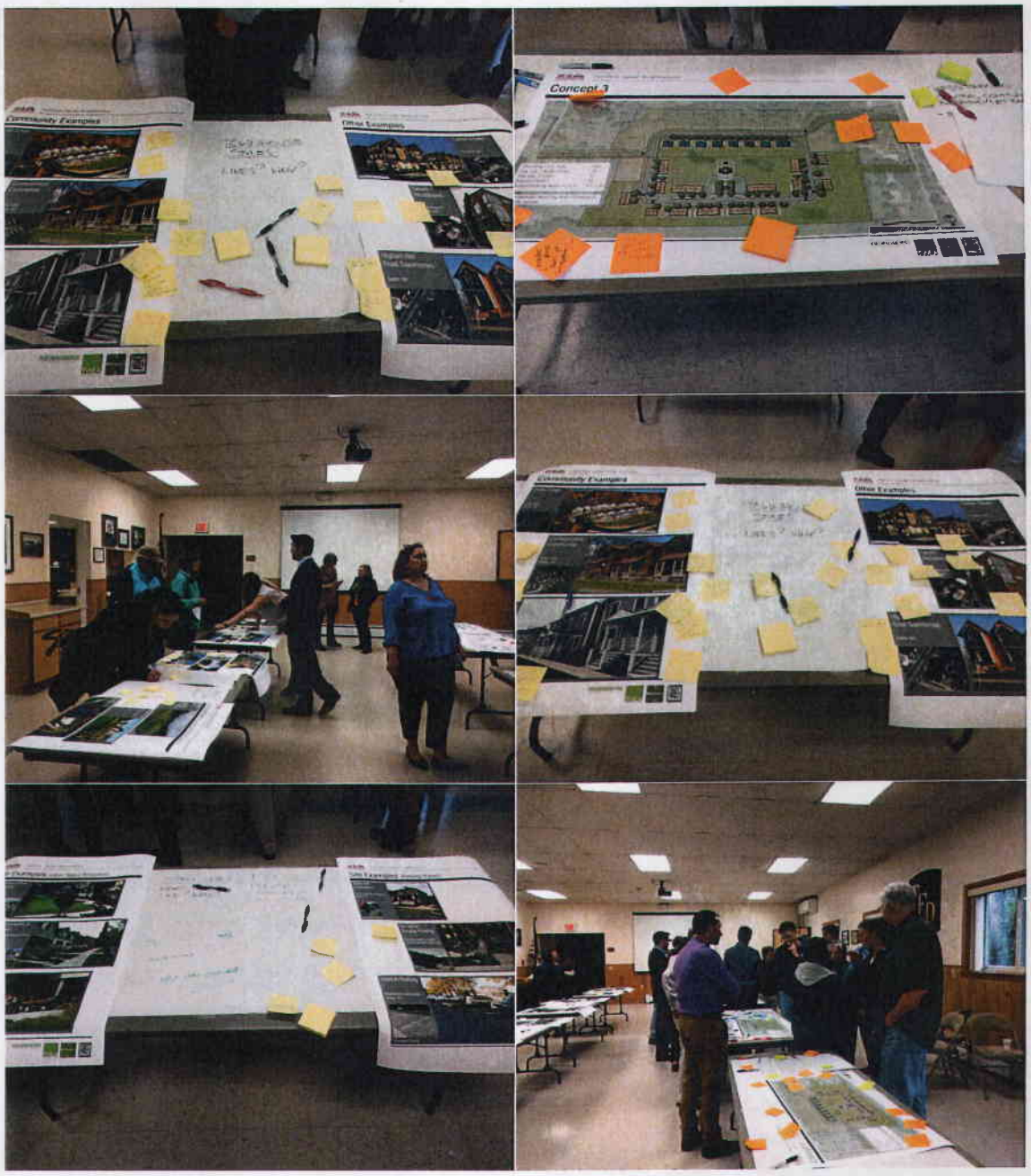
Looking forward to seeing and hearing more!

Or participating in the decision process for our village

Will love to know more about height restrictions, the plan etc etc.

Pictures from May 2nd Community Meeting

Pictures from May 2nd Community Meeting



HAMILTON SQUARE COMMUNITY MEETING

Thursday, July 13

7pm Presentation
7:30-9 pm Open House

Trumansburg Conservatory of Fine Arts,
5 McLallen Street

Parking suggestions:
In small lot at Conservatory or along Main Street

Ithaca Neighborhood Housing Services and Claudia Brenner invite you to participate in a community meeting for the proposed Hamilton Square development at 46 South Street. We will be sharing our updated proposed site plan that incorporates community feedback to date, along with results of traffic and environmental studies. We will also provide information on INHS's tenant selection and management process, and information for homebuyers. There will be a presentation at 7pm followed by an open-house style meeting with information stations on affordable housing, stormwater management, architecture, and site design. Feel free to drop by anytime between 7-9 and stay as long as you like.

For more information contact
Alena Fast at:
Phone: 607-277-4500 ext 236
E-mail: afast@ithacanhs.org

Ithaca Neighborhood
HOUSING SERVICES

Hamilton Square Neighborhood

Community Meeting #2

JULY 13, 2017

Ithaca Neighborhood HOUSING SERVICES

HOLT ARCHITECTS

TWLA

Meeting Agenda

- What We've Heard
- Site Plan Update and Street Level Views
- Distribution of Housing Types
- Site Drainage
- Affordable Rental Homes
- Architectural Types
- Affordable For Sale Homes
- Market Rate For Sale Homes
- Trumansburg Community Nursery School
- Questions and Comments from Community Members

What We've Heard

- Increase community outreach and input
- Distribute housing types more evenly
- Decrease the number of rentals/increase for sale
- Provide information on property taxes
- Provide options for seniors to age in place
- Need for housing for young families
- Assess traffic associated with the project
- Consider how to increase open space and maintain natural features and habitat
- Interest in green building and sustainable design
- Address site drainage

Context Plan

Hamilton Square Neighborhood

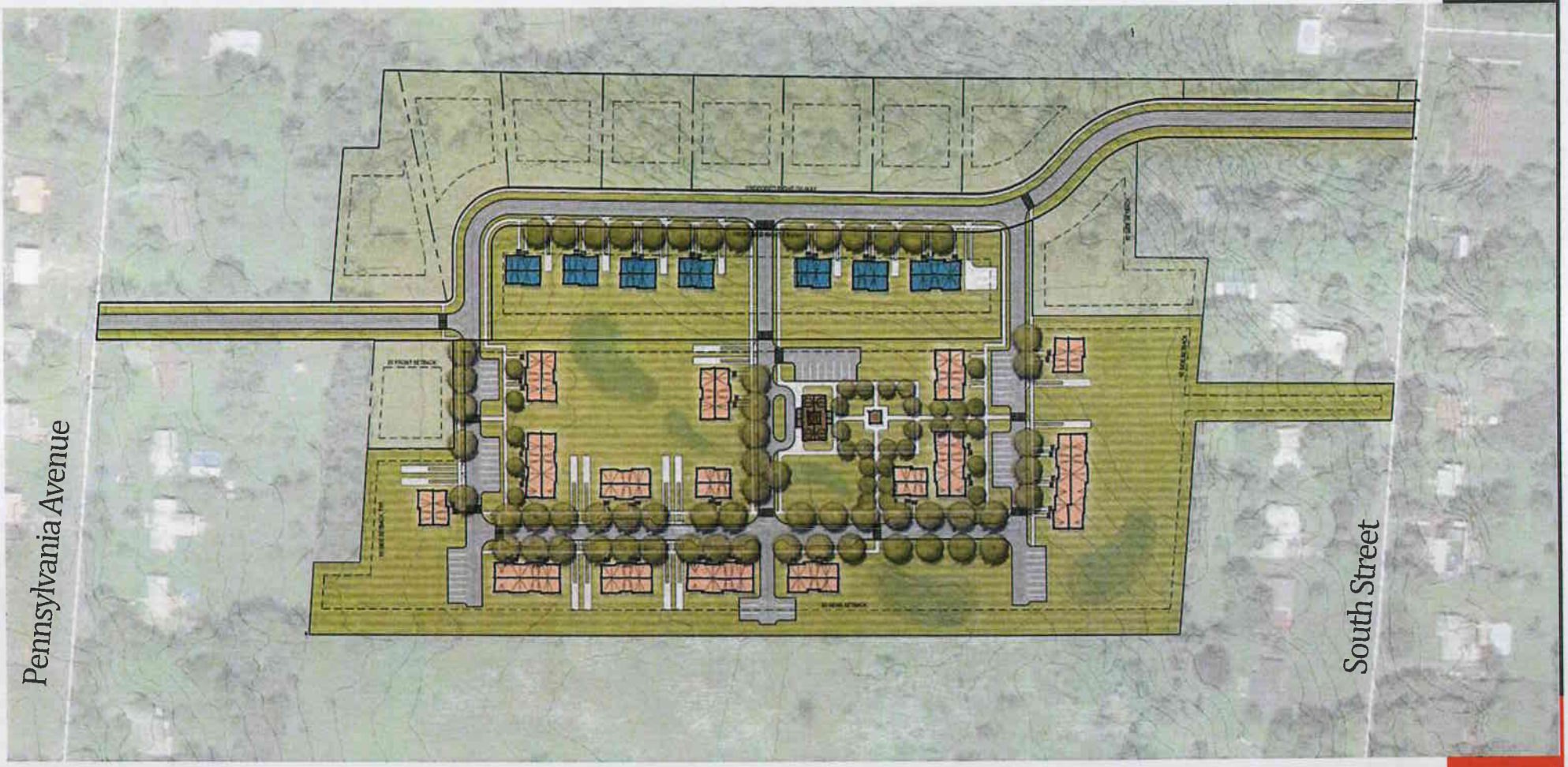
www.southstreetproject.org

Safe Routes to School

Existing Sidewalks

Planned Sidewalks

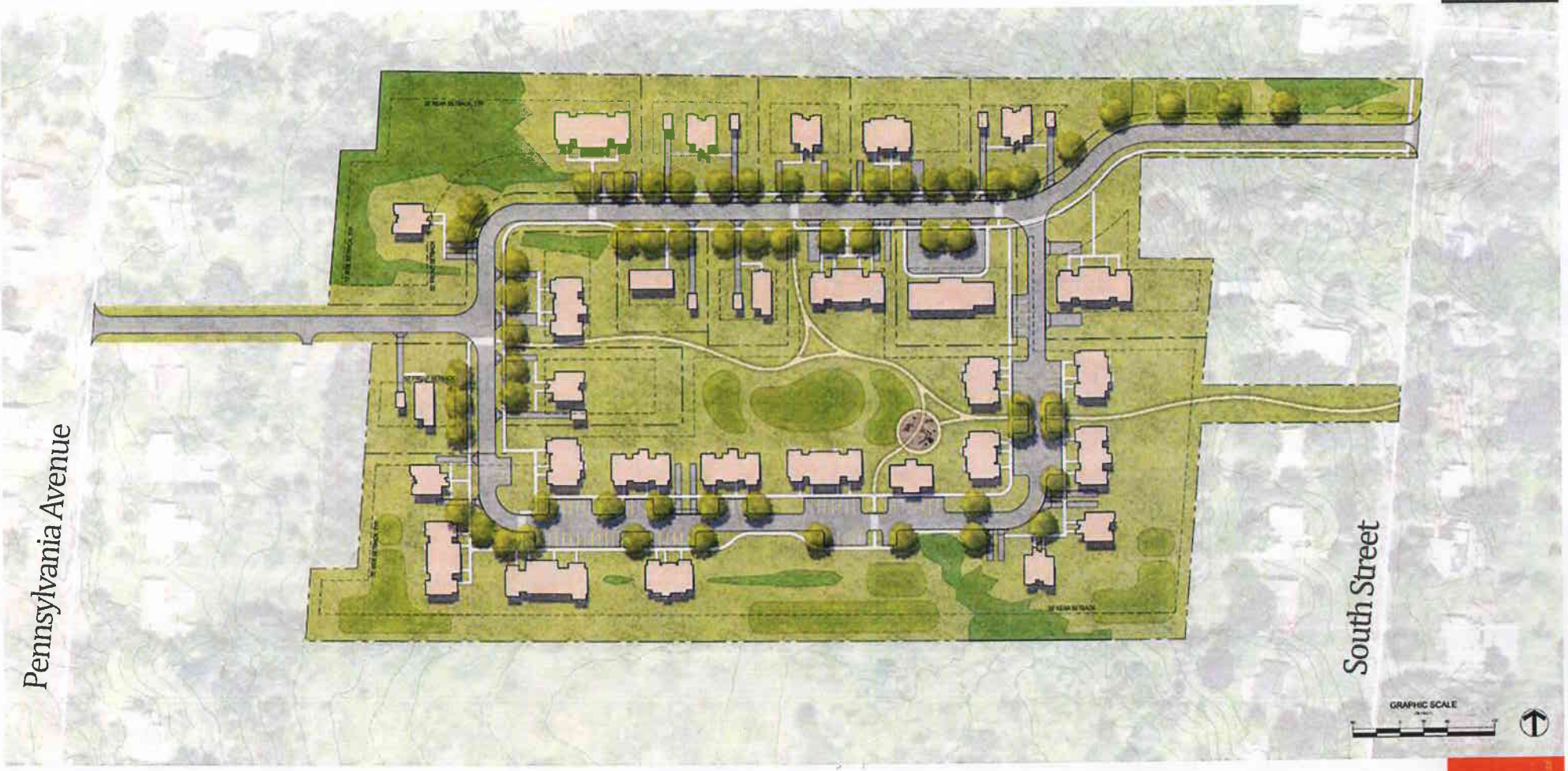
OLD Site Plan Concept



Option 1 from May 2, 2017 Community Meeting

Hamilton Square Neighborhood
www.southstreetproject.org

Proposed Site Plan Concept



Hamilton Square Neighborhood

www.southstreetproject.org

Public Road Street View

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www.southstreetproject.org

Private Road Street View

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www.southstreetproject.org

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Distribution of Unit Types

Dwelling Unit Type	Qty.
For Sale (Market Rate)	15
For Sale (INHS)	11
Rental (INHS)	47
Community Center/Day Care	1/1
Parking Ratio to D.U.	2:1

Hamilton Square Neighborhood

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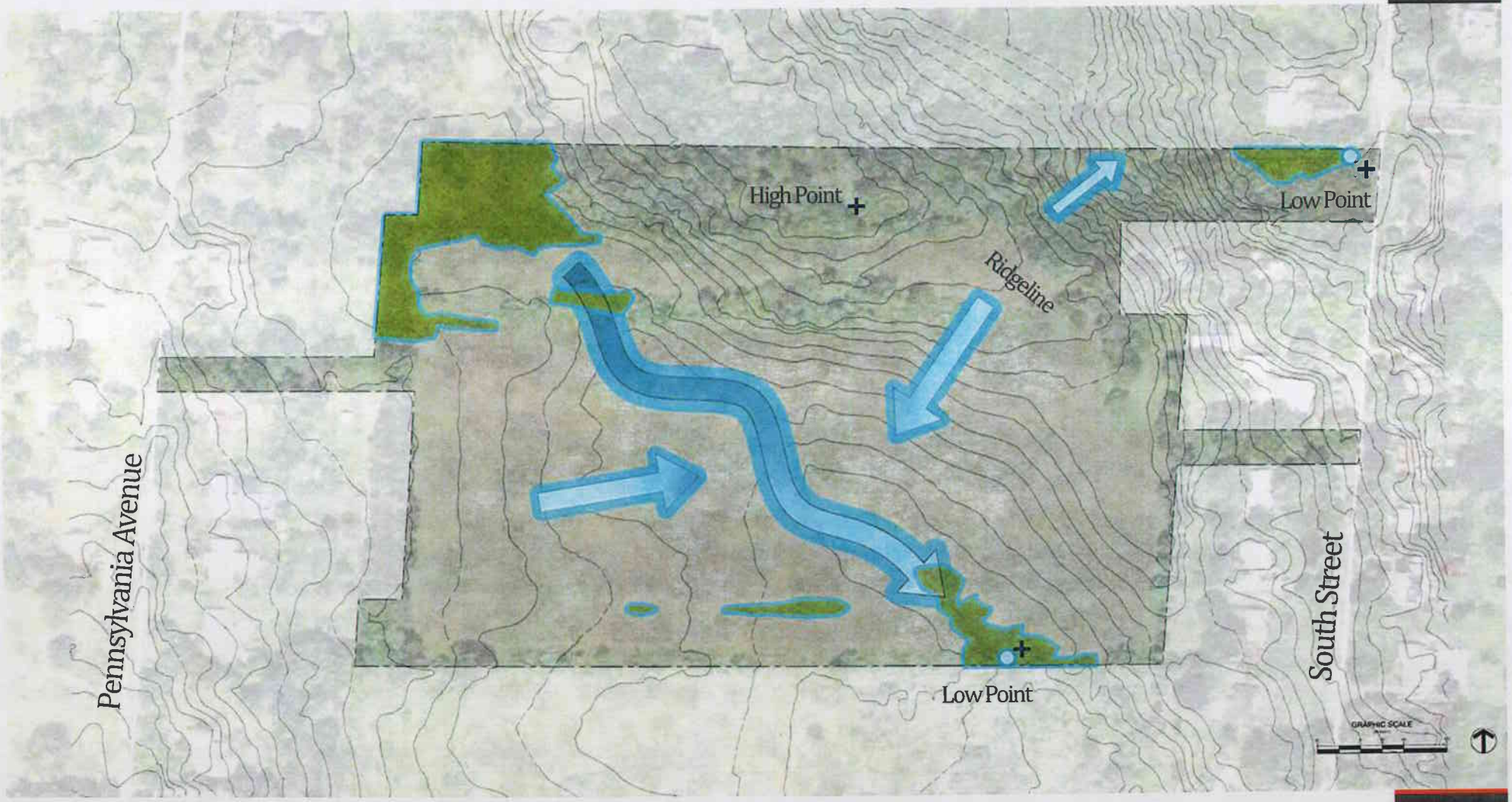
Existing Drainage Patterns



Hamilton Square Neighborhood
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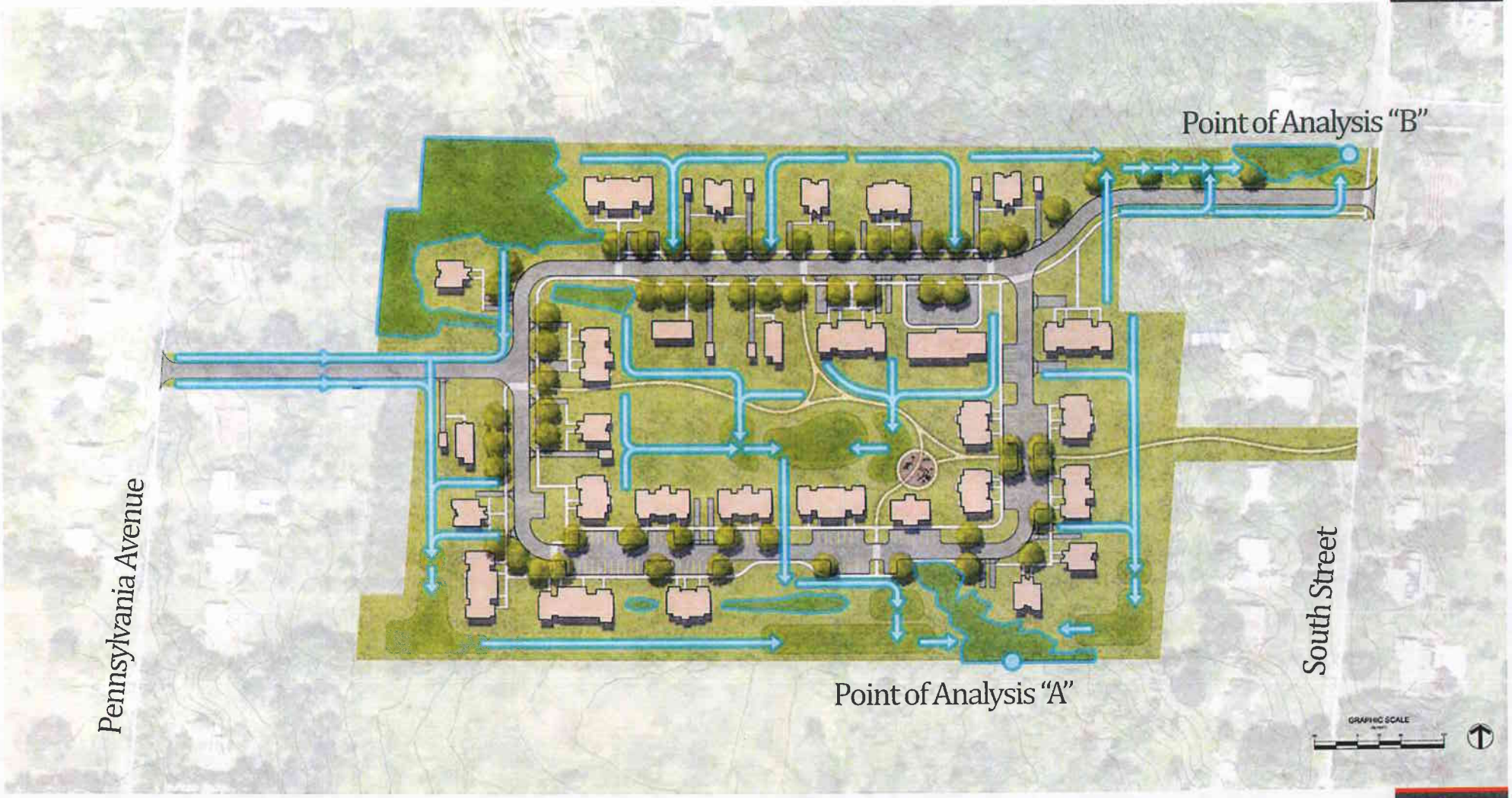

Hamilton Square Neighborhood
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Affordable Homes for Rent

- Rental prices and income ranges needed

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Kay and Holly, tenants since 1997

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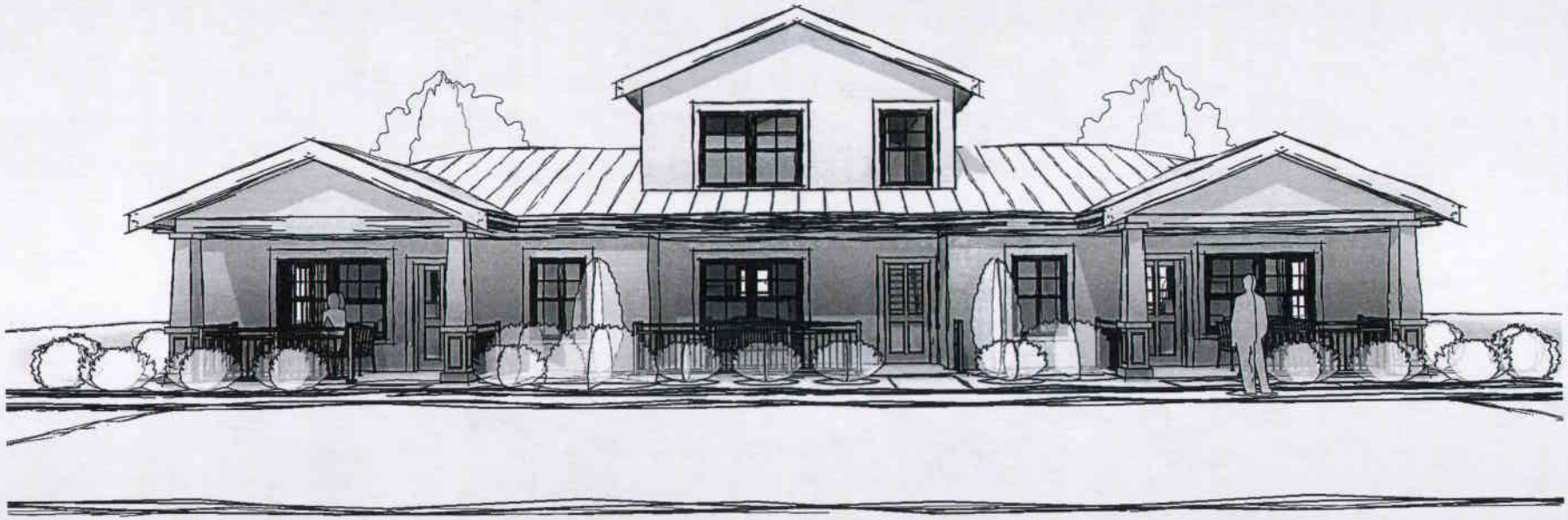

3 Unit Building Type

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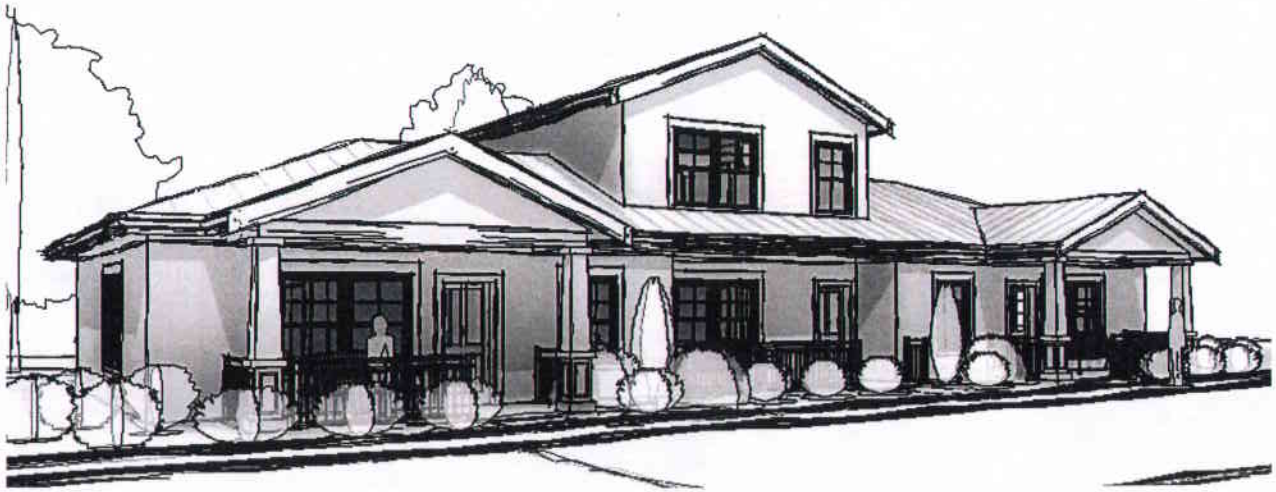
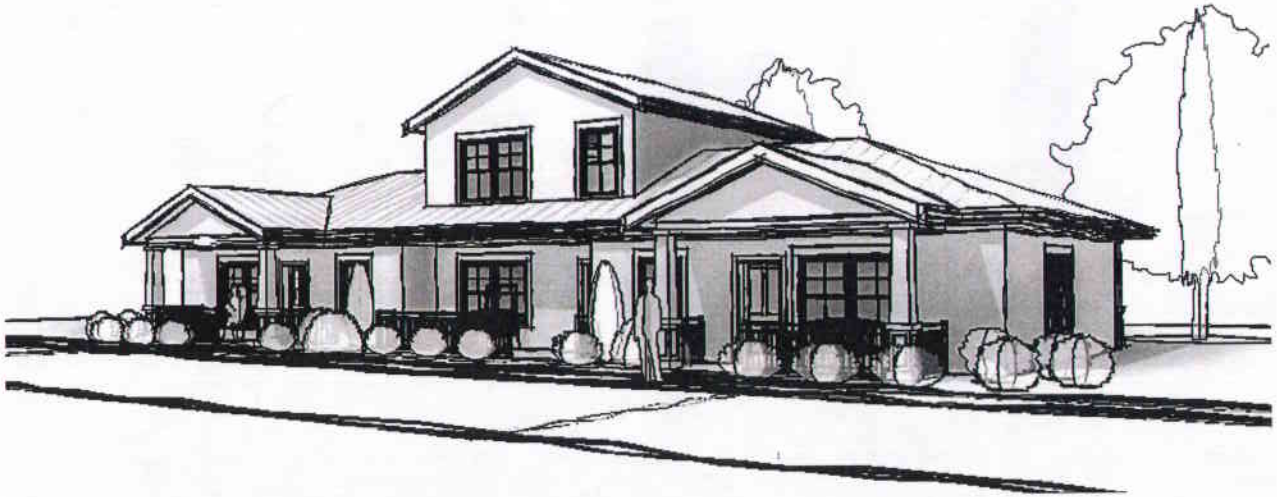
HOLT ARCHITECTS

Hamilton Square Neighborhood
www.southstreetproject.org

Architecture





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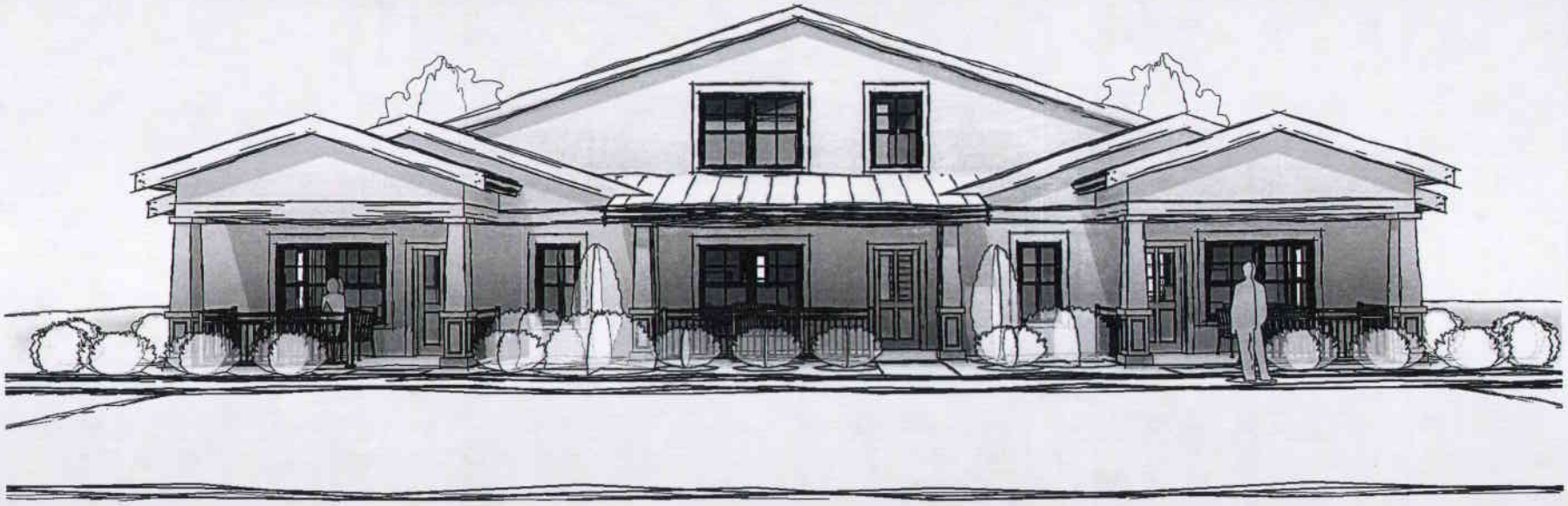

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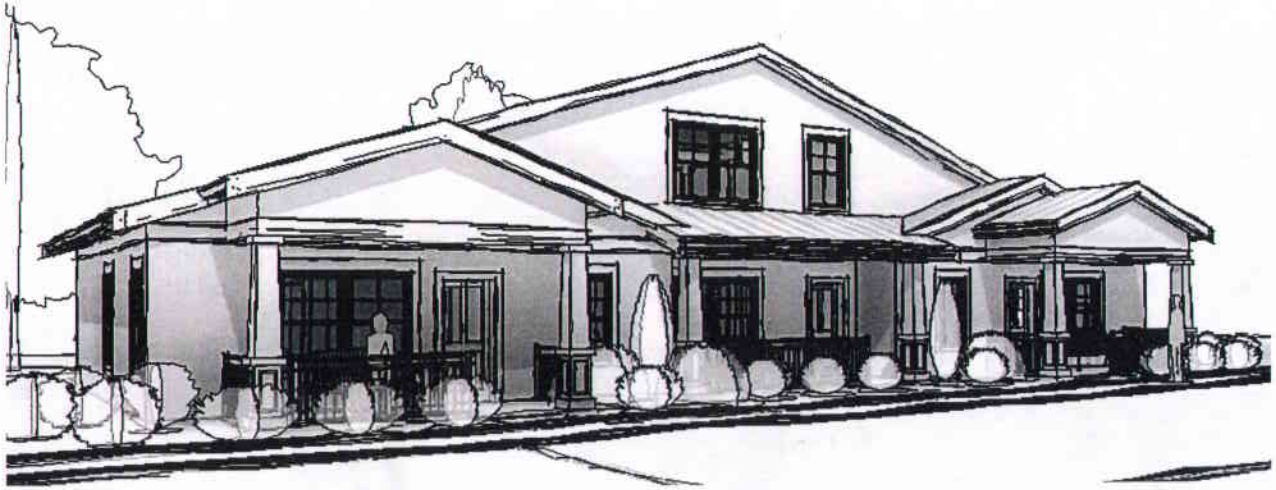

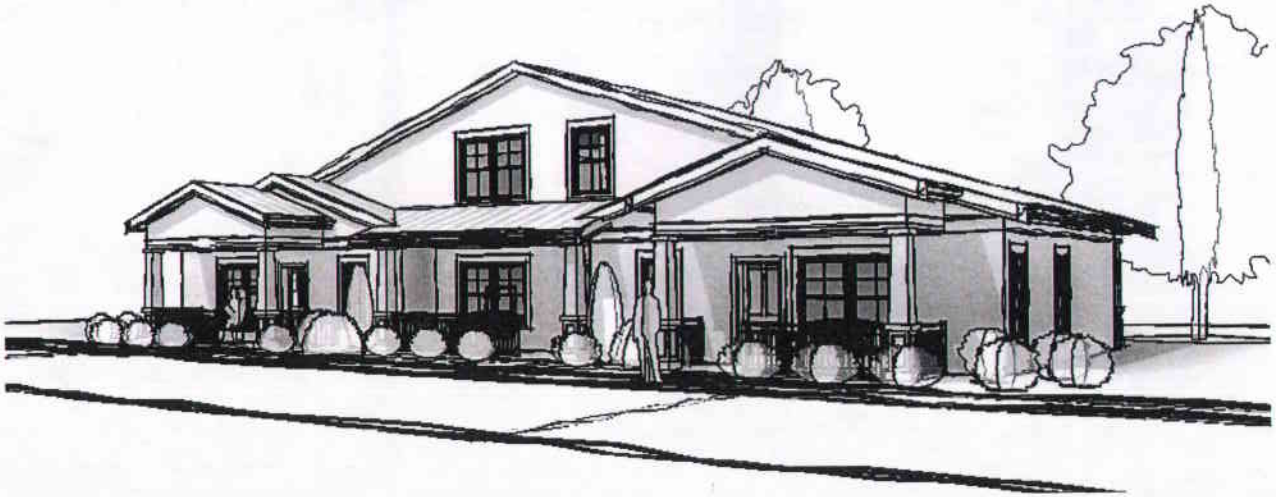

HOLTARCHITECTS

Hamilton Square Neighborhood

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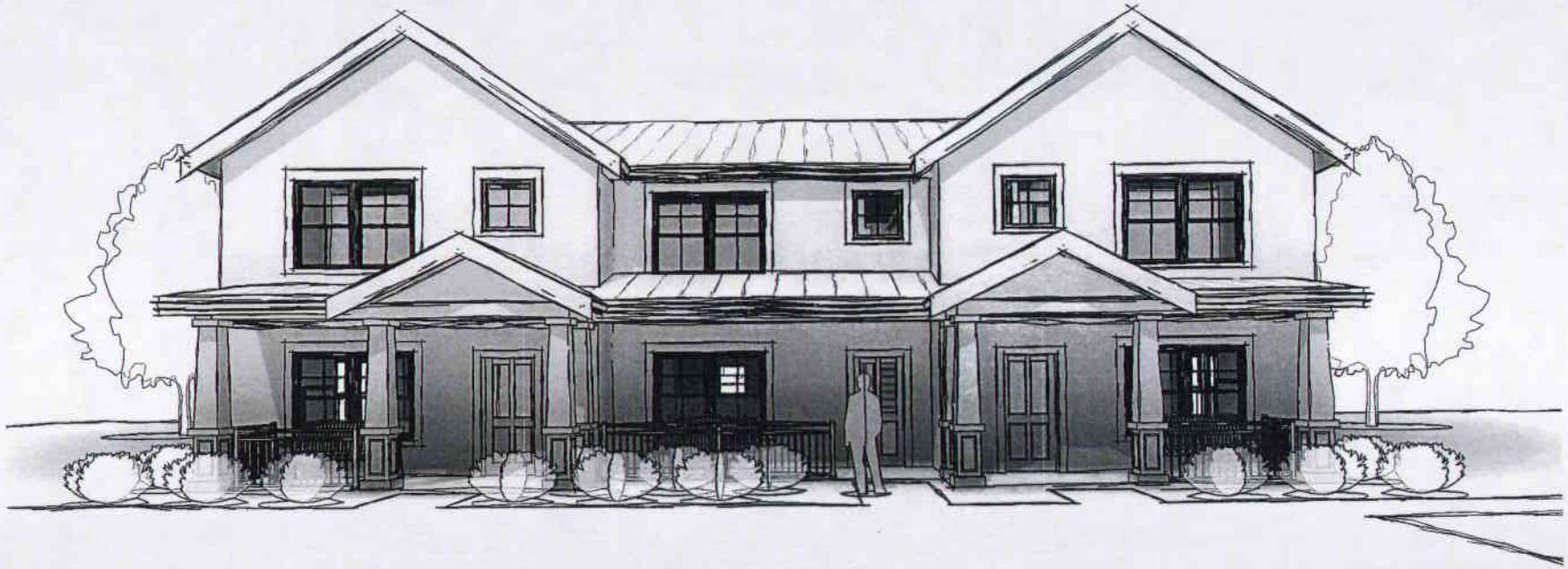
Architecture

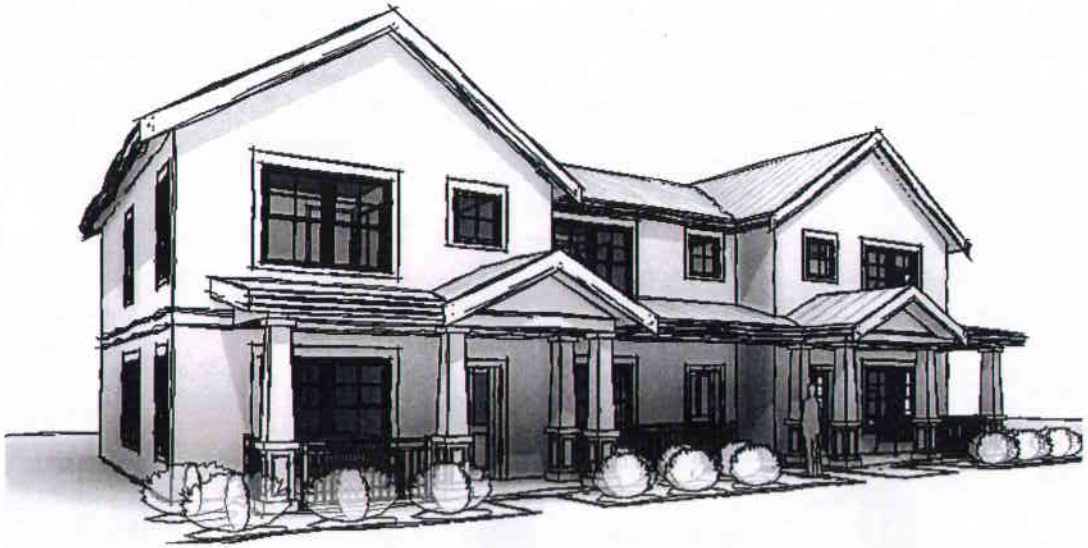


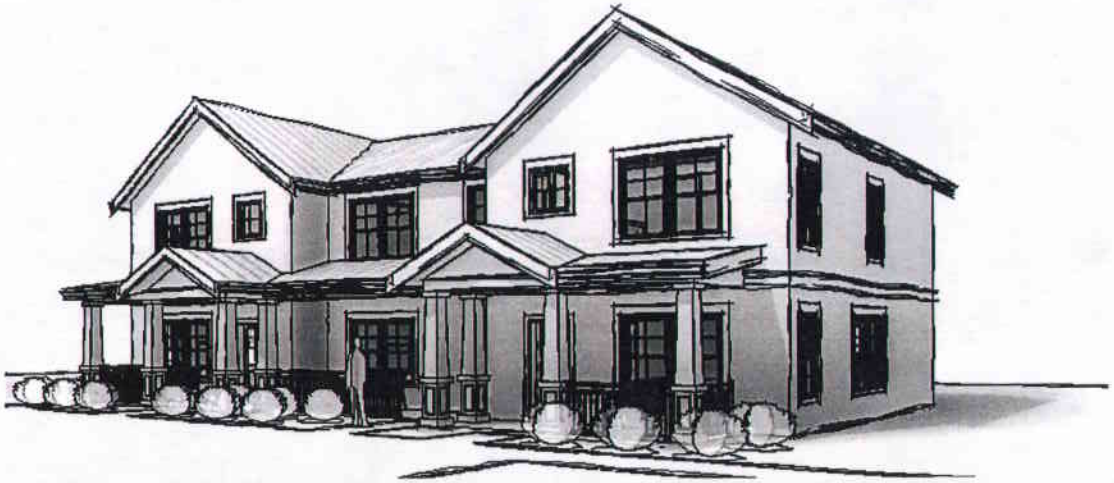
3 Unit Building Type

- 1 – Two bedrooms (Visitable Unit)
- 2 – Three bedrooms (Visitable Unit)

HOLT ARCHITECTS

Architecture





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Hamilton Square Neighborhood

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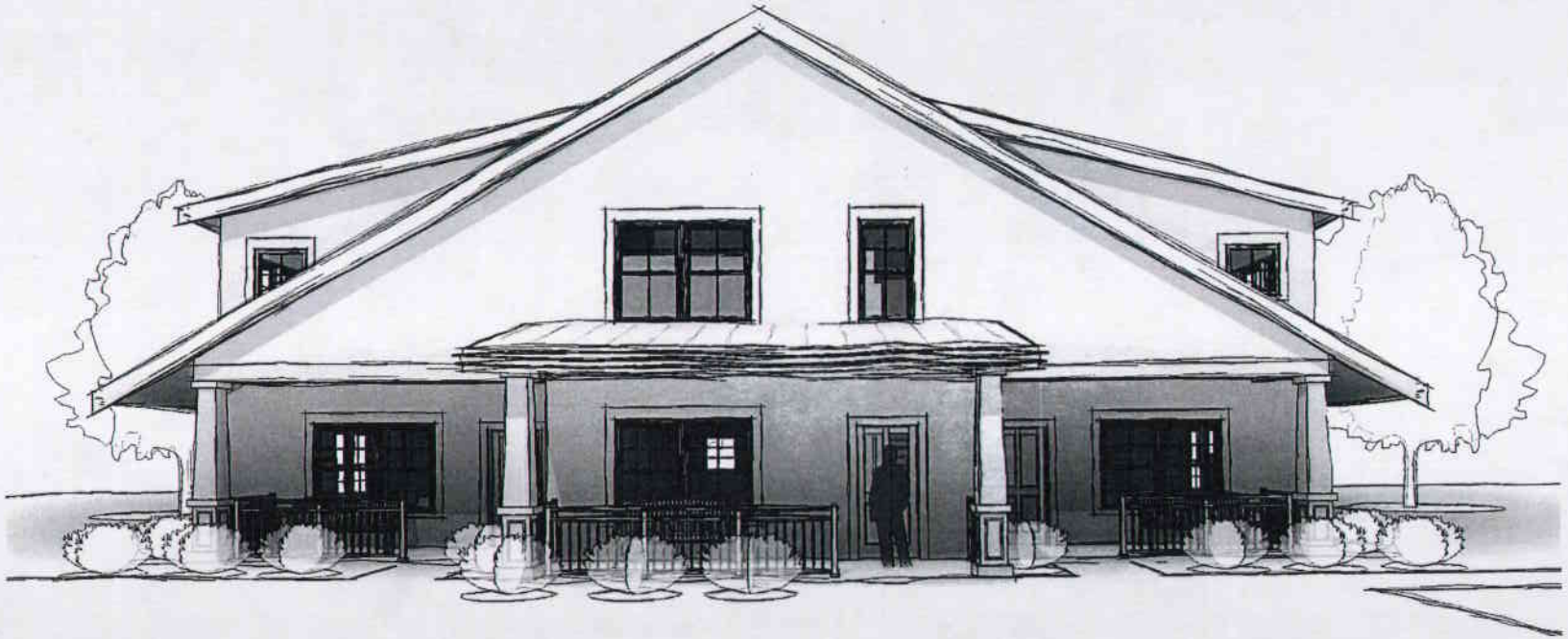
Architecture



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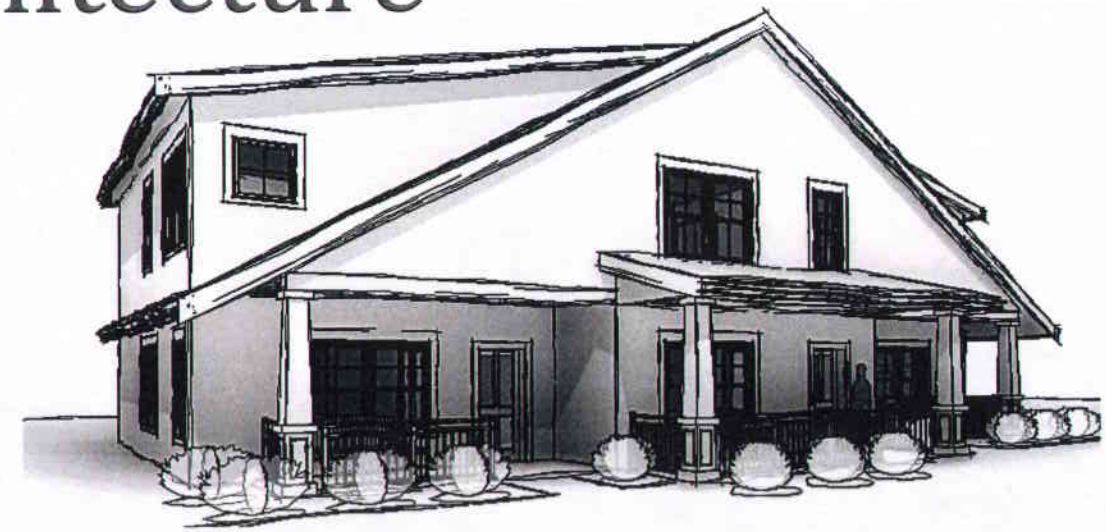
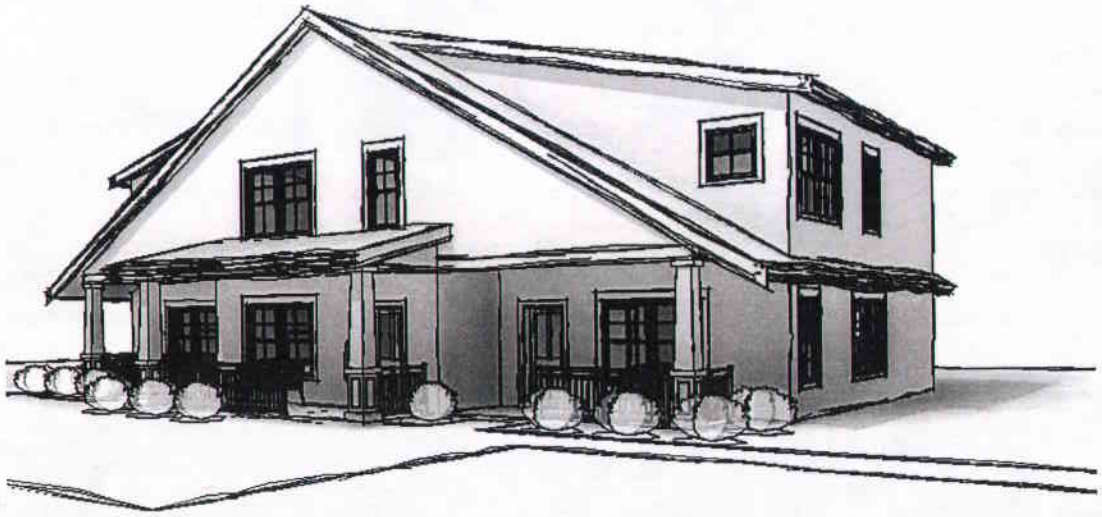
HOLT ARCHITECTS

Architecture





HOLT ARCHITECTS

Hamilton Square Neighborhood

www.southstreetproject.org

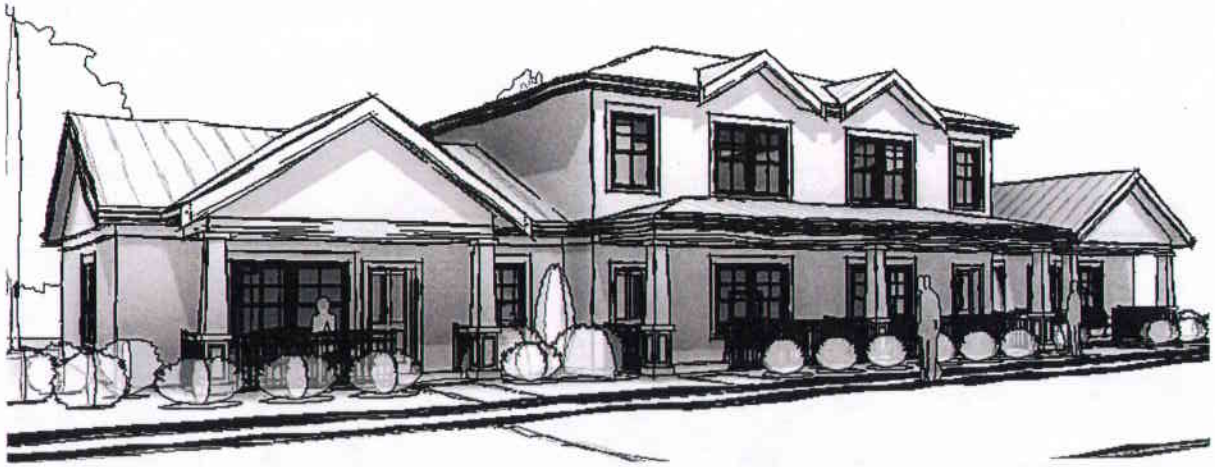
Architecture

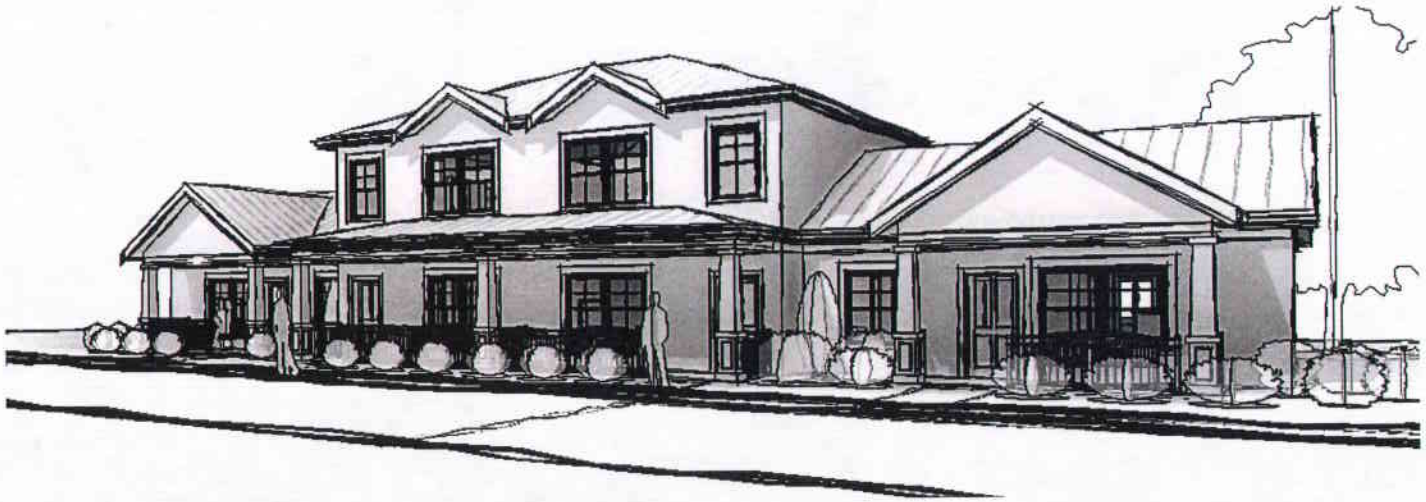
4 Unit Building Type

- 2 – One bedroom (Fully Accessible Unit)
- 2 – Two bedrooms (Visitable Unit)

HOLT ARCHITECTS

Architecture





HOLT ARCHITECTS

Hamilton Square Neighborhood

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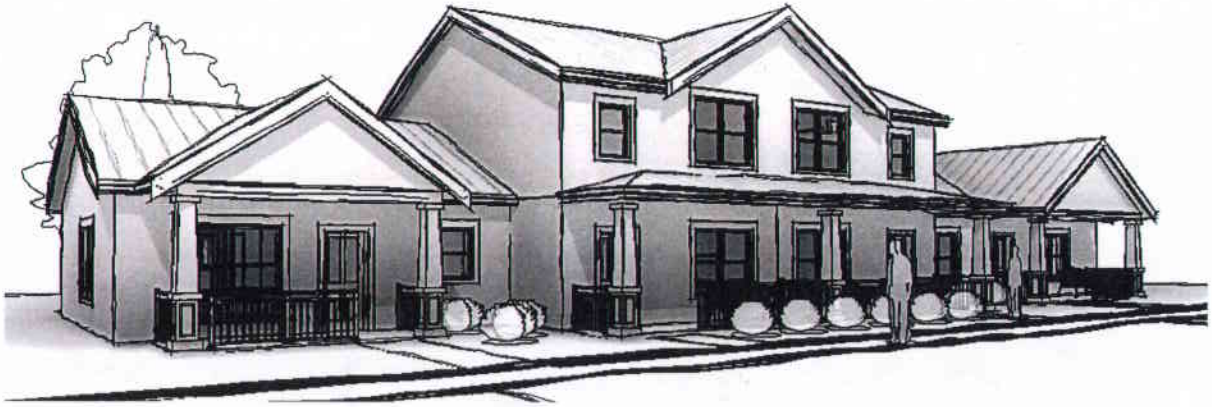
Architecture

4 Unit Building Type

- 1 – Two bedrooms (Fully Accessible Unit)
- 1 – Three bedrooms (Fully Accessible Unit)
- 2 – Three bedrooms (Visitable Unit)

HOLT ARCHITECTS

Architecture



HOLT ARCHITECTS

Hamilton Square Neighborhood

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Affordable Homes for Sale

INHS helps first-time home buyers 3 ways:

- **Builds or renovates homes to sell through our Community Housing Trust**, making high-quality homes permanently affordable for low-income home buyers.
- **Provides down payment assistance to low to moderate income home buyers** struggling to save enough to buy a home or to afford market prices.
- **We provide education and counseling**, regardless of income, to help people buy smartly and overcome barriers like low-credit and debt.

There is no typical INHS home buyer; we have helped Walmart employees and college professors, retirees and people starting out in their careers, single people and large families.

Culpepper Family

For Sale Income Limits and Prices

Household Size	"Low-Income" Maximum Total Household Income (Gross)	"Moderate-Income" Total Household Income (Gross)
1	$42,350	$63,500
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INHS' Lake Avenue Townhomes, for sale now, are selling for:

Two bedroom 1.5 bathroom town homes are $112,000-129,000

Three bedroom 1.5 bathroom townhomes are $145,000

Example Homes for Sale

Hamilton Square Neighborhood
www.southstreetproject.org

Example Homes for Sale

Hamilton Square Neighborhood

www.southstreetproject.org

Small energy efficient

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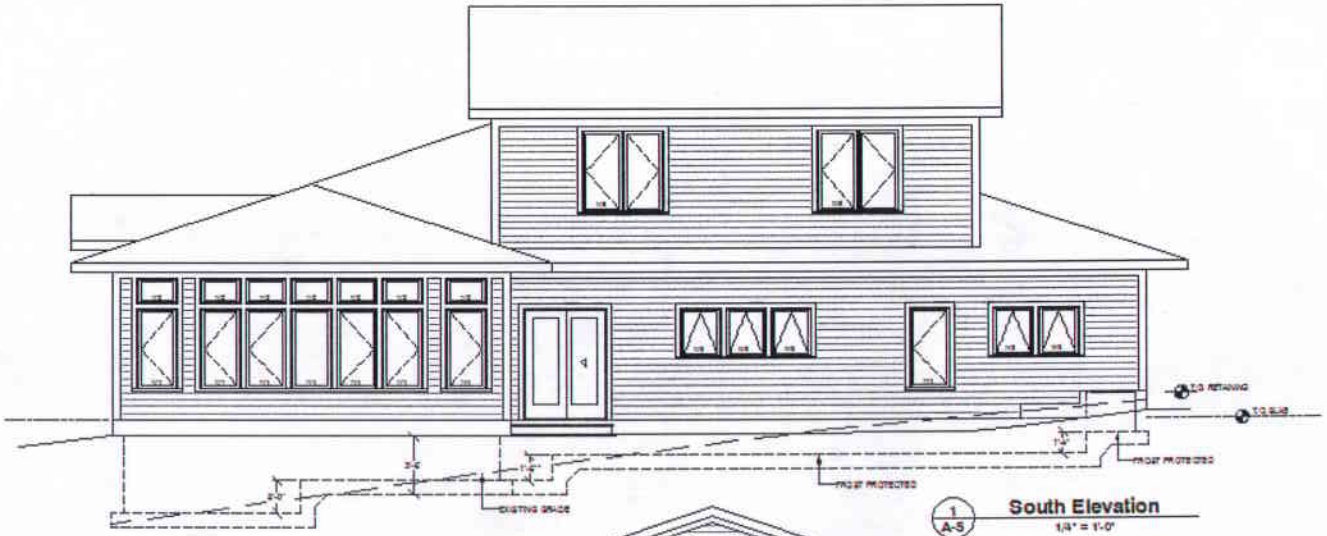
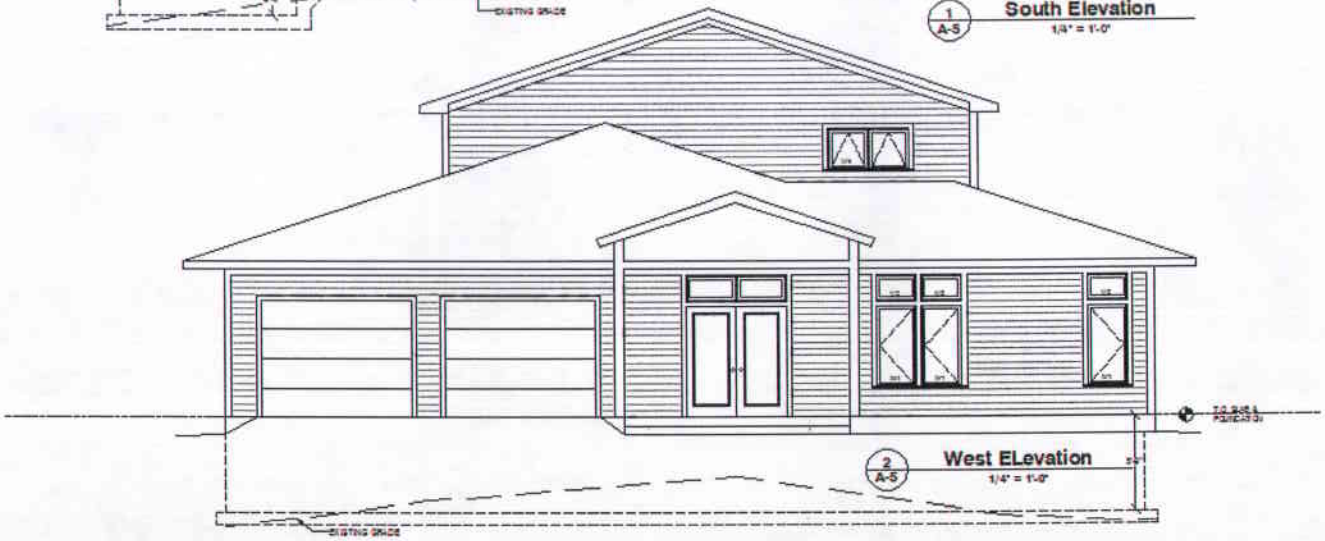
Age in place





Hamilton Square Neighborhood

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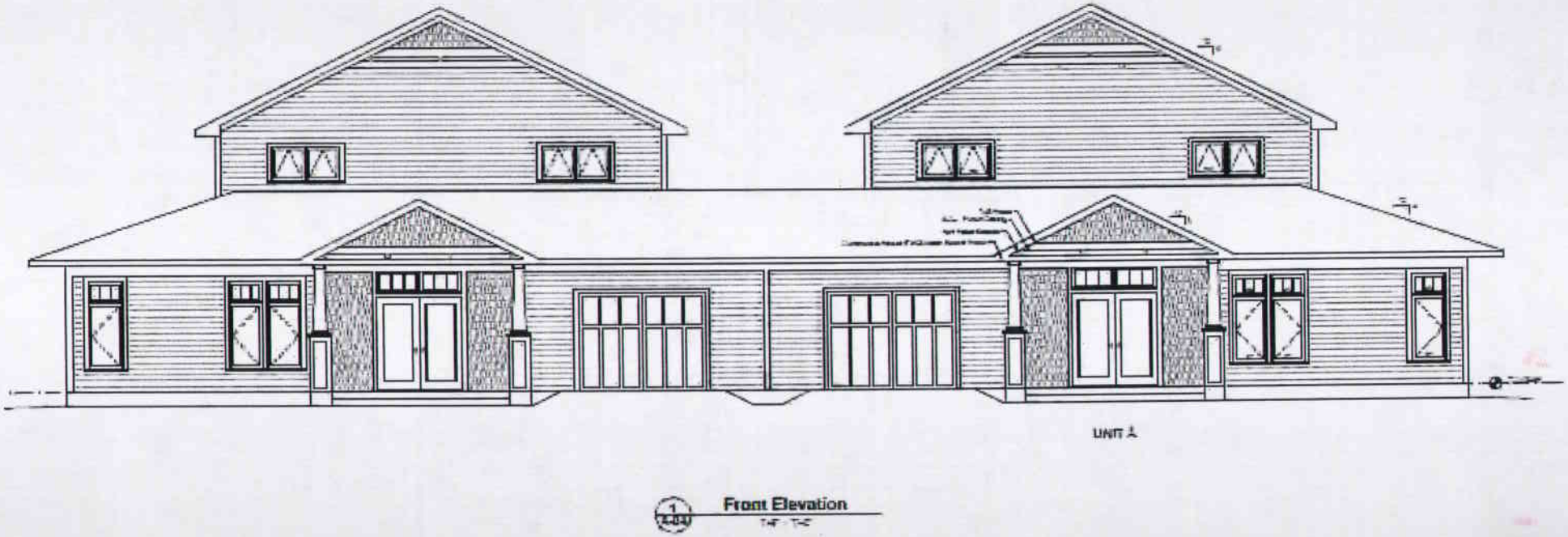
Age in place duplex



Hamilton Square Neighborhood
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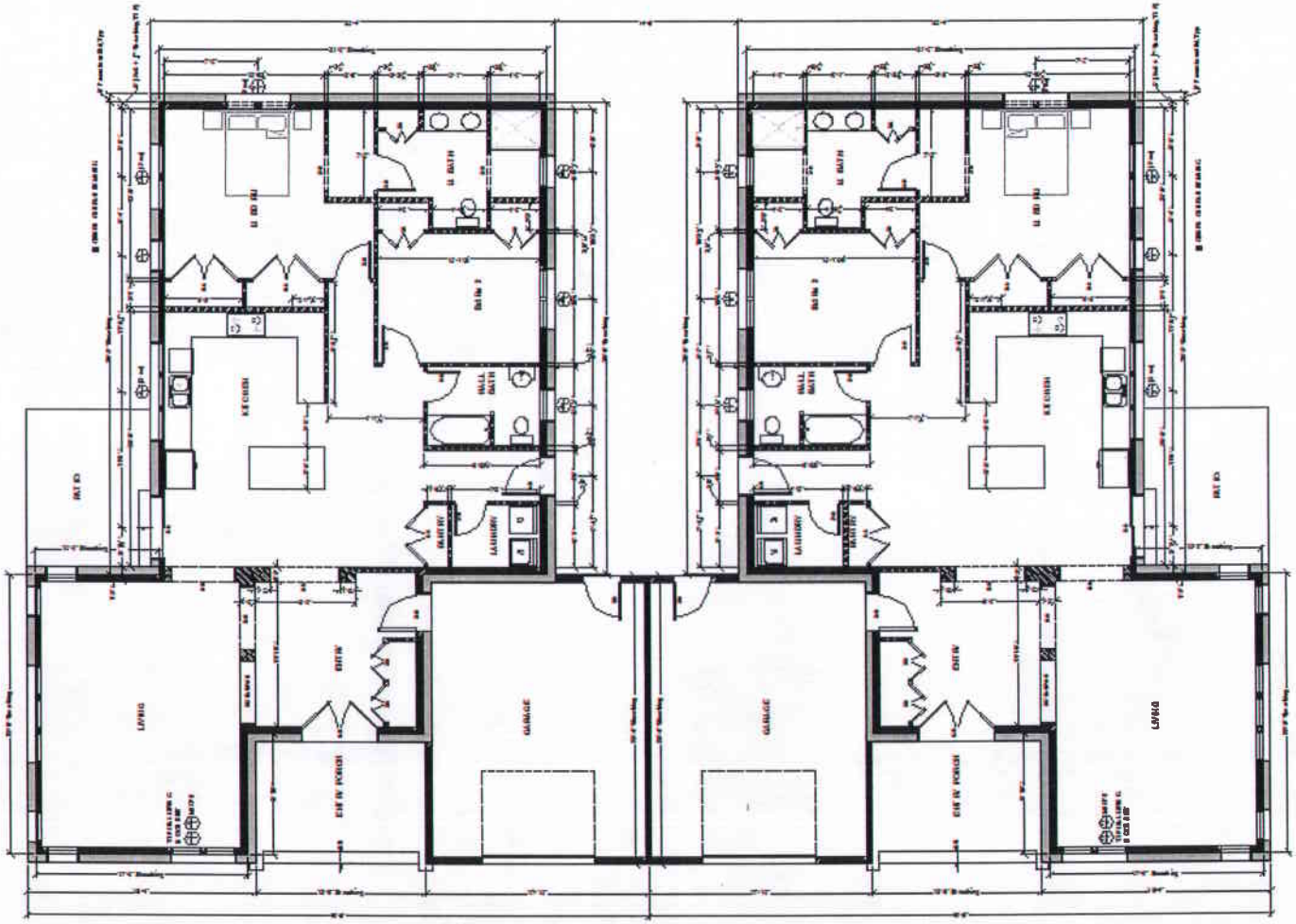
Age in place duplex



1st Floor Plan
1/4" = 1.0'

Hamilton Square Neighborhood
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Single family w apartment

Trumansburg Community Nursery School

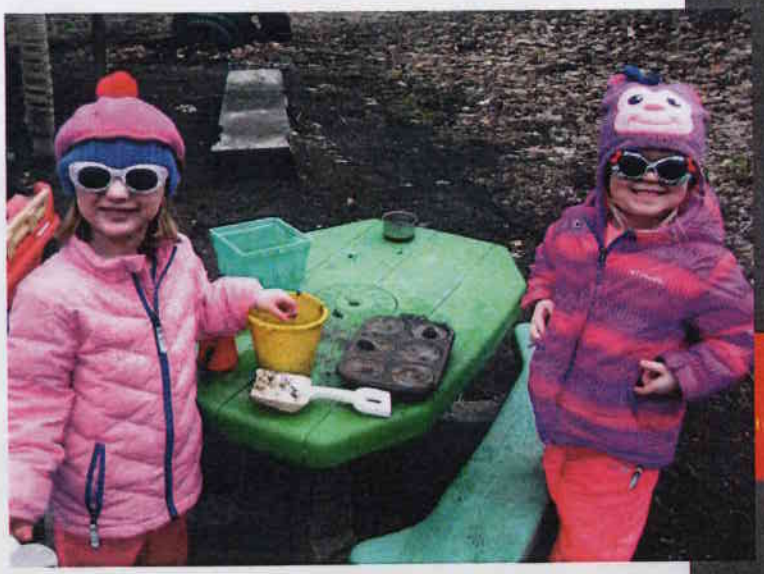
History:

- Not for profit, parent cooperative preschool started in 1959 with board of trustees comprised of parents and community members
- Currently offering morning preschool classes for children ages two to five and twice monthly toddler story time October through April
- Total enrollment for 2016-17: 36 children

Trumansburg Community Nursery School

Goal: expanded program options for families

- Maintain half-day preschool program with extended hours for working families
- Additional classroom space for toddler and preschool children to accommodate more children and families in the program
- Expand family support programs – play groups, drop-in care, child development/parenting classes
- Maintain location within village and walking distance to library and other community sites



Questions and Comments

Hamilton Square Neighborhood

www.southstreetproject.org

Picture from July 13 Community Meeting

Hamilton Square Development
COMMENT:

The loudest voices in the room do not represent the entire cross-section of T-burg. These folks fear change. I hope that cooler heads will prevail.

Your Name (optional): [redacted]

Hamilton Square Development
COMMENT:

SCALE!

Too many people for the location

Your Name (optional): _____

Hamilton Square Development
COMMENT:

TO LARGE

Your Name (optional): _____

Hamilton Square Development
COMMENT:

Thank you.
There are people in this room who like this. I have not been more embarrassed of my village. ever.
Good luck and good speed.

Your Name (optional): _____

Hamilton Square Development
COMMENT: I Strongly Believe that A Side Walk on Pennsylvania is Needed For our Safety

Your Name (optional): _____

Hamilton Square Development
COMMENT: We need financial disclosure from The Profit-making Side of This project. You are asking for abatements That are in effect Public financing

Your Name (optional): [redacted]

Hamilton Square Development
COMMENT: Please Put it on ICE Another Year. this is Too much Way to Fast

Your Name (optional): [redacted]

OVER →

Hamilton Square Development

COMMENT:

① No! Do not do this!

② More space between buildings in rental area?

③ you have not addressed an archeological assessment of site as a whole and a consultant during construction. SHOVEL testing?

④ RADON ? XXX

Your Name (optional): _____

(5) please —
Make a park instead

(6) Government funding may be severely cut (as per Trump budget). ~~Why~~
Where get subsidy $ in future?

(7) put up a BOND ($1,000,000?) against infrastructure impact.

(8) What does "GREEN" MEAN to you?

Hamilton Square Neighborhood

Planning Board Meeting

JULY 27, 2017

Ithaca Neighborhood HOUSING SERVICES

HOLT ARCHITECTS

TWLA

Meeting Agenda

- What We've Heard
- Proposed Subdivision Plan
- Site Plan Update and Distribution of Unit Types
- Street Views
- Site Drainage
- Affordable Homes
- Preliminary Architecture
- Questions and Comments from Planning Board

What We've Heard

- Increase community outreach and input
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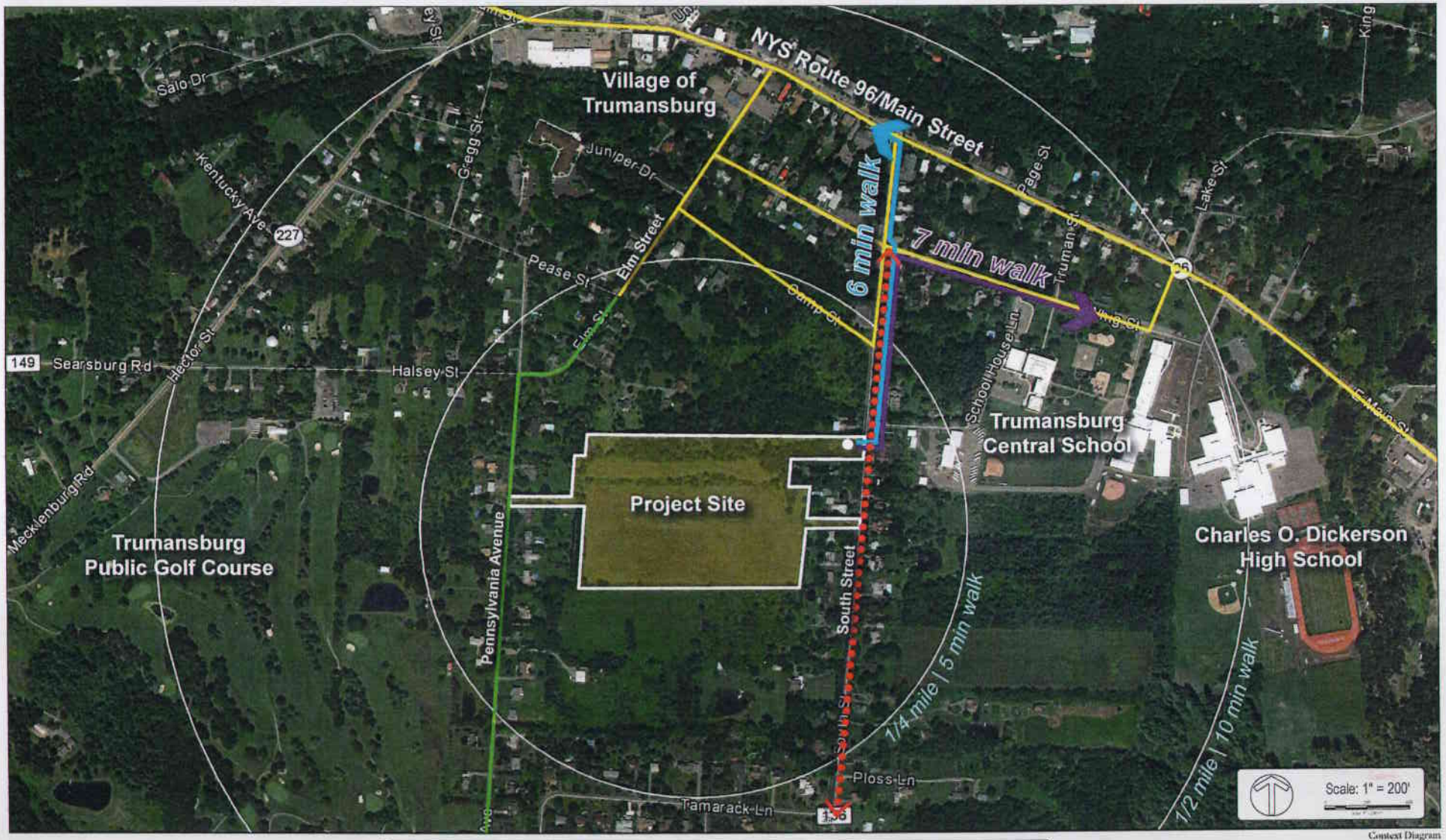
- Address site drainage
- Address walkability on site with sidewalks and walking trails

Context Plan



Context Diagram

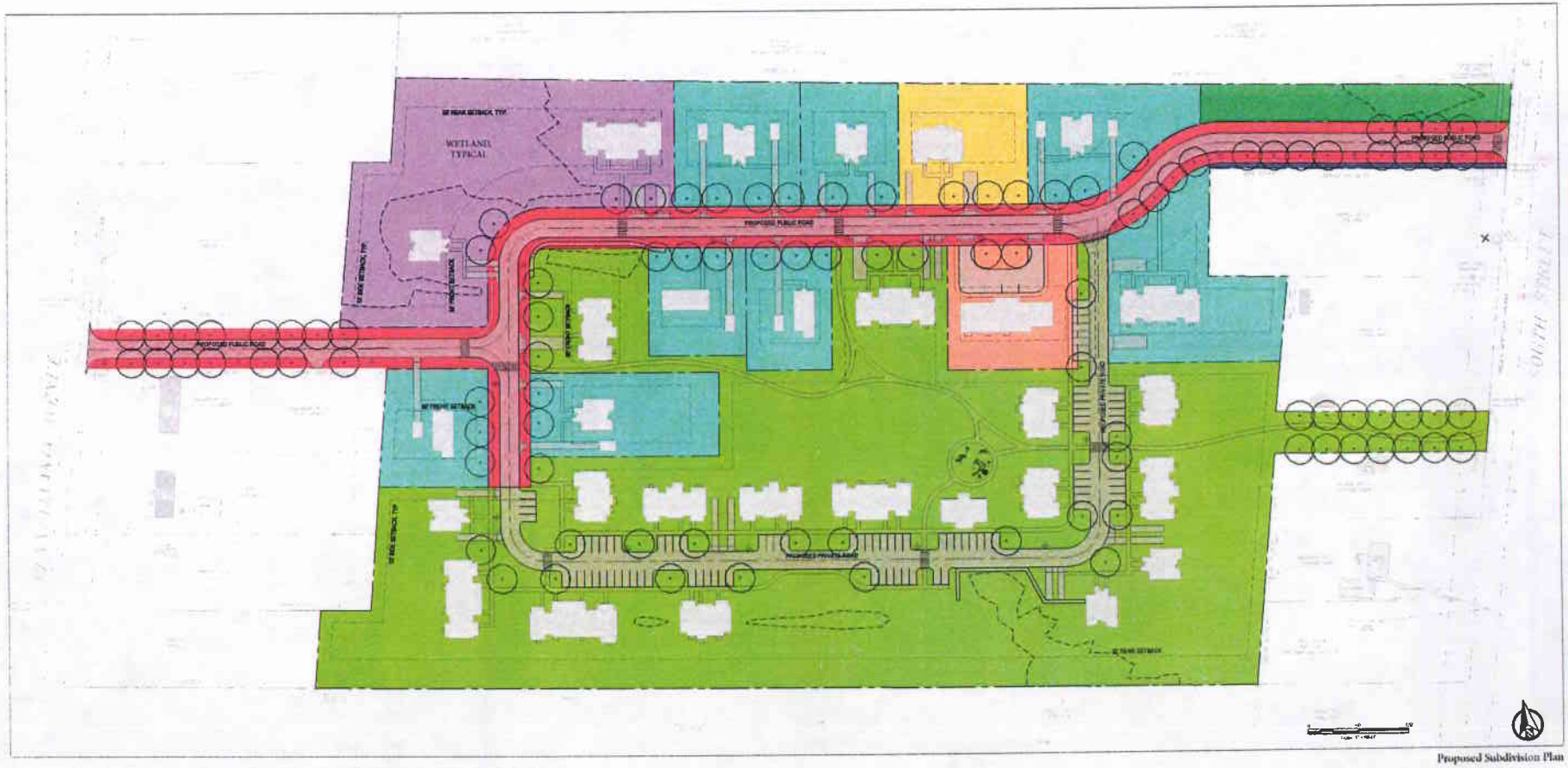
Hamilton Square Neighborhood

Village of Trumansburg, New York • July 27, 2017

LEGEND

- Walking Distance to Schools
- Walking Distance to Main Street
- Safe Routes to School
- Existing Sidewalks
- Planned Sidewalks

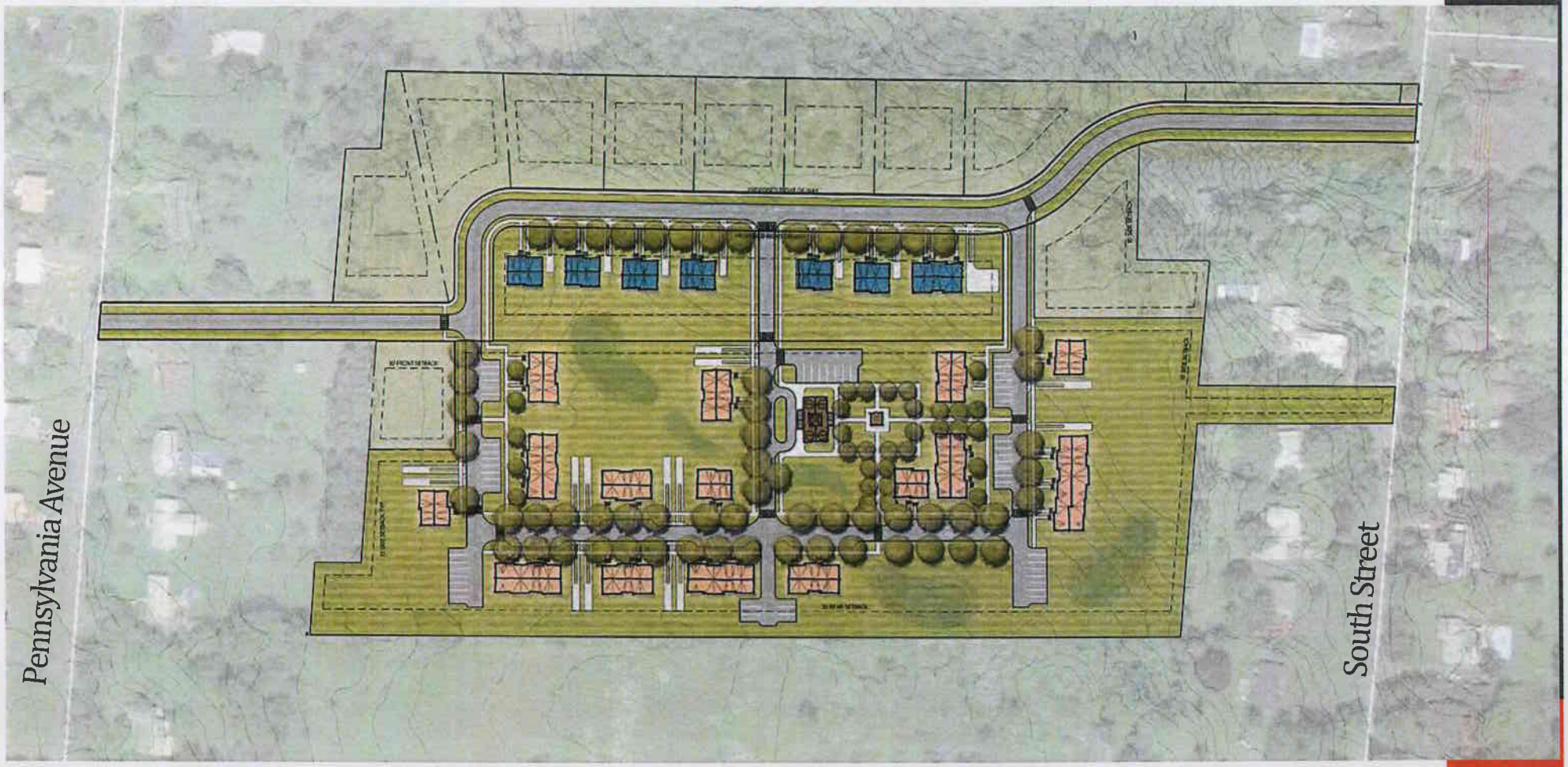
Proposed Subdivision Plan



Proposed Subdivision Plan

LEGEND
- PUBLIC ROAD R.O.W.
- AFFORDABLE FOR SALE AND AFFORDABLE RENTAL PARCEL
- MARKET RATE FOR SALE PARCEL
- TRUMANSBURG COMMUNITY NURSERY SCHOOL PARCEL

OLD Site Plan Concept



Option 1 from May 2, 2017 Community Meeting

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OLD Site Plan Concept

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Site Plan from May 18 Sketch Plan Presentation at Planning Board Meeting

Proposed Site Plan Concept

Proposed Site Plan

Hamilton Square Neighborhood

Village of Trumansburg, New York • July 27, 2017

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Hamilton Square Neighborhood

Village of Trumansburg, New York • July 27, 2017

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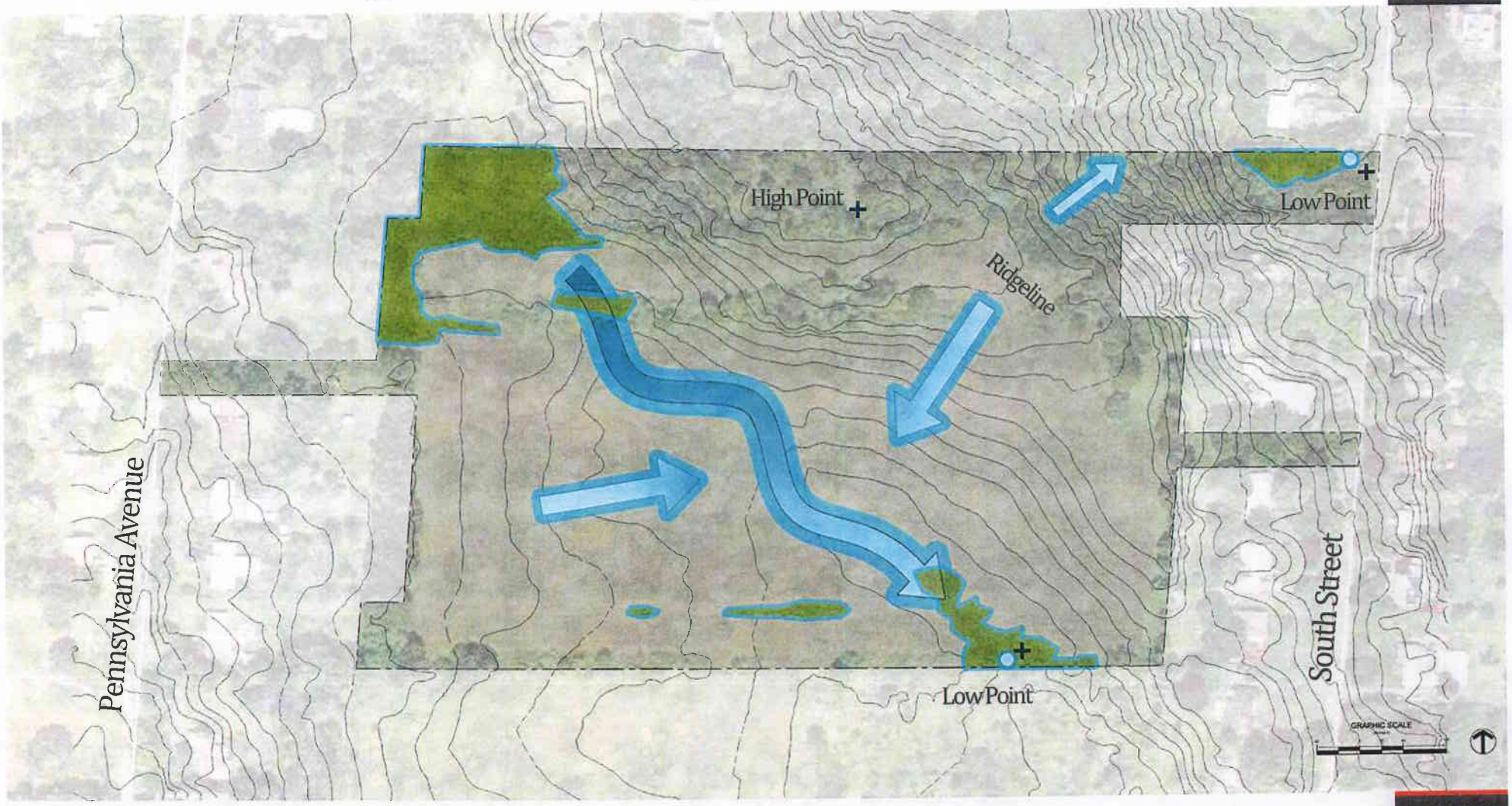

Hamilton Square Neighborhood
www.southstreetproject.org

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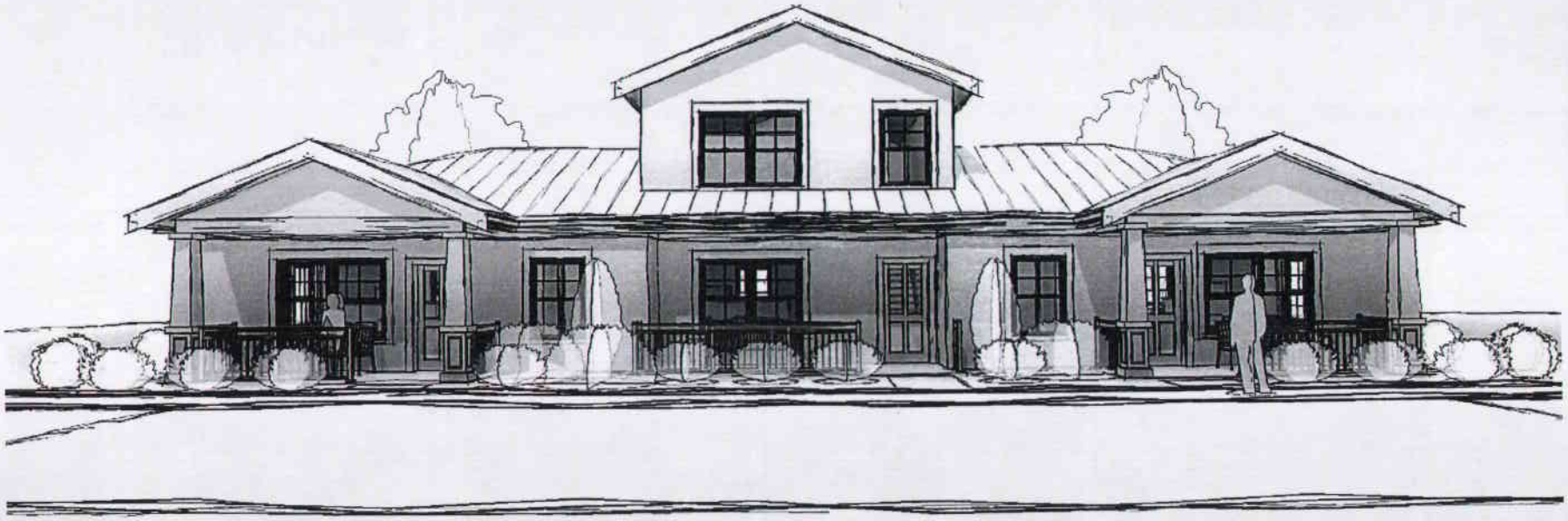

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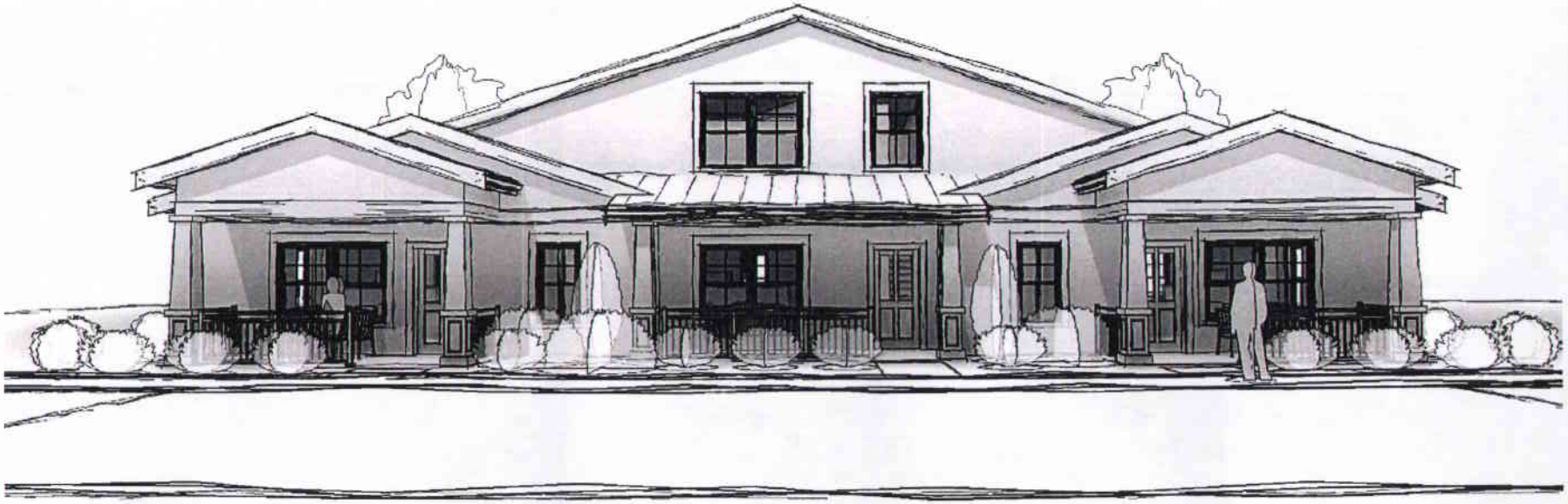
HOLT ARCHITECTS

Hamilton Square Neighborhood
www.southstreetproject.org

Architecture



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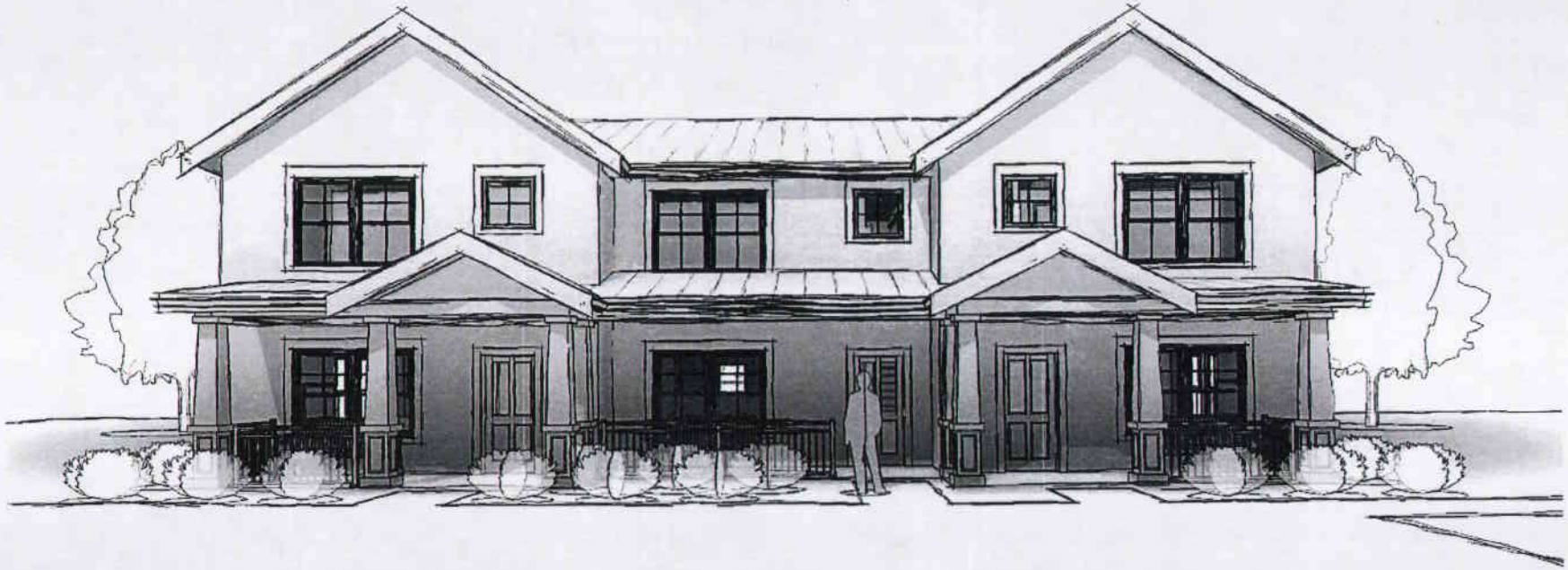
www.southstreetproject.org

Architecture

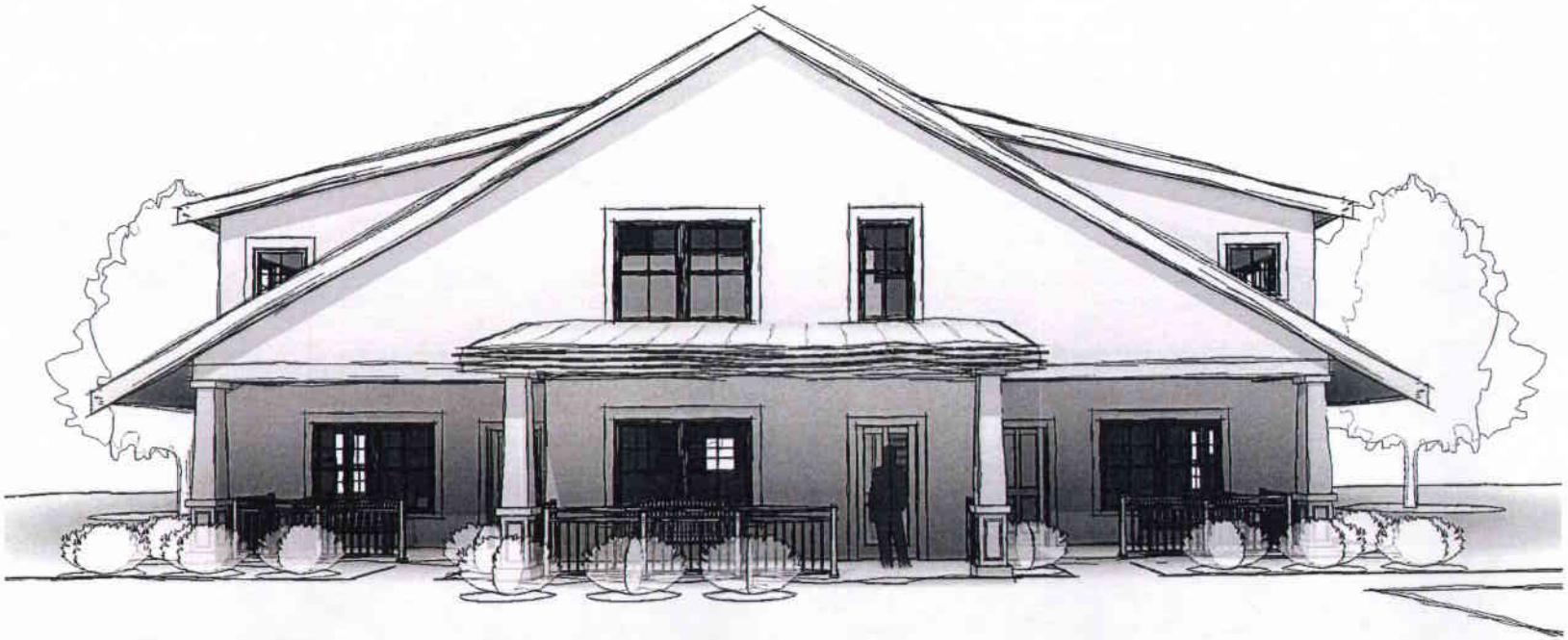


3 Unit Building Type

- 1 – Two bedrooms (Visitable Unit)
- 2 – Three bedrooms (Visitable Unit)

HOLT ARCHITECTS

Architecture

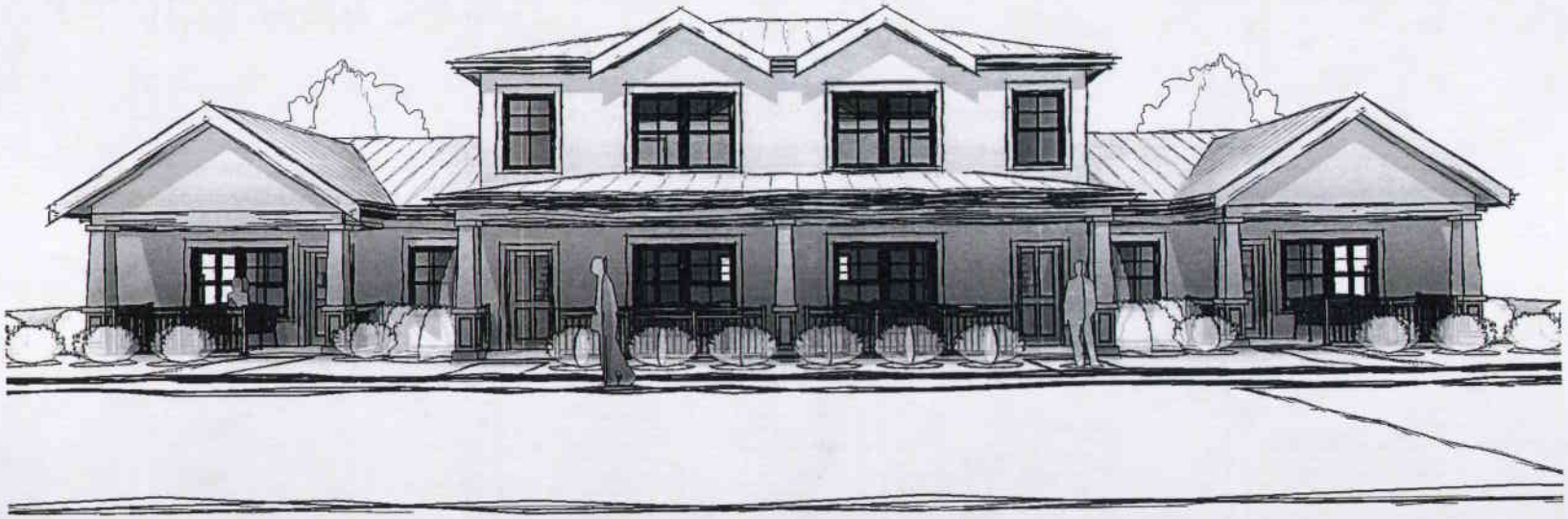


3 Unit Building Type

- 1 – Two bedrooms (Visitable Unit)
- 2 – Three bedrooms (Visitable Unit)

HOLT ARCHITECTS

Architecture



4 Unit Building Type

- 2 – One bedroom (Fully Accessible Unit)
- 2 – Two bedrooms (Visitable Unit)

HOLT ARCHITECTS

Architecture

4 Unit Building Type

- 1 – Two bedrooms (Fully Accessible Unit)
- 1 – Three bedrooms (Fully Accessible Unit)
- 2 – Three bedrooms (Visitable Unit)

HOLT ARCHITECTS

Example Homes for Sale

Hamilton Square Neighborhood
www.southstreetproject.org

Example Homes for Sale

Hamilton Square Neighborhood
www.southstreetproject.org

Questions and Comments

Hamilton Square Neighborhood

www.southstreetproject.org

46 South Street Project

a proposed development from INHS and Claudia Brenner

INTRODUCTION

Ithaca Neighborhood Housing Services and our development partner, architect Claudia Brenner, are excited to work with the residents of Trumansburg to potentially bring new housing to the land between South Street and Pennyslvania Avenue. We have proposed a mixed income development that should appeal to a wide range of ages and income levels, much like the neighborhood now.

While we have tentatively attached the name "Hamilton Square Neighborhood" to this project, it's not set in stone and we welcome more feedback on the name, or would love to hear other suggestions.

We value your input! This website will enable you to stay in touch with us, give us feedback, and learn what's new about the project. Please also sign up for our e-mail list as we will periodically send updates.

JULY 31 UPDATE

Thank you to all those who came out to the Planning Board meeting on July 27th. There was a very interesting idea floated by Paula Horrigan that we wanted to address regarding public open space. Paula was encouraging INHS/Claudia Brenner and the Village to have some public open space on the site.

This is a great idea and something that we have planned but may not have explained very well. Our intention is that all of the trails, sidewalks, central green, and the playground on the site are open to the public. Yes, most of these amenities will be owned and maintained by INHS in the current plan - all but the sidewalks along the public street - however, we would certainly be open to a partnership with the Village if the Village wanted to take over ownership of some of this land.

INHS has managed a playground for over 30 years on our campus at 115 West Clinton Street that is open to the public! The playground is on INHS land but anyone can enjoy it (and they do!). Most people do not know that it isn't a public park.

Hamilton Square

Frequently Asked Questions

Below is a list of questions that INHS and Claudia Brenner have received through community meetings, listening sessions, meetings with public officials, and emails. This list is not exhaustive we are happy to add to it as needed.

General Questions

- **What Is Hamilton Square?**

  Hamilton Square is a proposed mixed income, inclusive community that includes visitable/accessible rental and for sale homes as well as a proposed nursery school open to anyone.

  It is envisioned as a mixture of affordable and market rate housing with home sizes ranging from 1 to 3 bedrooms.

- **Who Is Proposing This Project?**

  Hamilton Square is a partnership between Claudia Brenner, a local architect and land owner, and INHS, a 40 year old not-for-profit based in Ithaca.

- **What Is Affordable Housing?**

  Affordable housing is usually defined in two ways:

  1. Affordable rental housing is housing where the family doesn't pay more than 30% of its income on rent and utilities.
  2. Affordable for sale housing is housing where the family doesn't pay more than 30% of its income on mortgage principal, interest, insurance, and taxes.

  People moving into affordable housing have to meet some income thresholds. Once they live there they generally can stay even if their income goes up.

- **Who Are Claudia Brenner And INHS?**

  Claudia Brenner is a local architect with a small practice in Ithaca. She has been designing homes and spaces for not-for-profits for over 30 years. She was employed in human services prior to her architectural education, working at Tompkins Co. EOC and Family & Children's Services. Her architectural services focus on providing people with affordable solutions for their homes and helping non-for-profits make the most of their limited resources.

  INHS is a 40 year old affordable housing not-for-profit based in Ithaca. We are dedicated to helping people of modest incomes find - and stay in - high-quality housing throughout central New York. We accomplish this in many ways: by providing low-interest loans to first-time home buyers, by building and managing well-maintained apartments, by helping people renovate the homes they own, and by providing home-repair assistance to seniors. INHS is a national leader in the affordable housing field and has been honored multiple times for creating "best practices" in the affordable housing field. INHS builds high quality homes and apartments that are certified for sustainability by the LEED and Energy Star programs.

- **What Is The Number Of The Various Kinds Of Housing?**

  The project continues to change as we study the site and talk to the community. At the moment we envision:

  1. Market rate lots – about 10 lots that could have about 15 units.
  2. Affordable for sale homes - about 11 homes as duplexes or triplexes.
  3. Affordable rentals – about 47 apartments as townhouses and attached patio homes.

- **How Long Will It Take To Build This?**

  The project will likely happen in several phases:

  1. Site work – all of the site work for the entire project will go in at the beginning. This will take about 6-8 months.
  2. Affordable rental buildings – these buildings will be built at about the same time as the site work it will take approximately 12 months to complete.
  3. Affordable for sale buildings – these buildings will likely happen in 2-3 phases. The first phase would happen along with the site work and the subsequent phases over the following 2-8 years.

4. Market rate buildings – these buildings will be built as the lots sell. It is hard to say how long this will take; 10 years would not be an unusual time period.

The project will likely be built by one contractor for the initial two parts and then others later on.

- **Why Are There So Many Rentals?**

  Tompkins County is one of the few upstate counties that is increasing in population. People are moving here but housing is not being built fast enough to accommodate them so housing is becoming less and less affordable throughout the county.

  The need for housing in the County is well documented in several recent studies. A good resource is the County Website at the following address:

  http://www.tompkinscountyny.gov/planning/housing-choices#

  The rental housing is also a source of financing for the road and infrastructure cost.

- **Why Townhouses Instead Of Single Family Homes?**

  Townhouses and attached homes are being built to make the homes more affordable and maximize the amount of green space. Attaching the homes lowers both the construction cost and the maintenance costs over the long term. Townhouses can actually look very similar to large single family homes by using good architectural details and high quality materials.

- **Who Will Own And Manage The Apartments?**

  INHS will own and manage them. There will be a site manager and a maintenance person dedicated to Hamilton Square on site during the week. There is 24 hour emergency maintenance. The apartments and buildings are inspected yearly by funders to ensure they remain high quality and well maintained. INHS management and maintenance staff ensure that the tenants take care of their homes with regular home visits.

- **Are The Apartments Subsidized?**

  The construction cost of the apartments is subsidized when they are built but the rent is not subsidized. By using local, state, and federal housing programs INHS reduces the amount of debt from conventional lenders. With less debt to pay we can keep the rents affordable.

  If they qualify, people who rent from INHS can use the federal Housing Choice Voucher program to pay part of their rent. INHS does not discriminate based on people's type of income. INHS does not control or administer these vouchers.

- **Have You Built Similar Projects Elsewhere?**

  Every project we build is unique, designed for the need and area. We have built projects ranging from 35 to 98 units. Some are all rental or all homeownership, some are family oriented or dedicated to seniors. Examples include single family homes, townhouses and mid-rise apartment buildings. Several of our housing complexes include community, recreation and education space to provide additional benefits residents and their neighbors.

  Hamilton Square is a combination of all we've learned to date about all of these things, a mixed rental/homeownership project made up of a 1-2 story buildings.

- **Is There Enough Capacity In The School District?**

  The Trumansburg School Superintendent has provided a letter that there is enough capacity. This letter will be included with our submission to the Planning Board.

Market Rate Lots

- **Who Will Live There?**

  These lots will be sold to anyone that wants to build a home there.

- **Who Will Own Them?**

  Whoever buys the lots will own them. Claudia Brenner will have no stake in them after the lots are sold. Until they are sold they are owned by Sundial Properties, a company set up by Claudia Brenner.

- **Who Will Maintain Them?**

Whoever buys the lots will maintain the lots and the homes built there. Until the lots are sold they are maintained by Sundial Properties, a company set up by Claudia Brenner.

- **How Many People Will Live There?**

  That depends on how large a home they build. The site concept shows the maximum number of units that a parcel could legally contain but it is expected that most lots will not have the maximum number.

- **What Are The Prices For The Market Rate Lots?**

  The prices are not set yet. Prices will be set once the plans are adopted by the Village and construction pricing for the site is finalized.

Affordable For Sale Homes

- **Who Will Live There?**

  INHS provides affordable homes for all kinds of first time homebuyers - families, single individuals, and couples; anyone who wants a well built, sustainable home. We have heard a desire for housing for seniors who may not be first time homebuyers; we are trying to find a way to make that possible.

- **Who Will Own Them?**

  The affordable for sale homes will be part of INHS's Community Housing Trust. Under the Trust, the homebuyer buys the structure and leases the land from INHS. INHS leases them the land with a renewable 99 year lease that gives the homebuyers virtually the same rights and responsibilities as a typical sale.

  In return for selling the homes at a below market affordable price, the homebuyers agree to eventually sell the home to a family who has about the same income as they did when they bought the home. And they also agree that the sales price of the home cannot rise more than 2% per year, the long term average in Tompkins County.

- **Who Will Maintain Them?**

  The homebuyers maintain the homes and grounds. INHS will maintain any common areas on the site.

- **What Types Of Jobs Will They Have?**

  Homebuyers who buy INHS homes work as school district aides and teachers, nurses and aides, college and university staff, non-profit organization staff, hospitality and restaurant staff, and construction workers. Most homebuyers work for small businesses around the county. Typical larger employers include Cayuga Medical Center, Cornell University, school districts, Wegmans, and Tompkins County.

- **Where Did They Live Before?**

  Our experience selling homes indicates that nearly everyone who buys a home already lives in Tompkins County.

- **How Many People Will Live There?**

  Tompkins County household sizes are smaller than average. Typically families contain 1-3 people per home.

- **How Many Seniors?**

  It is hard to say. Generally first time homebuyers are younger families starting out; the average age is about 40. We have heard a desire for housing preferentially for seniors; we are trying to find a way to make that possible.

- **Can The Homes Be Designated For Only Village Of Trumansburg Residents?**

  No. This violates federal, state, and local fair housing laws. However, INHS would heavily market the homes to the Village residents to be sure they have access to the housing.

- **What Are The Prices For The For Sale Homes?**

  It is still too early to say but typically INHS sells homes between $110,000 and $150,000.

- **How Much Do I Need To Earn To Afford A For Sale Home?**

  Typically our homes are sold to first time homebuyers earning between $30,000 and $65,000 a year. We are exploring broadening that income range.

Affordable Apartments

- **Who Will Live There?**

  We plan to provide quality, affordable homes for families, single individuals, couples, seniors, and people who have special needs such as handicapped accessible apartments.

- **What Types Of Jobs Will They Have?**

  Most tenants work for small businesses around the county or receive social security. Very few are on public assistance. INHS tenants work in the following fields: school district aides, certified nursing assistants, college and university staff, non-profit organization staff, restaurant wait and cook staff, and construction laborers. Typical larger employers are Cayuga Medical Center, Cornell University, Walmart, Racker Center, and Wegmans.

- **Where Did They Live Before?**

  Typically people want to live near where they live now and don't move far away. The majority of tenants who move into our apartments lived in the nearby community prior to applying. For example, 80% of the tenants or people on the waiting list for Juniper Manor are from Trumansburg or the immediate surrounding area.

- **How Many People Will Live There?**

  Based on other for sale/rental housing we have built, we expect a maximum of 188 residents – approximately 90 homeowners and 98 renters.

- **How Many Seniors?**

  It is hard to say. This is not a dedicated senior project like Juniper Manor but INHS houses many seniors. We know that there are seniors in Trumansburg who would like to downsize and have asked us when we might have apartments available. We have planned for many one bedroom apartment patio homes; many of these could be rented to seniors as they will be designed for people to age in place.

- **Can The Property Be Designated For Only Village Of Trumansburg Residents?**

  No. This violates federal, state, and local fair housing laws. However, INHS would heavily market the apartments to the Village residents to be sure they have access to the housing.

- **What Are The Rent Ranges?**

  The apartments are priced to be affordable to a range of people. Approximate rents are projected to be:

  One bedroom .....$300 to $775
  Two bedroom .....$650 to $975
  Three bedroom.....$800 to $1,160

  Note that these rents are based on incomes and family size and can change.

- **How Much Do I Need To Earn To Afford A Rental Apartment?**

  The apartments are priced to be affordable to a range of people. Approximate income ranges are projected to be:

  One bedroom ..... Between $21,960 and $48,000
  Two bedroom ..... Between $29,480 and $56,500
  Three bedroom..... Between $36,000 and $68,000

  Note that these rents are based on incomes and family size and can change.

Apartment Management

- **Who Will Manage The Apartments?**

  INHS will manage them. To maintain the properties properly and to have accountability we never hire third party property managers. Our property management staff work only for us. We do hire outside firms for lawn maintenance, snow removal, heating repairs, etc.

- **How Do You Screen Potential Tenants?**

  To qualify to live in one of our rental communities, we do criminal background checks, credit checks, income verification, landlord referrals, and home visits. If an applicant passes all of these, we sit down with them for an in-depth interview and they must agree to a lease that has been approved by our lenders.

- **Who Will Be On Site To Manage And Maintain The Properties?**

  A site manager and maintenance coordinator will be on site between 9:00AM and 5:00PM weekdays to oversee management and maintenance of the site.

- **What Is The Average Tenure Of People Who Rent From INHS?**

  The average tenure of INHS's tenants is about 5 years. The range is very wide though with over a fifth of tenants remaining over 10 years.

- **What Is The Average Age Of People Who Rent From INHS?**

  The average age of INHS tenants is about 50 years old. Near 40% of the tenants who rent from INHS are over 60 years old.

Location

- **Why Did You Select This Location?**

  Claudia Brenner, an architect we have worked with many times, asked INHS if we would be interested in working with her on a mixed-income, intergenerational neighborhood where people of all incomes and stages in life could live. INHS was excited about this site because it's within walkable distance to the schools, Main Street, and bus transportation.

- **Does The Village Code Allow This Type Of Project?**

  Yes. The project is designed to meet the Village's zoning laws and comprehensive plan.

- **Is There Public Water And Sewer?**

  Yes

- **Is There Adequate Gas And Electric?**

  We are not positive but believe so and are investigating with NYSEG. There have been areas of the County that do not have adequate gas capacity. If that is the case here then we would design heating/cooling systems that are all electric (heat pumps, never electric strip heat).

- **Will There Be Sidewalks To The Site?**

  There will be sidewalks on site as well as walking paths that connect the site to the new sidewalk the Village plans to construct on South Street.

Traffic and Parking

- **How Many Parking Spaces Are Required?**

  Village zoning requires two spaces per housing unit and 12 for the community building.

- **How Many Cars Do You Expect At The Site?**

  We expect an average of 1 to 1.5 cars per home/apartment. This is based on car ownership at our other properties. Given the current size of the project we are estimating roughly 110 cars.

- **Is There A Traffic Study?**

  Yes, we commissioned a traffic engineer, SRF, to do traffic counts at key nearby intersections, at both peak and non-peak times of day. The counts were collected during the first week of May 2017. This study will be submitted with our full Site Plan Application.

- **Does The Traffic Study Require Any Improvement To Existing Roads Or Intersections?**

  No, it does not recommend any changes to the existing road or intersections. However, we have heard concern from residents regarding the pedestrian use of South St and are reviewing that with SRF.

Drainage

- **Do You Know That The Site Is Wet And Neighbors Need Sump Pumps?**

  We are well aware of this. We have conducted soil borings and analysis to get more specific information. The civil engineers are responsible for providing full drainage plans to the Village for their approval. The plans and reports will be submitted with the full Site Plan Application.

- **Who Oversees Drainage Issues?**

  Projects are required to get permits from the NYS Department of Environmental Conservation (DEC).

- **What Is Required By Law?**

  That the water runoff that already happens is not increased or fundamentally changed as a result of this project.

- **What If There Are Wetlands On The Site?**

  These either need to be avoided or a permit must be obtained in order to move or remove them. We have found wetlands on the site and have moved the buildings and roads/sidewalks to avoid them.

- **Will The Drainage Basins Hold Standing Water?**

  Generally no but they are expected and designed to hold water after large rain events. After the rain has subsided the water will slowly drain into the ground over 24 hours. Depending on the design of the basins, fences may or may not be required - some basins are barely noticeable dips, while others are deeper.

Property Taxes

- **How Will The Project Be Assessed For Property Taxes?**

  It's complicated. The project has three separate housing types/options, each of which is assessed and taxed differently:

  Market Rate Homes

  These will be assessed and taxed at full market value as determined by Tompkins County Assessment.

  Affordable Rental Units

  These are assessed under the NYS Real Property Tax law 581a, a law which basically says that affordable housing portfolios are to be assessed based on the income they generate not the income they could theoretically generate if they were market rate.

  Compared to the land that is vacant today these units will pay considerably more in annual taxes to the Village, County and School District. We will ask the TC Assessment Department for an estimate based on our current budgets prior to our July application.

  Affordable for Sale Homes

  The homes would be part of INHS's Community Housing Trust which makes them permanently affordable to families of modest income. INHS builds these homes for around $250,000 but sells them to the homeowner for around $110,000-$150,000. The County assesses them at their full market value even though they cannot be sold for that amount because they are part of the Housing Trust which caps their resale price to keep them affordable. This makes it very difficult for a low-moderate income homebuyer to afford the taxes.

  To correct this discrepancy between Assessed Value and Actual Resale Value, the NYS legislature passed a law (Real Property Tax law 467-J) allowing a tax exemption for Tompkins County Housing Trusts so that homes in the Trusts can be taxed at their Actual Resale Value.

  The difference between this law (467-J) and the rental law (581A) is that each local taxing jurisdiction has to adopt the exemption; so far Tompkins County, Ithaca City Schools, Town of Ithaca, and City of Ithaca have all adopted it. We plan on applying to the Trumansburg jurisdictions for the exemption.

- **What Control Does The Village Or School Board Have Over Property Taxes The Project Pays?**

  For the affordable for-sale housing the Village and School Board must "opt-in" to have these homes taxed at a reduced rate. The rental housing assessments are determined by state law and cannot be changed.

- **If, as in an example presented by INHS in an earlier meeting, the intent is to build homes valued at a market-rate of $250,000 - $260,000, and sell them to qualified buyers for $160,000, why not just build a $160,000 home instead and eliminate the need for a subsidy and tax exemptions?**

  INHS has not found a way to build decent, building code compliant homes for $160,000. If it was possible to do this, builders would build them like mad and they would be snapped up like hot cakes throughout the county. It is even getting hard to find good quality existing houses in Tompkins County that sell for $160,000. Typically houses at this price point are old, not energy efficient and in need of substantial repair.

- **How Much Will The Project Pay In Property Taxes And Fees?**

  The final amount will depend on the final approved project. Our current best estimate is this:

Type of Housing	Units	per Unit Avg. Assessed Value	Total Value	Village Taxes	School Taxes	Total Taxes
Market FS	15	$300,000	$4,500,000	$31,425	$82,152	$113,577
Rental	47	$17,554	$825,038	$5,761	$15,062	$20,823
Afford FS	11	$125,000	$1,375,000	$9,602	$25,102	$34,704
	73		$6,700,038	$46,788	$122,317	$169,105

  There will be approximately $50-60,000 in yearly water and sewer fees paid as well.

Architecture

- **What Will The Homes Look Like?**

  The project plans to design homes that are similar to houses in the Village with porches and a variety of roof and siding types.

- **How Many Stories Will They Be?**

  The homes will be a mix of one and two story.

- **How Tall Will They Be?**

  The tallest buildings will be around 25 - 30 feet.

- **Can There Be Any Single Family Homes?**

  Yes, individuals can purchase market rate lots from Claudia Brenner and build single family homes.

- **How Do The Proposed Units Address The Need Of Allowing Current Senior Members Of The Trumansburg Community To Down-Size And "Age In Place"?**

  All of the affordable homes and apartments will use universal design practices and be visitable on the first floor; a number of the apartments will be fully adapted for use for people with mobility issues. Universal design elements typically include:

  - Wider doorways for wheelchair access
  - Lever handles on all doors
  - No threshold at the front entrance
  - Larger than normal half bathrooms on the first floor

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Ithaca Voice shared a link
July 14 at 2:43pm

Trumansburg residents on affordable housing project: 'Have you asked us outright if we want this?'

"It's really scary when something new comes in, but I just want people to try and be open minded."

ITHACAVOICE.COM

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Top Comments

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[redacted] I'm over townships approving low income housing complexes everywhere just because more welfare means more state aide. Why are low income citizens our problem? I never told anyone to have 6 kids or make McDonald's a career path. Back in the day fast food and gas station jobs were starter jobs for teens to build work experience. Then again back in the day kids weren't having kids as much as now.

Like · Reply · 3 · July 14 at 4:25pm · Edited

Hide 11 Replies

[redacted] Wait you were a teenager with a starter job in 2011 AND you can reminisce and being "back in the day".

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Like Reply 10 July 14 at 5:06pm

[redacted] What? Sprint has coverage in T-burg??? 😲
Like Reply 2 July 14 at 5:17pm Edited

[redacted] Haha I'm not fancy enough to live in tburg Frankie.
Like Reply July 14 at 5:19pm

[redacted] Low income people are not always on welfare, or working at McDonalds, or have six kids. In fact some low income people may have taught you when you were a student at TC3 (adjunct instructors comprise a large portion of the instructors there, many of whom are low-income due to a limit on the number of credit hours we can teach each semester; and the lack of health care offered).
Like Reply 27 July 14 at 5:46pm

[redacted] If you disagree with low income housing, where do you suggest low income people live?
Like Reply 12 July 14 at 8:28pm

[redacted] what about the family of 4 or 5 that earns between 70 and 90k that would qualify 2 become a first time home owners don't they deserve a opoortunity t yo have affordable hpusing
Like Reply 5 July 15 at 1:01am

[redacted] Actually teen pregnancy is @ the lowest level ever due mostly to improvements in contraceptive technology.
Like Reply 5 July 15 at 7:09am

[redacted] We lived in affordable housing for 2.5 years. it was very hard to get in. And the income limit was 69k for a family of 4. My husband was able to bike to work instead of hours commuting. Now we own a home in Tburg.
Like Reply 3 July 15 at 8:44am

[redacted] Oh snap! I forgot: and the ACA
Like Reply July 15 at 8:45am

[redacted] LIHTC programs are for those who are under the Area Median Income. Housing is super expensive there, and many in good jobs do not make a liveable wage, especially in T-Burg.
Like Reply July 15 at 2:23pm

[redacted] Also, affordable housing might make welfare a little less necessary. Don't we all deserve to be able to afford

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in good jobs do not make a liveable wage, especially in T-Burg.
Like · Reply · July 15 at 2:23pm

[redacted] Also, affordable housing might make welfare a little less necessary. Don't we all deserve to be able to afford to have a place to live?
Like · Reply · 1 · July 17 at 11:53am

Write a reply...

[redacted] It will change the burg forever. Look at Dryden, it has already changed its flavor by adding this type of housing.
Like · Reply · 2 · July 14 at 3:33pm

Hide 12 Replies

[redacted] Yeah man. I live on spencer road in Ithaca and when they put those stone quarry apartments in it completely changed the block....it'll never be the same...we now have a side walk.
Like · Reply · 28 · July 14 at 3:40pm · Edited

[redacted] I drive by those Dryden apartments every day on my way to work and I see children waiting for the bus and living in new housing and I'm happy for them. Seems a lot of people in opposition are dehumanizing and fearing contact with low income people and it's not pretty. Tburg.
Like · Reply · 24 · July 14 at 5:10pm

[redacted] My family has lived in T-burg for generations and your assumption we don't want affordable housing is incorrect. We already have affordable housing apartments here. We are concerned about the number of units going on such a small piece of land and people are also asking questions about how it will be managed. I don't think asking reasonable questions is unreasonable.
Like · Reply · 12 · July 14 at 5:30pm · Edited

[redacted] I agree. [redacted] I was only referring to what I read here in the comments from locals defending their "anti" stance.
Like · Reply · 1 · July 14 at 6:45pm

[redacted] Small piece of land??
Like · Reply · 2 · July 14 at 8:30pm

[redacted] One thing people don't think about is most 'affordable housing' apts that we have in rural areas currently are "trash" with mold, etc. Quality new build housing is important for children.
Like · Reply · 7 · July 14 at 8:54pm

[redacted] You people need to get out in the REAL world once in awhile, and quit living in your fantasy land.

Look at new York State. Thank the liberals. Time for the 3 Percenters to wake up!
Like · Reply · 1 · July 15 at 12:20pm

[redacted] Yes, compared to the number of units, many believe it's too big for the area. When you choose to live a more rural life the hole idea is not to have people piled on top of each other like in

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[redacted] Yes, compared to the number of units, many believe it's too big for the area. When you choose to live a more rural life the hole idea is not to have people piled on top of each other like in the city. My idea and your idea of small is probably very different compared to our individual perspectives.
Like · Reply · July 15 at 12:45pm

[redacted] what you don't see is most of the residents there weren't even from Dryden. A lot of them came from Syracuse. The police are there weekly, and there has been a bunch of drug busts. I'm all for low income housing if it help the people in my neighborhood.
Like · Reply · July 15 at 5:24pm

[redacted] Those apartments in Dryden are NOT low income housing! I looked into it!
Like · Reply · July 15 at 11:02pm

[redacted] That's the thing, [redacted], low income people don't have access to your neighborhood without assistance of the kind this housing potentially would make available. Thus, you would expect to have new neighbors from other places, ones you haven't met yet but who will potentially bring something new your burg.
Like · Reply · July 16 at 7:40pm

[redacted] "flavor", huh?
Like · Reply · July 19 at 5:48pm

Write a reply...

[redacted] This is the thing: I am an Ithaca resident. I don't get to decide on everything Ithaca does because of that. Does buying in TBurg give you a voting spot on some TBurg land use board? No. If you don't own land besides your own, you don't get to decide how it is used, unless you can demonstrate that it will impact the use of your land. I am just over people who own a parcel thinking they own a whole Burg.
Like · Reply · 36 · July 14 at 3:01pm

[redacted] It's called preserving the community
Like · Reply · 5 · July 14 at 3:11pm

[redacted] Much racism & classism falls under the heading 'preserving the community' & you know that. I think the 'TBurg Way of Life' is being oversold. When I was a young adult in this community if you had said the 'TBurg Way of Life' to me, I would have guessed you meant nose candy. 😉
Like · Reply · 38 · July 14 at 3:13pm

[redacted] Actually if you own land next to the proposed property...it does give you the right to involve yourself. Its called the SEQRA process. May want to look into that.
Like · Reply · July 14 at 9:53pm · Edited

[redacted] http://www.dec.ny.gov/permits/357.html
This involves environmental impact. I take that to mean water, soil, birds, fish

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Like · Reply · July 14 at 9:53pm · Edited

[redacted] http://www.dec.ny.gov/permits/357.html

This involves environmental impact. I take that to mean water, soil, birds, fish.

> **SEQR**
>
> In New York State, most projects or activities proposed by a state agency or unit of local government, and all discretionary approvals (permits) from a NYS agency or unit of local government, require an environmental impact assessment as prescribed by the NYS Environmental Quality Review Act (SEQR).
>
> DEC.NY.GOV

Like · Reply · 1 · July 15 at 7:03am · Edited

[redacted] they pay way more than the lions share of taxes but lets under represent them.....

Like · Reply · July 15 at 2:02pm

[redacted] Write a reply...

[redacted] What translates as I read the complainers: Poor people are gross criminals! The purity of our children will be sullied! Our town will be mired in the filth of freeloading disabled residents! Anyone who wants affordable housing is obviously degenerate, disgusting, and devilish!

...there are concerns one can have for land development or housing projects. These complainers are severely paranoid, xenophobic, and selfish. At the very least, that's how it sounds in the article and other stories around this affordable housing project.

Like · Reply · 20 · July 14 at 5:16pm

[redacted] Well, how people are interpreting it certainly is incorrect.

Like · Reply · 2 · July 14 at 5:31pm

[redacted] As a member of the T-burg community, I respectfully disagree.

Like · Reply · 1 · July 14 at 7:18pm

[redacted] As a village occupant, who owns her own home, I also respectfully disagree [redacted]

Like · Reply · July 14 at 8:56pm

[redacted] Wow. That was a mouthful wasnt it.

Like · Reply · July 14 at 9:23pm

[redacted] I know and I disagree also.

Like · Reply · July 15 at 7:32am

[redacted] After some of the comments I read, I'm going to agree

Like · Reply · July 19 at 5:49am

[redacted] Write a reply...

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agree
Like · Reply · July 19 at 5:49am

Write a reply...

[redacted] Lol they used the "they'll take our job" defense.
We are now afraid of other Americans coming to the town we live in and get a job 😂 man this area never stops amazing me.
Like · Reply · 14 · July 14 at 3:16pm

[redacted] Especially considering how many T-burg residents commute to a job in Ithaca.
Like · Reply · 7 · July 14 at 3:41pm

[redacted] I also find it funny that they jump right to the negative. Hey maybe more people will make it possible for businesses to expand. And new ones to start.
Like · Reply · 7 · July 14 at 4:09pm · Edited

[redacted] Exactly!
Like · Reply · July 14 at 7:47pm

Write a reply...

[redacted] They don't care. You are discriminating if you don't want this. They will turn it around on you to make it look like you don't care for the less fortunate. That's what liberals do.

We decide to buy or build based on a nice area. Then they decide to put these places in our area knowing full well that the statistics aren't kind. This forces values of property down, therefore making it hard to sell and move out. These liberals have no clue. Ban liberalism.
Like · Reply · July 14 at 10:17pm · Edited

[redacted] Texas, here you come, [redacted] 😉
Like · Reply · 2 · July 14 at 10:52pm

[redacted] Except is it hard to sell your house DownTown Ithaca? No, it isn't, houses there go for cash most often & for above asking price.
Like · Reply · 2 · July 15 at 7:13am

[redacted] You won't kick me out!
Like · Reply · July 15 at 12:16pm

[redacted] Ithaca property has always done that. Rural areas see totally different. Smh
Like · Reply · July 15 at 12:54pm

Write a reply...

[redacted] I didnt read ANY of the stuff you people are saying in that article, no one said they didnt want low income people there because of their economic position, they said the housing and the amount of people would impact the look and feel of the community. They said extra traffic would impact the safety of children walking to school, it says they are doing a traffic study. I think at least they are more affordable than trying to live in Ithaca, where for

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Like Reply July 15 at 12:54am

Write a reply...

[redacted] I didnt read ANY of the stuff you people are saying in that article, no one said they didnt want low income people there because of their economic position, they said the housing and the amount of people would impact the look and feel of the community. They said extra traffic would impact the safety of children walking to school, it says they are doing a traffic study. I think at least they are more affordable than trying to live in Ithaca, where for instance the new construction plans for East Hill Plaza are going to be outrageously priced rental and condo units, they really do have to build affordable housing, and Ithaca is apparently not the place. So they are reaching out to outlying areas, like Trumansburg and Lansing, although Lansing is not that affordable, in my opinion. This is all just my opinion. I don't want a housing development in my backyard either, that's why I own that land around me.

Like Reply 2 July 14 at 8:57pm

[redacted] From what i have found unless its subsidized, what the county considers affordable is far from it. They are not in touch with the fact many work at the top largest employers in the county and still make below the living wage. This is not a housing issue it a living wage issue.

Like Reply July 15 at 6:33am Edited

[redacted] It is both. People who make disappointing salaries @ local employers sometimes try to cover the difference by owning outrageously priced rentals. The prices on rental units in Ithaca & surrounding rival NYC & we are nothing like NYC in terms of economic potential.

Like Reply July 15 at 7:12am

[redacted] They'll turn it around on you saying you're against the poor. Community lifestyle is important when raising kids. Liberals wouldn't understand. They'll raise them or abort them, whichever is more convenient.

Like Reply July 15 at 12:24pm

Write a reply...

[redacted] These comments crack me up. Talk about judgement by people who dont truly even have an understanding of the situation. These non residents who feel they can read into things that were not said nor written and pass condemnation. This maybe why Ithaca is Ithaca and Trumansburg is Trumansburg over the decades

Like Reply 4 July 14 at 9:52pm Edited

[redacted] Enlighten us!

Like Reply 2 July 14 at 10:53pm

[redacted] The point being how people feel they can ridicule and judge others without proper knowledge or insight. We should let the people who this impacts in their town handle as they feel they need to. The rest should just stay peaceful

Like Reply July 15 at 4:10pm

[redacted] Maybe it does impact me? Maybe I'm a low-income

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[redacted] Maybe it does impact me? Maybe I'm a low-income minority and a single mom who's been priced and classed right out of decent housing in Ithaca and Tburg. Come on, Tburg is a tad too cozy and smug to be immune to a bit of chiding, judgement and ridicule over a little NIMBY hypocrisy.
Like · Reply · July 15 at 10:43pm

[redacted] Write a reply...

[redacted] Don't fret Trumansburg homies. The new neighbor isn't going to jack your Prius. Wow.
Like · Reply · 6 · July 14 at 7:34pm

[redacted] Hmm interesting.... not to many Prius cars in Trumansburg.
Like · Reply · 1 · July 14 at 9:45pm

[redacted] Wow trump voters live in tburg? Might as well say we don't want any low in come non whites moving in our. Neighborhood.
Like · Reply · 2 · July 15 at 1:38am

[redacted] That's exactly what it sounds like to me. El Ps.
Like · Reply · 1 · July 15 at 9:08am

[redacted] Purely illustrative [redacted] Volvo's, ' Subes, or Trump-stickered Dodge Rams are equally suitable in this case. T-burg's clique of "not in my backyard" naysayers make strange bedfellows indeed.
Like · Reply · 3 · July 15 at 9:46am

[redacted] People need to stop thinking "west village " when it comes to that type of housing. Other places downtown are nice safe and full with huge wait list.
Like · Reply · 2 · July 15 at 2:48pm

[redacted] Write a reply...

[redacted] Leasing rules that prohibit firearm ownership? That's crazy
Like · Reply · 3 · July 14 at 2:51pm

Hide 15 Replies

[redacted] Second amendment
Like · Reply · 1 · July 14 at 3:12pm

[redacted] Liberals don't have to follow the rules, didn't you get the memo? LOL.
Like · Reply · 1 · July 14 at 3:18pm

[redacted] So let me follow: it is okay to rent to low income residents as long as they are armed?
Like · Reply · 3 · July 14 at 3:19pm

[redacted]

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Like Reply 1 July 14 at 3:18pm

[redacted] So let me follow: it is okay to rent to low income residents as long as they are armed?
Like Reply 3 July 14 at 3:19pm

[redacted]

Like Reply 1 July 14 at 3:20pm

[redacted] I think what he's getting at is no landlord should be able to tell someone they can't be armed if they legally are allowed. It's violating their 2nd amendment rights
Like Reply July 14 at 3:57pm

[redacted] It's not actually. They have the choice to not agree and not move in...the landlord would in no way be violating anything.
Like Reply 4 July 14 at 3:58pm

[redacted] That's like having a free speech zone
Like Reply July 14 at 4:13pm

[redacted] A land owner has the legal right to ban guns from the property as long as it is on the lease when signed. http://www.allpropertymanagement.com/.../can-landlords.../

Can Landlords Limit Their Tenants' Right to Bear Arms? APM
By Tracey March Every day in our country...
ALLPROPERTYMANAGEMENT.COM

Like Reply 5 July 14 at 4:17pm

[redacted] the second amendment is contract between government and citizen - a lease is a private contract
Like Reply 1 July 14 at 4:54pm

[redacted] of course, if the housing is subsidized, that could complicate things
Like Reply July 14 at 4:56pm

[redacted] It is like tobacco. It isn't illegal to smoke but you can't do it in most housing anymore.

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[redacted] Sect 8 housing lease says no firearms are allowed, per the HUD/fed gov regulations.
Like Reply 2 July 14 at 7:11pm

[redacted] What about the 2 ND amendment, you have to give up your constitutional rights , what about free speech is that aloud here .maybe not
Like Reply July 14 at 7:52pm

[redacted] What I was getting at is why should it matter if they own guns? What if they like to hunt, That means they can't live there?
Like Reply 1 July 14 at 9:55pm

[redacted] They can live there. Will just have to store the guns elsewhere.
Like Reply July 15 at 2:06am

[redacted] Write a reply

[redacted] their are people who are hard working that would prefer to purchase affordable housing like this in small towns like tburg instead of Ithaca for various reasons we live in a county that claims to be liberal and progressive until it's in their back yard
Like Reply 23 July 14 at 3:32pm

[redacted] I was there. I was there ostensibly to listen and learn. I learned more about my "village-mates" than I wanted to and, due to the rudeness of so many of them, I had a hard time learning about the project. Maybe next time we all meet together, those of us who were quiet yesterday MIGHT get a chance to make OUR comments?
Like Reply 6 July 14 at 9:12pm

[redacted] I am so sorry to hear that. I was not able to make it.
Like Reply July 14 at 10:08pm

[redacted] Write a reply

[redacted] Ithaca Voice- The first paragraph of this article implies that all those in attendance were opposed to the project, no? That is not the case. I hate to nitpick, but it really skews the article in my opinion. This meeting was billed as an informational session, and some attended simply to learn more about the project.
Like Reply 5 July 14 at 4:58pm

[redacted] That said, I submit this feedback respectfully. I realize that you are a person behind the "Ithaca Voice" label and this was just something that struck me upon reading. 🙂
Like Reply July 14 at 5:06pm Edited

[redacted] Definitely just as many neutral or favorable to the idea as opposed. Unfortunately not many of us were called upon to speak. Also, fun fact: the author of this article did not include the fact that she literally had to chase Mr. Garner out of the building in order to get his name. He shouted at the INHS people because they had hurt his feelings by neglecting to acknowledge the street he lives on is the oldest in T-burg (South Street Pride!) and that his family had been there

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Like Reply · July 14 at 5:06pm · Edited

[redacted] Definitely just as many neutral or favorable to the idea as opposed. Unfortunately not many of us were called upon to speak. Also, fun fact: the author of this article did not include the fact that she literally had to chase Mr. Garner out of the building in order to get his name. He shouted at the INHS people because they had hurt his feelings by neglecting to acknowledge the street he lives on is the oldest in T-burg (South Street Pride!) and that his family had been there for generations (right after Sullivan's army drove out all the native people, of course). When we was finished, he stormed out of the building like a toddler throwing a temper tantrum. He wasn't there to listen. It was shameful and childish.

Like Reply · July 14 at 7:57pm

Write a reply...

[redacted] This reminds me,for so many reasons, of that scene in "Blazing Saddles" where the townsfolk have a meeting to voice complaints about their new sheriff being a black man.

Like Reply 8 July 14 at 3:49pm

[redacted] How 'bout some more beans, Mr. Taggart? 😉

Like Reply July 14 at 5:21pm

Write a reply...

[redacted] I'm super glad my fellow burgians have the honor of owning their own homes, but I think you guys should take a quick trip to CL and check out availability and prices of places IN Trumansburg. THEN tell me, as a single income family of three, that it's realistically affordable. Don't forget bills, and the ability to save something from your paycheck!

Like Reply 2 July 16 at 2:05am

[redacted] Shoot. I dare you to find something for a single person that's of decent quality.

Like Reply 2 July 16 at 2:07am

Write a reply...

[redacted] Wow I thought the people of trumansburg were better than this. I guess it's a real not in my backyard kind of town so long as they don't have to see the low income people it's okay but god forbid they have to see anyone who is poor living in the village... Way to go. It's no wonder those property taxes are so high

Like Reply 7 July 14 at 4:02pm

[redacted] Oh no...we can't have poor folk livin' in our community. The next thing you know, they'll develop a sense of self-respect and accomplishment. We can't have that. 😉

Like Reply 5 July 14 at 8:31pm

[redacted] I continue to be appalled by some of the rhetoric I hear and read in opposition to the Hamilton Square project. It's okay to dislike and debate the concept, but again and again I hear the same language employed that was

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Like Reply 5 July 14 at 5:31pm

[redacted] continue to be appalled by some of the rhetoric I hear and read in opposition to the Hamilton Square project. It's okay to dislike and debate the concept, but again and again I hear the same language employed that was once trotted out by White Citizens Leagues in the 1950's and '60's opposing integrated communities. I'd like to think that not what those who oppose Hamilton Square are all about. This is an exercise in "opportunity." Why shouldn't low income families have the same chance at opportunity as everybody else? The notion that somehow adults young or older working in low wage jobs are "undeserving" is ridiculous. A bit of history. Once upon a time the empty large white house and farm that most of us in Trumansburg see every day traveling on Rt 96 and passing the intersection with Perry City Road was the Tompkins County Poor House. And if you've been in the county for a couple hundred years, as my mother's family has been – there are more than a few stories of ancestors and relatives who lived in the poor house after losing farms, or jobs, or business, or after the death of a father or mother. Eventually those families moved on, finding affordable housing and new jobs and new chances. Hamilton Square isn't the poor house. Hamilton Square is that new opportunity. Understanding affordable housing and the role it plays in economic growth is important. Don't even think about opposing a project like this if you can't be bothered to do some research and read a book like Matthew Desmond's EVICTED, a 2016 study of housing economics and poverty. Hamilton Square isn't just for those in poverty – as we imagine poverty. Part of what makes Tompkins County work is the wealth of non-profit agencies. Many employees of non-profits, many teachers, many people working in the arts would qualify for income based rentals at Hamilton Square. Are those of you in opposition really suggesting that your kid's or grandkid's teacher should be your neighbor, shouldn't live in our village? If that's the case maybe we should double our taxes and pay newly minted teachers fresh from university twice as much money... My point is that there are always trade-offs. Now let's get real... So long as a project like Hamilton Square meets zoning and environmental requirements at least some of the overt opposition to the project might clearly be seen as disqualified by laws like the Fair Housing Act. You can't just say Not In My Back Yard because you dislike people who economically distressed, because you dislike minorities or because you assume that crime will come with it – with no evidence to justify that fear. Look at your own families. Do you have a relative who works hard but lives in poverty? Do you have children just out of college with student debt and a job in a coffee shop? Do you have a family member on disability? Do you have a son or daughter recently divorced with children? Maybe a favorite cousin who could earn more elsewhere but chooses to work as a police officer in a small village because it's "home" and they love the community. Because your opposition potentially hurts all of those people too.

Like Reply 5 July 15 at 10:10am

[redacted] One question I didn't happen to see. Is anyone asking the village board if they can handle the large influx. Water. Sewer. DPW workloads. Stress to EMS and Fire and of course police coverage with the increase of people. Simple things like lighting on the walkways, water mains big enough, ambient lighting concerns at night, property values around the penn ave section of town.

Like Reply 2 July 15 at 7:49pm

[redacted] This makes me less proud to say I'm from T-Burg. When I grew up there I learned to care for all, regardless of socioeconomic

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[redacted] This makes me less proud to say I'm from T-Burg. When I grew up there I learned to care for all, regardless of socioeconomic status or other identifier. Accept all. I'm shocked at the NIMBY nature of these comments, specially when it's only 47 units. Reeks of snobbishness.
Like · Reply · 3 · July 15 at 2:43pm

[redacted] Classism looks bad on you, t-burg
Like · Reply · 30 · July 14 at 3:19pm

[redacted] classism and snobbery are keystones of T-burg. gosh it has always been that way.
Like · Reply · 1 · July 14 at 8:50pm · Edited

[redacted] Write a reply...

[redacted] Tburg needs to get out of thier little square box need diversity. Quit being such snobs
Like · Reply · 7 · July 14 at 4:23pm

[redacted] NIMBY very sad T-burg. Now I know I will never buy there.
Like · Reply · 3 · July 15 at 8:31am · Edited

[redacted] Ithaca voice I did speak to you on the phone about this and if you want an update on my situation give me a call. They are trying to turn a decent person into a criminal, bye slandering my name around town
Like · Reply · July 14 at 2:51pm

[redacted] Insurance liability, nothing more. if I owned property you had better bet I'd want a smoke and fire arm free tennant... an no cats
Like · Reply · 2 · July 14 at 4:32pm

[redacted] Oh goodness the comments I read. Yall some rude people. I cannot wait until Our Lord comes.
Like · Reply · July 15 at 10:07am

[redacted] NIMBY.

News flash: housing shortage in Tompkins County
Like · Reply · 9 · July 14 at 4:19pm

[redacted] When "Snowflake" liberals discuss they do a melt down and never agree,
nor discuss.
In their minds they are right and everyone else
is a "Racist" or "Bigot"
But lets do the facts and I am sure some of you could care less.
An apartment building is right next to my house.
The owner built a parking lot and dumped it on my land
and the mayor said nothing and the code officer said "Prove It"
Odd, they did not need a permit, so I was told.
Then the owner took down my wooden fencing and left it to rot on the lawn.
why? Well, he wanted his tenants to walk across my lawn
to view my falls!
Now, no fencing, no lawn, and anyone when they feel like it walks every where.
including onto my deck and the mayor says, "It is not our problem!"
So "Snowflakes"
am I a "Bigot"?
Am I a "racist"?

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The owner built a parking lot and dumped it on my land
and the mayor said nothing and the code officer said "Prove It"
Odd, they did not need a permit, so I was told.
Then the owner took down my wooden fencing and left it to rot on the lawn.
why? Well, he wanted his tenants to walk across my lawn
to view my falls!
Now, no fencing, no lawn, and anyone when they feel like it walks every where,
including onto my deck and the mayor says, "It is not our problem!"
So "Snowflakes"
am I a "Bigot"?
Am I a "racist"?
Now how about the village and the adding of another water source.
odd, it was not an issue 10 or 20 years ago.
But oddly they need more water once the housing project got placed on the
"Planning Board" agenda...
Now "Snowflakes" am I racist when my waterbill doubles
because the village adds another water source that
mysteriously became an issue only after the talk of
getting public housing, odd isn't it?
They put out a survey as well,
but there are many reasons why people are angry
and one of them is the village, the mayor, seems to take property,
or have discussions that leave out neighboring propertie owners notification and
prevent them speaking out, thus the anger!
There is much more to this, but the mayor of Trumansburg is a Cornel retirery
and he could care less about anyone that he feels is beneath him.
They were taken to court once concerning failure to notify about a skating park
to deliberately prevent public opinion,
but he was not mayor yet, but slithered into mayorship
after the other mayor quit, for this present mayor was on the board and he said
nothing about the stunt!
Where was his complaint to the mayor about notification? Or was it his idea?
He just slithered in and said, "We are going to bring all housing up to code..."
Whose? Or is this the way to remove those who are beneath him?
You can take property if it is not up to code, hmmm?
There was a Main Street project 10 years ago. They replaced sidewalks and I
asked what was going to happen to mine.
I contacted the project designer, Paula Horigan and asked her.
Did she say anything about the sidewalk? "NO!"
She immediately told me,
"We are going to turn your house into a Bed&Breakfast!"
Hmmm, I thought I owned this house?

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I contacted the project designer, Paula Horigan and asked her.
Did she say anything about the sidewalk? "NO!"
She immediately told me,
"We are going to turn your house into a Bed&Breakfast!"
Hmmm, I thought I owned this house?
Paula Horigan teaches at Cornel, surprise surprise...
She even teaches "Sustaninable Projects"
That is not about green stuff, it is only, "ONLY" about
"Sustaining Government!"
Then the most recent code officer started to violate my house for code...
At the Town Level, look up Sheep Farmer fight against Town Of Ulysses and read it. This is how this skum bag of a mayor opereates and the town also follows; for the new code officer the village hired oddly also months later got hired by the town and he seems to tell even lawyers to show up despite the fact the judge had to tell him to cool it once; taken the judges authority away.
I wonder why he was hired?
A man who even violated his own parents code compliance!
Egotistical power hungry!
I was asked at Lows recently, "Has he asked for bribes yet?"
So, "Snowflakes" enjoy your melt down
if anyone dares question your right to step on property owners rights.
which do include peaceful pursuit to happiness:
governments seem to care less when they want something
that provides more tax revenue.
After all the village mayor gets $10000 a year to show up once a month, about $300 an hour, if not more.
But, like Ithaca, they spend $15 million for something they want, using tax payer money, but no one else wants.
They spend the money to give it a nicer look and just maybe that look will bring more people to see it.
Center Ithaca cost only $10 million to build.
My own daughter will not walk on the Commons now;
when a child she played on the playground that use to be outside Center Ithaca; she once enjoyed it there and had no fears of anyone!
There is "NO" playground there any more, I wonder why?
Could it be because of drug needles every where and bathrooms all over the Commons are now locked up now to prevent needles from being left in waste baskets???
So, we have a right to stop government take over!
For where the government goes, so does immorality!
Like · Reply · July 15 at 2:51am · Edited

[redacted] LOL...too funny
Like · Reply · July 14 at 11:10pm

[redacted] I hope they do it.
Like · Reply · July 14 at 11:11pm

[redacted] Ask about local labor ?
Like · Reply · 1 · July 14 at 4:23pm

Write a comment...

Ithaca Voice
July 14 at 1:56pm

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Exhibit Q

Traffic Impact Study

for the proposed

46 South Street
Mixed-Use Development

Village of Trumansburg
Tompkins County, New York

December 2017

Project No. 37021

Prepared For:

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LIST OF REFERENCES

1. Highway Capacity Manual. Transportation Research Board (TRB). The National Academies, Washington, DC. 2016.
2. Trip Generation, Ninth Edition. Institute of Transportation Engineers. Washington, DC. 2012.
3. New York State Department of Transportation Traffic Data Viewer. 2016. Retrieved from https://www.dot.ny.gov/tdv.

EXECUTIVE SUMMARY

OVERVIEW

The purpose of this report is to evaluate the potential traffic impacts associated with the proposed 46 South Street Mixed-Use Development in the Village of Trumansburg, Tompkins County, New York. Within this report, the operating characteristics of the proposed access drives and impacts to the adjacent roadway network are identified and mitigating measures, if needed, are provided to minimize capacity or safety concerns.

In an effort to define traffic impact, this analysis establishes existing traffic conditions, projects background traffic flow including area growth, and determines the traffic operations that would result from the proposed project.

The project site is bounded by undeveloped lands and some residential property to the north, residential properties and South Street to the east, undeveloped lands and some residential property to the south, and Pennsylvania Avenue and residential properties to the west. The site located at 46 South Street is currently undeveloped. Access to the project site will be provided via a new roadway with new intersections at both Pennsylvania Avenue and South Street. The study area includes the following existing intersections:

1. South Street/School House Lane
2. Pennsylvania Avenue/Halsey Street-Elm Street
3. South Street/Main Street (Route 96)
4. Rabbit Run Road/Main Street (Route 96)
5. South Street/Whig Street

The proposed project consists of:

- 40 Rental Apartments;
- Six (6) Affordable Rental Townhomes;
- Ten (10) Affordable For-Sale Townhomes;
- 17 Market Rate For-Sale Homes;
- Community Lounge (3,000 SF); and
- Nursery School (4,500 SF)

The Nursery School would provide one toddler and two pre-school classrooms with space for 12 toddlers and 36 pre-schoolers. The school will also provide both half-day programs and wrap-around care.

Access to the development will provided via two new roadway connections; one along South Street and the other along Pennsylvania Avenue.

Construction of the proposed project is anticipated to reach full build-out in approximately ten years depending on market conditions. The Village of Trumansburg was contacted to discuss any other specific developments that are currently approved or under construction that would generate additional traffic in the study area. No projects were identified.

A review of historical traffic volume data obtained from the NYSDOT within the study area indicates that traffic has decreased or remained stable between 2011 and 2014. To account for

normal increases in background traffic growth, including any unforeseen developments in the project study area, a growth rate of 0.25% per year has been applied to the existing traffic volumes.

CONCLUSIONS & RECOMMENDATIONS

This Traffic Impact Study identifies and evaluates the potential traffic impacts that can be expected from the proposed 46 South Street Mixed-Use Development in the Village of Trumansburg, Tompkins County, New York, as described in this study. The results of this study determine that the existing transportation network can adequately accommodate the projected traffic volumes and resulting impacts to study area intersections. The following sets forth the conclusions and recommendations based upon the results of the analyses:

1. The proposed project is expected to generate approximately 22 entering/49 exiting vehicle trips during the weekday AM peak hour and 57 entering/46 exiting vehicle trips during the PM peak hour.

2. All approaches to the study area intersections are projected to operate at an acceptable Level of Service "C" or better during the AM and PM peak hours under existing, background, and full development conditions.

3. The proposed new roadways shall be stop-controlled on their approaches to the adjacent roadways (South Street and Pennsylvania Avenue).

4. The available sight distance exceeds the desirable intersection sight distance and required stopping sight distance at the proposed new intersection locations along both South Street and Pennsylvania Ave.

5. The minor projected traffic impacts resulting from full development of the proposed project during both peak hours can be adequately accommodated by the existing transportation network.

6. No significant adverse traffic related impacts are anticipated and no mitigation is recommended.

I. INTRODUCTION

The purpose of this report is to evaluate the potential traffic impacts associated with the proposed 46 South Street Mixed-Use Development in the Village of Trumansburg, Tompkins County, New York. Within this report, the operating characteristics of the proposed access drives and impacts to the adjacent roadway network are identified and mitigating measures, if needed, are provided to minimize capacity or safety concerns.

In an effort to define traffic impact, this analysis establishes existing traffic conditions, projects background traffic flow including area growth, and determines the traffic operations that would result from the proposed project.

II. LOCATION

The project site is bounded by undeveloped lands and some residential property to the north, residential properties and South Street to the east, undeveloped lands and some residential property to the south, and Pennsylvania Avenue and residential properties to the west. The sites are currently undeveloped. The study area includes the following existing intersections:

1. South Street/School House Lane
2. Pennsylvania Avenue/Halsey Street-Elm Street
3. South Street/Main Street (Route 96)
4. Rabbit Run Road/Main Street (Route 96)
5. South Street/Whig Street

The site location and study area are illustrated in **Figure 1** (all Figures are included at the end of this report).

III. EXISTING HIGHWAY SYSTEM

The following information outlined in **Table 1** provides a description of the existing roadway network within project study area. **Figure 2** illustrates the lane geometry at each of the study intersections and the Annual Average Daily Traffic (AADT) volumes on the study roadways.

TABLE 1
EXISTING HIGHWAY SYSTEM

ROADWAY	CLASS[1]	JURISDICTION[2]	SPEED LIMIT (MPH)[3]	NUMBER OF TRAVEL LANES[4]	TRAVEL PATTERN	TRAVEL DIRECTION	EST. AADT[5]	AADT SOURCE[6]
Main Street (NYS Route 96)	Minor Arterial	NYSDOT	30/45	2	Two-way	East-West	8,447	NYSDOT (2014)
South Street (CR136)	Local Roadway	TCHD	30	2	Two-way	North-South	940	SRF (2017)
Pennsylvania Avenue	Local Roadway	TDPW	30	2	Two-way	North-South	360	SRF (2017)
Rabbit Run Road	Local Roadway	TDPW	55	2	Two-way	East-West	340	SRF (2017)
Whig Street	Local Roadway	TDPW	30	2	Two-way	East-West	1,900	SRF (2017)

Notes:

1. State Functional Classification of Roadway, all are Rural
2. "NYSDOT" = New York State Department of Transportation; "TCHD" = Tompkins County Highway Department; "TDPW"=Village of Trumansburg Department of Public Works"
3. Posted or Statewide Limit in Miles per Hour (MPH)
4. Excludes turning/auxiliary lanes developed at intersections
5. Estimated AADT in Vehicles per Day (vpd)
6. Source (Year); SRF = Estimated ADT extrapolated from Turning Movement Counts performed by SRF in 2017

IV. EXISTING TRAFFIC CONDITIONS

A. Peak Intervals for Analysis

Given the functional characteristics of the corridors, adjacent land uses, and the proposed land use for the project site (residential and nursery school), the peak hours selected for analysis are the weekday commuter AM and PM peak periods.

B. Existing Traffic Volume Data

Turning movement traffic counts were collected on Tuesday, June 6, 2017 by SRF & Associates (SRF) at the study area intersections described in *Section II*. Traffic counts were conducted on a weekday between 7:00-9:00 AM and 4:00-6:00 PM. The peak hour traffic periods for each study intersection are noted in **Table II**.

TABLE II
STUDY INTERSECTION PEAK HOURS

INTERSECTION	AM PEAK HOUR	PM PEAK HOUR
South St/School House Ln	7:15-8:15	4:00-5:00
Pennsylvania Ave/Halsey St-Elm St	7:00-8:00	4:15-5:15
South St/Main St (Route 96)	7:15-8:15	4:45-5:45
Rabbit Run Rd/Main Street (Route 96)	7:00-8:00	4:15-5:15
South St/Whig Street	7:15-8:15	4:30-5:30

All turning movement count data was collected on a typical weekday and no adverse weather conditions impacted the traffic counts. The traffic volumes were reviewed to confirm the accuracy and relative balance of the collective traffic counts. For the purposes of this analysis, the data are utilized with the actual peak hours at each individual intersection. Using the actual peaks at each intersection provides a worst-case scenario when adding project related traffic. The actual differences in traffic volumes can be attributed to temporal variations in traffic volumes (indicated, in part, in Table II) as well as activity related to driveways located in the segments between the study intersections. The 2017 existing weekday AM and PM peak hour volumes are reflected in **Figure 3**.

C. *Field Observations*

The study intersections were observed during both peak intervals to assess current traffic operations. This information was used to support and/or calibrate capacity analysis models described in detail later in this report.

V. FUTURE AREA DEVELOPMENT AND LOCAL GROWTH

Construction of the proposed project is anticipated to reach full build-out in approximately ten years depending on market conditions. The Village of Trumansburg was contacted to discuss any other specific developments that are currently approved or under construction that would generate additional traffic in the study area. No projects were identified.

A review of historical traffic volume data obtained from the NYSDOT within the study area indicates that traffic has decreased or remained stable between 2011 and 2014. To account for normal increases in background traffic growth, including any unforeseen developments in the project study area, a growth rate of 0.25% per year has been applied to the existing traffic volumes. Future background traffic volumes are shown in **Figure 4**.

VI. PROPOSED DEVELOPMENT

A. *Description*

The proposed project consists of:

- 40 Rental Apartments;
- Six (6) Affordable Rental Townhomes;
- Ten (10) Affordable For-Sale Townhomes;
- 17 Market Rate For-Sale Homes;
- Community Lounge (3,000 SF); and
- Nursery School (4,500 SF)

The Nursery School would provide one toddler and two pre-school classrooms with space for 12 toddlers and 36 pre-schoolers. The school will also provide both half-day programs and wrap-around care.

Access to the development is provided via two new roadway connections; one along South Street and the other along Pennsylvania Avenue.

B. *Site Traffic*

The next step in the evaluation is to determine the additional traffic attributable to the project as defined, vehicle trips entering and exiting the site. The Trip Generation, 9th Edition as published by the Institute of Transportation Engineers (ITE) was used as a reference for obtaining this information. The trip rate for the peak hour of the generator may or may not coincide in time or volume with the trip rate for the peak hour of adjacent street traffic. Volumes generated during the peak hour of adjacent street traffic, in this case, the weekday AM and PM peaks, represent a more critical volume when analyzing the capacity of the system; those intervals will provide the basis of this analysis.

The Community Lounge will be provided solely for use of residents in the community and will not generate additional traffic aside from a manager and a maintenance employee. It is not likely that these employees will be making trips during the peak hours of this study, so the Community Lounge will not affect trip generation for this traffic study.

Trip generation for the Nursery School is estimated based upon the anticipated number of students, teachers and staff. The estimated trips for the Nursery School are conservative considering the expected arrival and pick-up times of students largely do not coincide with the weekday commuter peak periods analyzed. It is also anticipated that some of the students at the Nursery School will be residents of the community and will not drive to the school, however, this was not accounted for in the analysis. The Community Lounge will be provided solely for use of residents in the community and will not generate additional traffic aside from a manager and a maintenance employee. It is not likely that these employees will be making trips during the peak hours of this study, so the Community Lounge will not affect trip generation for this traffic study.

All trip generation information has been included in the Appendices. **Table III** shows the total site generated trips for the weekday AM and PM peak hours for the proposed project.

TABLE III
SITE GENERATED TRIPS

DESCRIPTION	ITE LAND USE CODE	SIZE	AM PEAK		PM PEAK	
			ENTER	EXIT	ENTER	EXIT
Rental Apartments	224	40 Dwelling Units	5	18	16	9
Market Rate For-Sale Homes	210	17 Dwelling Units	5	16	13	7
Rental Townhouse	224	6 Dwelling Units	1	3	2	2
For-Sale Townhouse	230	10 Dwelling Units	1	7	6	3
Nursery School	N/A	48 Students	10	5	20	25
Total Site Generated Trips			**22**	**49**	**57**	**46**

The proposed project is expected to generate approximately 22 entering/49 exiting vehicle trips during the weekday AM peak hour and 57 entering/46 exiting vehicle trips during the PM peak hour.

C. *Site Traffic Distribution*

The cumulative effect of site-generated traffic on the transportation network is dependent on the origins and destinations of that traffic and the location of the driveways serving the site. The proposed arrival/departure distribution of traffic generated by each development area is considered a function of several parameters, including:

- Commercial centers in the area;
- Trumansburg schools;
- Employment centers in the area;
- Proximity and access to existing highway network;

- Location of the development area and the respective proposed driveways;
- Existing traffic patterns; and
- Existing traffic conditions and controls

Figure 6 shows the anticipated trip distribution pattern percentages for the traffic from the proposed residential development. **Figure 7** illustrate the peak hour site generated traffic based on those percentages.

VII. FULL DEVELOPMENT VOLUMES

Proposed design hour traffic volumes are developed for the AM and PM peak hours by combining the background traffic conditions (Figure 4) and the new site-generated traffic volumes (Figure 7) to yield the traffic volumes under full development conditions. The resulting design hour volumes for the proposed project are illustrated in **Figure 8** under full build-out conditions.

VIII. CAPACITY ANALYSIS

Capacity analysis is a technique used for determining a measure of effectiveness for a section of roadway and/or intersection based on the number of vehicles during a specific time period. The measure of effectiveness used for the capacity analysis is referred to as a Level of Service (LOS). Levels of Service are calculated to provide an indication of the amount of delay that a motorist experiences while traveling along a roadway or through an intersection. Since the most amount of delay to motorists usually occurs at intersections, capacity analysis typically focuses on intersections, as opposed to highway segments.

Six Levels of Service are defined for analysis purposes. They are assigned letter designations, from "A" to "F", with LOS "A" representing the best conditions and LOS "F" the worst. Suggested ranges of service capacity and an explanation of Levels of Service are included in the Appendices.

The standard procedure for capacity analysis of signalized and un-signalized intersections is outlined in the Highway Capacity Manual (HCM 2016) published by the Transportation Research Board (TRB). Traffic analysis software, SYNCHRO 9, which is based on procedures and methodologies contained in the HCM, was used to analyze operating conditions at study area intersections. The procedure yields a LOS based on the HCM 2016 as an indicator of how well intersections operate.

Existing and background operating conditions during the peak study periods are evaluated to determine a basis for comparison with the projected future conditions. The future traffic conditions generated by the project were analyzed to assess the operation of the study area intersections. Capacity results for existing, background, and full build-out conditions are listed in **Table IV**. The discussion following the table summarizes capacity conditions. All capacity analysis calculations are included in the Appendices.

TABLE IV
CAPACITY ANALYSIS RESULTS

INTERSECTION	2017 EXISTING CONDITIONS		2027 BACKGROUND CONDITIONS		FULL DEVELOPMENT CONDITIONS	
	AM	PM	AM	PM	AM	PM
Rabbit Run Road/Route 96 (U)						
Eastbound – Rabbit Run Road	C(17.4)	B(13.5)	C(17.8)	B(13.7)	C(17.5)	B(12.3)
Westbound – Rabbit Run Road	C(16.0)	B(14.1)	C(16.4)	B(14.3)	C(17.7)	C(15.2)
Northbound left – Route 96	A(0)	A(8.0)	A(0)	A(8.1)	A(8.8)	A(8.1)
Southbound left – Route 96	A(8.1)	A(8.4)	A(8.1)	A(8.4)	A(8.2)	A(8.4)
South Street/Main Street (U)						
Westbound left – Main Street	A(8.5)	A(8.1)	A(8.5)	A(8.1)	A(8.5)	A(8.2)
Northbound – South Street	B(14.7)	C(15.8)	C(15.0)	C(16.2)	C(16.8)	C(19.1)
South Street/Whig Street						
Eastbound – Whig Street	B(14.6)	B(10.0)	C(15.0)	B(10.1)	C(16.2)	B(10.5)
Westbound – Whig Street	B(14.3)	A(9.9)	B(14.7)	B(10.0)	C(16.1)	B(10.4)
Northbound left – South Street	A(7.3)	A(7.3)	A(7.3)	A(7.3)	A(7.3)	A(7.4)
Southbound left – South Street	A(7.5)	A(7.3)	A(7.5)	A(7.3)	A(7.6)	A(7.4)
South Street/School House Lane (U)						
Westbound – School House Lane	A(9.7)	A(8.9)	A(9.7)	A(8.9)	B(10.1)	A(9.2)
Southbound left – South Street	A(7.6)	A(7.3)	A(7.6)	A(7.3)	A(7.7)	A(7.4)
South Street/Proposed Driveway (U)						
Eastbound – Proposed Driveway	NA		NA		A(10.0)	A(9.7)
Northbound – South Street					A(7.4)	B(7.5)
Pennsylvania Ave/Proposed Driveway (U)						
Westbound – Proposed Driveway	NA		NA		A(8.6)	A(8.6)
Southbound – Pennsylvania Ave					A(7.3)	A(7.3)
Pennsylvania Ave/Halsey St/Elm St (U)						
Eastbound – Halsey Street	A(7.9)	A(7.3)	A(7.9)	A(7.3)	A(8.0)	A(7.4)
Westbound – Elm Street	A(7.5)	A(7.4)	A(7.5)	A(7.4)	A(7.6)	A(7.5)
Northbound – Pennsylvania Avenue	A(7.4)	A(7.4)	A(7.4)	A(7.4)	A(7.4)	A(7.5)
Southbound – Pennsylvania Avenue	A(7.3)	A(7.2)	A(7.3)	A(7.2)	A(7.3)	A(7.3)

Notes:
1. C(18.1) = Level of Service (Delay in seconds per vehicle)
2. (U) = Un-signalized; (S) = Signalized;
3. NA = Approach does not exist and/or not analyzed under this condition

Rabbit Run Road/Route 96

All approaches operate at an acceptable LOS "C" or better during both peak hours under all conditions. The westbound LOS changes from "B" to "C" during the PM peak for the full development condition, however, this is a borderline condition as the threshold between levels of service "B" and "C" is 15.0 seconds of delay per vehicle. The overall change in delay due to the project is 1.1 seconds for full development conditions. No mitigation is warranted or recommended as a result of the proposed project.

South Street/Main Street

All approaches operate at an acceptable LOS "C" or better during both peak hours under all conditions. The northbound LOS changes from "B" to "C" during the AM peak for the background condition, however, this is a borderline condition as the threshold between levels of service "B" and "C" is 15.0 seconds of delay per vehicle. The overall change in delay due to the project is 2.1

seconds for full development conditions. No mitigation is warranted or recommended as a result of the proposed project.

South Street/Whig Street
All approaches operate at an acceptable LOS "C" or better during both peak hours under all conditions. The eastbound LOS changes from "B" to "C" during the AM peak for the background condition, however, this is a borderline condition as the threshold between levels of service "B" and "C" is 15.0 seconds of delay per vehicle. The overall change in delay due to the project is 1.6 seconds for full development conditions. No mitigation is warranted or recommended as a result of the proposed project.

South Street/School House Lane
All approaches operate at a highly acceptable LOS "B" or better during both peak hours under all conditions. The westbound LOS changes from "A" to "B" during the AM peak for the full development condition, however, this is a borderline condition as the threshold between levels of service "A" and "B" is 10.0 seconds of delay per vehicle. The overall change in delay due to the project is 0.4 seconds. No mitigation is warranted or recommended as a result of the proposed project.

South Street/Proposed Driveway
All approaches operate at a highly acceptable LOS "B" or better during both peak hours. The proposed driveway shall be stop-controlled. No further mitigation is warranted or recommended as a result of the proposed project.

Pennsylvania Avenue/Proposed Driveway
All approaches operate at LOS "A" during both peak hours. The proposed driveway shall be stop-controlled. No further mitigation is warranted or recommended as a result of the proposed project.

Pennsylvania Avenue/Halsey Street/Elm Street
All approaches operate at LOS "A" during both peak hours with no change due to the project. No further mitigation is warranted or recommended as a result of the proposed project.

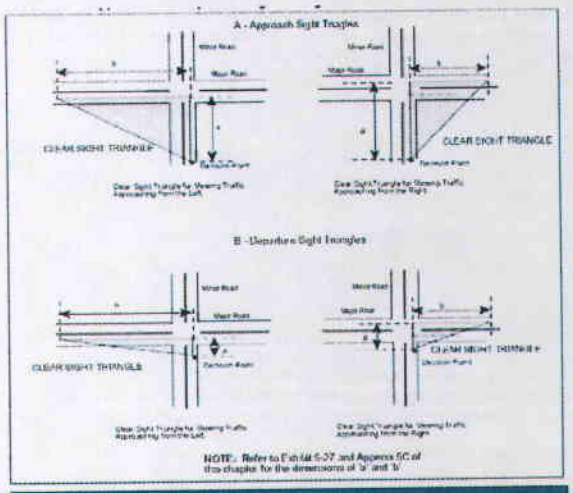
Potential Impacts on Other Nearby Intersections
The project will add approximately 6(7) trips to the intersection of Main Street and Elm Street during the AM(PM) peak hours. These additional trips will have very minor, if any, impacts to these intersections and no further evaluation is necessary.

The project will also add 1(2) trips to the south on Pennsylvania Avenue and 23(34) to the south on South Street during the AM(PM) peak hours.

During other hours of the day, the impacts will be even less.

IX. SIGHT DISTANCE EVALUATION

Sight distance was investigated at the proposed driveway locations along both South Street and Pennsylvania Ave. Sight distance is provided at intersections to allow drivers to perceive the presence of potentially conflicting vehicles. This should occur in sufficient time for a motorist to stop or adjust their speed, as appropriate, to avoid a collision at the intersection. Sight distance is also provided at intersections to allow the drivers of stopped vehicles a sufficient view of the intersecting highway to anticipate and avoid potential incidents. If the available sight distance for an entering or crossing vehicle is at least equal to the appropriate stopping sight distance for the major road, then drivers have sufficient sight distance to anticipate and avoid collisions. To enhance traffic operations, intersection sight distances that exceed stopping sight distances are desirable along the major road.



NYSDOT Sight Distance Triangles

A Policy on Geometric Design of Highways and Streets published by the American Association of State Highway and Transportation Officials (AASHTO), 2011, was used as a reference to establish the required stopping sight distance and desirable intersection sight distance for the proposed site access driveways.

Required stopping distances and desirable intersection sight distances are based on the design speed for a given section of roadway; generally, the design speed is the posted speed limit plus 5 MPH. In this case, the posted and corresponding design speed limits at the proposed driveway is therefore as follows:

1. Proposed East Driveway on South Street – posted 30 MPH; design 35 MPH
2. Proposed West Driveway on Pennsylvania Ave – posted 30 MPH; design 35 MPH

The required stopping distance and desirable intersection sight distance based on the design speed above is shown in **Table V**.

TABLE V
SIGHT DISTANCE REQUIREMENT AND MEASUREMENTS

INTERSECTION	POSTED SPEED LIMIT (MPH)	DESIGN SPEED (MPH)	DESIRABLE INTERSECTION SIGHT DISTANCE (ISD) FOR LEFT TURN FROM STOP (ft)	REQUIRED STOPPING SIGHT DISTANCE (SSD) (ft)	AVAILABLE SIGHT DISTANCE (ft) TO THE:	
					NORTH	SOUTH
South Street/ Proposed East Driveway	30	35	390'	250'	>550'	>550'

Pennsylvania Ave/ Proposed West Driveway	30	35	390'	250'	585'	>700'

Sight Distance to the North on South Street

Sight Distance to the South on South Street

Sight Distance to the North on Pennsylvania Ave

Sight Distance to the South on Pennsylvania Ave

The available sight distance exceeds the desirable intersection sight distance and required stopping sight distance at the proposed driveway locations along both South Street and Pennsylvania Ave.

X. IMPACT ON SOUTH ST & PENNSYLVANIA AVENUE

The concept of Levels of Service as defined in the Federal Highway Administration's Highway Capacity Manual, represents " a qualitative measure describing operational conditions within a traffic stream, and their perception by motorists and /or passengers."

While traffic flow measures in this context are solely from the drivers' perspective, an equally important measure generally lacking in most Traffic Impact Studies involving residential areas, would instead take into account, a resident viewpoint of traffic. The influence of traffic on the quality of life, or livability, for the residents within the vicinity of the project is considered more appropriately using this measure.

Each persons' concern for traffic and its impact on their quality of life is a function of numerous variables; traffic volume and speed, vehicle composition, temporal distribution of traffic, dwelling setback from the street, presence of children, and numerous resident demographic factors.

As such, no one single volume threshold at which residents normally become irritated can be generally applied. The type of roadway, and the perception the roadway exhibits to the residents greatly influences the threshold levels.

Residents' complaints about traffic volumes escalate whenever the actual conditions on the street differ from the resident's expectations as to what conditions on that particular street should be. Although there is not a linear relationship between complaints and traffic volume, there is a certain volume range in which resident expectations seem most likely to differ from actual conditions.

The Institute of Transportation Engineers specifies for "conventional" residential subdivisions, average daily traffic volume limits of 1,500 vehicles per day (vpd) for a local street, and above for a major residential collector.

Neighborhood street design criteria specified by the American Society of Civil Engineers, National Association of Home Builders, and Urban Land Institute recommends an average daily traffic volume below 250 vpd for local streets, and between 250-1000 vpd for subcollector roadways.

South Street is approximately 20 feet wide in the vicinity of the new intersection. The roadway was recently paved and is in very good condition. The average daily traffic (ADT) is approximately 940 vpd immediately south of School House Lane. The proposed project will increase the ADT to 1,500 vpd. These volumes are consistent with volumes characteristic of a local street even though South Street is considered a major residential collector providing access to various subdivisions and the Trumansburg Central School Campus.

Pennsylvania Avenue is also approximately 20 feet wide in the vicinity of the new intersection. The roadway was recently paved and is in very good condition. The average daily traffic (ADT) is approximately 360 vpd immediately south of Halsey Street. The proposed project will increase the ADT to 500 vpd. These volumes fall well below the threshold of 1,500 vpd for a local street.

XI. CONCLUSIONS & RECOMMENDATIONS

This Traffic Impact Study identifies and evaluates the potential traffic impacts that can be expected from the proposed 46 South Street Mixed-Use Development in the Village of Trumansburg, Tompkins County, New York, as described in this study. The results of this study determine that the existing transportation network can adequately accommodate the projected traffic volumes and resulting impacts to study area intersections. The following sets forth the conclusions and recommendations based upon the results of the analyses:

1. The proposed project is expected to generate approximately 22 entering/49 exiting vehicle trips during the weekday AM peak hour and 57 entering/46 exiting vehicle trips during the PM peak hour.

2. All approaches to the study area intersections are projected to operate at an acceptable Level of Service "C" or better during the AM and PM peak hours under existing, background, and full development conditions.

3. The proposed new roadways shall be stop-controlled on their approaches to the adjacent roadways (South Street and Pennsylvania Avenue).

4. The available sight distance exceeds the desirable intersection sight distance and required stopping sight distance at the proposed new intersection locations along both South Street and Pennsylvania Ave.

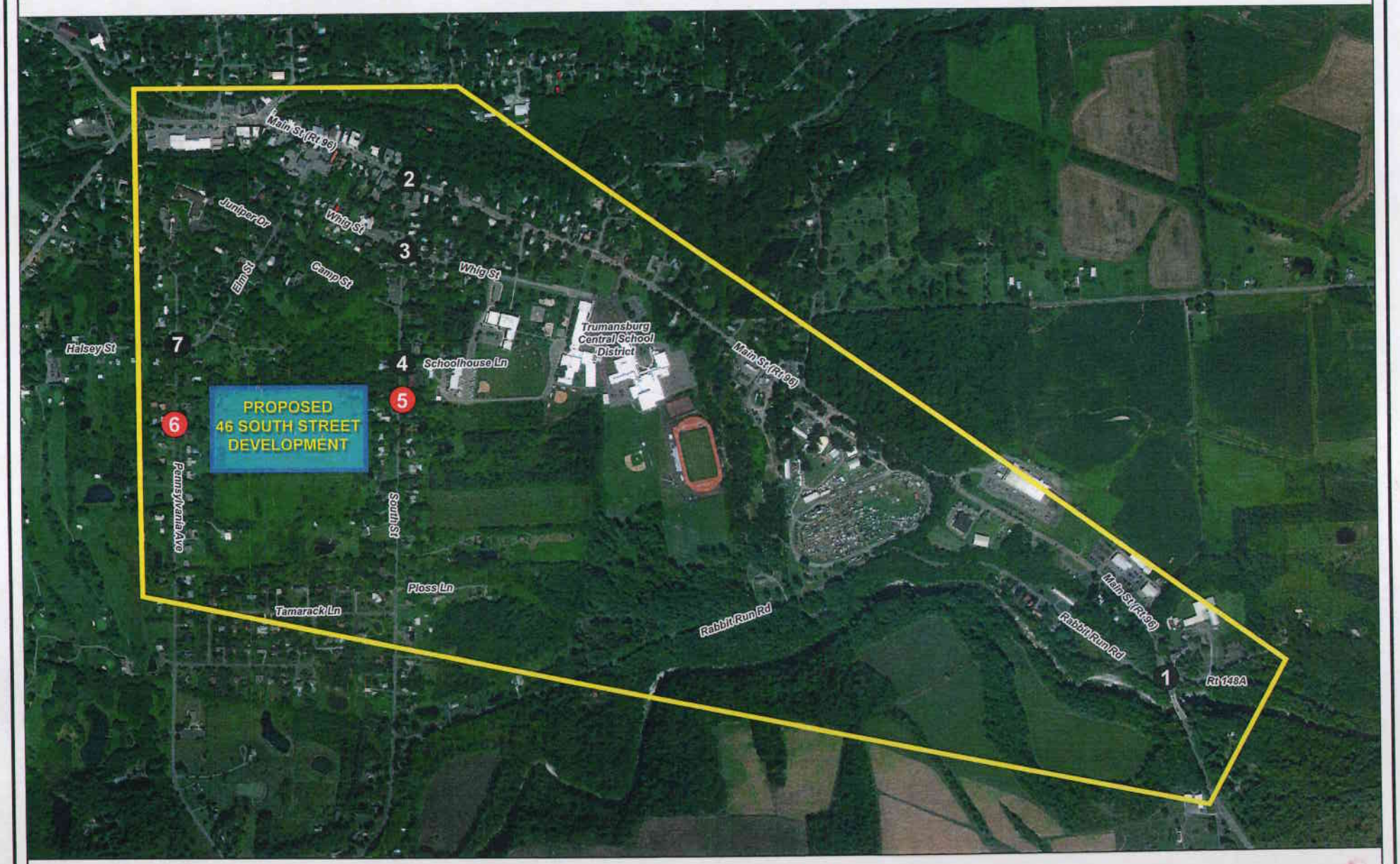
5. The minor projected traffic impacts resulting from full development of the proposed project during both peak hours can be adequately accommodated by the existing transportation network.

6. No significant adverse traffic related impacts are anticipated and no mitigation is recommended.

XII. FIGURES

Figures 1 through 8 are included on the following pages.

FIGURE 1 - SITE LOCATION AND STUDY AREA



Study Intersection
Proposed Intersection
Site Location
Study Area

PROPOSED 46 SOUTH STREET DEVELOPMENT
VILLAGE OF TRUMANSBURG, NY

0 500 1,000 2,000
Feet

N

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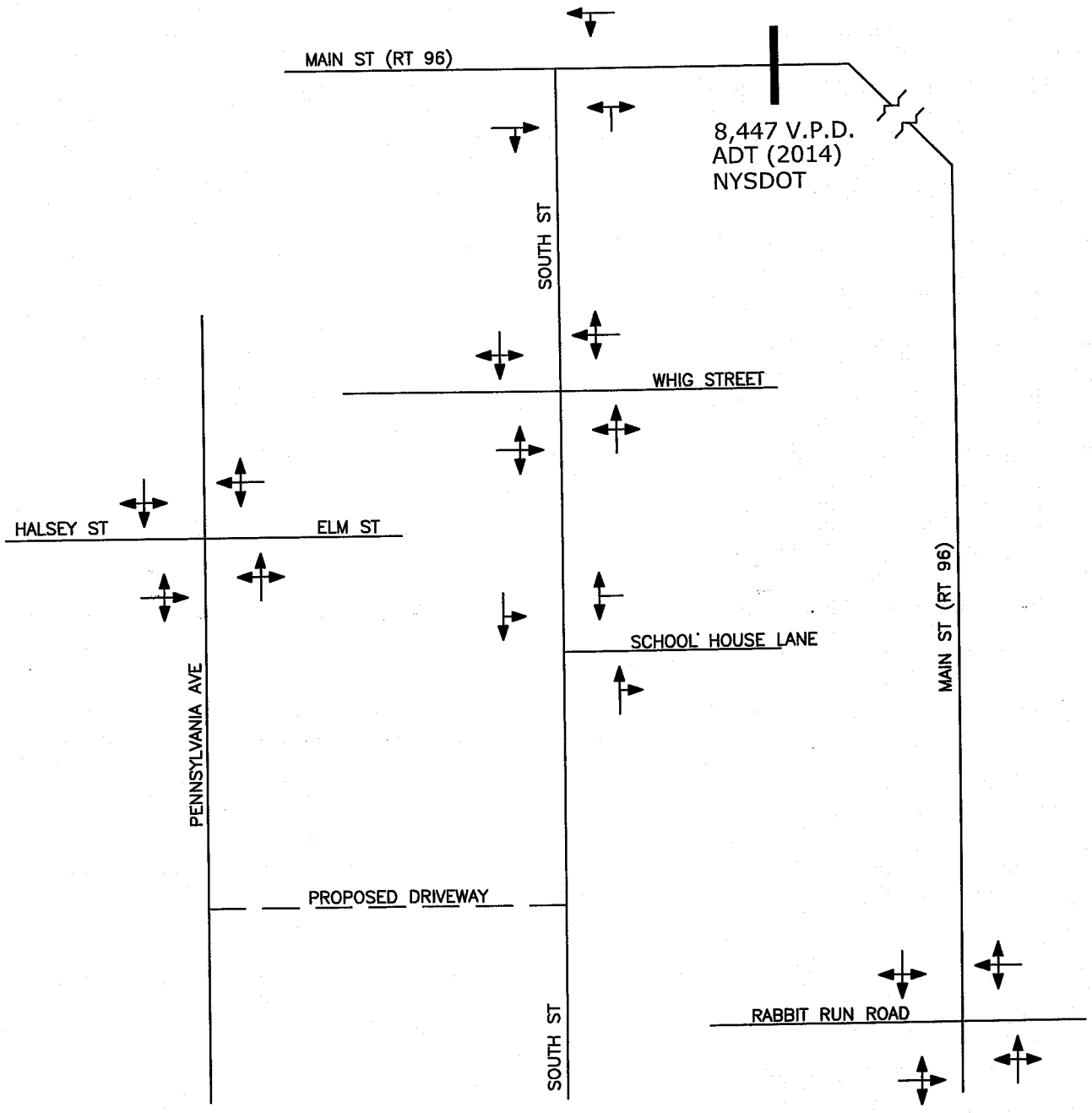
Note: All counts by New York State Dept of Transportation
V.P.D. = Vehicles Per Day



PROJECT NO: 37021

KEY

N

NOT TO SCALE

FIGURE 2

LANE GEOMETRY &
AVERAGE DAILY TRAFFIC

PROPOSED 46 SOUTH STREET
MIXED-USE DEVELOPMENT,
VILLAGE OF TRUMANSBURG, NY

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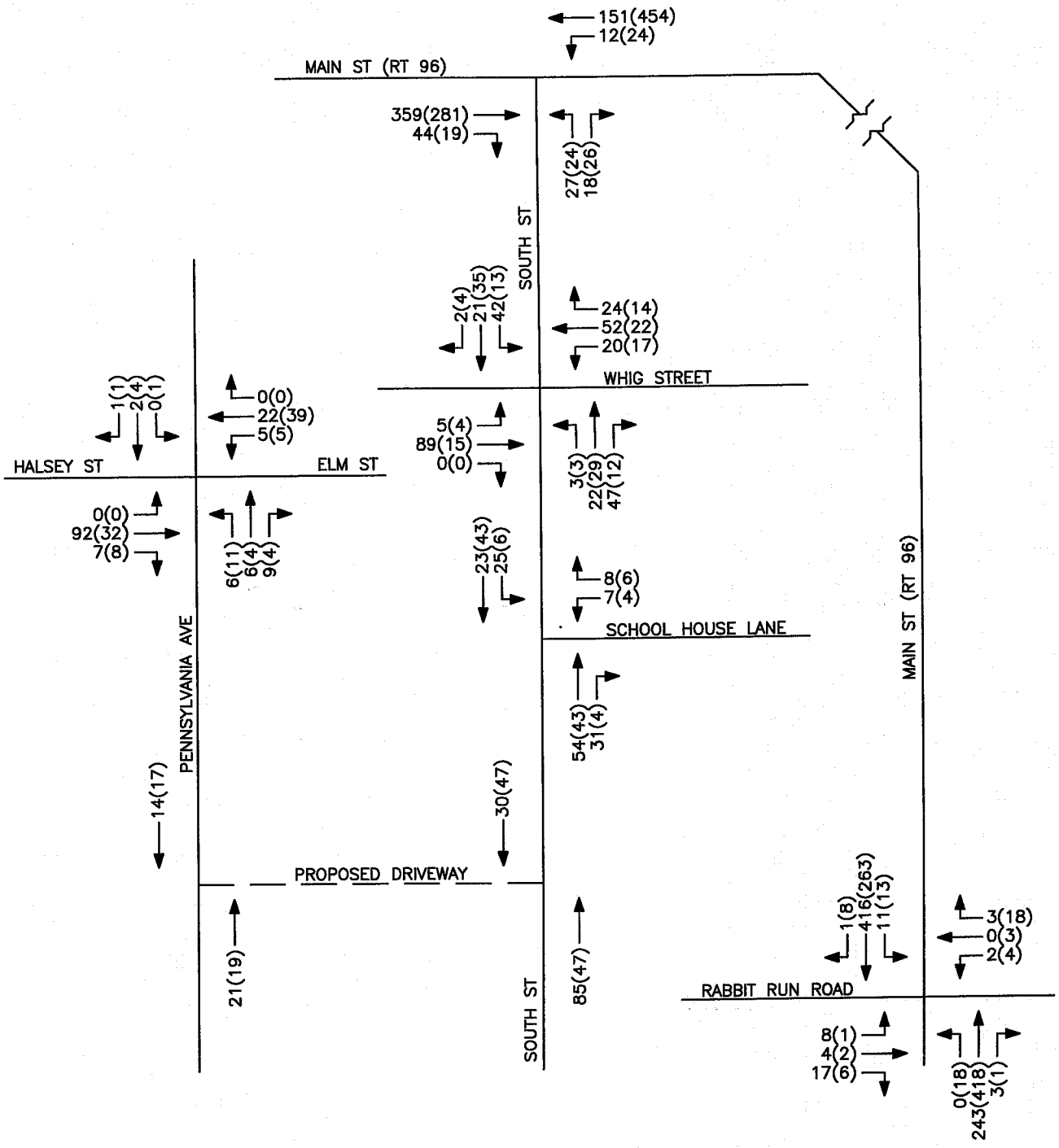

PROJECT NO: 37021

KEY
00(00) = AM(PM)

N

NOT TO SCALE

FIGURE 3

PEAK HOUR VOLUMES
2017 EXISTING CONDITIONS

PROPOSED 46 SOUTH STREET
MIXED-USE DEVELOPMENT,
VILLAGE OF TRUMANSBURG, NY

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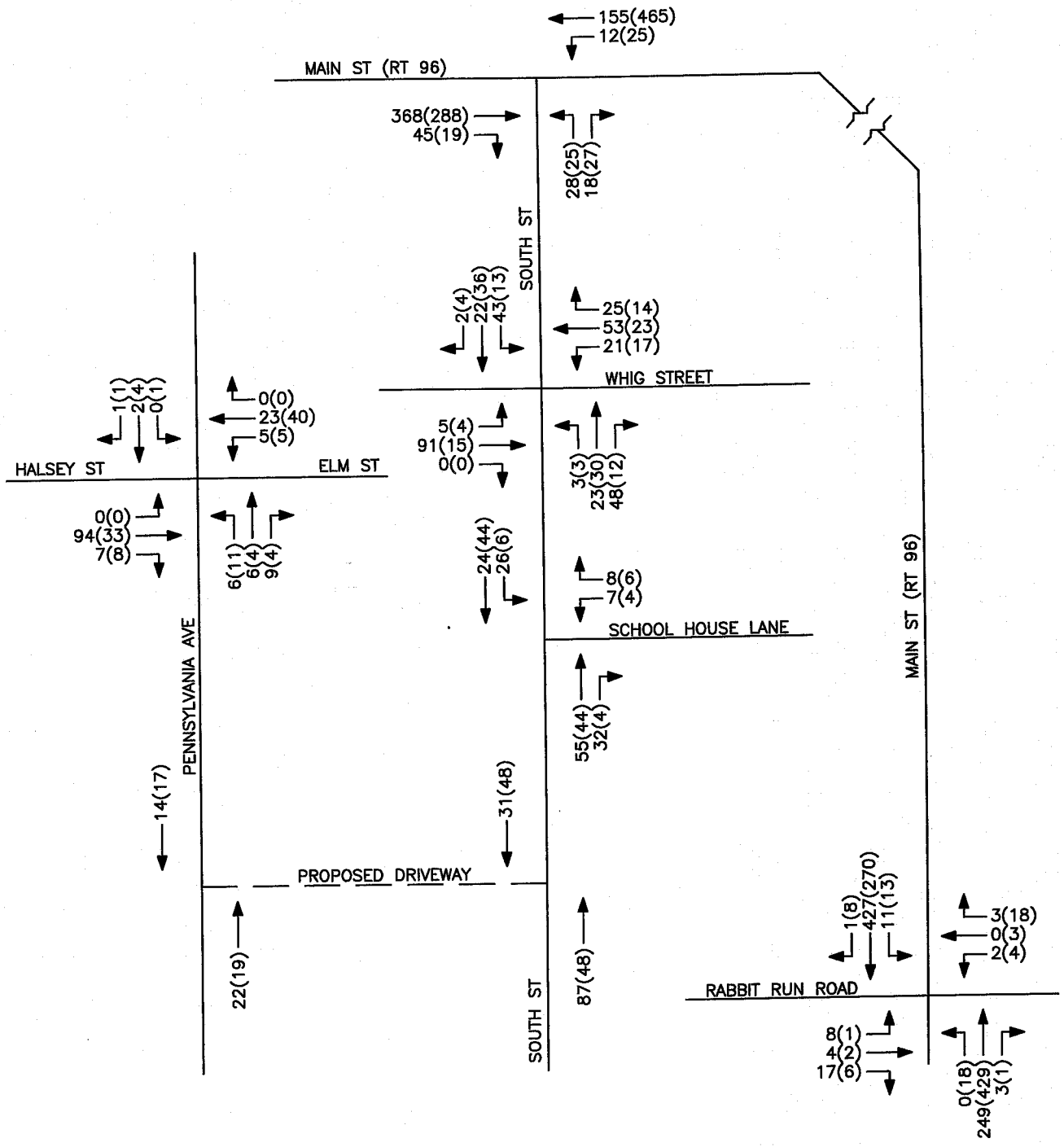

PROJECT NO: 37021

KEY

N

NOT TO SCALE

00(00) = AM(PM)

FIGURE 4

PEAK HOUR VOLUMES
2017 BACKGROUND CONDITIONS

PROPOSED 46 SOUTH STREET
MIXED-USE DEVELOPMENT,
VILLAGE OF TRUMANSBURG, NY

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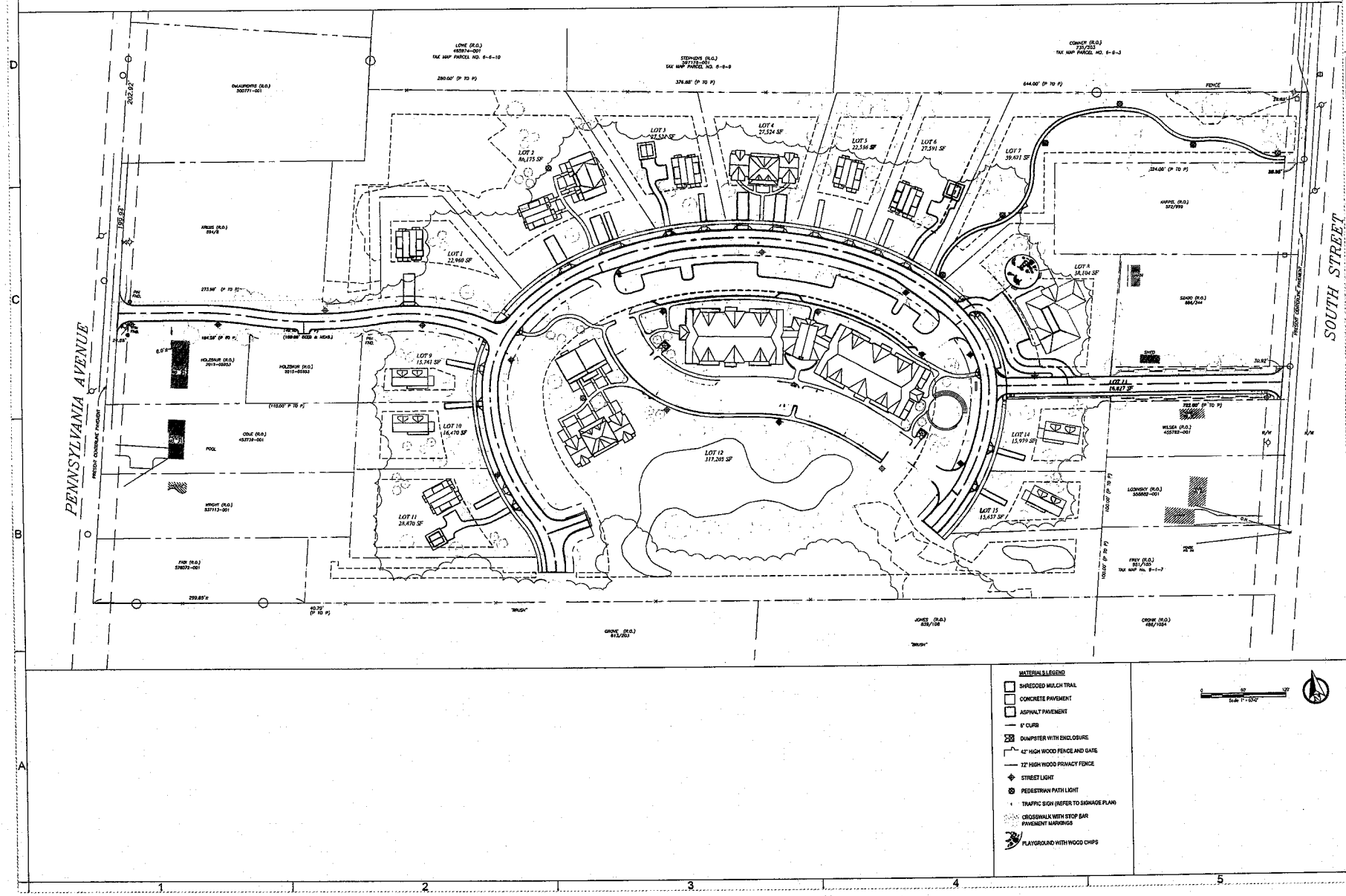
Figure 5: Site Plan



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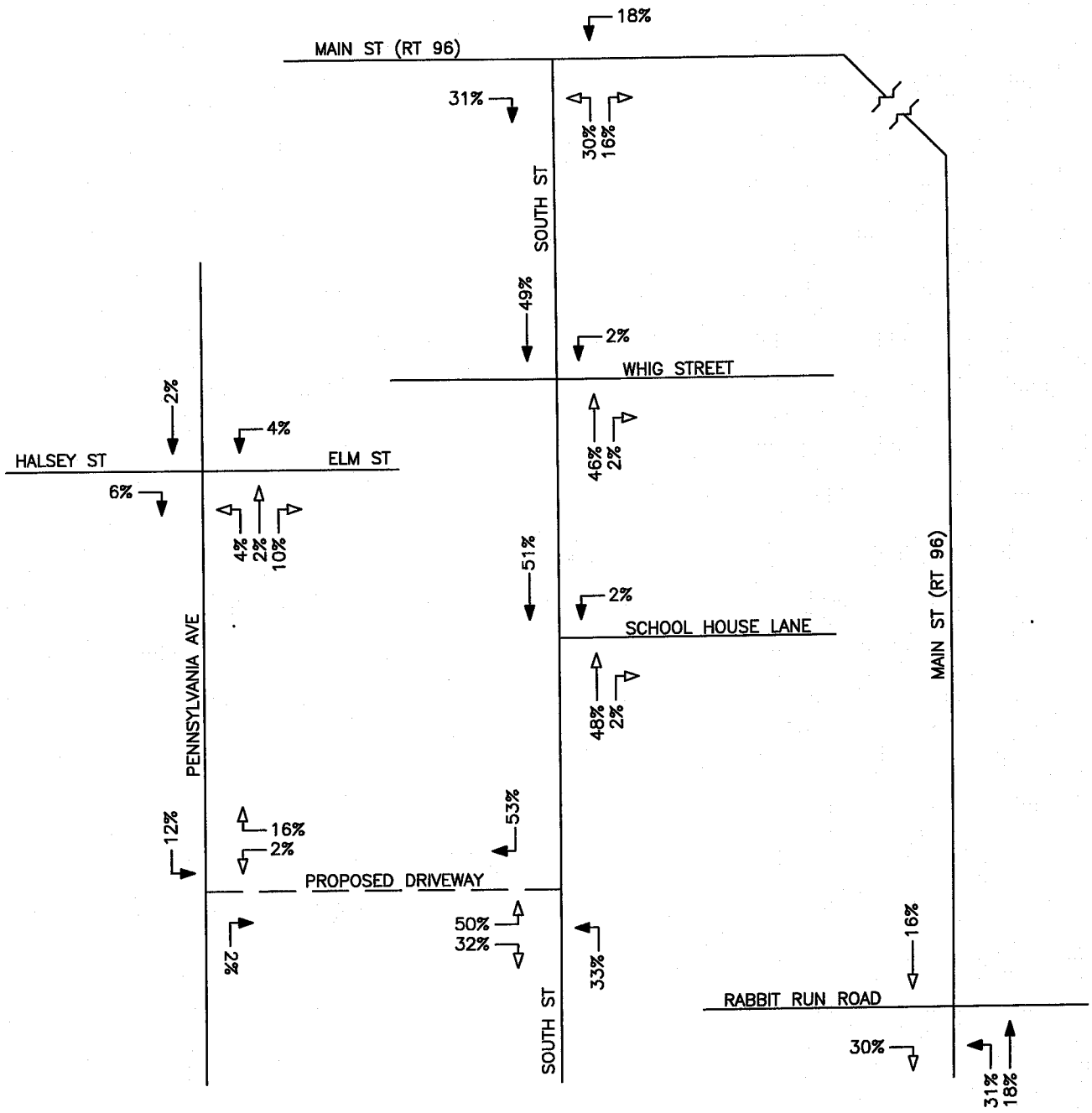
Ithaca Neighborhood Housing Services &
Sundial Property Development LLC
46 South Street
Trumansburg, New York

DATE:	11/06/2017
PROJECT:	17003
DRAWN BY:	RK
CHECKED:	

PRELIMINARY SITE PLAN

L-100



PROJECT NO: 37021

KEY

N

NOT TO SCALE

00(00) = AM(PM)

→ = ENTERING TRIPS

→ = EXITING TRIPS

FIGURE 6

TRIP DISTRIBUTION

PROPOSED 46 SOUTH STREET
MIXED-USE DEVELOPMENT,
VILLAGE OF TRUMANSBURG, NY

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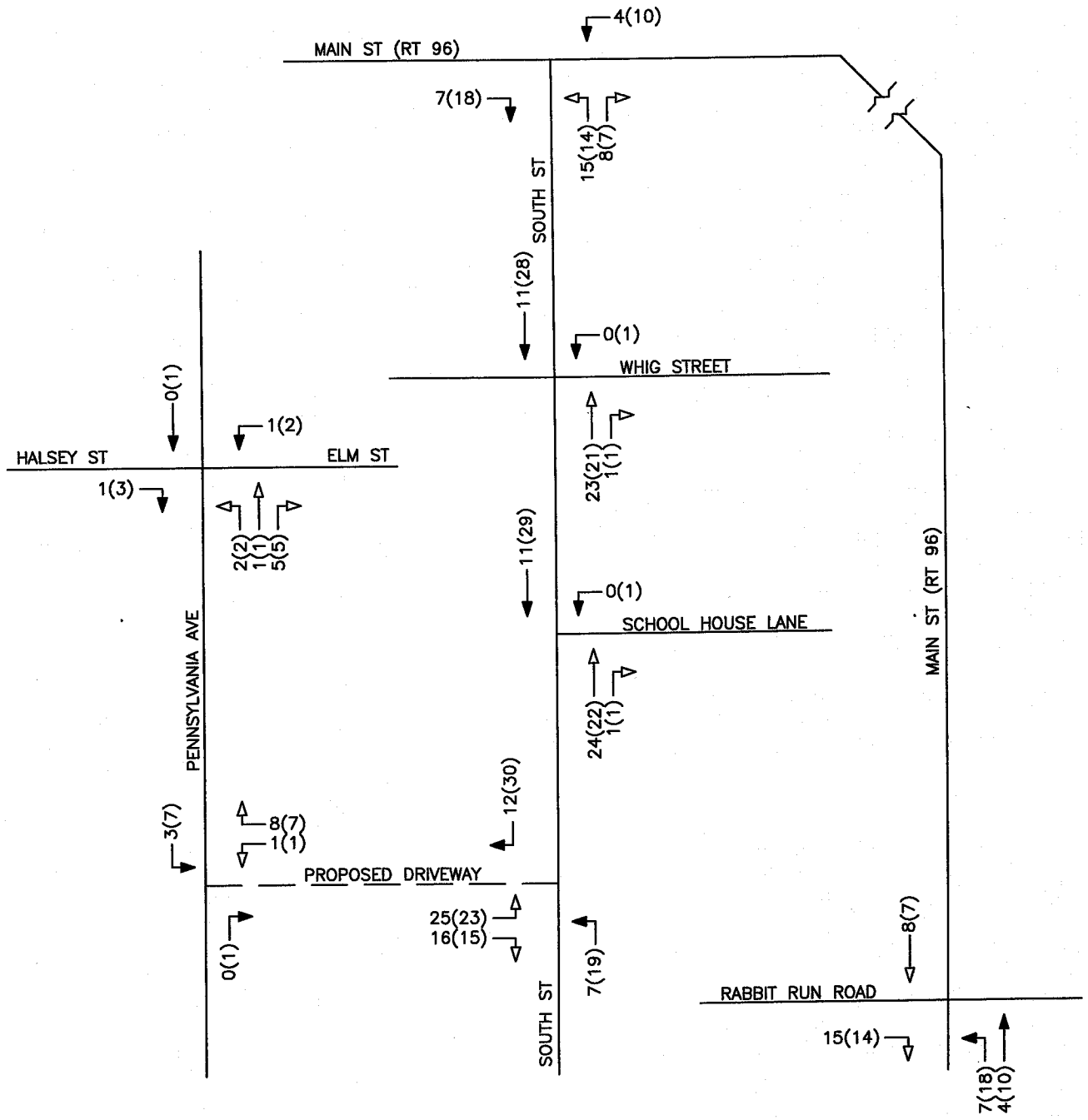

PROJECT NO: 37021

KEY

N

NOT TO SCALE

00(00) = AM(PM)

→ = ENTERING TRIPS

→ = EXITING TRIPS

FIGURE 7

SITE GENERATED TRIPS

PROPOSED 46 SOUTH STREET
MIXED-USE DEVELOPMENT,
VILLAGE OF TRUMANSBURG, NY

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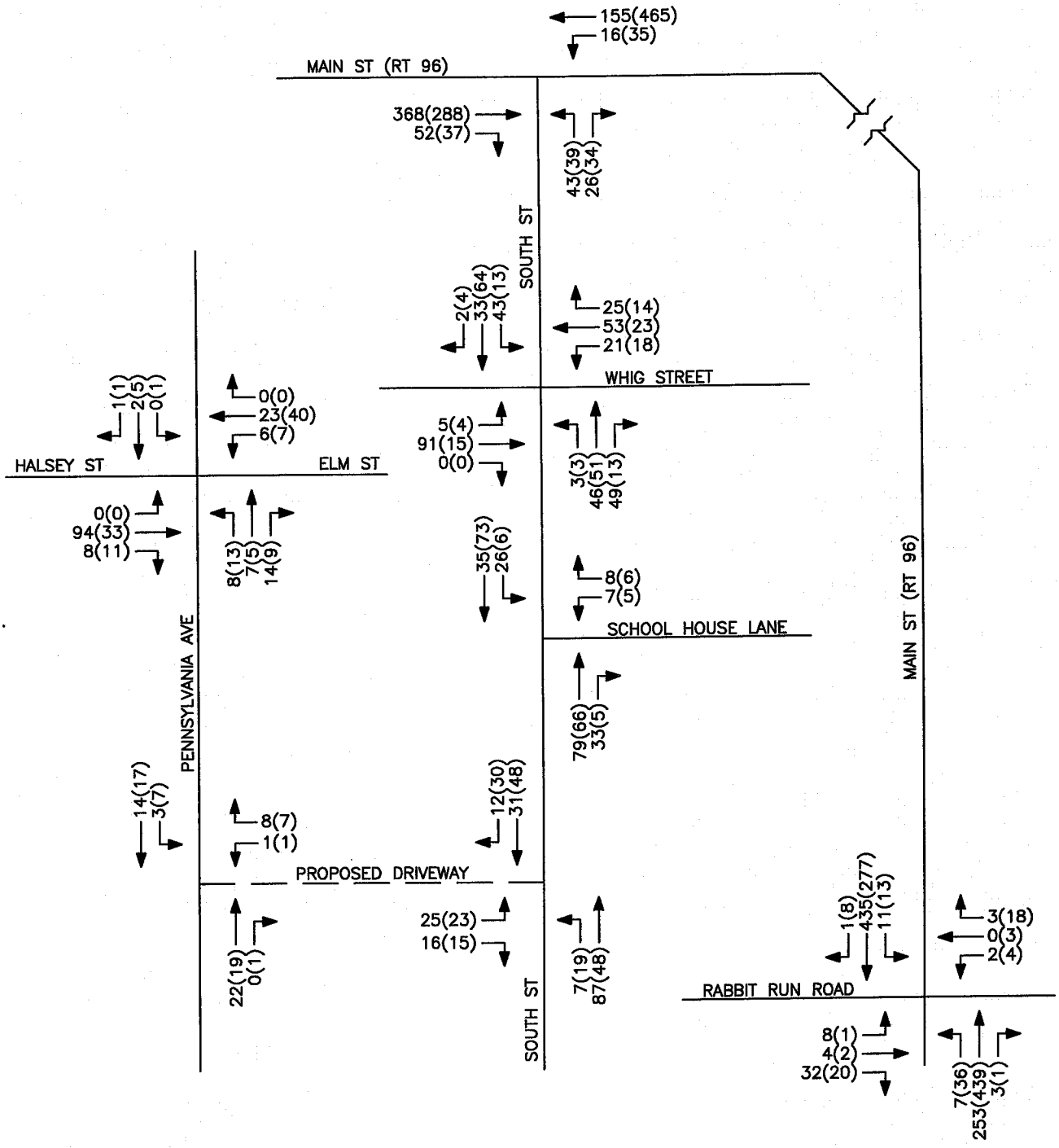

PROJECT NO: 37021

KEY

N

NOT TO SCALE

00(00) = AM(PM)

FIGURE 8

PEAK HOUR VOLUMES
FULL DEVELOPMENT CONDITIONS

PROPOSED 46 SOUTH STREET
MIXED-USE DEVELOPMENT,
VILLAGE OF TRUMANSBURG, NY

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APPENDICES

A1

Collected Traffic Volume Data

Quality Counts
TRANSPORTATION DATA COLLECTION SERVICES

Location: Pennsylvania Ave & Halsey St/Elm St
Date: 6/6/2017
Site Code: 14435901

	Pennsylvania Ave Southbound				Elm St Westbound				Pennsylvania Ave Northbound				Halsey St Eastbound			
Start Time	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
07:00 AM	0	0	0	0	0	2	1	0	6	0	0	0	1	6	0	0
07:15 AM	0	1	0	0	0	1	2	0	3	2	2	0	1	16	0	0
07:30 AM	0	0	0	0	0	5	1	0	0	3	1	0	2	38	0	0
07:45 AM	1	1	0	0	0	14	1	0	0	1	3	0	3	32	0	0
08:00 AM	0	1	0	0	0	5	1	0	0	0	1	0	1	5	0	0
08:15 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	2	0	0
08:30 AM	1	1	0	0	0	2	1	0	2	1	1	0	1	11	0	0
08:45 AM	0	3	0	0	0	2	1	0	5	3	0	0	2	3	0	0
Total	**2**	**7**	**0**	**0**	**0**	**32**	**8**	**0**	**16**	**11**	**8**	**0**	**11**	**113**	**0**	**0**

Peak Hour: 7:00 AM - 8:00 AM
Peak 15: 7:45 AM - 8:00 AM
PHF: 0.669643

Quality Counts
TRANSPORTATION DATA
COLLECTION SERVICES

Location: Pennsylvania Ave & Halsey St/Elm St
Date: 6/6/2017
Site Code: 14435902

	Pennsylvania Ave Southbound				Elm St Westbound				Pennsylvania Ave Northbound				Halsey St Eastbound			
Start Time	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
04:00 PM	0	0	0	0	0	10	3	0	0	2	3	0	2	6	0	0
04:15 PM	0	2	0	0	0	14	1	0	0	0	1	0	1	2	0	0
04:30 PM	0	0	1	0	0	7	1	0	0	1	5	0	3	9	0	0
04:45 PM	0	1	0	0	0	8	2	0	1	1	1	0	4	12	0	0
05:00 PM	1	1	0	0	0	10	1	0	3	2	4	0	0	9	0	0
05:15 PM	0	0	0	0	1	6	0	0	1	0	0	0	0	10	0	0
05:30 PM	0	0	0	0	0	10	3	0	1	0	1	0	3	8	1	0
05:45 PM	0	0	0	0	0	5	2	0	0	0	0	0	0	6	1	0
Total	**1**	**4**	**1**	**0**	**1**	**70**	**13**	**0**	**6**	**6**	**15**	**0**	**13**	**62**	**2**	**0**

Peak Hour: 4:15 PM - 5:15 PM
Peak 15: 5:00 PM - 5:15 PM
PHF: 0.879032

Quality Counts
TRANSPORTATION DATA COLLECTION SERVICES

Location: South St & Main St
Date: 6/6/2017
Site Code: 14435905

	South St Southbound				Main St Westbound				South St Northbound				Main St Eastbound			
Start Time	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
07:00 AM	0	0	0	0	0	19	1	0	0	0	2	0	6	67	0	0
07:15 AM	0	0	0	0	0	21	2	0	2	0	4	0	6	75	0	0
07:30 AM	0	0	0	0	0	42	5	0	4	0	2	0	21	106	0	0
07:45 AM	0	0	0	0	0	45	4	0	6	0	16	0	14	108	0	0
08:00 AM	0	0	0	0	0	43	1	0	6	0	5	0	3	70	0	0
08:15 AM	0	0	0	0	0	33	1	0	3	0	4	0	2	66	0	0
08:30 AM	0	0	0	0	0	47	3	0	6	0	3	0	3	82	0	0
08:45 AM	0	0	0	0	0	33	2	0	0	0	7	0	6	64	0	1
Total	**0**	**0**	**0**	**0**	**0**	**283**	**19**	**0**	**27**	**0**	**43**	**0**	**61**	**638**	**0**	**1**

Peak Hour: 7:15 AM - 8:15 AM
Peak 15: 7:45 AM - 8:00 AM
PHF: 0.791451

Quality Counts
TRANSPORTATION DATA
COLLECTION SERVICES

Location: South St & Main St
Date: 6/6/2017
Site Code: 14435906

	South St Southbound				Main St Westbound				South St Northbound				Main St Eastbound			
Start Time	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
04:00 PM	0	0	0	0	0	103	7	0	12	0	14	0	10	64	0	0
04:15 PM	0	0	0	0	0	113	3	0	8	0	6	0	9	62	0	0
04:30 PM	0	0	0	0	0	101	7	0	6	0	6	0	2	72	0	0
04:45 PM	0	0	0	0	0	87	5	0	6	0	3	0	4	67	0	0
05:00 PM	0	0	0	0	0	127	9	0	8	0	11	0	11	81	0	0
05:15 PM	0	0	0	0	0	127	3	0	7	0	5	0	1	66	0	0
05:30 PM	0	0	0	0	0	113	7	0	5	0	5	0	3	67	0	0
05:45 PM	0	0	0	0	0	76	6	0	3	0	4	0	3	40	0	0
Total	**0**	**0**	**0**	**0**	**0**	**847**	**47**	**0**	**55**	**0**	**54**	**0**	**43**	**519**	**0**	**0**

Peak Hour: 4:45 PM - 5:45 PM
Peak 15: 5:00 PM - 5:15 PM
PHF: 0.838057

Quality Counts
TRANSPORTATION DATA
COLLECTION SERVICES

Location: South St & School House Ln
Date: 6/6/2017
Site Code: 14435903

	South St Southbound				School House Ln Westbound				South St Northbound				School House Ln Eastbound			
Start Time	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
07:00 AM	0	0	0	0	1	0	0	0	0	3	0	0	0	0	0	0
07:15 AM	0	5	1	0	0	0	1	0	4	11	0	0	0	0	0	0
07:30 AM	0	2	20	0	1	0	1	0	19	15	0	0	0	0	0	0
07:45 AM	0	11	3	0	4	0	4	0	7	20	0	0	0	0	0	0
08:00 AM	0	5	1	0	3	0	1	0	1	8	0	0	0	0	0	0
08:15 AM	0	4	0	0	1	0	0	0	0	5	0	0	0	0	0	0
08:30 AM	0	3	0	0	0	0	0	0	0	7	0	0	0	0	0	0
08:45 AM	0	6	2	0	1	0	0	0	0	5	0	0	0	0	0	0
Total	**0**	**36**	**27**	**0**	**11**	**0**	**7**	**0**	**31**	**74**	**0**	**0**	**0**	**0**	**0**	**0**

Peak Hour: 7:15 AM - 8:15 AM
Peak 15: 7:30 AM - 7:45 AM
PHF: 0.637931

Quality Counts
TRANSPORTATION DATA
COLLECTION SERVICES

Location: South St & School House Ln
Date: 6/6/2017
Site Code: 14435904

	South St Southbound				School House Ln Westbound				South St Northbound				School House Ln Eastbound			
Start Time	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns
04:00 PM	0	17	1	0	3	0	2	0	0	13	0	0	0	0	0	0
04:15 PM	0	12	0	0	1	0	0	0	1	11	0	0	0	0	0	0
04:30 PM	0	6	1	0	2	0	0	0	1	10	0	0	0	0	0	0
04:45 PM	0	8	4	0	0	0	2	0	2	9	0	0	0	0	0	0
05:00 PM	0	14	2	0	4	0	4	0	1	11	0	0	0	0	0	0
05:15 PM	0	5	1	0	1	0	3	0	3	9	0	0	0	0	0	0
05:30 PM	0	7	2	0	0	0	2	0	1	5	0	0	0	0	0	0
05:45 PM	0	8	0	0	1	0	3	0	1	9	0	0	0	0	0	0
Total	**0**	**77**	**11**	**0**	**12**	**0**	**16**	**0**	**10**	**77**	**0**	**0**	**0**	**0**	**0**	**0**

Peak Hour: 4:00 PM - 5:00 PM
Peak 15: 4:00 PM - 4:15 PM
PHF: 0.736111

TRI-STATE TRAFFIC DATA

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Coatesville, Pennsylvania, United States 19320
610-466-1469
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Trumansburg, NY
Rte 96 @ Rabbit Run Rd
Wednesday, November 8, 2017
Location: 42.530234, -76.637231

Count Name: 1. Rte 96 @ Rabbit Run Rd
Site Code: SCU13X
Start Date: 11/08/2017
Page No: 1

Turning Movement Data

Start Time	Rabbit Run Rd Eastbound						Taughannock Park Rd Westbound						Rte 96 Northbound						Rte 96 Southbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
7:00 AM	0	1	1	0	0	2	0	0	0	0	0	0	0	28	1	0	0	29	1	85	0	0	0	86	117
7:15 AM	2	0	6	0	0	8	1	0	0	0	0	1	0	35	1	0	0	36	0	80	0	0	0	80	125
7:30 AM	3	2	5	0	0	10	1	0	3	0	0	4	0	98	0	0	0	98	2	109	0	0	0	111	223
7:45 AM	3	1	5	0	0	9	0	0	0	0	0	0	0	82	1	0	0	83	8	142	1	0	0	151	243
Hourly Total	**8**	**4**	**17**	**0**	**0**	**29**	**2**	**0**	**3**	**0**	**0**	**5**	**0**	**243**	**3**	**0**	**0**	**246**	**11**	**416**	**1**	**0**	**0**	**428**	**708**
8:00 AM	0	0	4	0	0	4	0	0	2	0	0	2	1	21	2	0	0	24	0	78	3	0	0	81	111
8:15 AM	0	0	4	0	0	4	0	0	0	0	0	0	0	35	1	0	0	36	1	56	0	0	0	57	97
8:30 AM	0	1	5	1	0	7	3	1	3	0	0	7	4	39	0	0	0	43	1	85	0	0	0	86	143
8:45 AM	0	1	2	0	0	3	0	2	0	0	0	2	1	54	2	0	0	57	1	61	0	0	0	62	124
Hourly Total	**0**	**2**	**15**	**1**	**0**	**18**	**3**	**3**	**5**	**0**	**0**	**11**	**6**	**149**	**5**	**0**	**0**	**160**	**3**	**280**	**3**	**0**	**0**	**286**	**475**
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**1**
4:00 PM	0	0	0	0	0	0	3	0	7	0	0	10	3	78	1	0	0	82	1	83	0	0	0	84	176
4:15 PM	0	2	2	0	0	4	1	2	5	0	0	8	1	96	0	0	0	97	3	87	2	0	0	92	201
4:30 PM	1	0	2	0	0	3	2	0	3	0	0	5	3	106	0	0	0	109	6	60	2	0	0	68	185
4:45 PM	0	0	0	0	0	0	1	0	7	0	0	8	6	117	1	0	0	124	1	50	0	0	0	51	183
Hourly Total	**1**	**2**	**4**	**0**	**0**	**7**	**7**	**2**	**22**	**0**	**0**	**31**	**13**	**397**	**2**	**0**	**0**	**412**	**11**	**280**	**4**	**0**	**0**	**295**	**745**
5:00 PM	0	0	2	0	0	2	0	1	3	0	0	4	8	99	0	0	0	107	3	66	4	0	0	73	186
5:15 PM	1	0	2	0	0	3	0	1	3	0	0	4	3	98	1	0	0	102	0	62	3	0	0	65	174
5:30 PM	1	1	0	0	0	2	1	0	7	0	0	8	2	135	1	0	0	138	0	60	1	0	0	61	209
5:45 PM	1	0	4	0	0	5	0	0	3	0	0	3	3	85	2	0	0	90	2	55	1	0	0	58	156
Hourly Total	**3**	**1**	**8**	**0**	**0**	**12**	**1**	**2**	**16**	**0**	**0**	**19**	**16**	**417**	**4**	**0**	**0**	**437**	**5**	**243**	**9**	**0**	**0**	**257**	**725**
Grand Total	12	9	44	1	0	66	13	7	46	0	0	66	35	1206	14	0	0	1255	31	1219	17	0	0	1267	2654
Approach %	18.2	13.6	66.7	1.5	-	-	19.7	10.6	69.7	0.0	-	-	2.8	96.1	1.1	0.0	-	-	2.4	96.2	1.3	0.0	-	-	-
Total %	0.5	0.3	1.7	0.0	-	2.5	0.5	0.3	1.7	0.0	-	2.5	1.3	45.4	0.5	0.0	-	47.3	1.2	45.9	0.6	0.0	-	47.7	-
Lights	12	9	44	1	-	66	13	7	46	0	-	66	35	1163	14	0	-	1212	31	1174	17	0	-	1222	2566
% Lights	100.0	100.0	100.0	100.0	-	100.0	100.0	100.0	100.0	-	-	100.0	100.0	96.4	100.0	-	-	96.6	100.0	96.3	100.0	-	-	96.4	98.7
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	12	0	0	-	12	0	13	0	0	-	13	25
% Buses	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	1.0	0.0	-	-	1.0	0.0	1.1	0.0	-	-	1.0	0.9
Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	31	0	0	-	31	0	32	0	0	-	32	63
% Trucks	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	2.6	0.0	-	-	2.5	0.0	2.6	0.0	-	-	2.5	2.4
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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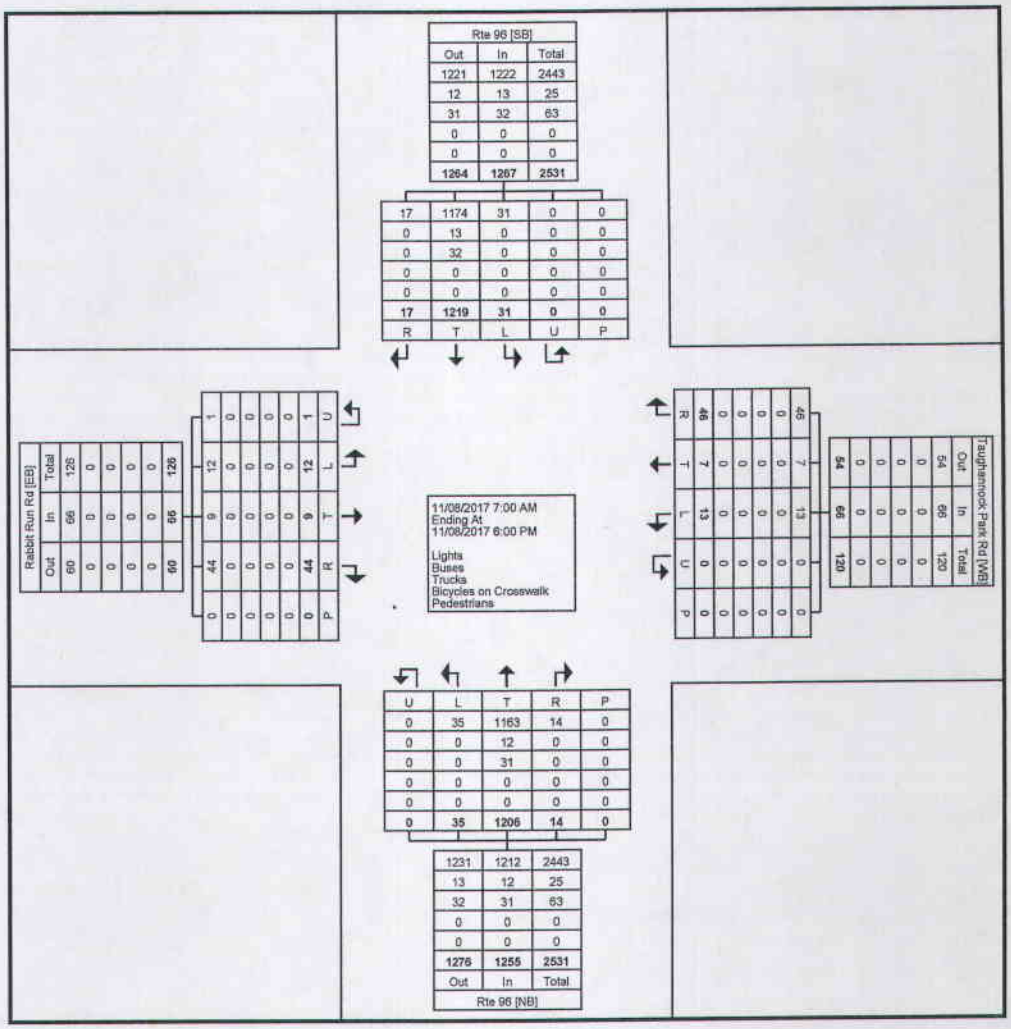
Trumansburg, NY
Rte 96 @ Rabbit Run Rd
Wednesday, November 8, 2017
Location: 42.530234, -76.637231

Count Name: 1. Rte 96 @ Rabbit Run Rd
Site Code: SCU13X
Start Date: 11/08/2017
Page No: 2



Turning Movement Data Plot

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Trumansburg, NY
Rte 96 @ Rabbit Run Rd
Wednesday, November 8, 2017
Location: 42.530234, -76.637231

Count Name: 1. Rte 96 @ Rabbit Run Rd
Site Code: SCU13X
Start Date: 11/08/2017
Page No: 3

Turning Movement Peak Hour Data (7:00 AM)

	Rabbit Run Rd Eastbound						Taughannock Park Rd Westbound						Rte 96 Northbound						Rte 96 Southbound						
Start Time	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
7:00 AM	0	1	1	0	0	2	0	0	0	0	0	0	0	28	1	0	0	29	1	85	0	0	0	86	117
7:15 AM	2	0	6	0	0	8	1	0	0	0	0	1	0	35	1	0	0	36	0	80	0	0	0	80	125
7:30 AM	3	2	5	0	0	10	1	0	3	0	0	4	0	98	0	0	0	98	2	109	0	0	0	111	223
7:45 AM	3	1	5	0	0	9	0	0	0	0	0	0	0	82	1	0	0	83	8	142	1	0	0	151	243
Total	8	4	17	0	0	29	2	0	3	0	0	5	0	243	3	0	0	246	11	416	1	0	0	428	708
Approach %	27.6	13.8	58.6	0.0	-	-	40.0	0.0	60.0	0.0	-	-	0.0	98.8	1.2	0.0	-	-	2.6	97.2	0.2	0.0	-	-	-
Total %	1.1	0.6	2.4	0.0	-	4.1	0.3	0.0	0.4	0.0	-	0.7	0.0	34.3	0.4	0.0	-	34.7	1.6	58.8	0.1	0.0	-	60.5	-
PHF	0.667	0.500	0.708	0.000	-	0.725	0.500	0.000	0.250	0.000	-	0.313	0.000	0.620	0.750	0.000	-	0.628	0.344	0.732	0.250	0.000	-	0.709	0.728
Lights	8	4	17	0	-	29	2	0	3	0	-	5	0	234	3	0	-	237	11	402	1	0	-	414	685
% Lights	100.0	100.0	100.0	-	-	100.0	100.0	-	100.0	-	-	100.0	-	96.3	100.0	-	-	96.3	100.0	96.6	100.0	-	-	96.7	96.8
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	3	0	0	-	3	0	5	0	0	-	5	8
% Buses	0.0	0.0	0.0	-	-	0.0	0.0	-	0.0	-	-	0.0	-	1.2	0.0	-	-	1.2	0.0	1.2	0.0	-	-	1.2	1.1
Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	6	0	0	-	6	0	9	0	0	-	9	15
% Trucks	0.0	0.0	0.0	-	-	0.0	0.0	-	0.0	-	-	0.0	-	2.5	0.0	-	-	2.4	0.0	2.2	0.0	-	-	2.1	2.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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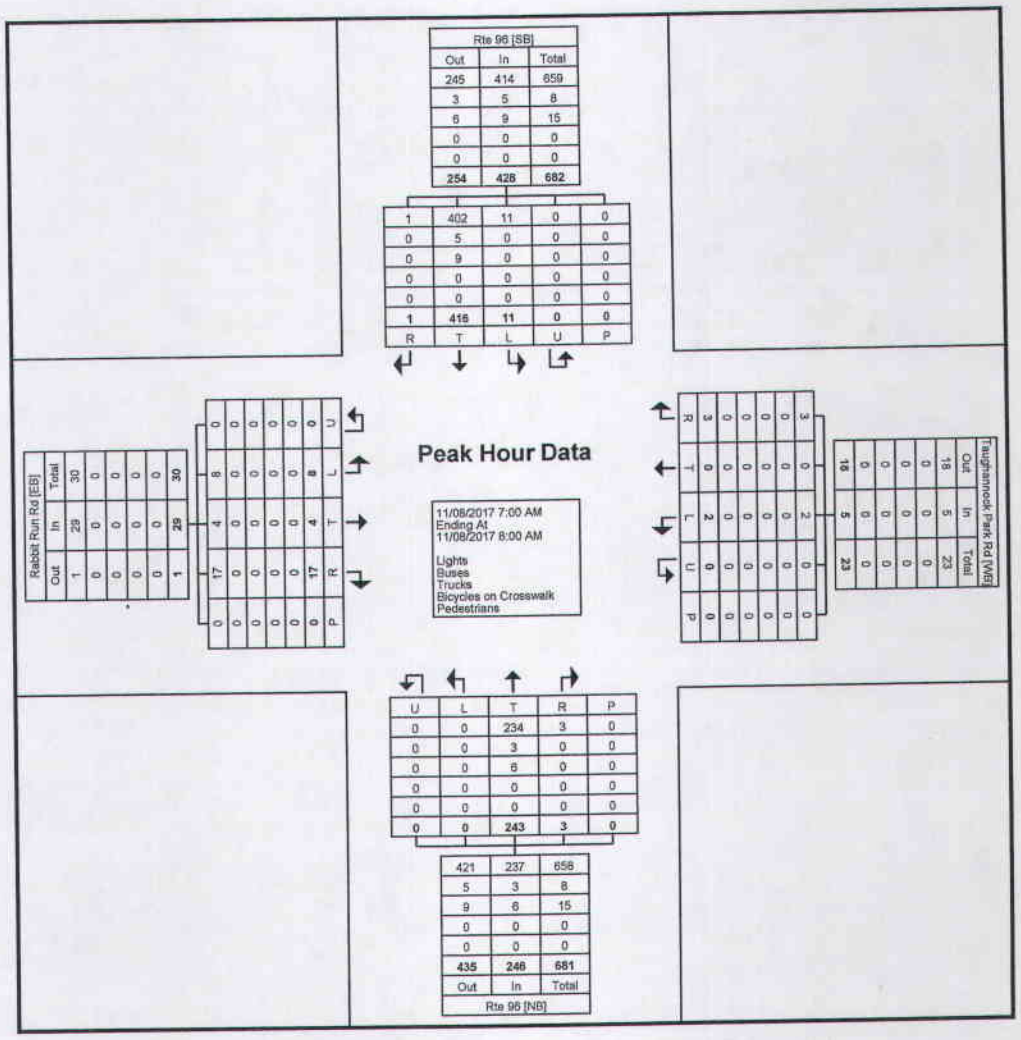
Trumansburg, NY
Rte 96 @ Rabbit Run Rd
Wednesday, November 8, 2017
Location: 42.530234, -76.637231

Count Name: 1. Rte 96 @ Rabbit Run Rd
Site Code: SCU13X
Start Date: 11/08/2017
Page No: 4



Turning Movement Peak Hour Data Plot (7:00 AM)

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Trumansburg, NY
Rte 96 @ Rabbit Run Rd
Wednesday, November 8, 2017
Location: 42.530234, -76.637231

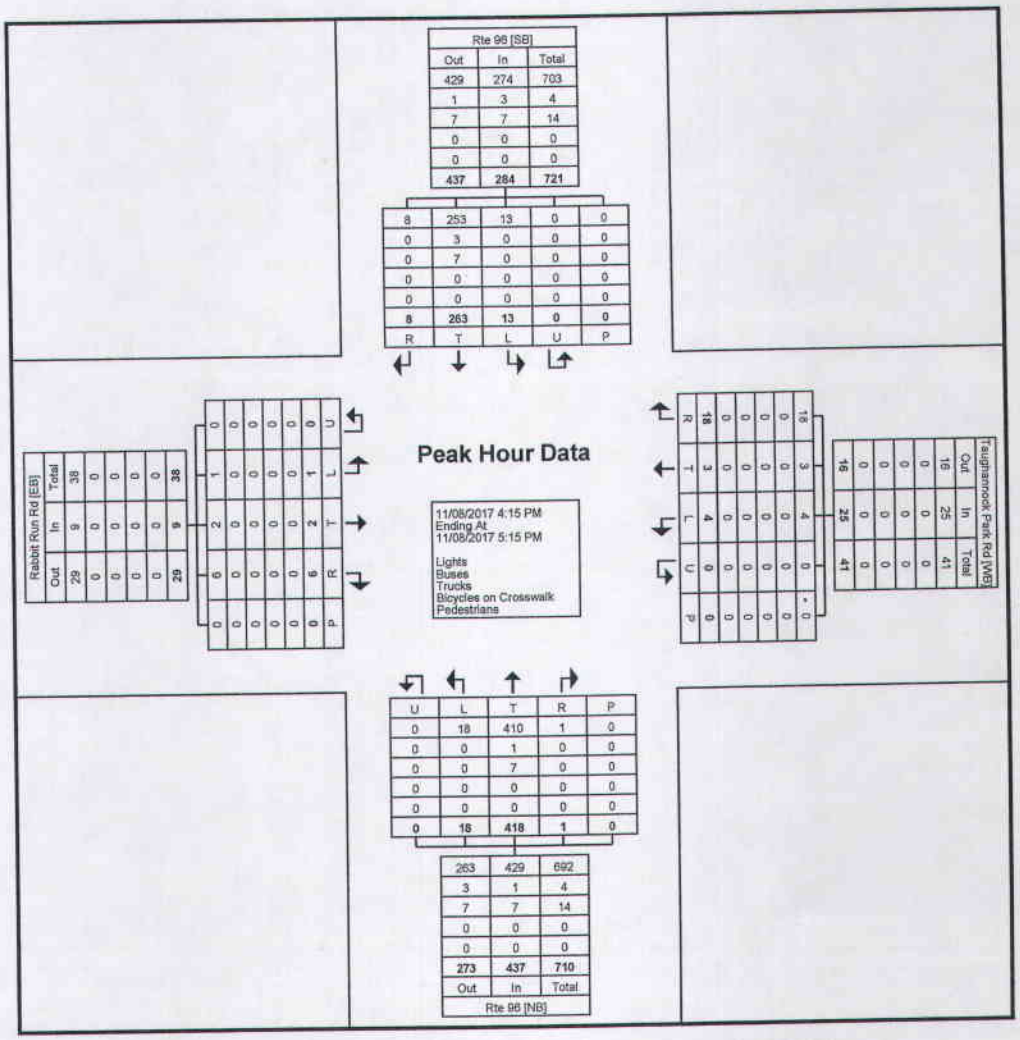
Count Name: 1. Rte 96 @ Rabbit Run Rd
Site Code: SCU13X
Start Date: 11/08/2017
Page No: 5

Turning Movement Peak Hour Data (4:15 PM)

	Rabbit Run Rd Eastbound						Taughannock Park Rd Westbound						Rte 96 Northbound						Rte 96 Southbound						
Start Time	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
4:15 PM	0	2	2	0	0	4	1	2	5	0	0	8	1	96	0	0	0	97	3	87	2	0	0	92	201
4:30 PM	1	0	2	0	0	3	2	0	3	0	0	5	3	106	0	0	0	109	6	60	2	0	0	68	185
4:45 PM	0	0	0	0	0	0	1	0	7	0	0	8	6	117	1	0	0	124	1	50	0	0	0	51	183
5:00 PM	0	0	2	0	0	2	0	1	3	0	0	4	8	99	0	0	0	107	3	66	4	0	0	73	186
Total	1	2	6	0	0	9	4	3	18	0	0	25	18	418	1	0	0	437	13	263	8	0	0	284	755
Approach %	11.1	22.2	66.7	0.0	-	-	16.0	12.0	72.0	0.0	-	-	4.1	95.7	0.2	0.0	-	-	4.6	92.6	2.8	0.0	-	-	-
Total %	0.1	0.3	0.8	0.0	-	1.2	0.5	0.4	2.4	0.0	-	3.3	2.4	55.4	0.1	0.0	-	57.9	1.7	34.8	1.1	0.0	-	37.6	-
PHF	0.250	0.250	0.750	0.000	-	0.563	0.500	0.375	0.643	0.000	-	0.781	0.563	0.893	0.250	0.000	-	0.881	0.542	0.756	0.500	0.000	-	0.772	0.939
Lights	1	2	6	0	-	9	4	3	18	0	-	25	18	410	1	0	-	429	13	253	8	0	-	274	737
% Lights	100.0	100.0	100.0	-	-	100.0	100.0	100.0	100.0	-	-	100.0	100.0	98.1	100.0	-	-	98.2	100.0	96.2	100.0	-	-	96.5	97.6
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	0	3	0	0	-	3	4
% Buses	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.2	0.0	-	-	0.2	0.0	1.1	0.0	-	-	1.1	0.5
Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	7	0	0	-	7	0	7	0	0	-	7	14
% Trucks	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	1.7	0.0	-	-	1.6	0.0	2.7	0.0	-	-	2.5	1.9
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Trumansburg, NY
Rte 96 @ Rabbit Run Rd
Wednesday, November 8, 2017
Location: 42.530234, -76.637231

Count Name: 1. Rte 96 @ Rabbit Run Rd
Site Code: SCU13X
Start Date: 11/08/2017
Page No: 6



Turning Movement Peak Hour Data Plot (4:15 PM)

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Trumansburg, NY
Whig Street @ South Street
Wednesday, November 8, 2017
Location: 42.539356, -76.658479

Count Name: 2. South St @ Whig St
Site Code: SCU3PX
Start Date: 11/08/2017
Page No: 1

Turning Movement Data

	Whig St Eastbound						Whig St Westbound						South St Northbound						South St Southbound						
Start Time	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
7:00 AM	2	6	1	0	0	9	0	0	0	0	1	0	0	4	3	0	0	7	1	2	0	0	0	3	19
7:15 AM	1	15	0	0	0	16	0	3	2	0	1	5	0	8	1	0	0	9	15	4	0	0	0	19	49
7:30 AM	1	23	0	0	0	24	3	9	5	0	6	17	2	2	21	0	4	25	18	9	0	0	14	27	93
7:45 AM	2	50	0	0	0	52	11	32	15	0	1	58	1	3	23	0	0	27	8	4	0	0	1	12	149
Hourly Total	**6**	**94**	**1**	**0**	**0**	**101**	**14**	**44**	**22**	**0**	**9**	**80**	**3**	**17**	**48**	**0**	**4**	**68**	**42**	**19**	**0**	**0**	**15**	**61**	**310**
8:00 AM	1	1	0	0	0	2	6	8	2	0	1	16	0	9	2	0	0	11	1	4	2	0	0	7	36
8:15 AM	2	3	0	0	0	5	3	1	2	0	1	6	0	3	2	0	0	5	0	3	3	0	0	6	22
8:30 AM	1	4	1	0	0	6	1	0	1	0	0	2	0	6	2	0	0	8	0	1	3	0	0	4	20
8:45 AM	3	0	0	0	0	3	1	3	1	0	0	5	1	3	1	0	0	5	0	6	3	0	0	9	22
Hourly Total	**7**	**8**	**1**	**0**	**0**	**16**	**11**	**12**	**6**	**0**	**2**	**29**	**1**	**21**	**7**	**0**	**0**	**29**	**1**	**14**	**11**	**0**	**0**	**26**	**100**
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:00 PM	0	0	1	0	2	1	4	5	5	0	0	14	0	11	0	0	2	11	1	8	0	0	0	9	35
4:15 PM	0	1	1	0	0	2	4	3	1	0	3	8	1	4	1	0	0	6	1	7	2	0	2	10	26
4:30 PM	2	2	0	0	1	4	4	1	2	0	0	7	0	7	5	0	2	12	1	8	2	0	0	11	34
4:45 PM	0	10	0	0	0	10	6	2	2	0	2	10	1	6	4	0	1	11	4	9	1	1	2	15	46
Hourly Total	**2**	**13**	**2**	**0**	**3**	**17**	**18**	**11**	**10**	**0**	**5**	**39**	**2**	**28**	**10**	**0**	**5**	**40**	**7**	**32**	**5**	**1**	**4**	**45**	**141**
5:00 PM	2	2	0	0	0	4	7	12	6	0	0	25	0	8	2	0	0	10	4	7	0	0	0	11	50
5:15 PM	0	1	0	0	0	1	0	7	4	0	0	11	2	8	1	0	0	11	4	11	1	0	1	16	39
5:30 PM	1	0	2	0	0	3	1	0	2	0	0	3	0	7	1	0	0	8	0	12	1	0	0	13	27
5:45 PM	2	3	0	0	0	5	1	2	2	0	0	5	0	7	2	0	0	9	0	7	2	0	0	9	28
Hourly Total	**5**	**6**	**2**	**0**	**0**	**13**	**9**	**21**	**14**	**0**	**0**	**44**	**2**	**30**	**6**	**0**	**0**	**38**	**8**	**37**	**4**	**0**	**1**	**49**	**144**
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	20	121	6	0	3	147	52	88	52	0	16	192	8	96	71	0	9	175	58	102	20	1	20	181	695
Approach %	13.6	82.3	4.1	0.0	-	-	27.1	45.8	27.1	0.0	-	-	4.6	54.9	40.6	0.0	-	-	32.0	56.4	11.0	0.6	-	-	-
Total %	2.9	17.4	0.9	0.0	-	21.2	7.5	12.7	7.5	0.0	-	27.6	1.2	13.8	10.2	0.0	-	25.2	8.3	14.7	2.9	0.1	-	26.0	-
Lights	18	119	5	0	-	142	51	87	52	0	-	190	8	92	71	0	-	171	57	92	20	1	-	170	673
% Lights	90.0	98.3	83.3	-	-	96.6	98.1	98.9	100.0	-	-	99.0	100.0	95.8	100.0	-	-	97.7	98.3	90.2	100.0	100.0	-	93.9	96.8
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	3	0	0	-	3	1	7	0	0	-	8	11
% Buses	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	3.1	0.0	-	-	1.7	1.7	6.9	0.0	0.0	-	4.4	1.6
Trucks	2	2	1	0	-	5	1	1	0	0	-	2	0	1	0	0	-	1	0	3	0	0	-	3	11
% Trucks	10.0	1.7	16.7	-	-	3.4	1.9	1.1	0.0	-	-	1.0	0.0	1.0	0.0	-	-	0.6	0.0	2.9	0.0	0.0	-	1.7	1.6
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	33.3	-	-	-	-	-	0.0	-	-	-	-	-	22.2	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	2	-	-	-	-	-	16	-	-	-	-	-	7	-	-	-	-	-	20	-	-
% Pedestrians	-	-	-	-	66.7	-	-	-	-	-	100.0	-	-	-	-	-	77.8	-	-	-	-	-	100.0	-	-

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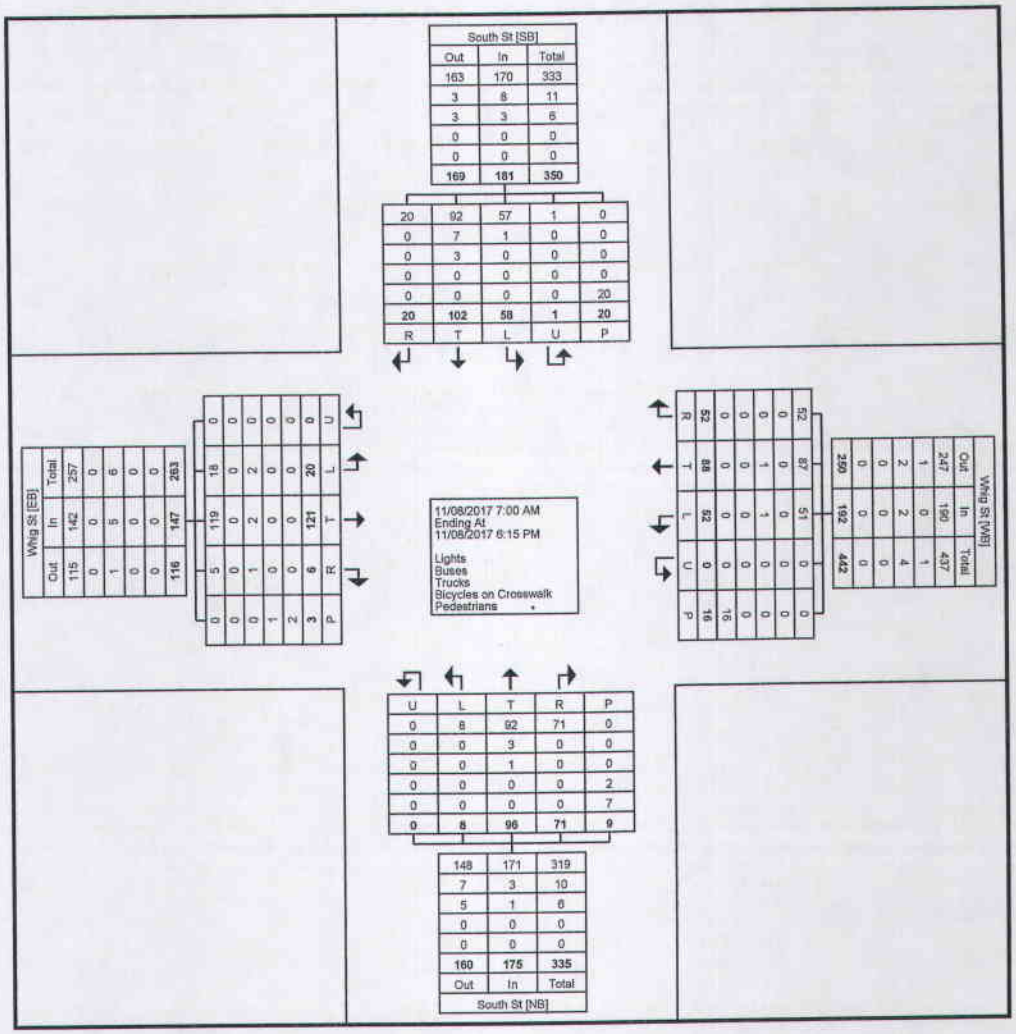
Trumansburg, NY
Whig Street @ South Street
Wednesday, November 8, 2017
Location: 42.539356, -76.658479

Count Name: 2. South St @ Whig St
Site Code: SCU3PX
Start Date: 11/08/2017
Page No: 2



Turning Movement Data Plot

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Page No: 3

Turning Movement Peak Hour Data (7:15 AM)

	Whig St Eastbound						Whig St Westbound						South St Northbound						South St Southbound						
Start Time	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
7:15 AM	1	15	0	0	0	16	0	3	2	0	1	5	0	8	1	0	0	9	15	4	0	0	0	19	49
7:30 AM	1	23	0	0	0	24	3	9	5	0	6	17	2	2	21	0	4	25	18	9	0	0	14	27	93
7:45 AM	2	50	0	0	0	52	11	32	15	0	1	58	1	3	23	0	0	27	8	4	0	0	1	12	149
8:00 AM	1	1	0	0	0	2	6	8	2	0	1	16	0	9	2	0	0	11	1	4	2	0	0	7	36
Total	5	89	0	0	0	94	20	52	24	0	9	96	3	22	47	0	4	72	42	21	2	0	15	65	327
Approach %	5.3	94.7	0.0	0.0	-	-	20.8	54.2	25.0	0.0	-	-	4.2	30.6	65.3	0.0	-	-	64.6	32.3	3.1	0.0	-	-	-
Total %	1.5	27.2	0.0	0.0	-	28.7	6.1	15.9	7.3	0.0	-	29.4	0.9	6.7	14.4	0.0	-	22.0	12.8	6.4	0.6	0.0	-	19.9	-
PHF	0.625	0.445	0.000	0.000	-	0.452	0.455	0.406	0.400	0.000	-	0.414	0.375	0.611	0.511	0.000	-	0.667	0.583	0.583	0.250	0.000	-	0.602	0.549
Lights	4	88	0	0	-	92	20	51	24	0	-	95	3	21	47	0	-	71	41	15	2	0	-	58	316
% Lights	80.0	98.9	-	-	-	97.9	100.0	98.1	100.0	-	-	99.0	100.0	95.5	100.0	-	-	98.6	97.6	71.4	100.0	-	-	89.2	96.6
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	1	6	0	0	-	7	8
% Buses	0.0	0.0	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	4.5	0.0	-	-	1.4	2.4	28.6	0.0	-	-	10.8	2.4
Trucks	1	1	0	0	-	2	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	3
% Trucks	20.0	1.1	-	-	-	2.1	0.0	1.9	0.0	-	-	1.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.9
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	9	-	-	-	-	-	4	-	-	-	-	-	15	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

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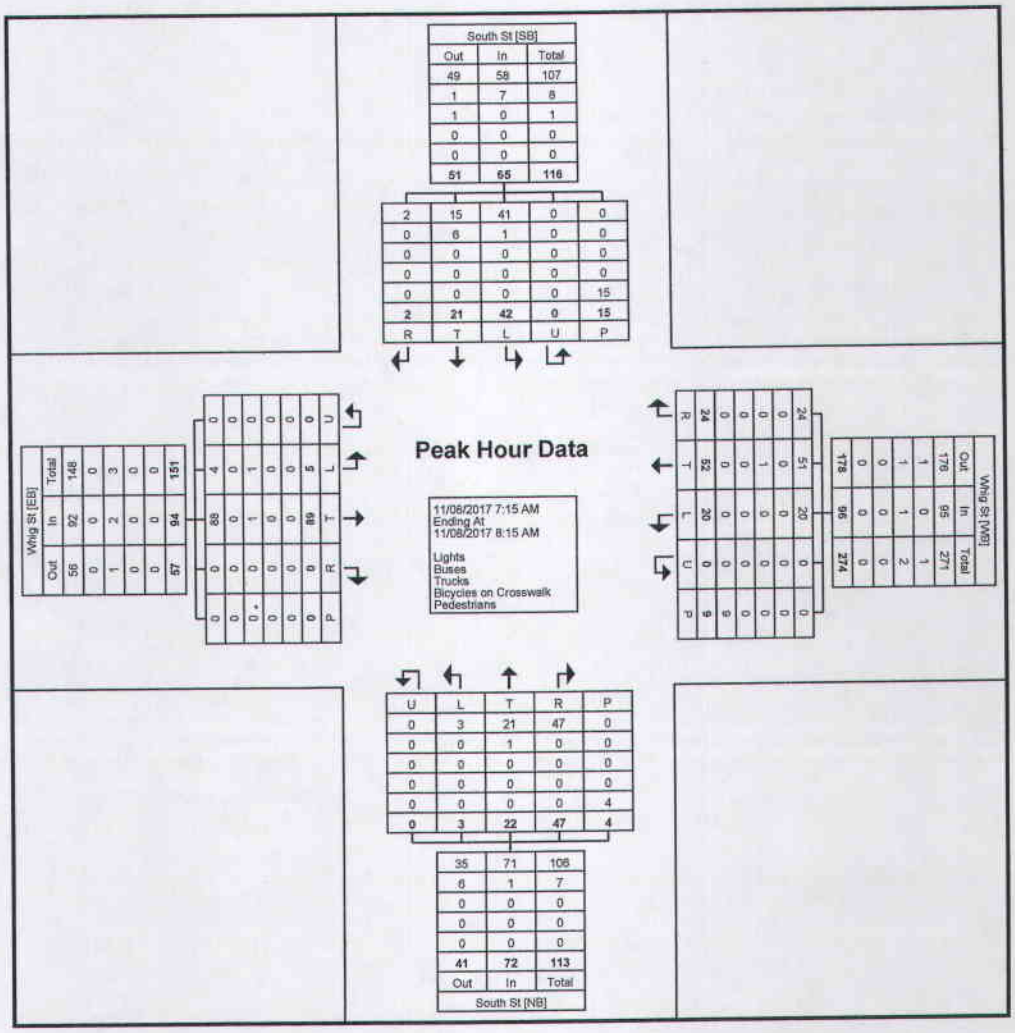

Turning Movement Peak Hour Data Plot (7:15 AM)

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Site Code: SCU3PX
Start Date: 11/08/2017
Page No: 5

Turning Movement Peak Hour Data (4:30 PM)

	Whig St Eastbound						Whig St Westbound						South St Northbound						South St Southbound						
Start Time	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
4:30 PM	2	2	0	0	1	4	4	1	2	0	0	7	0	7	5	0	2	12	1	8	2	0	0	11	34
4:45 PM	0	10	0	0	0	10	6	2	2	0	2	10	1	6	4	0	1	11	4	9	1	1	2	15	46
5:00 PM	2	2	0	0	0	4	7	12	6	0	0	25	0	8	2	0	0	10	4	7	0	0	0	11	50
5:15 PM	0	1	0	0	0	1	0	7	4	0	0	11	2	8	1	0	0	11	4	11	1	0	1	16	39
Total	4	15	0	0	1	19	17	22	14	0	2	53	3	29	12	0	3	44	13	35	4	1	3	53	169
Approach %	21.1	78.9	0.0	0.0	-	-	32.1	41.5	26.4	0.0	-	-	6.8	65.9	27.3	0.0	-	-	24.5	66.0	7.5	1.9	-	-	-
Total %	2.4	8.9	0.0	0.0	-	11.2	10.1	13.0	8.3	0.0	-	31.4	1.8	17.2	7.1	0.0	-	26.0	7.7	20.7	2.4	0.6	-	31.4	-
PHF	0.500	0.375	0.000	0.000	-	0.475	0.607	0.458	0.583	0.000	-	0.530	0.375	0.906	0.600	0.000	-	0.917	0.813	0.795	0.500	0.250	-	0.828	0.845
Lights	4	15	0	0	-	19	17	22	14	0	-	53	3	29	12	0	-	44	13	34	4	1	-	52	168
% Lights	100.0	100.0	-	-	-	100.0	100.0	100.0	100.0	-	-	100.0	100.0	100.0	100.0	-	-	100.0	100.0	97.1	100.0	100.0	-	98.1	99.4
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Buses	0.0	0.0	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0
Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	1
% Trucks	0.0	0.0	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	2.9	0.0	0.0	-	1.9	0.6
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	100.0	-	-	-	-	-	0.0	-	-	-	-	-	66.7	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	3	-	-
% Pedestrians	-	-	-	-	0.0	-	-	-	-	-	100.0	-	-	-	-	-	33.3	-	-	-	-	-	100.0	-	-

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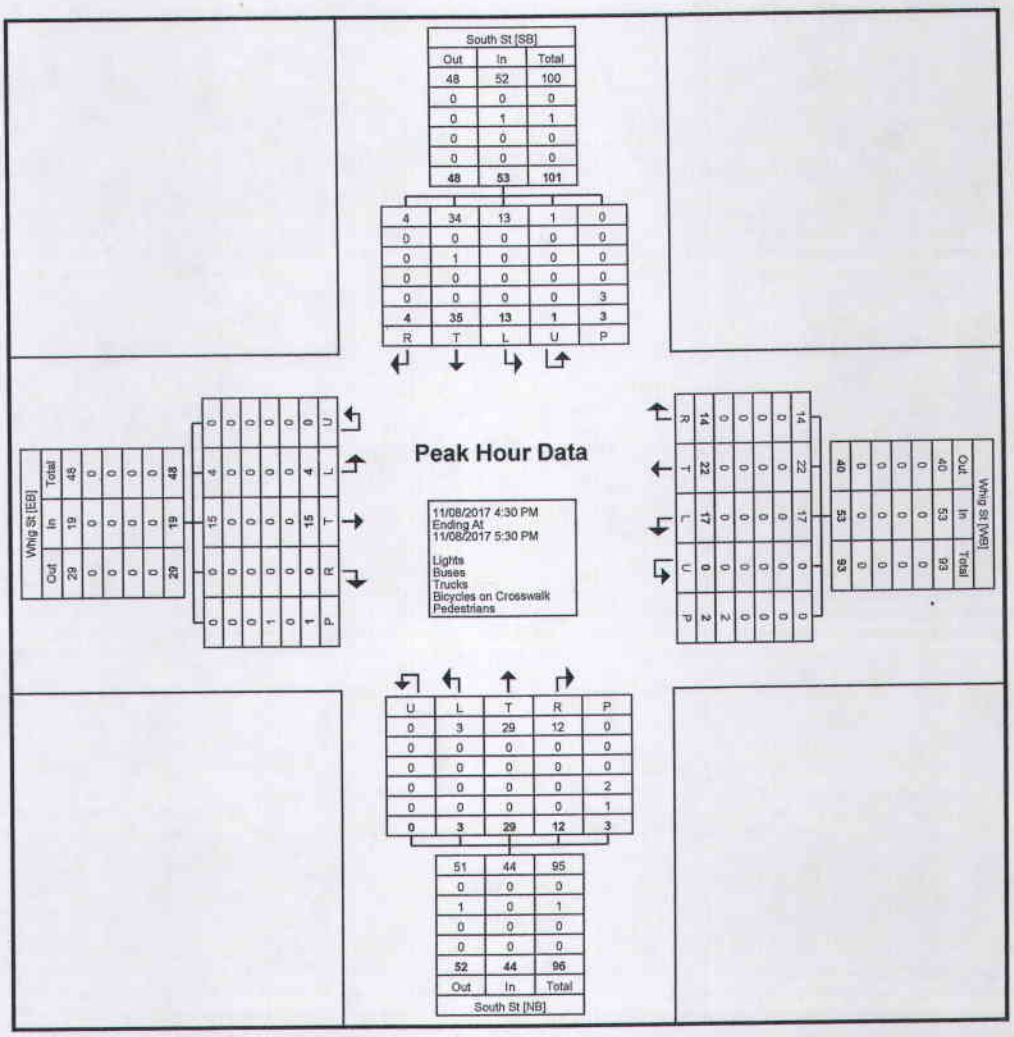


Turning Movement Peak Hour Data Plot (4:30 PM)

A2

Miscellaneous Traffic Data and Calculations

46 S St. Trumansburg - Nursery
37021.2

- 50% of parents pick up + Drop off at their own convenience.
- Most Drop offs from 8-9AM
- 50% Pick up from noon - 1
- 50% Pick up from 3:30 - 6 PM

★ 12 Toddlers + 36 preschoolers = 48 kids
3 classrooms → ~ 5 teachers/administrative — Where do they park??

Teachers/admin arrive/leave 8AM / 6PM - 5 trips

Kids Arrive 8-9AM - 48 trips (Mostly Around 9AM)
50% kids leave 12-1PM - 24 trips
50% kids leave 3:30 - 6PM 24 trips

3:30-4:30	4:30-5:36	5:30-6
10%	80%	10%
3 trips	19 trips	2 trips

AM Peak for the project is 7:00 - 8:00 AM
PM 4:45 - 5:45 AM

Generated Trips:

AM: 5 students + 5 teachers/admin
drop off (enter + exit) — stay for day (enter)

PM: 20 Students + 5 teachers/admin
pick-up (enter + exit) — leave for day (exit)

★

	AM:	PM:
Enter	10	20
Exit	5	25

Project Information	
Project Name:	46 South Street
No:	37021.8
Date:	12/11/2017
City:	Trumansburg
State/Province:	NY
Zip/Postal Code:	
Country:	United States
Client Name:	
Analyst's Name:	PEV
Edition:	ITE-TGM 9th Edition

Land Use	Size	AM Peak		PM Peak	
		Entry	Exit	Entry	Exit
220 - Rental Apartements	40 Dwelling Units	5	18	16	9
Reduction		0	0	0	0
Internal		0	0	0	0
Pass-by		0	0	0	0
Non-pass-by		5	18	16	9
210 - Market Rate For-Sale Homes	**17 Dwelling Units**	**5**	**16**	**13**	**7**
Reduction		**0**	**0**	**0**	**0**
Internal		**0**	**0**	**0**	**0**
Pass-by		**0**	**0**	**0**	**0**
Non-pass-by		**5**	**16**	**13**	**7**
224 - Rental Townhouse	6 Dwelling Units	1	3	2	2
Reduction		0	0	0	0
Internal		0	0	0	0
Pass-by		0	0	0	0
Non-pass-by		1	3	2	2
230 - For-Sale Townhouse	**10 Dwelling Units**	**1**	**7**	**6**	**3**
Reduction		**0**	**0**	**0**	**0**
Internal		**0**	**0**	**0**	**0**
Pass-by		**0**	**0**	**0**	**0**
Non-pass-by		**1**	**7**	**6**	**3**
Nursery School	48 Students	10	5	20	25
Reduction		0	0	0	0
Internal		0	0	0	0
Pass-by		0	0	0	0
Non-pass-by		10	5	20	25
Total		22	49	57	46
Total Reduction		0	0	0	0
Total Internal		0	0	0	0
Total Pass-by		0	0	0	0
Total Non-pass-by		22	49	57	46

***Note Nursery School Trip Gen based off of information from the client, not ITE**

PROPOSED 46 SOUTH STREET DEVELOPMENT
VILLAGE OF TRUMANSBURG, NY
AM PEAK

Num of yrs
10

LOCATION NUMBER	INTERSECTION DESCRIPTION	2017 Existing Volume	Bkgd Volume 0.25%	Proposed 46 South Street Development Enter Dist. %	Exit Dist. %	Trips IN 22	Trips OUT 49	Total Site Trips
1	Rabbit Run Rd/ Main St							
	SR	1	1					
	ST	416	427		16%		8	8
	SL	11	11					
	WR	3	3					
	WT							
	WL	2	2					
	NR	3	3					
	NT	243	249	18%		4		4
	NL			31%		7		7
	ER	17	17		30%		15	15
	ET	4	4					
	EL	8	8					
2	South St/ Main St							
	SR							
	ST							
	SL							
	WR							
	WT	151	155					
	WL	12	12	18%		4		4
	NR	18	18		16%		8	8
	NT							
	NL	27	28		30%		15	15
	ER	44	45	31%		7		7
	ET	358	368					
	EL							
3	South St/ Whig St							
	SR	2	2					
	ST	21	22	49%		11		11
	SL	42	43					
	WR	24	25					
	WT	52	53					
	WL	20	21	2%		0		0
	NR	47	48		2%		1	1
	NT	22	23		46%		23	23
	NL	3	3					
	ER							
	ET	89	91					
	EL	5	5					
4	South St/ School House Lane							
	SR							
	ST	23	24	51%		11		11
	SL	25	26					
	WR	8	8					
	WT							
	WL	7	7	2%		0		0
	NR	31	32		2%		1	1
	NT	54	55		48%		24	24
	NL							
	ER							
	ET							
	EL							
5	South St/ Proposed Driveway							
	SR			53%		12		12
	ST	30	31					
	SL							
	WR							
	WT							
	WL							
	NR							
	NT	85	87					
	NL			33%		7		7
	ER				32%		16	16
	ET							
	EL				50%		25	25
6	Pennsylvania Ave/ Proposed Driveway							
	SR							
	ST	14	14					
	SL			12%		3		3
	WR				16%		8	8
	WT							
	WL				2%		1	1
	NR			2%		0		0
	NT	21	22					
	NL							
	ER							
	ET							
	EL							
7	Pennsylvania Ave/ Elm St/Halsey Ave							
	SR	1	1					
	ST	2	2	2%		0		0
	SL							
	WR							
	WT	22	23					
	WL	5	5	4%		1		1
	NR	9	9		10%		5	5
	NT	6	6		2%		1	1
	NL	6	6		4%		2	2
	ER	7	7	6%		1		1
	ET	92	94					
	EL							

PROPOSED 46 SOUTH STREET DEVELOPMENT
VILLAGE OF TRUMANSBURG, NY
PM PEAK

Num of yrs
10

LOCATION NUMBER	INTERSECTION DESCRIPTION	2017 Existing Volume	Bkgd Volume 0.25%	Proposed 46 South Street Development				Total Site Trips
				Enter Dist. %	Exit Dist. %	Trips IN 57	Trips OUT 46	
1	Rabbit Run Rd/ Main St							
	SR	8	8					
	ST	263	270		16%		7	7
	SL	13	13					
	WR	18	18					
	WT	3	3					
	WL	4	4					
	NR	1	1					
	NT	418	429	18%		10		10
	NL	18	18	31%		18		18
	ER	6	6		30%		14	14
	ET	2	2					
	EL	1	1					
2	South St/ Main St							
	SR							
	ST							
	SL							
	WR							
	WT	454	465					
	WL	24	25	18%		10		10
	NR	26	27		16%		7	7
	NT							
	NL	24	25		30%		14	14
	ER	19	19	31%		18		18
	ET	281	288					
	EL							
3	South St/ Whig St							
	SR	4	4					
	ST	35	36	49%		28		28
	SL	13	13					
	WR	14	14					
	WT	22	23					
	WL	17	17	2%		1		1
	NR	12	12		2%		1	1
	NT	29	30		46%		21	21
	NL	3	3					
	ER							
	ET	15	15					
	EL	4	4					
4	South St/ School House Lane							
	SR							
	ST	43	44	51%		29		29
	SL	6	6					
	WR	6	6					
	WT							
	WL	4	4	2%		1		1
	NR	4	4		2%		1	1
	NT	43	44		48%		22	22
	NL							
	ER							
	ET							
	EL							
5	South St/ Proposed Driveway							
	SR			53%		30		30
	ST	47	48					
	SL							
	WR							
	WT							
	WL							
	NR							
	NT	47	48					
	NL			33%		19		19
	ER				32%		15	15
	ET							
	EL				50%		23	23
6	Pennsylvania Ave/ Proposed Driveway							
	SR							
	ST	17	17					
	SL			12%		7		7
	WR				16%		7	7
	WT							
	WL				2%		1	1
	NR			2%		1		1
	NT	19	19					
	NL							
	ER							
	ET							
	EL							
7	Pennsylvania Ave/ Elm St/Halsey Ave							
	SR	1	1					
	ST	4	4	2%		1		1
	SL	1	1					
	WR							
	WT	39	40					
	WL	5	5	4%		2		2
	NR	4	4		10%		5	5
	NT	4	4		2%		1	1
	NL	11	11		4%		2	2
	ER	8	8	6%		3		3
	ET	32	33					
	EL							

Sight Distance Measurements, AMS, 7/17/16
Trumansburg, NY

South St, 130' S of Trumansburg Central School
d.w. on W. side of road;

Intersec. SDist (3.5' → 3.5')
SPLim. = 25 SD → N = > 550' (not limited)
SD → S = > [illegible]' (far crest)

Stopping SDist ([illegible] → [illegible])
Photos: ① → N [illegible] → N = [illegible]
② → S SD → S = > 5[illegible]' [illegible]

Lanes – 10'
Shoulders – 0
Newly Paved
Not Striped

Pennsylvania Ave., 585' S of Elm/Halsey Sts.
d.w. on E side of road;

Intersection SDist. ([illegible] → [illegible])
SPLim. = 25 SD → N = > 585' ([illegible])
SD → S = > 700' ([illegible])

Stopping SDist ([illegible] → [illegible])
Photos ③ → N [illegible]
④ → S [illegible]

Lanes – 10
Shoulders – 0
New Pvm't
Not Striped

A3

Level of Service: Criteria and Definitions

Level of Service Criteria

Highway Capacity Manual 2010

SIGNALIZED INTERSECTIONS

Level of Service is a qualitative measure describing operational conditions within a traffic stream, based on service measures such as speed and travel time, freedom to maneuver, traffic interruptions, comfort, and convenience. Level of Service for signalized intersections is defined in terms of delay specifically, average total delay per vehicle for a 15 minute analysis period. The ranges are as follows:

Level of Service	Control Delay per vehicle (seconds)
A	< 10
B	10 – 20
C	20 – 35
D	35 – 55
E	55 – 80
F	>80

UNSIGNALIZED INTERSECTIONS

Level of Service for unsignalized intersections is also defined in terms of delay. However, the delay criteria are different from a signalized intersection. The primary reason for this is driver expectation that a signalized intersection is designed to carry higher volumes than an unsignalized intersection. The total delay threshold for any given Level of Service is less for an unsignalized intersection than for a signalized intersection. The ranges are as follows:

Level of Service	Control Delay per vehicle (seconds)
A	< 10
B	10 – 15
C	15 – 25
D	25 – 35
E	35 - 50
F	>50

A4

Level of Service Calculations: Existing Conditions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	4	17	2	0	3	0	243	3	11	416	1
Future Volume (vph)	8	4	17	2	0	3	0	243	3	11	416	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.920			0.916			0.998				
Flt Protected		0.986			0.982						0.999	
Satd. Flow (prot)	0	1690	0	0	1676	0	0	1859	0	0	1861	0
Flt Permitted		0.986			0.982						0.999	
Satd. Flow (perm)	0	1690	0	0	1676	0	0	1859	0	0	1861	0
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		671			748			547			585	
Travel Time (s)		8.3			9.3			8.3			8.9	
Peak Hour Factor	0.73	0.73	0.73	0.31	0.31	0.31	0.63	0.63	0.63	0.71	0.71	0.71
Adj. Flow (vph)	11	5	23	6	0	10	0	386	5	15	586	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	39	0	0	16	0	0	391	0	0	602	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 40.8% ICU Level of Service A
Analysis Period (min) 15

Intersection

Int Delay, s/veh 1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	4	17	2	0	3	0	243	3	11	416	1
Future Vol, veh/h	8	4	17	2	0	3	0	243	3	11	416	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	73	73	73	31	31	31	63	63	63	71	71	71
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	5	23	6	0	10	0	386	5	15	586	1

Major/Minor	Minor2			Minor1				Major1			Major2	
Conflicting Flow All	1011	1008	587	1020	1006	388	587	0	0	390	0	0
Stage 1	618	618	-	388	388	-	-	-	-	-	-	-
Stage 2	393	390	-	632	618	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	218	240	510	215	241	660	988	-	-	1169	-	-
Stage 1	477	481	-	636	609	-	-	-	-	-	-	-
Stage 2	632	608	-	468	481	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	212	235	510	199	236	660	988	-	-	1169	-	-
Mov Cap-2 Maneuver	212	235	-	199	236	-	-	-	-	-	-	-
Stage 1	477	472	-	636	609	-	-	-	-	-	-	-
Stage 2	623	608	-	433	472	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.4	16	0	0.2
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	988	-	-	329	343	1169	-	-
HCM Lane V/C Ratio	-	-	-	0.121	0.047	0.013	-	-
HCM Control Delay (s)	0	-	-	17.4	16	8.1	0	-
HCM Lane LOS	A	-	-	C	C	A	A	-
HCM 95th %ile Q(veh)	0	-	-	0.4	0.1	0	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	**359**	**44**	**12**	**151**	**27**	**18**
Future Volume (vph)	359	44	12	151	27	18
Ideal Flow (vphpl)	**1900**	**1900**	**1900**	**1900**	**1900**	**1900**
Storage Length (ft)		150	150		150	150
Storage Lanes		**0**	**0**		**0**	**0**
Taper Length (ft)			25		25	
Lane Util. Factor	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
Frt	0.985				0.946	
Flt Protected				**0.996**	**0.971**	
Satd. Flow (prot)	1835	0	0	1855	1711	0
Flt Permitted				**0.996**	**0.971**	
Satd. Flow (perm)	1835	0	0	1855	1711	0
Link Speed (mph)	**30**			**30**	**30**	
Link Distance (ft)	638			486	520	
Travel Time (s)	**14.5**			**11.0**	**11.8**	
Peak Hour Factor	0.79	0.79	0.83	0.83	0.51	0.51
Adj. Flow (vph)	**454**	**56**	**14**	**182**	**53**	**35**
Shared Lane Traffic (%)						
Lane Group Flow (vph)	**510**	**0**	**0**	**196**	**88**	**0**
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	**Left**	**Right**	**Left**	**Left**	**Left**	**Right**
Median Width(ft)	0			0	12	
Link Offset(ft)	**0**			**0**	**0**	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		**9**	**15**		**15**	**9**
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 31.6% ICU Level of Service A
Analysis Period (min) 15

Intersection

Int Delay, s/veh 1.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	**359**	**44**	**12**	**151**	**27**	**18**
Future Vol, veh/h	359	44	12	151	27	18
Conflicting Peds, #/hr	**0**	**0**	**0**	**0**	**0**	**0**
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	**-**	**None**	**-**	**None**	**-**	**None**
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	**0**	**-**	**-**	**0**	**0**	**-**
Grade, %	0	-	-	0	0	-
Peak Hour Factor	**79**	**79**	**83**	**83**	**51**	**51**
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	**454**	**56**	**14**	**182**	**53**	**35**

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	510	0	693	482
Stage 1	**-**	**-**	**-**	**-**	**482**	**-**
Stage 2	-	-	-	-	211	-
Critical Hdwy	**-**	**-**	**4.12**	**-**	**6.42**	**6.22**
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	**-**	**-**	**-**	**-**	**5.42**	**-**
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	**-**	**-**	**1055**	**-**	**409**	**584**
Stage 1	-	-	-	-	621	-
Stage 2	**-**	**-**	**-**	**-**	**824**	**-**
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	**-**	**-**	**1055**	**-**	**403**	**584**
Mov Cap-2 Maneuver	-	-	-	-	403	-
Stage 1	**-**	**-**	**-**	**-**	**621**	**-**
Stage 2	-	-	-	-	812	-

Approach	EB	WB	NB
HCM Control Delay, s	**0**	**0.6**	**14.7**
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	**460**	**-**	**-**	**1055**	**-**
HCM Lane V/C Ratio	0.192	-	-	0.014	-
HCM Control Delay (s)	**14.7**	**-**	**-**	**8.5**	**0**
HCM Lane LOS	B	-	-	A	A
HCM 95th %ile Q(veh)	**0.7**	**-**	**-**	**0**	**-**

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	89	0	20	52	24	3	22	47	42	21	2
Future Volume (vph)	5	89	0	20	52	24	3	22	47	42	21	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.966			0.912			0.996	
Flt Protected		0.997			0.990			0.998			0.969	
Satd. Flow (prot)	0	1857	0	0	1781	0	0	1695	0	0	1798	0
Flt Permitted		0.997			0.990			0.998			0.969	
Satd. Flow (perm)	0	1857	0	0	1781	0	0	1695	0	0	1798	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		519			551			900			520	
Travel Time (s)		11.8			12.5			20.5			11.8	
Peak Hour Factor	0.45	0.45	0.45	0.41	0.41	0.41	0.67	0.67	0.67	0.60	0.60	0.60
Adj. Flow (vph)	11	198	0	49	127	59	4	33	70	70	35	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	209	0	0	235	0	0	107	0	0	108	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 28.8% ICU Level of Service A
Analysis Period (min) 15

Intersection

Int Delay, s/veh 10.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	89	0	20	52	24	3	22	47	42	21	2
Future Vol, veh/h	5	89	0	20	52	24	3	22	47	42	21	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	45	45	45	41	41	41	67	67	67	60	60	60
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	198	0	49	127	59	4	33	70	70	35	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	347	289	37	353	255	68	38	0	0	103	0	0
Stage 1	177	177	-	77	77	-	-	-	-	-	-	-
Stage 2	170	112	-	276	178	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	607	621	1035	602	649	995	1572	-	-	1489	-	-
Stage 1	825	753	-	932	831	-	-	-	-	-	-	-
Stage 2	832	803	-	730	752	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	463	589	1035	429	616	995	1572	-	-	1489	-	-
Mov Cap-2 Maneuver	463	589	-	429	616	-	-	-	-	-	-	-
Stage 1	823	717	-	929	829	-	-	-	-	-	-	-
Stage 2	661	801	-	503	716	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.6	14.3	0.3	4.9
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1572	-	-	581	619	1489	-	-
HCM Lane V/C Ratio	0.003	-	-	0.36	0.378	0.047	-	-
HCM Control Delay (s)	7.3	0	-	14.6	14.3	7.5	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %ile Q(veh)	0	-	-	1.6	1.8	0.1	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	7	8	54	31	25	23
Future Volume (vph)	7	8	54	31	25	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.927		0.951			
Flt Protected	0.978					0.975
Satd. Flow (prot)	1689	0	1771	0	0	1816
Flt Permitted	0.978					0.975
Satd. Flow (perm)	1689	0	1771	0	0	1816
Link Speed (mph)	30		30			30
Link Distance (ft)	515		1123			900
Travel Time (s)	11.7		25.5			20.5
Peak Hour Factor	0.63	0.63	0.55	0.55	0.47	0.47
Adj. Flow (vph)	11	13	98	56	53	49
Shared Lane Traffic (%)						
Lane Group Flow (vph)	24	0	154	0	0	102
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 19.3% ICU Level of Service A
Analysis Period (min) 15

Intersection

Int Delay, s/veh 2.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	8	54	31	25	23
Future Vol, veh/h	7	8	54	31	25	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	63	63	55	55	47	47
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	13	98	56	53	49

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	281	126	0	0	155	0
Stage 1	126	-	-	-	-	-
Stage 2	155	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	709	924	-	-	1425	-
Stage 1	900	-	-	-	-	-
Stage 2	873	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	682	924	-	-	1425	-
Mov Cap-2 Maneuver	682	-	-	-	-	-
Stage 1	900	-	-	-	-	-
Stage 2	840	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.7	0	4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	793	1425	-
HCM Lane V/C Ratio	-	-	0.03	0.037	-
HCM Control Delay (s)	-	-	9.7	7.6	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %ile Q(veh)	-	-	0.1	0.1	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	92	7	5	22	0	6	6	9	0	2	1
Future Volume (vph)	0	92	7	5	22	0	6	6	9	0	2	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991						0.942			0.949	
Flt Protected					0.991			0.986				
Satd. Flow (prot)	0	1846	0	0	1846	0	0	1730	0	0	1768	0
Flt Permitted					0.991			0.986				
Satd. Flow (perm)	0	1846	0	0	1846	0	0	1730	0	0	1768	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		510			1134			1305			529	
Travel Time (s)		11.6			25.8			29.7			12.0	
Peak Hour Factor	0.62	0.62	0.62	0.45	0.45	0.45	0.75	0.75	0.75	0.38	0.38	0.38
Adj. Flow (vph)	0	148	11	11	49	0	8	8	12	0	5	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	159	0	0	60	0	0	28	0	0	8	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 18.6% ICU Level of Service A
Analysis Period (min) 15

Intersection

Intersection Delay, s/veh	7.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	92	7	5	22	0	6	6	9	0	2	1
Future Vol, veh/h	0	92	7	5	22	0	6	6	9	0	2	1
Peak Hour Factor	0.62	0.62	0.62	0.45	0.45	0.45	0.75	0.75	0.75	0.38	0.38	0.38
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	148	11	11	49	0	8	8	12	0	5	3
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.9	7.5	7.4	7.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	29%	0%	19%	0%
Vol Thru, %	29%	93%	81%	67%
Vol Right, %	43%	7%	0%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	21	99	27	3
LT Vol	6	0	5	0
Through Vol	6	92	22	2
RT Vol	9	7	0	1
Lane Flow Rate	28	160	60	8
Geometry Grp	1	1	1	1
Degree of Util (X)	0.032	0.177	0.069	0.009
Departure Headway (Hd)	4.117	3.999	4.154	4.237
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	854	896	857	850
Service Time	2.216	2.03	2.202	2.237
HCM Lane V/C Ratio	0.033	0.179	0.07	0.009
HCM Control Delay	7.4	7.9	7.5	7.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.6	0.2	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	2	6	4	3	18	18	418	1	13	263	8
Future Volume (vph)	1	2	6	4	3	18	18	418	1	13	263	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.913			0.903						0.996	
Flt Protected		0.994			0.992			0.998			0.998	
Satd. Flow (prot)	0	1690	0	0	1669	0	0	1859	0	0	1852	0
Flt Permitted		0.994			0.992			0.998			0.998	
Satd. Flow (perm)	0	1690	0	0	1669	0	0	1859	0	0	1852	0
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		671			748			547			585	
Travel Time (s)		8.3			9.3			8.3			8.9	
Peak Hour Factor	0.56	0.56	0.56	0.78	0.78	0.78	0.88	0.88	0.88	0.77	0.77	0.77
Adj. Flow (vph)	2	4	11	5	4	23	20	475	1	17	342	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	17	0	0	32	0	0	496	0	0	369	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 38.4% ICU Level of Service A
Analysis Period (min) 15

Intersection

Int Delay, s/veh 1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	2	6	4	3	18	18	418	1	13	263	8
Future Vol, veh/h	1	2	6	4	3	18	18	418	1	13	263	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	56	56	56	78	78	78	88	88	88	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	4	11	5	4	23	20	475	1	17	342	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	911	898	347	904	902	476	352	0	0	476	0	0
Stage 1	381	381	-	516	516	-	-	-	-	-	-	-
Stage 2	530	517	-	388	386	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	255	279	696	258	277	589	1207	-	-	1086	-	-
Stage 1	641	613	-	542	534	-	-	-	-	-	-	-
Stage 2	533	534	-	636	610	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	235	267	696	243	265	589	1207	-	-	1086	-	-
Mov Cap-2 Maneuver	235	267	-	243	265	-	-	-	-	-	-	-
Stage 1	626	601	-	530	522	-	-	-	-	-	-	-
Stage 2	497	522	-	611	598	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.5	14.1	0.3	0.4
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1207	-	-	442	429	1086	-	-
HCM Lane V/C Ratio	0.017	-	-	0.036	0.075	0.016	-	-
HCM Control Delay (s)	8	0	-	13.5	14.1	8.4	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %ile Q(veh)	0.1	-	-	0.1	0.2	0	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	281	19	24	454	24	26
Future Volume (vph)	281	19	24	454	24	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	150		150	150
Storage Lanes		0	0		0	0
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.991				0.930	
Flt Protected				0.997	0.977	
Satd. Flow (prot)	1846	0	0	1857	1693	0
Flt Permitted				0.997	0.977	
Satd. Flow (perm)	1846	0	0	1857	1693	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	638			486	520	
Travel Time (s)	14.5			11.0	11.8	
Peak Hour Factor	0.84	0.84	0.83	0.83	0.71	0.71
Adj. Flow (vph)	335	23	29	547	34	37
Shared Lane Traffic (%)						
Lane Group Flow (vph)	358	0	0	576	71	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 53.5% ICU Level of Service A
Analysis Period (min) 15

Intersection

Int Delay, s/veh 1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	281	19	24	454	24	26
Future Vol, veh/h	281	19	24	454	24	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	83	83	71	71
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	335	23	29	547	34	37

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	357	0	951	346
Stage 1	-	-	-	-	346	-
Stage 2	-	-	-	-	605	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1202	-	288	697
Stage 1	-	-	-	-	716	-
Stage 2	-	-	-	-	545	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1202	-	278	697
Mov Cap-2 Maneuver	-	-	-	-	278	-
Stage 1	-	-	-	-	716	-
Stage 2	-	-	-	-	526	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	15.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	404	-	-	1202	-
HCM Lane V/C Ratio	0.174	-	-	0.024	-
HCM Control Delay (s)	15.8	-	-	8.1	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %ile Q(veh)	0.6	-	-	0.1	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	15	0	17	22	14	3	29	12	13	35	4
Future Volume (vph)	4	15	0	17	22	14	3	29	12	13	35	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.965			0.963			0.989	
Flt Protected		0.990			0.984			0.997			0.987	
Satd. Flow (prot)	0	1844	0	0	1769	0	0	1788	0	0	1818	0
Flt Permitted		0.990			0.984			0.997			0.987	
Satd. Flow (perm)	0	1844	0	0	1769	0	0	1788	0	0	1818	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		519			551			900			520	
Travel Time (s)		11.8			12.5			20.5			11.8	
Peak Hour Factor	0.48	0.48	0.48	0.53	0.53	0.53	0.92	0.92	0.92	0.83	0.83	0.83
Adj. Flow (vph)	8	31	0	32	42	26	3	32	13	16	42	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	39	0	0	100	0	0	48	0	0	63	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 17.8% ICU Level of Service A
Analysis Period (min) 15

Intersection

Int Delay, s/veh 6.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	15	0	17	22	14	3	29	12	13	35	4
Future Vol, veh/h	4	15	0	17	22	14	3	29	12	13	35	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	48	48	48	53	53	53	92	92	92	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	31	0	32	42	26	3	32	13	16	42	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	155	127	45	137	123	38	47	0	0	45	0	0
Stage 1	76	76	-	45	45	-	-	-	-	-	-	-
Stage 2	79	51	-	92	78	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	812	764	1025	834	767	1034	1560	-	-	1563	-	-
Stage 1	933	832	-	969	857	-	-	-	-	-	-	-
Stage 2	930	852	-	915	830	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	751	754	1025	800	757	1034	1560	-	-	1563	-	-
Mov Cap-2 Maneuver	751	754	-	800	757	-	-	-	-	-	-	-
Stage 1	931	823	-	967	855	-	-	-	-	-	-	-
Stage 2	861	850	-	871	821	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10	9.9	0.5	1.8
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1560	-	-	753	830	1563	-	-
HCM Lane V/C Ratio	0.002	-	-	0.053	0.12	0.01	-	-
HCM Control Delay (s)	7.3	0	-	10	9.9	7.3	0	-
HCM Lane LOS	A	A	-	B	A	A	A	-
HCM 95th %ile Q(veh)	0	-	-	0.2	0.4	0	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	4	6	43	4	6	43
Future Volume (vph)	4	6	43	4	6	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.919		0.990			
Flt Protected	0.980					0.994
Satd. Flow (prot)	1678	0	1844	0	0	1852
Flt Permitted	0.980					0.994
Satd. Flow (perm)	1678	0	1844	0	0	1852
Link Speed (mph)	30		30			30
Link Distance (ft)	515		1123			900
Travel Time (s)	11.7		25.5			20.5
Peak Hour Factor	0.65	0.65	0.89	0.89	0.65	0.65
Adj. Flow (vph)	6	9	48	4	9	66
Shared Lane Traffic (%)						
Lane Group Flow (vph)	15	0	52	0	0	75
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 17.3% ICU Level of Service A
Analysis Period (min) 15

Intersection

Int Delay, s/veh 1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	6	43	4	6	43
Future Vol, veh/h	4	6	43	4	6	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	65	65	89	89	65	65
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	9	48	4	9	66

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	136	51	0	0	53	0
Stage 1	51	-	-	-	-	-
Stage 2	85	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	857	1017	-	-	1553	-
Stage 1	971	-	-	-	-	-
Stage 2	938	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	852	1017	-	-	1553	-
Mov Cap-2 Maneuver	852	-	-	-	-	-
Stage 1	971	-	-	-	-	-
Stage 2	932	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	0.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	944	1553	-
HCM Lane V/C Ratio	-	-	0.016	0.006	-
HCM Control Delay (s)	-	-	8.9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %ile Q(veh)	-	-	0.1	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	32	8	5	39	0	11	4	4	1	4	1
Future Volume (vph)	0	32	8	5	39	0	11	4	4	1	4	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.973						0.971			0.977	
Flt Protected					0.995			0.973			0.992	
Satd. Flow (prot)	0	1812	0	0	1853	0	0	1760	0	0	1805	0
Flt Permitted					0.995			0.973			0.992	
Satd. Flow (perm)	0	1812	0	0	1853	0	0	1760	0	0	1805	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		510			1134			1305			529	
Travel Time (s)		11.6			25.8			29.7			12.0	
Peak Hour Factor	0.61	0.61	0.61	0.77	0.77	0.77	0.42	0.42	0.42	0.50	0.50	0.50
Adj. Flow (vph)	0	52	13	6	51	0	26	10	10	2	8	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	65	0	0	57	0	0	46	0	0	12	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 16.2% ICU Level of Service A
Analysis Period (min) 15

Intersection

Intersection Delay, s/veh	7.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	32	8	5	39	0	11	4	4	1	4	1
Future Vol, veh/h	0	32	8	5	39	0	11	4	4	1	4	1
Peak Hour Factor	0.61	0.61	0.61	0.77	0.77	0.77	0.42	0.42	0.42	0.50	0.50	0.50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	52	13	6	51	0	26	10	10	2	8	2
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.3	7.4	7.4	7.2
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	58%	0%	11%	17%
Vol Thru, %	21%	80%	89%	67%
Vol Right, %	21%	20%	0%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	19	40	44	6
LT Vol	11	0	5	1
Through Vol	4	32	39	4
RT Vol	4	8	0	1
Lane Flow Rate	45	66	57	12
Geometry Grp	1	1	1	1
Degree of Util (X)	0.052	0.072	0.065	0.014
Departure Headway (Hd)	4.145	3.957	4.106	4.114
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	858	901	869	862
Service Time	2.201	1.999	2.148	2.179
HCM Lane V/C Ratio	0.052	0.073	0.066	0.014
HCM Control Delay	7.4	7.3	7.4	7.2
HCM Lane LOS	A	A	A	A
HCM 95th-file Q	0.2	0.2	0.2	0

A5

Level of Service Calculations: Background Conditions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	4	17	2	0	3	0	249	3	11	427	1
Future Volume (vph)	8	4	17	2	0	3	0	249	3	11	427	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.920			0.916			0.998				
Flt Protected		0.986			0.982						0.999	
Satd. Flow (prot)	0	1690	0	0	1676	0	0	1859	0	0	1861	0
Flt Permitted		0.986			0.982						0.999	
Satd. Flow (perm)	0	1690	0	0	1676	0	0	1859	0	0	1861	0
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		671			748			547			585	
Travel Time (s)		8.3			9.3			8.3			8.9	
Peak Hour Factor	0.73	0.73	0.73	0.31	0.31	0.31	0.63	0.63	0.63	0.71	0.71	0.71
Adj. Flow (vph)	11	5	23	6	0	10	0	395	5	15	601	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	39	0	0	16	0	0	400	0	0	617	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary		
Area Type:	Other	
Control Type: Unsignalized		
Intersection Capacity Utilization	41.4%	ICU Level of Service A
Analysis Period (min)	15	

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	4	17	2	0	3	0	249	3	11	427	1
Future Vol, veh/h	8	4	17	2	0	3	0	249	3	11	427	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	73	73	73	31	31	31	63	63	63	71	71	71
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	5	23	6	0	10	0	395	5	15	601	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1035	1033	602	1045	1032	398	603	0	0	400	0	0
Stage 1	633	633	-	398	398	-	-	-	-	-	-	-
Stage 2	402	400	-	647	634	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	210	232	500	207	233	652	975	-	-	1159	-	-
Stage 1	468	473	-	628	603	-	-	-	-	-	-	-
Stage 2	625	602	-	460	473	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	204	228	500	191	229	652	975	-	-	1159	-	-
Mov Cap-2 Maneuver	204	228	-	191	229	-	-	-	-	-	-	-
Stage 1	468	464	-	628	603	-	-	-	-	-	-	-
Stage 2	616	602	-	425	464	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.8	16.4	0	0.2
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	975	-	-	320	332	1159	-	-
HCM Lane V/C Ratio	-	-	-	0.124	0.049	0.013	-	-
HCM Control Delay (s)	0	-	-	17.8	16.4	8.1	0	-
HCM Lane LOS	A	-	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.2	0	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	368	45	12	155	28	18
Future Volume (vph)	368	45	12	155	28	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	150		150	150
Storage Lanes		0	0		0	0
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.985				0.947	
Flt Protected				0.997	0.970	
Satd. Flow (prot)	1835	0	0	1857	1711	0
Flt Permitted				0.997	0.970	
Satd. Flow (perm)	1835	0	0	1857	1711	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	638			486	520	
Travel Time (s)	14.5			11.0	11.8	
Peak Hour Factor	0.79	0.79	0.83	0.83	0.51	0.51
Adj. Flow (vph)	466	57	14	187	55	35
Shared Lane Traffic (%)						
Lane Group Flow (vph)	523	0	0	201	90	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 32.1% ICU Level of Service A
Analysis Period (min) 15

Intersection

Int Delay, s/veh 1.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	368	45	12	155	28	18
Future Vol, veh/h	368	45	12	155	28	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	79	79	83	83	51	51
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	466	57	14	187	55	35

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	523	0	710	494
Stage 1	-	-	-	-	494	-
Stage 2	-	-	-	-	216	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1043	-	400	575
Stage 1	-	-	-	-	613	-
Stage 2	-	-	-	-	820	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1043	-	394	575
Mov Cap-2 Maneuver	-	-	-	-	394	-
Stage 1	-	-	-	-	613	-
Stage 2	-	-	-	-	808	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	15
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	449	-	-	1043	-
HCM Lane V/C Ratio	0.201	-	-	0.014	-
HCM Control Delay (s)	15	-	-	8.5	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %ile Q(veh)	0.7	-	-	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	91	0	21	53	25	3	23	48	43	22	2
Future Volume (vph)	5	91	0	21	53	25	3	23	48	43	22	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.966			0.912			0.996	
Flt Protected		0.997			0.990			0.998			0.969	
Satd. Flow (prot)	0	1857	0	0	1781	0	0	1695	0	0	1798	0
Flt Permitted		0.997			0.990			0.998			0.969	
Satd. Flow (perm)	0	1857	0	0	1781	0	0	1695	0	0	1798	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		519			551			900			520	
Travel Time (s)		11.8			12.5			20.5			11.8	
Peak Hour Factor	0.45	0.45	0.45	0.41	0.41	0.41	0.67	0.67	0.67	0.60	0.60	0.60
Adj. Flow (vph)	11	202	0	51	129	61	4	34	72	72	37	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	213	0	0	241	0	0	110	0	0	112	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 29.1% ICU Level of Service A
Analysis Period (min) 15

Intersection

Int Delay, s/veh 10.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	91	0	21	53	25	3	23	48	43	22	2
Future Vol, veh/h	5	91	0	21	53	25	3	23	48	43	22	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	45	45	45	41	41	41	67	67	67	60	60	60
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	202	0	51	129	61	4	34	72	72	37	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	356	297	38	362	262	70	40	0	0	106	0	0
Stage 1	182	182	-	79	79	-	-	-	-	-	-	-
Stage 2	174	115	-	283	183	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	599	615	1034	594	643	993	1570	-	-	1485	-	-
Stage 1	820	749	-	930	829	-	-	-	-	-	-	-
Stage 2	828	800	-	724	748	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	452	582	1034	417	609	993	1570	-	-	1485	-	-
Mov Cap-2 Maneuver	452	582	-	417	609	-	-	-	-	-	-	-
Stage 1	818	712	-	927	827	-	-	-	-	-	-	-
Stage 2	654	798	-	492	711	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15	14.7	0.3	4.8
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1570	-	-	573	609	1485	-	-
HCM Lane V/C Ratio	0.003	-	-	0.372	0.396	0.048	-	-
HCM Control Delay (s)	7.3	0	-	15	14.7	7.5	0	-
HCM Lane LOS	A	A	-	C	B	A	A	-
HCM 95th %ile Q(veh)	0	-	-	1.7	1.9	0.2	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	7	8	55	32	26	24
Future Volume (vph)	7	8	55	32	26	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.927		0.950			
Flt Protected	0.978					0.975
Satd. Flow (prot)	1689	0	1770	0	0	1816
Flt Permitted	0.978					0.975
Satd. Flow (perm)	1689	0	1770	0	0	1816
Link Speed (mph)	30		30			30
Link Distance (ft)	515		1123			900
Travel Time (s)	11.7		25.5			20.5
Peak Hour Factor	0.63	0.63	0.55	0.55	0.47	0.47
Adj. Flow (vph)	11	13	100	58	55	51
Shared Lane Traffic (%)						
Lane Group Flow (vph)	24	0	158	0	0	106
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 19.4% ICU Level of Service A
Analysis Period (min) 15

Intersection

Int Delay, s/veh 2.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	8	55	32	26	24
Future Vol, veh/h	7	8	55	32	26	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	63	63	55	55	47	47
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	13	100	58	55	51

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	291	129	0	0	158	0
Stage 1	129	-	-	-	-	-
Stage 2	162	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	700	921	-	-	1422	-
Stage 1	897	-	-	-	-	-
Stage 2	867	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	672	921	-	-	1422	-
Mov Cap-2 Maneuver	672	-	-	-	-	-
Stage 1	897	-	-	-	-	-
Stage 2	832	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.7	0	4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	785	1422	-
HCM Lane V/C Ratio	-	-	0.03	0.039	-
HCM Control Delay (s)	-	-	9.7	7.6	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %ile Q(veh)	-	-	0.1	0.1	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	94	7	5	23	0	6	6	9	0	2	1
Future Volume (vph)	0	94	7	5	23	0	6	6	9	0	2	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991						0.942			0.949	
Flt Protected					0.991			0.986				
Satd. Flow (prot)	0	1846	0	0	1846	0	0	1730	0	0	1768	0
Flt Permitted					0.991			0.986				
Satd. Flow (perm)	0	1846	0	0	1846	0	0	1730	0	0	1768	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		510			1134			1305			529	
Travel Time (s)		11.6			25.8			29.7			12.0	
Peak Hour Factor	0.62	0.62	0.62	0.45	0.45	0.45	0.75	0.75	0.75	0.38	0.38	0.38
Adj. Flow (vph)	0	152	11	11	51	0	8	8	12	0	5	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	163	0	0	62	0	0	28	0	0	8	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 18.6% ICU Level of Service A
Analysis Period (min) 15

Intersection	
Intersection Delay, s/veh	7.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	94	7	5	23	0	6	6	9	0	2	1
Future Vol, veh/h	0	94	7	5	23	0	6	6	9	0	2	1
Peak Hour Factor	0.62	0.62	0.62	0.45	0.45	0.45	0.75	0.75	0.75	0.38	0.38	0.38
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	152	11	11	51	0	8	8	12	0	5	3
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.9	7.5	7.4	7.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	29%	0%	18%	0%
Vol Thru, %	29%	93%	82%	67%
Vol Right, %	43%	7%	0%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	21	101	28	3
LT Vol	6	0	5	0
Through Vol	6	94	23	2
RT Vol	9	7	0	1
Lane Flow Rate	28	163	62	8
Geometry Grp	1	1	1	1
Degree of Util (X)	0.033	0.181	0.072	0.009
Departure Headway (Hd)	4.229	4.002	4.155	4.251
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	852	894	857	847
Service Time	2.229	2.036	2.206	2.252
HCM Lane V/C Ratio	0.033	0.182	0.072	0.009
HCM Control Delay	7.4	7.9	7.5	7.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.7	0.2	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	2	6	4	3	18	18	429	1	13	270	8
Future Volume (vph)	1	2	6	4	3	18	18	429	1	13	270	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.913			0.903						0.996	
Flt Protected		0.994			0.992			0.998			0.998	
Satd. Flow (prot)	0	1690	0	0	1669	0	0	1859	0	0	1852	0
Flt Permitted		0.994			0.992			0.998			0.998	
Satd. Flow (perm)	0	1690	0	0	1669	0	0	1859	0	0	1852	0
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		671			748			547			585	
Travel Time (s)		8.3			9.3			8.3			8.9	
Peak Hour Factor	0.56	0.56	0.56	0.78	0.78	0.78	0.88	0.88	0.88	0.77	0.77	0.77
Adj. Flow (vph)	2	4	11	5	4	23	20	488	1	17	351	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	17	0	0	32	0	0	509	0	0	378	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 39.0% ICU Level of Service A
Analysis Period (min) 15

Intersection

Int Delay, s/veh 1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	2	6	4	3	18	18	429	1	13	270	8
Future Vol, veh/h	1	2	6	4	3	18	18	429	1	13	270	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	56	56	56	78	78	78	88	88	88	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	4	11	5	4	23	20	488	1	17	351	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	932	920	356	926	924	488	361	0	0	489	0	0
Stage 1	390	390	-	529	529	-	-	-	-	-	-	-
Stage 2	542	530	-	397	395	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	247	271	688	249	269	580	1198	-	-	1074	-	-
Stage 1	634	608	-	533	527	-	-	-	-	-	-	-
Stage 2	525	527	-	629	605	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	227	259	688	235	258	580	1198	-	-	1074	-	-
Mov Cap-2 Maneuver	227	259	-	235	258	-	-	-	-	-	-	-
Stage 1	619	596	-	521	515	-	-	-	-	-	-	-
Stage 2	489	515	-	603	593	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.7	14.3	0.3	0.4
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1198	-	-	432	419	1074	-	-
HCM Lane V/C Ratio	0.017	-	-	0.037	0.076	0.016	-	-
HCM Control Delay (s)	8.1	0	-	13.7	14.3	8.4	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.2	0	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	288	19	25	465	25	27
Future Volume (vph)	288	19	25	465	25	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	150		150	150
Storage Lanes		0	0		0	0
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.992				0.930	
Flt Protected				0.997	0.977	
Satd. Flow (prot)	1848	0	0	1857	1693	0
Flt Permitted				0.997	0.977	
Satd. Flow (perm)	1848	0	0	1857	1693	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	638			486	520	
Travel Time (s)	14.5			11.0	11.8	
Peak Hour Factor	0.84	0.84	0.83	0.83	0.71	0.71
Adj. Flow (vph)	343	23	30	560	35	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	366	0	0	590	73	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 54.9% ICU Level of Service A
Analysis Period (min) 15

Intersection

Int Delay, s/veh 1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	288	19	25	465	25	27
Future Vol, veh/h	288	19	25	465	25	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	83	83	71	71
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	343	23	30	560	35	38

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	365	0	974	354
Stage 1	-	-	-	-	354	-
Stage 2	-	-	-	-	620	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1194	-	279	690
Stage 1	-	-	-	-	710	-
Stage 2	-	-	-	-	536	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1194	-	269	690
Mov Cap-2 Maneuver	-	-	-	-	269	-
Stage 1	-	-	-	-	710	-
Stage 2	-	-	-	-	517	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	16.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	394	-	-	1194	-
HCM Lane V/C Ratio	0.186	-	-	0.025	-
HCM Control Delay (s)	16.2	-	-	8.1	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %ile Q(veh)	0.7	-	-	0.1	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	15	0	17	23	14	3	30	12	13	36	4
Future Volume (vph)	4	15	0	17	23	14	3	30	12	13	36	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.965			0.964			0.989	
Flt Protected		0.990			0.984			0.997			0.988	
Satd. Flow (prot)	0	1844	0	0	1769	0	0	1790	0	0	1820	0
Flt Permitted		0.990			0.984			0.997			0.988	
Satd. Flow (perm)	0	1844	0	0	1769	0	0	1790	0	0	1820	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		519			551			900			520	
Travel Time (s)		11.8			12.5			20.5			11.8	
Peak Hour Factor	0.48	0.48	0.48	0.53	0.53	0.53	0.92	0.92	0.92	0.83	0.83	0.83
Adj. Flow (vph)	8	31	0	32	43	26	3	33	13	16	43	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	39	0	0	101	0	0	49	0	0	64	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 18.0% ICU Level of Service A
Analysis Period (min) 15

Intersection

Int Delay, s/veh 6.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	15	0	17	23	14	3	30	12	13	36	4
Future Vol, veh/h	4	15	0	17	23	14	3	30	12	13	36	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	48	48	48	53	53	53	92	92	92	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	31	0	32	43	26	3	33	13	16	43	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	158	129	46	139	126	39	48	0	0	46	0	0
Stage 1	77	77	-	46	46	-	-	-	-	-	-	-
Stage 2	81	52	-	93	80	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	808	762	1023	831	764	1033	1559	-	-	1562	-	-
Stage 1	932	831	-	968	857	-	-	-	-	-	-	-
Stage 2	927	852	-	914	828	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	745	752	1023	797	754	1033	1559	-	-	1562	-	-
Mov Cap-2 Maneuver	745	752	-	797	754	-	-	-	-	-	-	-
Stage 1	930	822	-	966	855	-	-	-	-	-	-	-
Stage 2	856	850	-	870	819	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.1	10	0.5	1.8
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1559	-	-	751	826	1562	-	-
HCM Lane V/C Ratio	0.002	-	-	0.053	0.123	0.01	-	-
HCM Control Delay (s)	7.3	0	-	10.1	10	7.3	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %ile Q(veh)	0	-	-	0.2	0.4	0	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	4	6	44	4	6	44
Future Volume (vph)	4	6	44	4	6	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.919		0.990			
Flt Protected	0.980					0.994
Satd. Flow (prot)	1678	0	1844	0	0	1852
Flt Permitted	0.980					0.994
Satd. Flow (perm)	1678	0	1844	0	0	1852
Link Speed (mph)	30		30			30
Link Distance (ft)	515		1123			900
Travel Time (s)	11.7		25.5			20.5
Peak Hour Factor	0.65	0.65	0.89	0.89	0.65	0.65
Adj. Flow (vph)	6	9	49	4	9	68
Shared Lane Traffic (%)						
Lane Group Flow (vph)	15	0	53	0	0	77
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 17.4% ICU Level of Service A
Analysis Period (min) 15

Intersection

Int Delay, s/veh 1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	6	44	4	6	44
Future Vol, veh/h	4	6	44	4	6	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	65	65	89	89	65	65
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	9	49	4	9	68

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	138	52	0	0	54	0
Stage 1	52	-	-	-	-	-
Stage 2	86	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	855	1016	-	-	1551	-
Stage 1	970	-	-	-	-	-
Stage 2	937	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	850	1016	-	-	1551	-
Mov Cap-2 Maneuver	850	-	-	-	-	-
Stage 1	970	-	-	-	-	-
Stage 2	931	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	0.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	942	1551	-
HCM Lane V/C Ratio	-	-	0.016	0.006	-
HCM Control Delay (s)	-	-	8.9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %ile Q(veh)	-	-	0.1	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	33	8	5	40	0	11	4	4	1	4	1
Future Volume (vph)	0	33	8	5	40	0	11	4	4	1	4	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.974						0.971			0.977	
Flt Protected					0.995			0.973			0.992	
Satd. Flow (prot)	0	1814	0	0	1853	0	0	1760	0	0	1805	0
Flt Permitted					0.995			0.973			0.992	
Satd. Flow (perm)	0	1814	0	0	1853	0	0	1760	0	0	1805	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		510			1134			1305			529	
Travel Time (s)		11.6			25.8			29.7			12.0	
Peak Hour Factor	0.61	0.61	0.61	0.77	0.77	0.77	0.42	0.42	0.42	0.50	0.50	0.50
Adj. Flow (vph)	0	54	13	6	52	0	26	10	10	2	8	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	67	0	0	58	0	0	46	0	0	12	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 16.3% ICU Level of Service A
Analysis Period (min) 15

Intersection

Intersection Delay, s/veh	7.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	33	8	5	40	0	11	4	4	1	4	1
Future Vol, veh/h	0	33	8	5	40	0	11	4	4	1	4	1
Peak Hour Factor	0.61	0.61	0.61	0.77	0.77	0.77	0.42	0.42	0.42	0.50	0.50	0.50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	54	13	6	52	0	26	10	10	2	8	2
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.3	7.4	7.4	7.2
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	58%	0%	11%	17%
Vol Thru, %	21%	80%	89%	67%
Vol Right, %	21%	20%	0%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	19	41	45	6
LT Vol	11	0	5	1
Through Vol	4	33	40	4
RT Vol	4	8	0	1
Lane Flow Rate	45	67	58	12
Geometry Grp	1	1	1	1
Degree of Util (X)	0.052	0.074	0.067	0.014
Departure Headway (Hd)	4.151	3.961	4.107	4.12
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	856	901	868	860
Service Time	2.209	2.003	2.149	2.187
HCM Lane V/C Ratio	0.053	0.074	0.067	0.014
HCM Control Delay	7.4	7.3	7.4	7.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.2	0.2	0

A7

Level of Service Calculations: Full Build Conditions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	4	32	2	0	3	7	253	3	11	435	1
Future Volume (vph)	8	4	32	2	0	3	7	253	3	11	435	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.901			0.916			0.998				
Flt Protected		0.991			0.982			0.999			0.999	
Satd. Flow (prot)	0	1663	0	0	1676	0	0	1857	0	0	1861	0
Flt Permitted		0.991			0.982			0.999			0.999	
Satd. Flow (perm)	0	1663	0	0	1676	0	0	1857	0	0	1861	0
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		671			748			547			585	
Travel Time (s)		8.3			9.3			8.3			8.9	
Peak Hour Factor	0.73	0.73	0.73	0.31	0.31	0.31	0.63	0.63	0.63	0.71	0.71	0.71
Adj. Flow (vph)	11	5	44	6	0	10	11	402	5	15	613	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	60	0	0	16	0	0	418	0	0	629	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 37.9% ICU Level of Service A
Analysis Period (min) 15

Intersection

Int Delay, s/veh 1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	4	32	2	0	3	7	253	3	11	435	1
Future Vol, veh/h	8	4	32	2	0	3	7	253	3	11	435	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	73	73	73	31	31	31	63	63	63	71	71	71
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	5	44	6	0	10	11	402	5	15	613	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1075	1073	613	1095	1071	404	614	0	0	406	0	0
Stage 1	644	644	-	426	426	-	-	-	-	-	-	-
Stage 2	431	429	-	669	645	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	197	220	492	191	221	647	965	-	-	1153	-	-
Stage 1	461	468	-	606	586	-	-	-	-	-	-	-
Stage 2	603	584	-	447	467	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	189	212	492	166	213	647	965	-	-	1153	-	-
Mov Cap-2 Maneuver	189	212	-	166	213	-	-	-	-	-	-	-
Stage 1	454	459	-	597	577	-	-	-	-	-	-	-
Stage 2	585	575	-	394	458	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.5	17.7	0.2	0.2
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	965	-	-	349	300	1153	-	-
HCM Lane V/C Ratio	0.012	-	-	0.173	0.054	0.013	-	-
HCM Control Delay (s)	8.8	0	-	17.5	17.7	8.2	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %ile Q(veh)	0	-	-	0.6	0.2	0	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	368	52	16	155	43	26
Future Volume (vph)	368	52	16	155	43	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	150		150	150
Storage Lanes		0	0		0	0
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.983				0.949	
Flt Protected				0.995	0.970	
Satd. Flow (prot)	1831	0	0	1853	1715	0
Flt Permitted				0.995	0.970	
Satd. Flow (perm)	1831	0	0	1853	1715	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	638			486	520	
Travel Time (s)	14.5			11.0	11.8	
Peak Hour Factor	0.79	0.79	0.83	0.83	0.51	0.51
Adj. Flow (vph)	466	66	19	187	84	51
Shared Lane Traffic (%)						
Lane Group Flow (vph)	532	0	0	206	135	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 33.2% ICU Level of Service A
Analysis Period (min) 15

Intersection

Int Delay, s/veh 2.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	368	52	16	155	43	26
Future Vol, veh/h	368	52	16	155	43	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	79	79	83	83	51	51
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	466	66	19	187	84	51

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	532	0	724	499
Stage 1	-	-	-	-	499	-
Stage 2	-	-	-	-	225	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1036	-	393	572
Stage 1	-	-	-	-	610	-
Stage 2	-	-	-	-	812	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1036	-	385	572
Mov Cap-2 Maneuver	-	-	-	-	385	-
Stage 1	-	-	-	-	610	-
Stage 2	-	-	-	-	796	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	16.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	439	-	-	1036	-
HCM Lane V/C Ratio	0.308	-	-	0.019	-
HCM Control Delay (s)	16.8	-	-	8.5	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %ile Q(veh)	1.3	-	-	0.1	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	91	0	21	53	25	3	46	49	43	33	2
Future Volume (vph)	5	91	0	21	53	25	3	46	49	43	33	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.966			0.932			0.997	
Flt Protected		0.997			0.990			0.999			0.973	
Satd. Flow (prot)	0	1857	0	0	1781	0	0	1734	0	0	1807	0
Flt Permitted		0.997			0.990			0.999			0.973	
Satd. Flow (perm)	0	1857	0	0	1781	0	0	1734	0	0	1807	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		519			551			900			520	
Travel Time (s)		11.8			12.5			20.5			11.8	
Peak Hour Factor	0.45	0.45	0.45	0.41	0.41	0.41	0.67	0.67	0.67	0.60	0.60	0.60
Adj. Flow (vph)	11	202	0	51	129	61	4	69	73	72	55	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	213	0	0	241	0	0	146	0	0	130	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 29.7% ICU Level of Service A
Analysis Period (min) 15

Intersection

Int Delay, s/veh 10.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	91	0	21	53	25	3	46	49	43	33	2
Future Vol, veh/h	5	91	0	21	53	25	3	46	49	43	33	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	45	45	45	41	41	41	67	67	67	60	60	60
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	202	0	51	129	61	4	69	73	72	55	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	409	351	57	415	316	105	58	0	0	142	0	0
Stage 1	200	200	-	114	114	-	-	-	-	-	-	-
Stage 2	209	151	-	301	202	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	553	573	1009	548	600	949	1546	-	-	1441	-	-
Stage 1	802	736	-	891	801	-	-	-	-	-	-	-
Stage 2	793	772	-	708	734	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	409	542	1009	374	567	949	1546	-	-	1441	-	-
Mov Cap-2 Maneuver	409	542	-	374	567	-	-	-	-	-	-	-
Stage 1	800	698	-	888	799	-	-	-	-	-	-	-
Stage 2	620	770	-	477	696	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.2	16.1	0.2	4.2
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1546	-	-	533	563	1441	-	-
HCM Lane V/C Ratio	0.003	-	-	0.4	0.429	0.05	-	-
HCM Control Delay (s)	7.3	0	-	16.2	16.1	7.6	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %ile Q(veh)	0	-	-	1.9	2.1	0.2	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	7	8	79	33	26	35
Future Volume (vph)	7	8	79	33	26	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.927		0.960			
Flt Protected	0.978					0.979
Satd. Flow (prot)	1689	0	1788	0	0	1824
Flt Permitted	0.978					0.979
Satd. Flow (perm)	1689	0	1788	0	0	1824
Link Speed (mph)	30		30			30
Link Distance (ft)	515		141			900
Travel Time (s)	11.7		3.2			20.5
Peak Hour Factor	0.63	0.63	0.55	0.55	0.47	0.47
Adj. Flow (vph)	11	13	144	60	55	74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	24	0	204	0	0	129
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 19.9% ICU Level of Service A
Analysis Period (min) 15

Intersection

Int Delay, s/veh 1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	8	79	33	26	35
Future Vol, veh/h	7	8	79	33	26	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	63	63	55	55	47	47
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	13	144	60	55	74

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	359	174	0	0	204	0
Stage 1	174	-	-	-	-	-
Stage 2	185	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	640	869	-	-	1368	-
Stage 1	856	-	-	-	-	-
Stage 2	847	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	613	869	-	-	1368	-
Mov Cap-2 Maneuver	613	-	-	-	-	-
Stage 1	856	-	-	-	-	-
Stage 2	811	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0	3.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	727	1368	-
HCM Lane V/C Ratio	-	-	0.033	0.04	-
HCM Control Delay (s)	-	-	10.1	7.7	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %ile Q(veh)	-	-	0.1	0.1	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	25	16	7	87	31	12
Future Volume (vph)	25	16	7	87	31	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.947				0.962	
Flt Protected	0.970			0.996		
Satd. Flow (prot)	1711	0	0	1855	1792	0
Flt Permitted	0.970			0.996		
Satd. Flow (perm)	1711	0	0	1855	1792	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	1748			981	141	
Travel Time (s)	39.7			22.3	3.2	
Peak Hour Factor	0.50	0.50	0.55	0.55	0.47	0.47
Adj. Flow (vph)	50	32	13	158	66	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	82	0	0	171	92	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 20.4% ICU Level of Service A
Analysis Period (min) 15

Intersection

Int Delay, s/veh 2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	25	16	7	87	31	12
Future Vol, veh/h	25	16	7	87	31	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	50	50	55	55	47	47
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	50	32	13	158	66	26

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	263	79	91	0	-	0
Stage 1	79	-	-	-	-	-
Stage 2	184	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	726	981	1504	-	-	-
Stage 1	944	-	-	-	-	-
Stage 2	848	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	719	981	1504	-	-	-
Mov Cap-2 Maneuver	719	-	-	-	-	-
Stage 1	944	-	-	-	-	-
Stage 2	840	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1504	-	803	-	-
HCM Lane V/C Ratio	0.008	-	0.102	-	-
HCM Control Delay (s)	7.4	0	10	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %ile Q(veh)	0	-	0.3	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	1	8	22	0	3	14
Future Volume (vph)	1	8	22	0	3	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.880					
Flt Protected	0.994					0.991
Satd. Flow (prot)	1629	0	1863	0	0	1846
Flt Permitted	0.994					0.991
Satd. Flow (perm)	1629	0	1863	0	0	1846
Link Speed (mph)	30		30			30
Link Distance (ft)	1748		568			592
Travel Time (s)	39.7		12.9			13.5
Peak Hour Factor	0.50	0.50	0.75	0.75	0.38	0.38
Adj. Flow (vph)	2	16	29	0	8	37
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	0	29	0	0	45
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 13.3% ICU Level of Service A
Analysis Period (min) 15

Intersection

Int Delay, s/veh 2.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	8	22	0	3	14
Future Vol, veh/h	1	8	22	0	3	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	75	75	38	38
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	16	29	0	8	37

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	82	29	0	0	29	0
Stage 1	29	-	-	-	-	-
Stage 2	53	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	920	1046	-	-	1584	-
Stage 1	994	-	-	-	-	-
Stage 2	970	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	915	1046	-	-	1584	-
Mov Cap-2 Maneuver	915	-	-	-	-	-
Stage 1	994	-	-	-	-	-
Stage 2	965	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	1.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1030	1584	-
HCM Lane V/C Ratio	-	-	0.017	0.005	-
HCM Control Delay (s)	-	-	8.6	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %ile Q(veh)	-	-	0.1	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	94	8	6	23	0	8	7	14	0	2	1
Future Volume (vph)	0	94	8	6	23	0	8	7	14	0	2	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989						0.934			0.949	
Flt Protected					0.990			0.986				
Satd. Flow (prot)	0	1842	0	0	1844	0	0	1715	0	0	1768	0
Flt Permitted					0.990			0.986				
Satd. Flow (perm)	0	1842	0	0	1844	0	0	1715	0	0	1768	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		510			1134			592			529	
Travel Time (s)		11.6			25.8			13.5			12.0	
Peak Hour Factor	0.62	0.62	0.62	0.45	0.45	0.45	0.75	0.75	0.75	0.38	0.38	0.38
Adj. Flow (vph)	0	152	13	13	51	0	11	9	19	0	5	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	165	0	0	64	0	0	39	0	0	8	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 21.4% ICU Level of Service A
Analysis Period (min) 15

Intersection

Intersection Delay, s/veh	7.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	94	8	6	23	0	8	7	14	0	2	1
Future Vol, veh/h	0	94	8	6	23	0	8	7	14	0	2	1
Peak Hour Factor	0.62	0.62	0.62	0.45	0.45	0.45	0.75	0.75	0.75	0.38	0.38	0.38
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	152	13	13	51	0	11	9	19	0	5	3
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8	7.6	7.4	7.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	28%	0%	21%	0%
Vol Thru, %	24%	92%	79%	67%
Vol Right, %	48%	8%	0%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	29	102	29	3
LT Vol	8	0	6	0
Through Vol	7	94	23	2
RT Vol	14	8	0	1
Lane Flow Rate	39	165	64	8
Geometry Grp	1	1	1	1
Degree of Util (X)	0.045	0.184	0.075	0.009
Departure Headway (Hd)	4.205	4.016	4.18	4.273
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	857	890	850	842
Service Time	2.205	2.057	2.239	2.274
HCM Lane V/C Ratio	0.046	0.185	0.075	0.01
HCM Control Delay	7.4	8	7.6	7.3
HCM Lane LOS	A	A	A	A
HCM 95th-file Q	0.1	0.7	0.2	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	2	20	4	3	18	36	439	1	13	277	8
Future Volume (vph)	1	2	20	4	3	18	36	439	1	13	277	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.884			0.903						0.997	
Flt Protected		0.998			0.992			0.996			0.998	
Satd. Flow (prot)	0	1643	0	0	1669	0	0	1855	0	0	1853	0
Flt Permitted		0.998			0.992			0.996			0.998	
Satd. Flow (perm)	0	1643	0	0	1669	0	0	1855	0	0	1853	0
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		671			748			547			585	
Travel Time (s)		8.3			9.3			8.3			8.9	
Peak Hour Factor	0.56	0.56	0.56	0.78	0.78	0.78	0.88	0.88	0.88	0.77	0.77	0.77
Adj. Flow (vph)	2	4	36	5	4	23	41	499	1	17	360	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	42	0	0	32	0	0	541	0	0	387	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 46.6% ICU Level of Service A
Analysis Period (min) 15

Intersection

Int Delay, s/veh 1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	2	20	4	3	18	36	439	1	13	277	8
Future Vol, veh/h	1	2	20	4	3	18	36	439	1	13	277	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	56	56	56	78	78	78	88	88	88	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	4	36	5	4	23	41	499	1	17	360	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	994	981	365	999	985	499	370	0	0	500	0	0
Stage 1	399	399	-	581	581	-	-	-	-	-	-	-
Stage 2	595	582	-	418	404	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	224	249	680	222	248	572	1189	-	-	1064	-	-
Stage 1	627	602	-	499	500	-	-	-	-	-	-	-
Stage 2	491	499	-	612	599	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	201	232	680	197	231	572	1189	-	-	1064	-	-
Mov Cap-2 Maneuver	201	232	-	197	231	-	-	-	-	-	-	-
Stage 1	597	590	-	475	476	-	-	-	-	-	-	-
Stage 2	445	475	-	565	587	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.3	15.2	0.6	0.4
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1189	-	-	535	386	1064	-	-
HCM Lane V/C Ratio	0.034	-	-	0.077	0.083	0.016	-	-
HCM Control Delay (s)	8.1	0	-	12.3	15.2	8.4	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %ile Q(veh)	0.1	-	-	0.2	0.3	0	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	288	37	35	465	39	34
Future Volume (vph)	288	37	35	465	39	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	150		150	150
Storage Lanes		0	0		0	0
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.985				0.937	
Flt Protected				0.997	0.974	
Satd. Flow (prot)	1835	0	0	1857	1700	0
Flt Permitted				0.997	0.974	
Satd. Flow (perm)	1835	0	0	1857	1700	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	638			486	520	
Travel Time (s)	14.5			11.0	11.8	
Peak Hour Factor	0.84	0.84	0.83	0.83	0.71	0.71
Adj. Flow (vph)	343	44	42	560	55	48
Shared Lane Traffic (%)						
Lane Group Flow (vph)	387	0	0	602	103	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 58.1% ICU Level of Service B
Analysis Period (min) 15

Intersection

Int Delay, s/veh 2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	288	37	35	465	39	34
Future Vol, veh/h	288	37	35	465	39	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	83	83	71	71
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	343	44	42	560	55	48

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	387	0	1010	365
Stage 1	-	-	-	-	365	-
Stage 2	-	-	-	-	645	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1171	-	266	680
Stage 1	-	-	-	-	702	-
Stage 2	-	-	-	-	522	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1171	-	252	680
Mov Cap-2 Maneuver	-	-	-	-	252	-
Stage 1	-	-	-	-	702	-
Stage 2	-	-	-	-	495	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	19.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	357	-	-	1171	-
HCM Lane V/C Ratio	0.288	-	-	0.036	-
HCM Control Delay (s)	19.1	-	-	8.2	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %ile Q(veh)	1.2	-	-	0.1	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	15	0	18	23	14	3	51	13	13	64	4
Future Volume (vph)	4	15	0	18	23	14	3	51	13	13	64	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.966			0.974			0.993	
Flt Protected		0.990			0.984			0.998			0.992	
Satd. Flow (prot)	0	1844	0	0	1771	0	0	1811	0	0	1835	0
Flt Permitted		0.990			0.984			0.998			0.992	
Satd. Flow (perm)	0	1844	0	0	1771	0	0	1811	0	0	1835	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		519			551			900			520	
Travel Time (s)		11.8			12.5			20.5			11.8	
Peak Hour Factor	0.48	0.48	0.48	0.53	0.53	0.53	0.92	0.92	0.92	0.83	0.83	0.83
Adj. Flow (vph)	8	31	0	34	43	26	3	55	14	16	77	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	39	0	0	103	0	0	72	0	0	98	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary		
Area Type:	Other	
Control Type: Unsignalized		
Intersection Capacity Utilization 20.4%		ICU Level of Service A
Analysis Period (min) 15		

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	15	0	18	23	14	3	51	13	13	64	4
Future Vol, veh/h	4	15	0	18	23	14	3	51	13	13	64	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	48	48	48	53	53	53	92	92	92	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	31	0	34	43	26	3	55	14	16	77	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	215	187	80	195	182	63	82	0	0	70	0	0
Stage 1	111	111	-	69	69	-	-	-	-	-	-	-
Stage 2	104	76	-	126	113	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	742	708	980	764	712	1002	1515	-	-	1531	-	-
Stage 1	894	804	-	941	837	-	-	-	-	-	-	-
Stage 2	902	832	-	878	802	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	682	699	980	731	703	1002	1515	-	-	1531	-	-
Mov Cap-2 Maneuver	682	699	-	731	703	-	-	-	-	-	-	-
Stage 1	892	795	-	939	835	-	-	-	-	-	-	-
Stage 2	831	830	-	834	793	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.5	10.4	0.3	1.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1515	-	-	695	771	1531	-	-
HCM Lane V/C Ratio	0.002	-	-	0.057	0.135	0.01	-	-
HCM Control Delay (s)	7.4	0	-	10.5	10.4	7.4	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %ile Q(veh)	0	-	-	0.2	0.5	0	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	5	6	66	5	6	73
Future Volume (vph)	5	6	66	5	6	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.929		0.990			
Flt Protected	0.977					0.996
Satd. Flow (prot)	1691	0	1844	0	0	1855
Flt Permitted	0.977					0.996
Satd. Flow (perm)	1691	0	1844	0	0	1855
Link Speed (mph)	30		30			30
Link Distance (ft)	515		146			900
Travel Time (s)	11.7		3.3			20.5
Peak Hour Factor	0.65	0.65	0.89	0.89	0.65	0.65
Adj. Flow (vph)	8	9	74	6	9	112
Shared Lane Traffic (%)						
Lane Group Flow (vph)	17	0	80	0	0	121
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 18.8% ICU Level of Service A
Analysis Period (min) 15

Intersection

Int Delay, s/veh 1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	6	66	5	6	73
Future Vol, veh/h	5	6	66	5	6	73
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	65	65	89	89	65	65
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	9	74	6	9	112

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	208	77	0	0	80	0
Stage 1	77	-	-	-	-	-
Stage 2	131	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	780	984	-	-	1518	-
Stage 1	946	-	-	-	-	-
Stage 2	895	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	775	984	-	-	1518	-
Mov Cap-2 Maneuver	775	-	-	-	-	-
Stage 1	946	-	-	-	-	-
Stage 2	890	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	0.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	877	1518	-
HCM Lane V/C Ratio	-	-	0.019	0.006	-
HCM Control Delay (s)	-	-	9.2	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %ile Q(veh)	-	-	0.1	0	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	23	15	19	48	48	30
Future Volume (vph)	23	15	19	48	48	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.947				0.948	
Flt Protected	0.971			0.986		
Satd. Flow (prot)	1713	0	0	1837	1766	0
Flt Permitted	0.971			0.986		
Satd. Flow (perm)	1713	0	0	1837	1766	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	1765			892	146	
Travel Time (s)	40.1			20.3	3.3	
Peak Hour Factor	0.50	0.50	0.89	0.89	0.65	0.65
Adj. Flow (vph)	46	30	21	54	74	46
Shared Lane Traffic (%)						
Lane Group Flow (vph)	76	0	0	75	120	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 20.2% ICU Level of Service A
Analysis Period (min) 15

Intersection

Int Delay, s/veh 3.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	23	15	19	48	48	30
Future Vol, veh/h	23	15	19	48	48	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	50	50	89	89	65	65
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	46	30	21	54	74	46

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	194	97	120	0	-	0
Stage 1	97	-	-	-	-	-
Stage 2	97	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	795	959	1468	-	-	-
Stage 1	927	-	-	-	-	-
Stage 2	927	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	783	959	1468	-	-	-
Mov Cap-2 Maneuver	783	-	-	-	-	-
Stage 1	927	-	-	-	-	-
Stage 2	913	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.7	2.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1468	-	844	-	-
HCM Lane V/C Ratio	0.015	-	0.09	-	-
HCM Control Delay (s)	7.5	0	9.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	1	7	19	1	7	17
Future Volume (vph)	1	7	19	1	7	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.882		0.994			
Flt Protected	0.994					0.986
Satd. Flow (prot)	1633	0	1852	0	0	1837
Flt Permitted	0.994					0.986
Satd. Flow (perm)	1633	0	1852	0	0	1837
Link Speed (mph)	30		30			30
Link Distance (ft)	1765		588			594
Travel Time (s)	40.1		13.4			13.5
Peak Hour Factor	0.50	0.50	0.42	0.42	0.50	0.50
Adj. Flow (vph)	2	14	45	2	14	34
Shared Lane Traffic (%)						
Lane Group Flow (vph)	16	0	47	0	0	48
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 17.1% **ICU Level of Service A**
Analysis Period (min) 15

Intersection

Int Delay, s/veh 2.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	7	19	1	7	17
Future Vol, veh/h	1	7	19	1	7	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	42	42	50	50
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	14	45	2	14	34

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	108	46	0	0	48	0
Stage 1	46	-	-	-	-	-
Stage 2	62	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	889	1023	-	-	1559	-
Stage 1	976	-	-	-	-	-
Stage 2	961	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	881	1023	-	-	1559	-
Mov Cap-2 Maneuver	881	-	-	-	-	-
Stage 1	976	-	-	-	-	-
Stage 2	952	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	2.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1003	1559	-
HCM Lane V/C Ratio	-	-	0.016	0.009	-
HCM Control Delay (s)	-	-	8.6	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %ile Q(veh)	-	-	0	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	33	11	7	40	0	13	5	9	1	5	1
Future Volume (vph)	0	33	11	7	40	0	13	5	9	1	5	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.966						0.956			0.981	
Flt Protected					0.993			0.976			0.993	
Satd. Flow (prot)	0	1799	0	0	1850	0	0	1738	0	0	1815	0
Flt Permitted					0.993			0.976			0.993	
Satd. Flow (perm)	0	1799	0	0	1850	0	0	1738	0	0	1815	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		510			1134			594			529	
Travel Time (s)		11.6			25.8			13.5			12.0	
Peak Hour Factor	0.61	0.61	0.61	0.77	0.77	0.77	0.42	0.42	0.42	0.50	0.50	0.50
Adj. Flow (vph)	0	54	18	9	52	0	31	12	21	2	10	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	72	0	0	61	0	0	64	0	0	14	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 18.6% ICU Level of Service A
Analysis Period (min) 15

Intersection

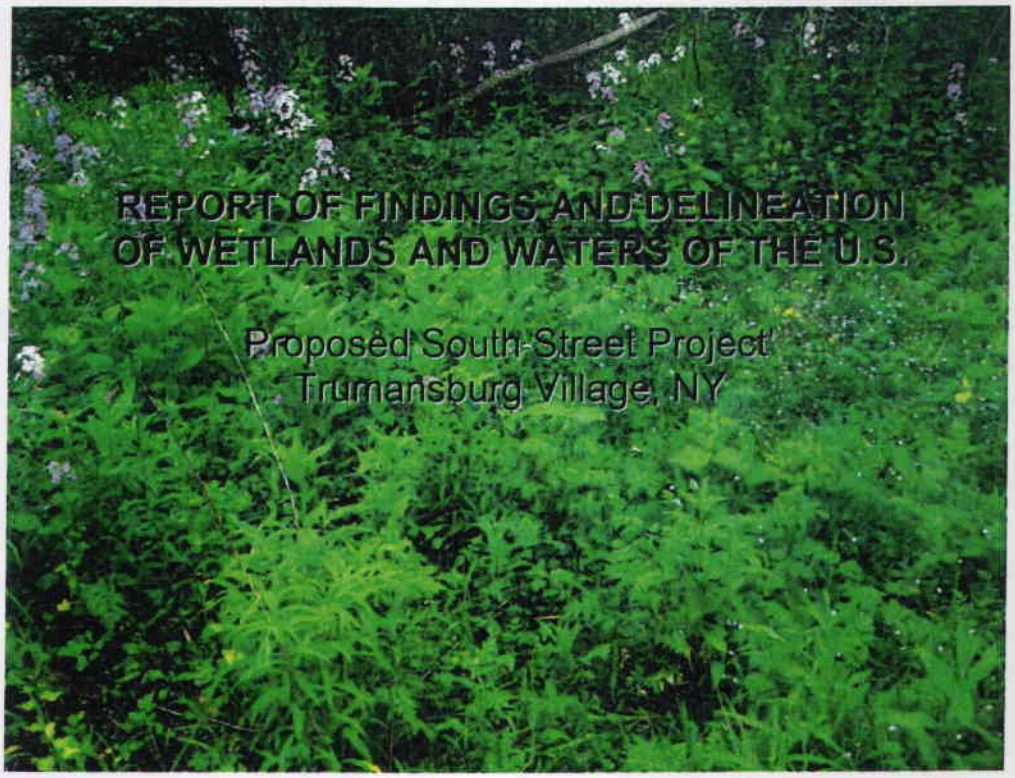
Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	33	11	7	40	0	13	5	9	1	5	1
Future Vol, veh/h	0	33	11	7	40	0	13	5	9	1	5	1
Peak Hour Factor	0.61	0.61	0.61	0.77	0.77	0.77	0.42	0.42	0.42	0.50	0.50	0.50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	54	18	9	52	0	31	12	21	2	10	2
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.4	7.5	7.5	7.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	48%	0%	15%	14%
Vol Thru, %	19%	75%	85%	71%
Vol Right, %	33%	25%	0%	14%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	27	44	47	7
LT Vol	13	0	7	1
Through Vol	5	33	40	5
RT Vol	9	11	0	1
Lane Flow Rate	64	72	61	14
Geometry Grp	1	1	1	1
Degree of Util (X)	0.073	0.079	0.07	0.016
Departure Headway (Hd)	4.07	3.985	4.154	4.156
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	872	897	857	851
Service Time	2.133	2.018	2.206	2.231
HCM Lane V/C Ratio	0.073	0.08	0.071	0.016
HCM Control Delay	7.5	7.4	7.5	7.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.3	0.2	0

Exhibit R



Prepared For:

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Executive Summary

LeCain Environmental Services, Inc. (LES) conducted a delineation of wetlands and waters of the U.S at the site of Ithaca neighborhood housing services (INHS) proposed South Street development located in the Village of Trumansburg, NY. We completed the delineation in July of 2017. The delineation is in compliance with the 1987 U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual of the U.S. and the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: North central and Northeast Region. Wetlands and waters of the U.S account for approximately 1.3 acres within the project area. The depression, emergent marsh, and forested scrub/shrub wetland community types meet the Code of Federal Register (CFR) guidance and technical criteria contained within both the above mentioned USACE guidelines.

Surface drainages on the property are limited to remnants of drain ditches flowing to the east and likely to Taughannock Creek. Two wetland areas (Wetlands D and F) appear to have developed along old plow lines in abandoned fields and have no apparent connection to other wetlands or Waters of the U.S. Accordingly, we do not think the wetlands D and F meet the criteria for jurisdictional water of the U.S. However, this determination will come from the Auburn office of the USACE. We discuss all site aquatic features in detail in the following report.

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1 INTRODUCTION

Ithaca Neighborhood Housing Services requested delineation of wetlands and waters of the U.S. on its proposed South Street project located in the village of Trumansburg, Tompkins County, NY (Figure 1). The property site is located approximately ¼ mile to the west of NYS Route 96 on South Street in the Village of Trumansburg. The site currently is vacant land dominated by hay meadow, with small areas of forest and scrub/shrub. INHS is proposing to construct mixed density housing with associated Streets and infrastructure. The development site is directly adjacent to existing residential properties on all sides. This report documents the findings of a field delineation of all wetlands and other aquatic features on the entirety of the proposed project property.

1.1 General Site Description

The majority of the property is likely former agricultural land that has transitioned into hay. There is evidence of past plowing as demonstrated by narrow linear swales. The property is gently sloping to the north east with areas of palustrine emergent marsh, forested wetland, and scrub/shrub wetland (section 3 and Appendix A). There is no clearly defined drainage on the property, and drainage swales lack Ordinary High Water Marks (OHWM).

The Natural Resource Conservation Service (NRCS) soil survey lists the Arkport fine sandy loam, Conesus gravelly silt loam, Halsey silt loam, Howard gravelly loam, Lansing gravelly silt loam, Ovid silt loam, Phelps gravelly silt loam, and Rhinebeck silt loam on the property (Appendix C). Of these, the NRCS classifies the Ovid silt loam, and Rhinebeck silt loam as hydric.

2 METHODS

2.1 Wetland Delineation Methods

Waters of the U.S. including special aquatic sites and jurisdictional wetlands were delineated in accordance with criteria established in the 1987 Corps of Engineers Wetland Delineation Manual (1987 Corps Manual) using protocols detailed in The Field Guide for Wetland Delineation 1987 Corps of Engineers Manual (WTI 91-2, 1991) and the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (2009 Regional Supplement). LES conducted the field delineation in July of 2017.

Figure One: Location Map for INHS South Street Project.

In order to delineate a representative area as jurisdictional the technical criteria for hydrophytic vegetation, hydric soil and wetland hydrology, as described in the 1987 Corps Manual as modified by the 2009 Regional Supplement, must be satisfied. LES used a Routine Level-2 on-site Determination Method to delineate the jurisdictional areas.

LES determined the wetland boundary in the field based on changes in plant communities and/or hydrology, and changes in soil characteristics. LES assessed the vegetation composition, soil characteristics and hydrology at upland and wetland locations. If all three parameters met the criteria, LES designated the area as wetland and mapped it by the vegetation community type. If any one of the parameters did not exhibit positive wetland indicators, LES determined the area to be upland.

Due to the Solid Waste Agency of Northern Cook County (SWANCC) Supreme Court ruling in December of 2000, there have been changes in jurisdiction over isolated wetlands. This ruling disallows the migratory bird rule (and hence the sole tie to interstate commerce) negating the USACE mandate to claim jurisdiction over isolated wetlands. According to the USACE regulatory guidance letter issued in December, 2002 isolated wetlands must meet the following criteria:

(1) No surface water connection to other jurisdictional wetlands or waters of the U.S.,
(2) Not adjacent to waters of the U.S.

This guidance has been further modified by the Rapanos v. U.S., and Carabell v. U.S. Supreme Court rulings in 2006. This ruling has resulted in guidance for classifying waterways as Traditional Navigable Waters (TNW), or tributaries of TNWs as Relatively Permanent Waterways (RPW) or Non-RPWs. In order for the USACE to apply jurisdiction to Non-RPWs a Significant Nexus Determination (SND) is generally required. "A significant nexus exists if a tributary, in combination with all of its adjacent wetlands, has more than a speculative or an insubstantial effect on the chemical, physical, and/or biological, integrity of a TNW" (2007, U.S. Army Corps of Engineers). Accordingly, even if the wetlands meet the criteria outlined in the 1987 USACE Manual, they may not be jurisdictional and therefore not subject to USACE regulation. However, the USACE will make the final determination on the jurisdictional status for all site wetlands and waterways.

2.1.1 Hydrophytic Vegetation

Plants must be physiologically or morphologically adapted for life under saturated or anaerobic soil conditions to grow in wetlands. The USACE and the U.S. Fish and Wildlife Service (USFWS) have investigated the probability of occurrence of individual plant species in wetlands. Based on this investigation the USFWS has developed an extensive list of plant species categorized as obligate (OBL), facultative wetland (FACW), facultative (FAC), facultative upland (FACU), or upland (UPL) (USFWS 1996). Species with an indicator status of OBL, FACW or FAC are considered wetland species. According to USACE methods a sample point is deemed to have wetland vegetation if more than 50% of the number of dominant species present are wetland species. Wetland boundaries on the site were therefore delineated based on the distribution and relative dominance of wetland species along the wetland/upland interface.

2.1.2 Hydric Soil

The Natural Resource Conservation Service (NRCS) defines hydric soils as "soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part of the soil profile" (USDA 1987). Prior to the site visit LES reviewed the NRCS list of Hydric Soils in the United States (USDA 1987) to determine if hydric soils are mapped on the site. This list identified two (2) NRCS mapped soil series that met hydric criteria; the Ovid silt loam, and Rhinebeck silt loam. Additionally, mapped upland (non-wetland) soils may have inclusions of hydric soils. These inclusions may not be delineated on the NRCS maps; therefore requiring field examination of soil conditions to determine whether or not hydric soil inclusions exist.

LES investigated soils on the site through excavation of a series of 16" deep pits along the upland/wetland gradient. LES located the wetland boundary based on the appearance of hydric soils along this gradient (in concert with the appearance of hydrophytic vegetation). Soil pit logs from typical upland and wetland locations are included in Appendix B. LES determined the presence or absence of hydric soil using criteria established in the 1987 USACE Wetland Delineation Manual and the 2009 Regional Supplement. These criteria include certain physical characteristics

observable in the field including high organic content, accumulation of sulfidic material (sulfidic odor), greenish, bluish gray, gley, or dark soil colors (low soil chroma) and reduction/oxidation features (mottling). LES estimated organic content visually and texturally. LES assessed the presence or absence of sulfidic material by odor, and soil colors and mottling with a Munsell soil color chart (Munsell 2000).

2.1.3 Wetland Hydrology

Wetland hydrology is defined as "permanent or periodic inundation, or soil saturation for a significant period (usually fourteen days or more) during the growing season" (WTI, 1991). Wetland hydrology may be supplied by surface water, groundwater, and/or direct precipitation.

LES determined the presence or absence of wetland hydrology using criteria established in the 1987 USACE Wetland Delineation Manual. Direct, visual indicators of wetland hydrology include observations of standing water or saturated soil, or evidence of previous water inundation or saturation such as drift lines, sediment deposits or watermarks. Additionally, wetland hydrology is often implied from soil features such as oxidized rhizospheres, or from sparsely vegetated concave surfaces in the assessment area. LES examined each sample point for indicators of wetland hydrology (Appendix B).

2.2 Waters of the U.S. Delineation Methods

Waters of the U.S. and wetlands have different technical criteria for delineation. LES identified waterways on the site that appeared to typically flow year-round or have continuous flow at least seasonally (as evidenced by a definable bed and bank with an OHWM). In general terms, rivers, streams or drainage ways with a definable bed and bank and OHWM are typically designated as Relatively Permanent Waterways (RPW) and therefore jurisdictional waters of the U.S.

3 RESULTS

3.1 Wetland Delineation Results

We delineated six (6) wetlands on the site (Appendix A). Wetlands A, B, and C are a mix of forested and scrub/shrub wetlands. Wetlands D, E, and F are depressional, palustrine emergent marsh. The specific vegetation, soil and hydrology of the wetland areas are described below and on USACE data sheets in Appendix B.

3.1.1 Depressional, Palustrine, Emergent Marsh

The deppresional, palustrine, emergent marsh wetlands (W-D, E, and F) account for 0.3 acres of wetland on the property (Appendix A) (Photo 1). These wetlands are associated with topography lows with the dominant source of hydrology coming from groundwater augmented by impoundment of precipitation. Of note, wetlands D and F appear to be isolated with no surface water connection to other wetlands or Waters of the U.S. Accordingly, they may not meet the USACE criteria for jurisdictional wetlands. However, this will be determined by the Auburn office of the

USACE. For specific vegetation, hydrology and soil information please see data sheets for SP-2 and SP-5, Appendix B

Photo 1: Vegetative community typical of depressional, palustrine, emergent marsh at South Street site (July 2017).

3.1.2 Forested, Scrub/shrub Wetlands

The forested, scrub/shrub wetlands account for approximately 1.04 acres on the property (Photo 2). These wetlands are associated with topography lows with the dominant source of hydrology coming from groundwater augmented by impoundment of precipitation. For specific vegetation, hydrology and soil information please see data sheets for SP-1, 3, 4 and 6, Appendix B

Photo 2: Vegetative community typical of forested, scrub/shrub Wetlands at the South Street Site (July 2017).

3.2 Waters of the U.S. Delineation Results

Drainages on the site are limited to old drain ditches that lack a defined OHWM and vegetated swales associated with old plow lines. There do not appear to be drainages on the property that meet the criteria for RPWs. The USACE will determine if site drainages meet the criteria for jurisdictional Waters of the U.S.

4 REFERENCES

Clean Water Act, Section 404. 1986. Federal Register - Regulatory Programs of the Corps of Engineers.

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. US Army Engineer Waterways Experiment Station, Vicksburg, MS. Tech. Rpt. Y-87-1.

Munsell Soil Color Charts. 2000. New Windsor, New York.

U.S. Army Corp of Engineers Engineer Research and Development Center. 2009. Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region.

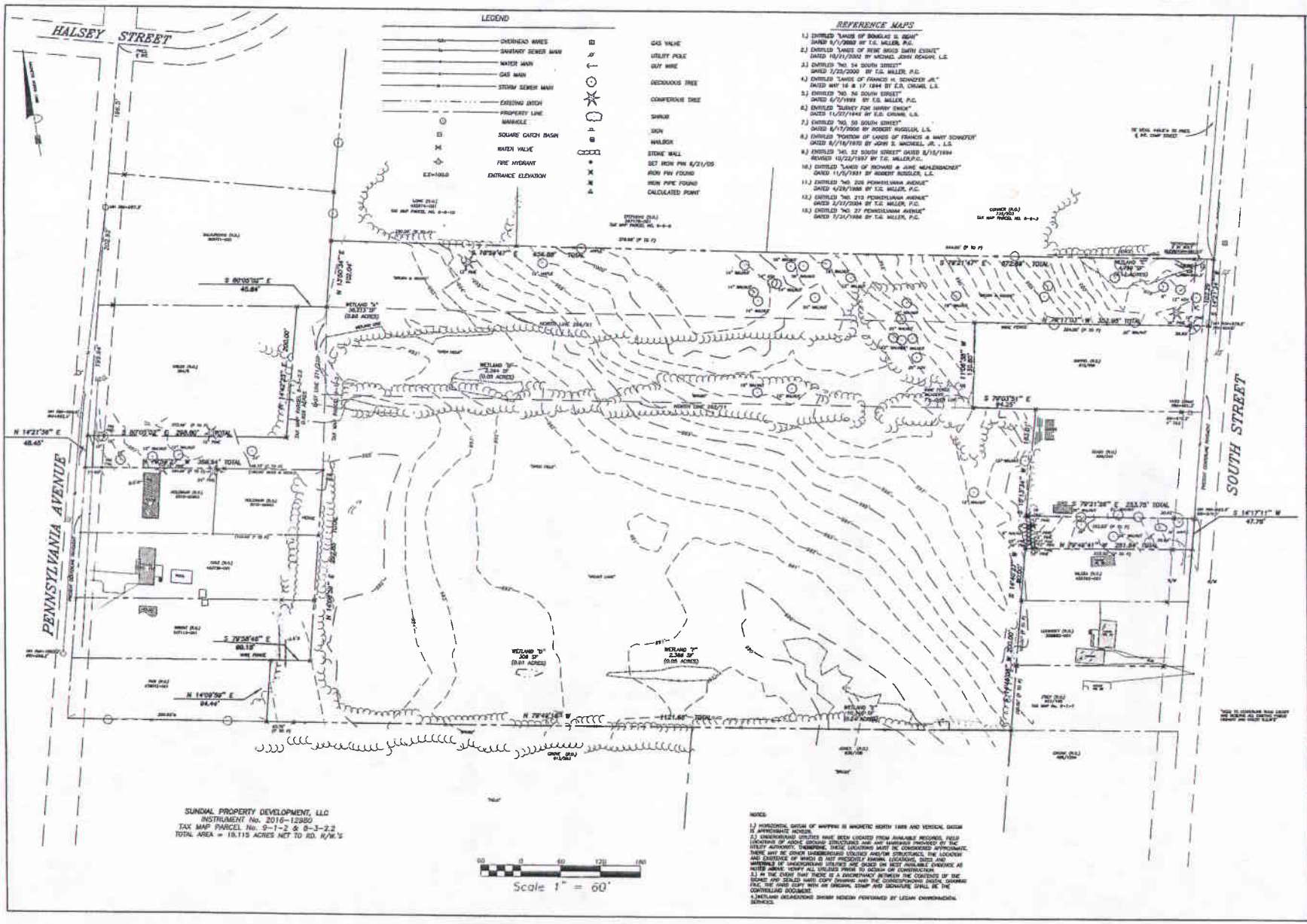
USDA Soil Conservation Service. 1987. Hydric Soils of the United States. In cooperation with the National Technical Committee for Hydric Soils. Washington, D.C.

U.S. Fish & Wildlife Service. 1996. National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary

U.S. Fish & Wildlife Service. 2010. National Wetlands Inventory Wetlands Mapper. http://www.fws.gov/wetlands/Data/Mapper.html.

Wetland Training Institute, Inc. 1991. Field Guide for Wetland Delineation: 1987 Corps of Engineers Manual. WTI 91-2.

5 APPENDIX A: WETLAND DELINEATION MAP



T. C. MILLER P.C.
ENGINEERS AND SURVEYORS
253 NORTH AURORA STREET
TEL (607) 272-0417
ITHACA, NEW YORK 14850

BOUNDARY & TOPOGRAPHIC MAP

SHOWING LANDS OF SUNDIAL PROPERTY DEVELOPMENT, LLC
LOCATED AT NO. 46 SOUTH STREET
VILLAGE OF TRUMANSBURG, TOMPKINS COUNTY, NEW YORK

DATE	REVISION	BY
6/21/17	ADDED WETLAND INFORMATION	JSB
8/3/17	REVISED WETLAND INFORMATION	JSB

Warning

ALTERATIONS TO THIS MAP NOT CONFORMING TO SECTION 7209 SUBDIVISION 2, NEW YORK STATE EDUCATION LAW ARE PROHIBITED BY LAW. ALL CERTIFICATIONS INDICATED ON THIS MAP, SIGN AND SEAL ONLY THE MAP AND COPIES THEREOF. NOT A SAID MAP OR COPIES BEAR THE IMPRESSION SEAL OF THE LICENSED LAND SURVEYOR WHOSE SIGNATURE APPEARS HEREON.

LEE DRESSER, L.S.
N.Y.S. LICENSE No. 050096

SIGNATURE
LICENSED LAND SURVEYOR

STATE OF NEW YORK · LEE DRESSER · 050096 · LICENSED LAND SURVEYOR

PROJECT

SHEET TITLE
BOUNDARY & TOPOGRAPHIC

DATE 4/10/2017
JOB No. S15748
SCALE 1"= 60'
DRAWN BY DLD
CHECKED JSB
SHEET 1 OF 1

6 APPENDIX B: USACE WETLAND DELINEATION DATA FORMS

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: South Street Project City/County: Trumansburg Village, Tompkins county Sampling Date: 5 June 2017

Applicant/Owner: Ithaca Nieghborhood Housing Service State: NY Sampling Point: SP-1

Investigator(s): LeCain and Wesley Section, Township, Range: _____

Landform (hillside, terrace, etc.): Old field Local relief (concave, convex, none): normal Slope (%): _____

Subregion (LRR or MLRA): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Phelps gravelly silt loam NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No x

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X	No _____	If yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes x	No _____	

Remarks: (Explain alternative procedures here or in a separate report.)
This is a forested wetland with areas of standing water on the sample date.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes x	No _____	Depth (inches): 4
Water Table Present?	Yes _____	No _____	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes x	No _____	Depth (inches): 0

Wetland Hydrology Present? Yes x No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
No recoded data available

Remarks:
We observed 2 inches of standing water on the sample date.

VEGETATION – Use scientific names of plants.

Sampling Point: SP-1

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	70	Yes	FACW
2. *Juglans nigra*	2	No	FACU
3.			
4.			
5.			
6.			
7.			
	72	=Total Cover	

Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Herb Stratum (Plot size: _____)			
1. *Lysimachia nummularia*	80	Yes	FACW
2. *Symphyotrichum lanceolatum*	5	No	NA
3. *Carex spp,*	15	No	FACW
4. *Epilobium coloratum*	10	No	FACW
5. *Glyceria acutiflora*	2	No	OBL
6. *Onoclea sensibilis*	20	No	FACW
7.			
8.			
9.			
10.			
11.			
12.			
	132	=Total Cover	

Woody Vine Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	2	x 1 =	2
FACW species	195	x 2 =	390
FAC species	0	x 3 =	0
FACU species	2	x 4 =	8
UPL species	0	x 5 =	0
Column Totals:	199 (A)		400 (B)

Prevalence Index = B/A = 2.01

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-2	5YR 2.5/1						Loamy/Clayey	
2-16	10YR 3/2						Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- x Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: South Street Project City/County: Trumansburg Village, Tompkins county Sampling Date: 5 June 2017

Applicant/Owner: Ithaca Nieghborhood Housing Service State: NY Sampling Point: SP-2

Investigator(s): LeCain and Wesley Section, Township, Range: _____

Landform (hillside, terrace, etc.): Old field Local relief (concave, convex, none): normal Slope (%): _____

Subregion (LRR or MLRA): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Phelps gravelly silt loam NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No x

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X	No _____	If yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes x	No _____	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No x	Depth (inches): _____
Water Table Present?	Yes _____	No _____	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes x	No _____	Depth (inches): 16

Wetland Hydrology Present? Yes x No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
No recoded data available

Remarks:
Saturated soils

VEGETATION – Use scientific names of plants.

Sampling Point: SP-2

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2. *Juglans nigra*	30	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	30	=Total Cover	

Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Herb Stratum (Plot size: _____)			
1. *Torilis arvensis*	30	Yes	FACW
2. *Solidago rugosa*	10	No	NA
3. *Hackelia virginiana*	15	Yes	FACW
4. *Solidago gigantea*	10	No	FACW
5. *Dactylis glomerata*	10	No	FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	75	=Total Cover	

Woody Vine Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	55	x 2 =	110
FAC species	0	x 3 =	0
FACU species	40	x 4 =	160
UPL species	0	x 5 =	0
Column Totals:	95 (A)		270 (B)

Prevalence Index = B/A = 2.84

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/1						Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- x Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: South Street Project City/County: Trumansburg Village, Tompkins county Sampling Date: 5 June 2017

Applicant/Owner: Ithaca Nieghborhood Housing Service State: NY Sampling Point: SP-3

Investigator(s): LeCain and Wesley Section, Township, Range: _____

Landform (hillside, terrace, etc.): Old field Local relief (concave, convex, none): normal Slope (%): _____

Subregion (LRR or MLRA): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Phelps gravelly silt loam NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No x

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X	No _____	If yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes x	No _____	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No x	Depth (inches): _____
Water Table Present?	Yes _____	No _____	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes x	No _____	Depth (inches): 16

Wetland Hydrology Present? Yes x No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
No recoded data available

Remarks:
Saturated soils

VEGETATION – Use scientific names of plants.

Sampling Point: SP-3

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2. *Juglans nigra*	30	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	30	=Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Herb Stratum (Plot size:)			
1. *Lysimachia nummularia*	70	Yes	FACW
2. *Carex vulpinoidea*	40	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	110	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	40	x 1 =	40
FACW species	70	x 2 =	140
FAC species	0	x 3 =	0
FACU species	30	x 4 =	120
UPL species	0	x 5 =	0
Column Totals:	140 (A)		300 (B)

Prevalence Index = B/A = 2.14

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/2						Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- x Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: South Street Project City/County: Trumansburg Village, Tompkins county Sampling Date: 5 June 2017

Applicant/Owner: Ithaca Nieghborhood Housing Service State: NY Sampling Point: SP-4

Investigator(s): LeCain and Wesley Section, Township, Range: _____

Landform (hillside, terrace, etc.): Old field Local relief (concave, convex, none): normal Slope (%): _____

Subregion (LRR or MLRA): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Phelps gravelly silt loam NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No x

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X	No _____	If yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes x	No _____	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No x	Depth (inches): _____
Water Table Present?	Yes _____	No _____	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes x	No _____	Depth (inches): 16

Wetland Hydrology Present? Yes x No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
No recoded data available

Remarks:
Saturated soils

VEGETATION – Use scientific names of plants. Sampling Point: SP-4

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2. *Juglans nigra*	30	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	30	=Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Herb Stratum (Plot size:)			
1. *Lysimachia nummularia*	55	Yes	FACW
2. *Carex vulpinoidea*	40	Yes	OBL
3. *Vulpia octoflora*	20	No	UPL
4. *Agrostis stolonifera*	10	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	125	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	40	x 1 =	40
FACW species	65	x 2 =	130
FAC species	0	x 3 =	0
FACU species	30	x 4 =	120
UPL species	20	x 5 =	100
Column Totals:	155 (A)		390 (B)

Prevalence Index = B/A = 2.52

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP-4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/2		2.5YR 3/6	25			Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- x Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: South Street Project City/County: Trumansburg Village, Tompkins county Sampling Date: 5 June 2017

Applicant/Owner: Ithaca Nieghborhood Housing Service State: NY Sampling Point: SP-5

Investigator(s): LeCain and Wesley Section, Township, Range: _____

Landform (hillside, terrace, etc.): Old field Local relief (concave, convex, none): normal Slope (%): _____

Subregion (LRR or MLRA): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Phelps gravelly silt loam NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No x

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X	No _____	If yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes x	No _____	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No x	Depth (inches): _____
Water Table Present?	Yes _____	No _____	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes x	No _____	Depth (inches): 16

Wetland Hydrology Present? Yes x No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
No recoded data available

Remarks:
Saturated soils

VEGETATION – Use scientific names of plants.

Sampling Point: SP-5

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2. *Juglans nigra*	30	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	30	=Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: _____)			
1. *Onoclea sensibilis*	60	Yes	FACW
2. *Carex vulpinoidea*	20	Yes	OBL
3. *Dactylis glomerata*	10	No	UPL
4. *Ranunculus acris*	5	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	95	=Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	60	x 2 =	120
FAC species	5	x 3 =	15
FACU species	30	x 4 =	120
UPL species	10	x 5 =	50
Column Totals:	125 (A)		325 (B)

Prevalence Index = B/A = 2.60

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP-5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/2						Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ High Chroma Sands (S11) **(LRR K, L)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- x Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR K, L)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: South Street Project City/County: Trumansburg Village, Tompkins county Sampling Date: 5 June 2017

Applicant/Owner: Ithaca Nieghborhood Housing Service State: NY Sampling Point: SP-6

Investigator(s): LeCain and Wesley Section, Township, Range: _____

Landform (hillside, terrace, etc.): Old field Local relief (concave, convex, none): normal Slope (%): _____

Subregion (LRR or MLRA): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Phelps gravelly silt loam NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No x

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X	No _____	If yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes x	No _____	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No x	Depth (inches): _____
Water Table Present?	Yes _____	No _____	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes x	No _____	Depth (inches): 16

Wetland Hydrology Present? Yes x No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
No recoded data available

Remarks:
Saturated soils

VEGETATION – Use scientific names of plants.

Sampling Point: SP-6

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2. *Juglans nigra*	30	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	30	=Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Herb Stratum (Plot size:)			
1. *Lysimachia nummularia*	70	Yes	FACW
2. *Festuca pratensis*	15	No	FACU
3. *Scirpus atrovirens*	5	No	OBL
4. *Vulpia octoflora*	5	No	UPL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	95	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	70	x 2 =	140
FAC species	0	x 3 =	0
FACU species	45	x 4 =	180
UPL species	5	x 5 =	25
Column Totals:	125 (A)		350 (B)

Prevalence Index = B/A = 2.80

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP-6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/1						Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- x Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

7 APPENDIX C: SOIL MAP AND REPORTS FOR THE SOUTH STREET SITE

Soil Map—Tompkins County, New York
(Trumansburg INHS Project)

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

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

Special Point Features

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

Water Features

- Streams and Canals

Transportation

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

Background

- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Tompkins County, New York
Survey Area Data: Version 11, Sep 24, 2016

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

Date(s) aerial images were photographed: Jun 2, 2010—Oct 8, 2010

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

Map Unit Legend

Tompkins County, New York (NY109)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
ArB	Arkport fine sandy loam, 2 to 6 percent slopes	1.0	1.4%
CfB	Conesus gravelly silt loam, 3 to 8 percent slopes	4.3	6.3%
Ha	Halsey silt loam	0.3	0.5%
HdC	Howard gravelly loam, 5 to 15 percent simple slopes	14.8	21.6%
LbB	Lansing gravelly silt loam, 3 to 8 percent slopes	18.1	26.3%
OaA	Ovid silt loam, 0 to 6 percent slopes	3.5	5.0%
PhA	Phelps gravelly silt loam, 0 to 3 percent slopes	0.0	0.0%
RkA	Rhinebeck silt loam, 0 to 2 percent slopes	26.7	38.9%
Totals for Area of Interest		**68.6**	**100.0%**

8 APPENDIX D: NWI AND DEC MAP FOR THE SOUTH STREET SITE

U.S. Fish and Wildlife Service

National Wetlands Inventory

South Street National Wetland Inver

August 1, 2017

Wetlands

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

This map is for general reference only. The US Fish and Wi
Service is not responsible for the accuracy or currentness c
base data shown on this map. All wetlands related data sho
be used in accordance with the layer metadata found on th
Wetlands Mapper web site.

National Wetlands Inventory
This page was produced by the NWI m

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Environmental Resource Mapper

Base Map: Topographical

- Search
- Tools
- **Layers and Legend**
  - **All Layers**
- Other Wetland Layers
- Reference Layers
- Tell Me More...
- Need A Permit?
- Contacts

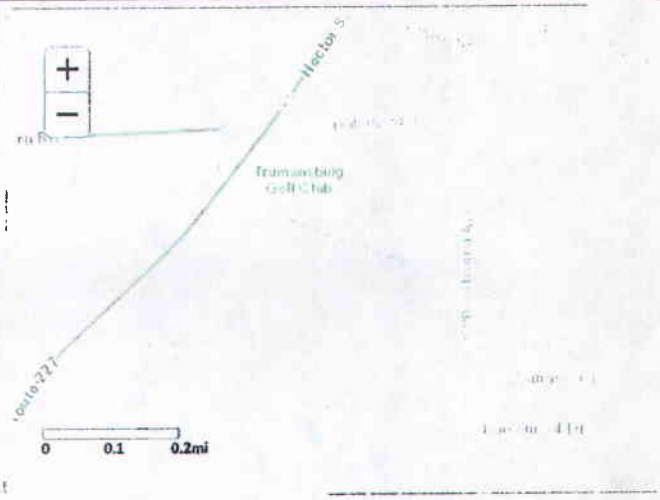


Exhibit S

Report
Phase I Environmental Site Assessment

Ithaca Neighborhood Housing Services
46 South Street

Trumansburg, New York

May 26, 2017

Seeler Engineering, P.C.

Report
Phase I Environmental Site Assessment

Ithaca Neighborhood Housing Services
46 South Street

Trumansburg, New York

May 26, 2017

Prepared By
Seeler Engineering, P.C.
1151 Pittsford-Victor Road
Suite 125
Pittsford, New York 14534
585-248-9520

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Appendix D *Additional Environmental Records Search- FOIL Search Results*

Appendix E *Sanborn, Historical Usage Maps & City Directory*

Appendix F *Aerial Photographs*

Appendix G *Site Photographs*

Appendix H *Interviews*

Appendix I *VES Report*

Declarations

I, Tim A. Seeler, P.E., declare that, to the best of my professional knowledge and belief, I meet the definition of an Environmental Professional as defined in Part 312 of 40 CFR Part 312. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the Target Property.

Tim A. Seeler

Tim A. Seeler, P.E.

I, Tim A. Seeler, P.E. have developed and performed all appropriate inquiries for this report in conformance with the standards and practices set forth in requirements of the USEPA Appropriate Inquiry (AAI) Rule.

Tim A. Seeler

Tim A. Seeler, P.E.

Section 1
Executive Summary

1.1 Executive Summary

For this report, Seeler Engineering, P.C. conducted a Phase I Environmental Site Assessment in accordance with the requirements of ASTM E 1527-13 for 46 South Street located in the Village of Trumansburg, NY (Target Property).

Based upon the work conducted for this report, Seeler Engineering, P.C., has identified one data gap. No title information was available for review.

Based upon available information one Recognized Environmental Conditions (REC) was identified. Historically use of the site for agricultural purposes for many years presents a potential for herbicides and pesticides to be present in soils at the site. While no specific information regarding chemical use was identified through the efforts of this Phase I Environmental Site Assessment we believe it to be prudent, given the historical use and the proposed residential nature of the new development, to conduct a limited investigation to determine the presence or absence of pesticides and /or herbicides in soils.

The Phase I study also investigated the potential for non-scope items including Vapor Encroachment Conditions (VEC). A VEC can be ruled out.

Section 2
Introduction

2.1 Purpose

The purpose of this Phase I Environmental Site Assessment is to render an opinion as to whether surficial or historical evidence indicates the presence of a recognized environmental condition as defined in ASTM E 1527-13 for Phase I Environmental Site Assessments.

2.2 Detailed Scope of Services

This Phase I Environmental Site Assessment was performed for the target property consisting of approximately 18.5 acres of vacant land located at 46 South St. in the Village of Trumansburg (Tax ID 8.-3-2-2).

Work conducted included:

- A visual site review to record current conditions, note unusual site conditions, and identify potential environmental concerns.
- Visual observations of the current use of adjacent properties.
- A review of available relevant aerial photographs.
- A review of deeds, titles, easements, ownership documents for portions of the Target Properties and a property survey (provided by the client) associated with the site.
- A review of regulatory environmental data bases in conformance with ASTM guidance.
- An Environmental/Regulatory Enforcement Check

The Phase I study also investigated the potential for non-scope items including Vapor Encroachment Conditions.

Our findings are subject to modification if Seeler Engineering, P.C. or any other party develops subsequent information. This report and our work are subject to the limitations presented in Section 2.4.

2.3 Significant Assumptions

None.

2.4 Limitations and Exceptions

This site assessment was performed in accordance with generally accepted practices of other consultants undertaking similar studies at the same time and in the same geographical area, and Seeler Engineering, P.C. observed the degree of care and skill generally exercised by other consultants under similar

circumstances and conditions. Our findings and conclusions must be considered not as scientific certainties, but rather as our professional opinion concerning the significance of the data gathered during the course of the environmental site assessment. No other warranty, express or implied, is made.

It should be noted that when an assessment is completed without subsurface explorations and chemical screening of soil and groundwater beneath the site, no data can be generated regarding latent subsurface conditions which may be the result of on-site or off-site sources. The Client did not provide or request other specific limitations or exceptions.

2.5 Special Terms and Conditions

The work was completed in general accordance with our proposal for services.

2.6 User Reliance

This Phase I Environmental Site Assessment has been prepared on behalf of and for the exclusive use by the following:

- Ithaca Neighborhood Housing Services

This report and the findings contained herein shall not, in whole or in part, be disseminated or conveyed to any other party, nor used by any other party in whole or in part, without the prior written consent of Seeler Engineering, P.C.. However, Seeler Engineering, P.C. acknowledges and agrees that the Report may be conveyed to the lender or seller associated with the Site transaction.

2.7 Qualified Professional

The qualifications of the environmental professional who performed this Phase I ESA are included as Appendix A. I, Tim Seeler, P.E., declare that, to the best of my professional knowledge and belief, I meet the definition of an Environmental Professional as defined in Part 312 of 40 CFR Part 312. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the Target Properties. I have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Section 3
Site Description

3.1 Location and Legal Description

The Target Property which is the subject of this Site Assessment consists of one parcel of approximately 18.5 acres in size as depicted on the drawing contained in Appendix B. This Target Property is currently owned by Sundial Property Development, LLC.

3.2 Site and Vicinity General Characteristics

USGS Topographic Map:	Trumansburg
Approximate Site Elevation:	Approximately, on average, 995 feet above mean sea level
Topography:	The site is relatively flat with grades sloping slightly downward from northeast to southwest and southeast with the lowest point at the southeast corner of the property. Elevations drop significantly beyond the property to 970 and further to the northeast to 381 at Cayuga Lake
Nearest Water Bodies:	The target property, is located approximately 0.5 miles south of Trumansburg Creek, approximately 0.5 miles north of Taughannock Creek and approximately 2.4 miles south west of Cayuga Lake.

3.3 Current Use of the Property

The Target Property is currently owned by Sundial Property Development, LLC and appears to be in use as hay fields.

3.4 Description of Structures, Road, Other Improvements on the Site

The Target Property contains no structures. The open land is divided by several wooded hedgerows.

3.5 Current Use of the Adjoining Properties

Adjoining properties on all sides are single family residences or open fallow land.

Section 4
User Provided Information

4.1 Title Records

A formal Abstract of Title for the Target Properties was not provided for review.

4.2 Environmental Lien or Activity and Use Limitations

No information was provided which indicates the presence of liens or use limitations.

4.3 Specialized Knowledge

None.

4.4 Commonly Known or Reasonable Ascertainable Information

None.

4.5 Valuation Reduction for Environmental Issues

No information provided.

4.6 Owner, Property Manager, and Occupant Information

The Target Property is currently owned by Sundial Property Development, LLC..

4.7 Reason for Performing Phase 1

The purpose of the Phase 1 was to support the financing of redevelopment of the Target Property.

Section 5
Records Review

5.1 Standard Environmental Records Sources

Seeler Engineering, P.C. contracted with Environmental Data Resources, Inc. (EDR) to conduct an Environmental Record Source search. A copy of the report is included as Appendix C. The search conducted met the requirements of ASTM E 1527-13. The site was not listed on any of the Federal or State databases. Seven nearby sites within prescribed minimum radii were found to have been listed on selected databases. Six (6) sites were identified as leaking underground storage tanks (LTanks) and one site was identified as a solid waste transfer station. Dates for the initial reporting of the LTank ranged from 1989 through 2000. All LTank sites are located at elevations below the Target Property and all sites have been remediated. Documentation provided for the Solid Waste Transfer facility did not indicate any adverse environmental conditions. As such, no recognized environmental conditions were identified based upon the available records.

5.2 Additional Environmental Record Sources

The following state and local governments were contacted for information relative to the Target Property.

- New York State Department of Environmental Conservation,
- Village of Trumansburg, and
- Tompkins County

All agencies have responded to the FOIL request. No records were found. All correspondence and related information is included in Appendix D.

5.3 Physical Setting Sources

Seeler Engineering, P.C. contracted with EDR to provide information on the physical setting of the sites. A copy of the report is included as Appendix C.

The average elevation of the Target Property is 995 feet. The site is relatively flat with grades sloping slightly downward from northeast to southwest and southeast with the lowest point at the southeast corner of the property. Elevations drop significantly beyond the property to 970 and further to the northeast to 381 at Cayuga Lake. Geologic information indicates the site rock stratigraphic unit is as follow; Era-Paleozoic, System-Devonian, Series-Upper Devonian, Code-D3. Soils are classified as gravelly-loam, hydrologic group Class A.

Given the elevation change of the Target Property and the waterbodies identified above it is reasonable to assume that groundwater flows to the north, east and south from the center of the Target Property.

5.4 Historical Use Information on the Property

Aerial Photos, City Directory, and historical USGS topographic mapping information for the Target Property was obtained from EDR. Sanborn mapping does not exist for this site. All reports are found in Appendix E.

Aerial Photos from 1938, 1954, 1963, 1969, 1971, 1980, 1985, 1991., 1994, 2006, 2008, 2009, and 2011, show the property as agricultural (open cultivated fields). No changes in the Target Property were noted. Information contained on historical USGS topographic mapping for years 1902, 1940, 1942, 1943, 1970, 2013 yielded little information on the Target Property. The City Directories did not list the Target Property. The Aerial Photographs, Topographic Maps, City Directory and Sanborn report are included as Appendix E.

5.5 Historical Use Information on Adjoining Properties

Growth in the number of residential buildings was noted from aerial photographs between the years of 1969 and 1980, particularly along the western boundary of the Target Property. Nothing unusual was noted in any of the photos. The City Directory identified surrounding properties as residential. A funeral home was identified north of the Target Property on South St. The location does not present a concern to the site. Nothing of concern was identified in topographic mapping.

Section 6
Site Reconnaissance

6.1 Methodology and Limiting Conditions

The purpose of Seeler Engineering, P.C.'s site reconnaissance was to make surficial observations for evidence of recognized environmental conditions, which could result in the presence of hazardous materials and petroleum products in the environment. A site inspection was conducted on April 20, 2017. Observations were documented and pertinent features of the site were documented through photographs. Selected photographs are included in Appendix F.

6.2 General Site Setting

The Target Property consists of open field divided by several hedgerows running in an east/west direction clearly indicative of agricultural use. Entering from South Street, grade rises gently to a high point in the northeast corner of the site and then slopes gently downward to the south and west. There are no structures on the site. Vegetation in the field and in the hedgerows, appears healthy and to be growing naturally. No evidence of fill activities was noted. A small stockpile of soil was noted along the path used to access the interior of the property from South Street. The stockpile appears to have originated from some regrading along the pathway to facilitate drainage and does not raise a concern. The surrounding area primarily consists of residential and agricultural uses. Historical use of the site for agricultural purposes for many years presents a potential for herbicides and pesticides to be present in soils at the site. While no specific information regarding chemical use was identified through the efforts of this Phase I Environmental Site Assessment we believe it to be prudent, given the historical use and the proposed residential nature of the new development, to conduct a limited investigation to determine the presence or absence of pesticides and /or herbicides in soils.

Section 7
Interviews

7.1 Interview with Owner

Ms. Claudia Brenner, Owner of Sundial Property Development, LLC, and owner of the property was interviewed by Seeler Engineering, P.C. on May 26,2017. She confirmed the site had been used for agricultural purposes and informed us that she was not aware of any pending, threatened, or past litigation relevant to hazardous substances of petroleum products in, on or from the property; any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on or from the property; and any notices from any governmental entity regarding any possible violation or environmental laws or possible liability relating to hazardous substances or petroleum products.

7.2 Interview with Site Manager

See Section 7.1 above.

7.3 Interview with Occupants

The Target Property is vacant land.

7.4 Interview with Local Government Officials

See Section 5.2 of this report.

7.5 Interview with Others

Ms. Alena Fast, Real Estate Developer with Ithaca Neighborhood Housing Services, Inc, a project partner in the planned development was interviewed by Seeler Engineering, P.C. on May 3, 2017. She confirmed the site had been used for agricultural purposes and informed us that she was not aware of any pending, threatened, or past litigation relevant to hazardous substances of petroleum products in, on or from the property; any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on or from the property; and any notices from any governmental entity regarding any possible violation or environmental laws or possible liability relating to hazardous substances or petroleum products.

Section 8
Vapor Encroachment Screen

8.1 Vapor Encroachment Screening

A vapor encroachment assessment was conducted by performing a vapor encroachment screen (VES) as outlined by ASTM E 2600-10 standards. The VES report is included in Appendix I. The VES was performed to provide a practical and useful evaluation of chemicals of concern (COC) that may affect the Target Property. More specifically, the VES is used to determine the potential of COC that may migrate as vapors because of contaminated soil and groundwater on or near the Target Property. A Tier 1 assessment was conducted.

8.2 Current Use

As noted in Section 3 of this report, the Target Property is currently owned by Sundial Property Development, LLC and currently undeveloped agricultural land. Adjoining property consists of residential buildings

Further information can be found in Section 3 and Section 6 of this report.

8.3 Government and Historical Records

Based upon the records received from EDR reports, including but not limited to Radius Maps, Sanborn Maps, Aerial Photos, and City Directories, and in conjunction with city, county, and state records, several sites within the proscribed radii identified conditions which were evaluated.

Seven nearby sites within prescribed minimum radii were found to have been listed on selected databases. Six (6) sites were identified as leaking underground storage tanks (LTanks) and one site was identified as a solid waste transfer station. Dates for the initial reporting of the LTank ranged from 1989 through 2000. All LTank sites are located at elevations below the Target Property and all sites have been remediated. Documentation provided for the Solid Waste Transfer facility did not indicate any adverse environmental conditions.

8.4 Physical Setting

The average elevation of the Target Property is 995 feet. The site is relatively flat with grades sloping slightly downward from northeast to southwest and southeast with the lowest point at the southeast corner of the property. Elevations drop significantly beyond the property to 970 and further to the northeast to 381 at Cayuga Lake. Geologic information indicates the site rock stratigraphic unit is as follow; Era-Paleozoic, System-Devonian, Series-Upper Devonian, Code-D3. Soils are classified as gravelly-loam, hydrologic group Class A.

Given the elevation change of the Target Property and the waterbodies identified in this report it is reasonable to assume that groundwater flows to the north, east and south from the center of the Target Property

8.5 VES Findings

The VES report is included in Appendix I. Although several were identified, all sites were located well below the Target Property in elevation and remediation had been completed at all sites a number of years ago. The VES concluded that a Vapor Encroachment Condition (VEC) can be ruled out.

Section 9
Findings, Conclusions, and Recommendations

9.1 Findings, Conclusions, and Recommendations

For this report, Seeler Engineering, P.C. conducted a Phase I Environmental Site Assessment in accordance with the requirements of ASTM E 1527-13 for 46 South Street located in the Village of Trumansburg, NY (Target Property).

Based upon the work conducted for this report, Seeler Engineering, P.C., has identified one data gap. No title information was available for review.

Based upon available information one Recognized Environmental Conditions (REC) was identified. Historically use of the site for agricultural purposes for many years presents a potential for herbicides and pesticides to be present in soils at the site. While no specific information regarding chemical use was identified through the efforts of this Phase I Environmental Site Assessment we believe it to be prudent, given the historical use and the proposed residential nature of the new development, to conduct a limited investigation to determine the presence or absence of pesticides and /or herbicides in soils.

The Phase I study also investigated the potential for non-scope items including Vapor Encroachment Conditions (VEC). A VEC can be ruled out.

Seeler Engineering, P.C.

June 20, 2017

TRANSMITTED ELECTRONICALLY

Ms. Alena Fast
Real Estate Developer
Ithaca Neighborhood Housing Services, Inc.
115 West Clinton Street
Ithaca, New York 14850

Subject: Phase II Environmental Assessment
46 South St.

Dear Ms. Fast:

Seeler Engineering, P.C. (Seeler) conducted a Phase II Environmental Site Assessment (ESA) at the property located at 46 South St., Trumansburg, NY. Prior to this investigation, a Phase I ESA was conducted for this property by Seeler. The Phase I Report is dated May 26, 2017. One Recognized Environmental Condition (REC) was identified in the Phase I Report.

1. Based upon available information one Recognized Environmental Conditions (REC) was identified. Historically use of the site for agricultural purposes for many years presents a potential for herbicides and pesticides to be present in soils at the site. While no specific information regarding chemical use was identified through the efforts of this Phase I Environmental Site Assessment we believe it to be prudent, given the historical use and the proposed residential nature of the new development, to conduct a limited investigation to determine the presence or absence of pesticides and /or herbicides in soils.

On June 2, 2017 soil samples were collected from five representative locations (see Drawing Number 1). Soil samples were collected from a depth of 0" to 2" and then from 2" to 6" in each location. Soil samples from the 0" to 2" depth were submitted to ALS Laboratories for analysis of:

1. Heavy Metals; Arsenic, Lead, and Mercury (method 6010 and method 7471B)

2. Pesticides (Method 8081), and

3. Herbicides (Method 8151).

Soil samples collected from the 2" to 6" depth were preserved and held at the laboratory pending results of analysis of the top layer (0" to 2" depth) of soil.

The detailed laboratory report is included as Attachment 1. No Pesticide or Herbicide analytes were found in detectable levels in any of the five samples. Arsenic, Lead, and Mercury were detected. Levels were compared with the Supplemental Soil Cleanup Objectives contained within the New York State Department of Environmental Conservation Soil Cleanup Guidance Document CP-51 for Residential Use. All three analytes in all five samples were within allowable limits for Residential Use (Attachment 3).

1151 PITTSFORD-VICTOR ROAD · SUITE 125 · PITTSFORD, NEW YORK 14534
FAX 585-248-9532 · PHONE 585-248-9520

Based on the work summarized above, Seeler Engineering P.C. concludes that the site has not been impacted by previous agricultural uses and the REC should be closed.

We thank you for the opportunity to assist you. Should you have any questions please do not hesitate to contact me at (585) 248-9520 or timseeler@seelerengineering.com.

Very truly yours,
Seeler Engineering, P.C.

Tim A. Seeler

Tim A. Seeler, P.E.
Principal

w/enc.

Exhibit T

EMPIRE GEO SERVICES, INC.

A SUBSIDIARY OF SJB SERVICES, INC.

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MEMBER
ACEC New York
American Council of Engineering Companies of New York

Geotechnical Engineering Report
Proposed Residential Development
46 South Street
Trumansburg, New York

Prepared For:

Ithaca Neighborhood Housing Services, Inc.
115 West Clinton Street
Ithaca, New York 14850

Prepared By:

Empire Geo-Services, Inc.
Cortland, New York

STATE OF NEW YORK
JOHN S. HUTCHISON
085390
LICENSED PROFESSIONAL ENGINEER

8-7-17

Empire Project No. CE-17-014
August 2017

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1.0 INTRODUCTION

This report presents the results of a geotechnical engineering evaluation completed by Empire Geo-Services, Inc. (Empire) for the proposed residential development at 46 South Street in the village of Trumansburg, Tompkins County, New York. The evaluation included an investigation of the site's subsurface by means of conventional test borings and an engineering analysis of the conditions encountered as they relate to the planned construction. On this basis, recommendations have been prepared to assist in planning for design and construction of foundations, floor slabs, pavements and associated earthwork.

Ithaca Neighborhood Housing Services, Inc. retained Empire to perform this work, which was completed in general accordance with the scope of services outlined in our proposal dated May 17, 2017. The work scope was expanded subsequent to authorization of the proposal to include additional infiltration and percolation testing.

2.0 SITE AND PROJECT DESCRIPTION

The project site is approximately 19 acres in size, and is located between South Street and Pennsylvania Avenue. Topography is gently rolling in the site locale, and overall grades at the site run to the east (refer to the site location map, Figure 1).

We understand the project entails construction of multiple one and two story dwellings on the parcel, along with associated paved roadways/parking areas, stormwater management features and landscaping. While proposed finish floor elevations and anticipated foundation loads were not established at the time of this report, we understand that conventional shallow spread foundations with frost walls and slab-on-grade floors are anticipated. We further understand some fill may be required to establish final grades.

The site is situated within an overall residential neighborhood type setting. At the time of our investigation, the majority of the site was grass and brush covered with some wooded areas and scattered trees. Based on available topographic mapping, total relief across the site is about 25 feet, with the highest elevation along the northern property margin and the lowest near the northeast corner.

3.0 METHOD OF INVESTIGATION

Test Borings

Subsurface conditions at the site were investigated through the completion of 32 test borings. Of these, 19 were completed at the locations of proposed buildings (BB-series), 9 were performed in proposed pavement areas (PB-series), and four were completed for infiltration testing (IT-series). Note that boreholes BB-2 and PB-1 were deleted due to access issues, and boreholes PB-7 and IT-5 were co-located due to their close proximity to one another.

The borehole locations were selected by TWLA Landscape Architects and were staked/ marked in the field using a hand-held GPS; their approximate locations are shown on the subsurface investigation plan (Figure 2). The ground surface elevation at each test boring was determined through differential leveling and referenced to a temporary benchmark (rim of manhole along South Street with reported elevation of 979.5 feet). The site was accessed from South Street at the northeast corner of project (only one access location was available).

The test borings were completed between June 1 and 21, 2017 by Empire's affiliated drilling and materials testing company, SJB Services, Inc., using a CME model 850 track-mounted drill rig equipped with hollow-stem augers. As the augers were advanced, overburden soils were sampled in accordance with ASTM D1586, the Standard Method for Penetration Test and Split-Barrel Sampling of Soils. Split spoon samples and standard penetration tests (SPTs) were taken on a continuous basis from the ground surface to depths upwards of 12 feet, and at standard intervals of five feet beyond the zone of continuous sampling. The test borings were thus advanced to total depths of 8.1 to 38.2 feet below existing grade.

Representative portions of the recovered soil samples were transported to Empire's office, whereupon a geotechnical engineer prepared individual test boring logs based on visual classification of the recovered samples and review of the driller's field notes. The soil samples were described based on visual estimation of the grain size distribution and characteristics such as color, relative density, consistency, moisture, etc. The subsurface logs are presented in Appendix A, along with a key of terms and symbols used in their preparation.

Geotechnical Laboratory Testing

Selected soil samples from the boreholes were tested in our soils laboratory as part of the subsurface investigation, to confirm the visual classifications and to provide index properties for use in the geotechnical evaluation. This testing was performed in general accordance with the following standard methods:

- Moisture content by ASTM D2216 – Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
- Hydrometer analysis by ASTM D422 – Standard Test Method for Particle-Size Analysis of Soils
- Grain size analysis by ASTM C136 – Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
- Atterberg limits by ASTM D4318 – Standard Test Method for Liquid Limit, Plastic Limit and Plasticity Index of Soils

The laboratory testing results are presented in Appendix B, along with a summary table of the laboratory testing program and results (Table 1).

Field Infiltration Tests

A total of five field infiltration tests were performed, immediately adjacent to each of the I-series boreholes and correspondingly designated. The infiltration tests were performed in general accordance with the procedure outlined in the New York State Stormwater Management Design Manual.

At each location, this involved the installation of a temporary four-inch diameter casing to a nominal target depth of six feet below existing grade, and filling the casing with water to allow for a period of pre-soak. After the pre-soak period and upon start of the test, the casing was re-filled with water as necessary to produce a standing water column of 24 inches inside the pipe, and the drop in head was measured after a period of one hour. The casing was again re-filled and the process was repeated three times, for a total of four timed cycles.

The stabilized infiltration rate was taken as the average drop in head inside the casing over the four timed intervals, and this rate was found to be essentially nil inches per hour (in/hr) at each location tested. Some in fact took on water during the test. The infiltration test results are presented for your use in Appendix C of this report.

Field Percolation Tests

In addition to the infiltration tests, a total of five field percolation tests (PT-1 thru PT-5) were completed in general accordance with New York State Department of Health standards at the approximate location shown on Figure 2. At each location, this consisted of hand excavating an approximate 12-inch diameter test hole to a depth between 24 and 27 inches, pre-soaking the test hole and running the test.

No measurable change in water level was observed during the time period monitored at four of the five locations tested (percolation rate >60 minutes per inch), with some percolation observed only at PT-5 (where the percolation rate stabilized at approximately 16 minutes per inch (min/in). The percolation test reports are presented for your use in Appendix D.

4.0 SUBSURFACE CONDITIONS

The individual subsurface logs should be referenced for the conditions at each test boring location. A summary of these conditions by stratum is provided below.

Surface and Fill Materials

Topsoil was present at the ground surface of each test boring location, at thicknesses between roughly 0.4 to 1.3 feet (these topsoil thickness measurements are approximate only and should not be relied upon for construction quantity estimates – contractors should be encouraged to make their own topsoil thickness determinations for bidding purposes).

While indications of fill across the site were for the most part absent, we note that soils in the upper five to six feet in test borings BB-4 and BB-5 have possibly been disturbed or reworked. We also note that cinders/ash were noted in the upper one foot of percolation test PT-5.

Indigenous Soils

Native soils beneath the topsoil (and possible fill/reworked soils, where applicable) generally consisted of silts with lesser amounts of sand, gravel and clay, along with occasional cobbles and/or rock fragments. These glacial till soils were classified among the ML, SM, SP-SM, SW-SM, SM-SC, GM, GP-GM, CL and CL-ML groups using the Unified Soil Classification System (USCS).

Measured SPT N-values where the native soils were essentially granular ranged from 3 to 50 or greater, indicating an overall loose to very compact relative density. Where the soils were deemed essentially cohesive, measured N-values were 2 to 30 or greater indicating a very soft to hard consistency. The soils tended to become more penetration resistant with depth, and spoon refusals were common. N-values were no less than 20 below a depth of six feet in any of the boreholes.

Bedrock

Bedrock was not encountered within the depths explored. For information purposes, the Geologic Map of New York – Finger Lakes Sheet (New York State Education Department, 1970) indicates that bedrock underlying the project area consists of shales and siltstones of the Genesee group.

Groundwater Conditions

Water level measurements were made (or attempted) in the test borings as the boreholes were advanced and upon the completion of sampling; these measurements are noted on the subsurface logs, and are also summarized in Table 2 as presented in Appendix E.

Note that while the soils encountered were generally non water-bearing, and measurable groundwater was present inside the augers upon completion of sampling at just seven of the 32 boreholes, sufficient time for any groundwater to enter the augers and achieve a static level may not have elapsed prior to these measurements being taken. Wet soil seams or layers were sometimes identified in the overburden, and holes that were left open overnight tended to accumulate water.

Localized areas of perched/trapped groundwater may also be present at times in the upper soils nearer the ground surface, particularly during seasonally wet periods and following heavy or extended periods of precipitation. It should be expected that groundwater levels, and the quantity/extent of any perched or trapped water, will vary with location and with seasonal fluctuations in precipitation and runoff.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The project site is considered suitable for the proposed residential buildings using conventional shallow spread foundations and slab-on-grade design. Based on the conditions disclosed by our investigation, we offer the following general conclusions, with more detailed recommendations provided in the subsequent report sections.

1) New building foundations and floor slabs may be seated on either undisturbed native soils or on imported structural fill which is placed over the native soils after all topsoil is removed, along with any existing fill or otherwise unsuitable materials which may be found.

2) It is anticipated that materials which are excavated for foundation construction will consist primarily of silty glacial till soils. As these materials are expected to be variable in composition and/or excessively fine-grained, it is recommended they be re-used only in landscaped or otherwise non-critical areas. An imported granular fill is recommended for fill and backfill work beneath and around new foundations.

3) At the time of investigation, groundwater was generally found below the depths likely to directly impact on design and construction of building foundations. However, it is possible that zones of perched or trapped water may be encountered in places. Any such groundwater is expected to be limited in volume and/or occur as relatively slow seepage, and it is anticipated that standard sump and pump methods of dewatering will be sufficient to allow excavation and backfill to proceed in the dry.

5.1 Building Foundations

Conventional spread foundations may be proportioned for a maximum net allowable bearing pressure of 3,000 pounds per square foot (psf). Continuous wall footings should be at least 1.5 feet in width, and column/individual footings should be at least two feet in width. Interior building foundations (beneath heated spaces) should be embedded a minimum of two feet below finished floor elevation to develop adequate bearing capacity. Exterior foundations should be seated a minimum of four feet below finished exterior grades for frost protection.

Foundations may be supported directly on undisturbed native soils, or on imported structural fill placed over the native soils after all topsoil is removed, along with any existing fill, disturbed soils, remains of former structures or otherwise unsuitable materials that may be found.

Bearing grades should be carefully inspected at the time of excavation to ensure that foundations are constructed on the materials intended. Where over-excavation is required beneath the foundations to remove unsuitable material, the excavation should extend horizontally beyond each side of the foundation a distance equal to at least one-half the depth of the undercut below the final bearing grade elevation. Replacement material should meet the specification and compaction guidelines for structural fill as outlined in Appendix F.

Any water which enters foundation excavations should be promptly removed together with any softened bearing grade materials. All final bearing grades should be firm, stable, and free of any loose soil, mud, water or frost.

Assuming the recommendations outlined in this report are adhered to, settlement of spread foundations is not expected to exceed one-inch total and ¾-inch differential, respectively. Any such settlement should occur as construction proceeds and proportionally as loads are applied.

5.2 Floor Slabs

Interior floor slabs should be constructed over a minimum six inch thick base course of subbase stone (consideration should be given to increasing this thickness in areas subject to heavier loads and/or use, or in any unheated areas). Floor slab subgrades should be prepared as outlined in section 5.5. Material and placement guidelines for the subbase stone are provided in Appendix F (see structural fill). Under these parameters, building floor slabs may be designed and constructed in accordance with procedures recommended by the Portland Cement Association or American Concrete Institute using 150 pounds per cubic inch (psi/in) as a modulus of subgrade reaction at the top of the base layer.

5.3 Seismic Design Considerations

Site Class

In our estimation, the site meets the criteria for seismic Site Class "C" (very dense soil and soft rock profile) set forth in table 20.3-1 of ASCE 7, as referenced in the 2015 International Building Code adopted by New York State.

Spectral Response Accelerations

Spectral response accelerations in the project area were obtained from the U.S. Seismic Design Maps web application available at the United States Geological Survey (USGS) website (earthquake.usgs.gov). The accelerations are based on USGS seismic hazard data as promulgated in the building code. Using geographic coordinates 42.5355°N, 76.6617°W, the indicated maximum spectral response accelerations normalized for reference Site Class B conditions are 0.128g for the short period response (0.2 second, S_s) and 0.056g for the 1 second period response (S_1). For design purposes, these spectral response accelerations must be modified for the soil profile determined at the project site(s), as follows:

Maximum spectral response accelerations, adjusted for Site Class:

- Short Period Response (S_{MS}) - 0.154g
- 1 Second Period Response (S_{M1}) - 0.096g

Maximum five percent damped design spectral response accelerations:

- S_{DS} - 0.103g
- S_{D1} - 0.064g

Liquefaction Potential

Based on the composition and density of site soils, the potential for liquefaction to occur during a seismic event is considered minimal.

5.4 Pavement Design

Soils disclosed by the test borings are generally suitable for the support of asphalt pavement. Design recommendations are provided below for commercial duty hot mix asphalt pavement, one section intended for truck use and areas subjected to frequent and/or heavier loads (heavy duty), and another intended for automobile parking and occasional light delivery truck traffic (standard duty). Pavement design is dependent on a number of service parameters for which limited information was available; in the absence of specific information, typical values were assumed. The pavement sections recommended are based on the assumption that subgrades will be prepared as outlined in section 5.5.

Table 3 - Recommended Asphalt Pavement Sections

Pavement Course	Thickness (inches)	
	Heavy Duty Section	Standard Duty Section
Top	2.0	1.5
Binder	3.0	2.0
Subbase	18	12
Geotextile	✓	✓

Note that local municipal standards for pavement design may apply in the event the roadways are to be turned over to the village.

We also note that the suitability of the subgrade soils for roadway/pavement construction will be highly weather dependent, as they are silty in composition, moisture-sensitive and will easily soften/lose strength when disturbed by normal construction activities if wet. Should wet weather prevail at the time of construction, it may be necessary to improve pavement subgrades through undercut of the soft soils and replacement with imported granular fill, or by other means, and this may represent a significant expense. As a minimum, it will likely be necessary to increase subbase stone thickness to improve subgrade conditions and to promote drainage in some areas.

Pavement structure components should meet the following material specifications:

Table 4 - Asphalt Pavement Section Material Specifications	
Asphalt Top Course	NYSDOT 9.5 or 12.5 Top Course - Hot Mix Asphalt
Asphalt Binder Course	NYSDOT 19.0 or 25.0 Binder Course - Hot Mix Asphalt
Stone Subbase Course	NYSDOT Type 2 Subbase - Crushed Aggregate
Geotextile	Woven polypropylene stabilization/separation geotextile (Mirafi 500X or equivalent)

Concrete sidewalks should be constructed over a minimum six inches of imported granular subbase (NYSDOT Type 2); subgrade drainage should be provided as appropriate. Concrete sidewalk thickness should be no less than four inches.

Accumulation of water on pavement subgrades should be avoided by grading the subgrade to a slope of at least two percent, and/or by providing underdrains. Failure to provide adequate drainage will shorten pavement life.

5.5 Site Preparation and Construction

Construction Dewatering

Shallow foundation excavations at the site are not expected to encounter appreciable amounts of groundwater. Should zones of perched and/or trapped water in the overburden soils be encountered, it is expected that it will be limited in volume and occur as relatively slow seepage which may be controlled through standard sump and pump methods of dewatering.

Any seepage of groundwater or collected precipitation should be intercepted and maintained below the excavation bottom, such that construction proceeds in the dry. Groundwater associated impacts on construction may be lessened if site development is planned during seasonally dry periods.

Excavation for Foundation Construction

Excavation to the proposed bearing grades for foundation construction should be performed using a method which limits disturbance to the bearing grade soils, such as a backhoe equipped with a smooth blade bucket. All existing topsoil should be removed from beneath foundation bearing grades, along with any existing fill, remains of former structures, disturbed or otherwise unsuitable materials that may be found.

Subgrades should be carefully inspected during construction to verify that foundations are constructed on suitable materials. The native soil bearing grades should be observed and evaluated by the geotechnical engineer prior to foundation construction, or where over-excavation is required, before placement of structural fill. Placement and compaction of structural fill beneath foundations should be as outlined in Appendix F.

All bearing grades for foundation construction should be protected from precipitation and surface water. Water should not be allowed to accumulate on the soil bearing grades and the bearing grades should not be allowed to freeze, either prior to or after construction of foundations. Any water which enters foundation excavations should be promptly removed together with any softened bearing grade materials. All final bearing grades should be firm, stable, and free of any loose soil, mud, water or frost.

Foundation excavations should be backfilled as soon as possible and prior to construction of the superstructure. We recommend that foundation backfill consist of a suitable granular fill; re-use of excavated site soils for foundation backfill should be avoided.

Subgrade Preparation for Slab-on-Grade and Pavement Areas

Beneath proposed building floor slabs and pavements, all existing topsoil, stumps and roots should be removed, along with any existing pavements, foreign matter, excessively coarse or other unsuitable material that may be found. Following removal of surface materials and excavation to proposed subgrades, the exposed subgrades should be proof-rolled to evaluate their condition. The proof-rolling should be performed prior to any required fill placement, using a smooth drum roller with a static weight of at least seven tons. The roller should be operated in the static (non-vibratory) mode and complete at least two passes over the exposed subgrades.

All subgrades and/or proof-rolling should be observed by the geotechnical engineer. Any areas which appear wet, loose, soft, unstable or otherwise unsuitable should be undercut. Over-excavation, which may be required as a result of the evaluation, should be performed based on guidance provided the engineer. Where undercut to remove unsuitable soils and improve stability, subgrades should be backfilled with structural fill.

Suitable granular fill may be used for general grade increases and to raise site grades beneath the subbase course for pavements and slabs-on-grade; it is recommended that utility trenches located within slab-on-grade areas be backfilled with structural fill. Placement of material to raise site grades should be monitored by a representative of the engineer to ensure the recommendations contained herein are adhered to. Material and placement guidelines for imported granular fill materials are provided in Appendix F.

During construction, the contractor should take precautions to limit construction traffic over building slab and pavement subgrades. Any subgrades which become damaged, rutted, unstable or are otherwise degraded should be undercut and repaired as necessary prior to placement of the subbase course.

Pavement Construction

Placement of pavement subbase stone can proceed following proper subgrade preparation, proof-rolling and subgrade filling as described above. As the separation geotextile is placed

over the subgrade, installation of adjoining panels should have minimum overlap of 12 to 18 inches, or as recommended by the manufacturer. Subbase stone should be placed and compacted in accordance with the recommendations in Appendix F. Construction of the asphaltic concrete courses (i.e., base, binder and top) should be performed in accordance with NYSDOT Standard Specifications - section 400.

Excavation Safety

All excavations must be performed in accordance with federal Occupational Safety and Health Administration (OSHA) standards, along with state and local codes, as applicable. The contractor is ultimately responsible for all aspects of excavation safety.

6.0 CLOSING REMARKS

This report was prepared to assist in planning for design and construction of the proposed residential development at 46 South Street in the village of Trumansburg, New York. The report has been prepared for the exclusive use of Ithaca Neighborhood Housing Services and other members of the design team for specific application to this site and project only. The recommendations were prepared based on Empire's understanding of the project, as described herein, and through the application of generally accepted soils and foundation engineering practices. No other warranties, expressed or implied, are made by the conclusions, opinions, recommendations or services provided.

Empire should be informed of any changes to the planned construction so that it may be determined whether the changes warrant modification to the recommendations contained herein. Empire should also be afforded the opportunity to review final plans and specifications to verify that the recommendations were properly interpreted and applied.

Important information which should be reviewed regarding the use and interpretation of this report is presented in Appendix G.

Respectfully Submitted,
EMPIRE GEO-SERVICES, INC.

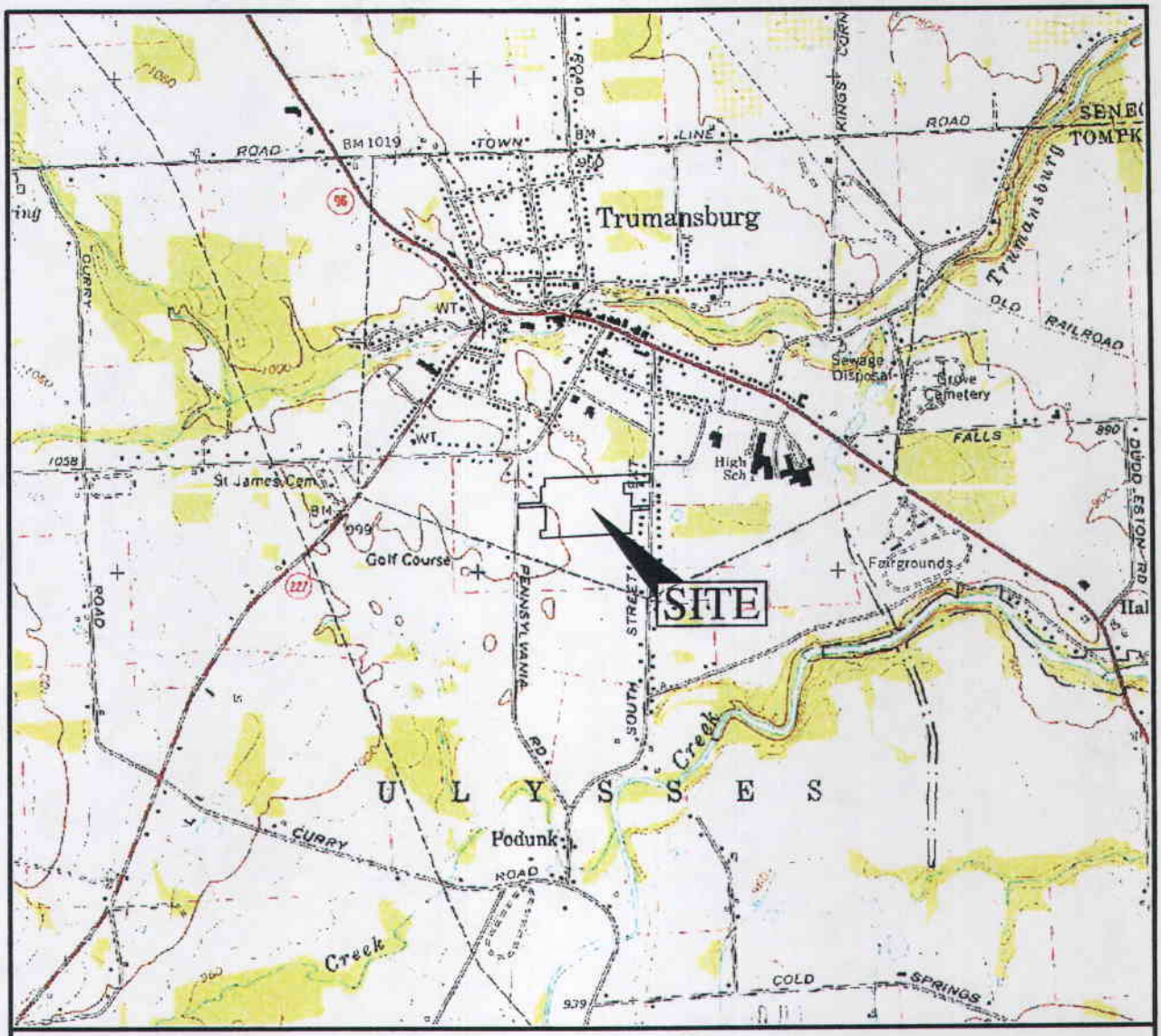
Parviz Akbari

Parviz Akbari
Geotechnical Engineer

John S. Hutchison, P.E.
Geotechnical Engineer
and Project Reviewer

Figures

Site Location Map
Subsurface Investigation Plan



SCALE 1:24,000

1 1/2 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 20 FEET

DATUM IS MEAN SEA LEVEL

SOURCE: TRUMANSBURG, NY
USGS 7.5' QUADRANGLE (1990).

EMPIRE GEO SERVICES INC

a subsidiary of SJB Services, Inc.

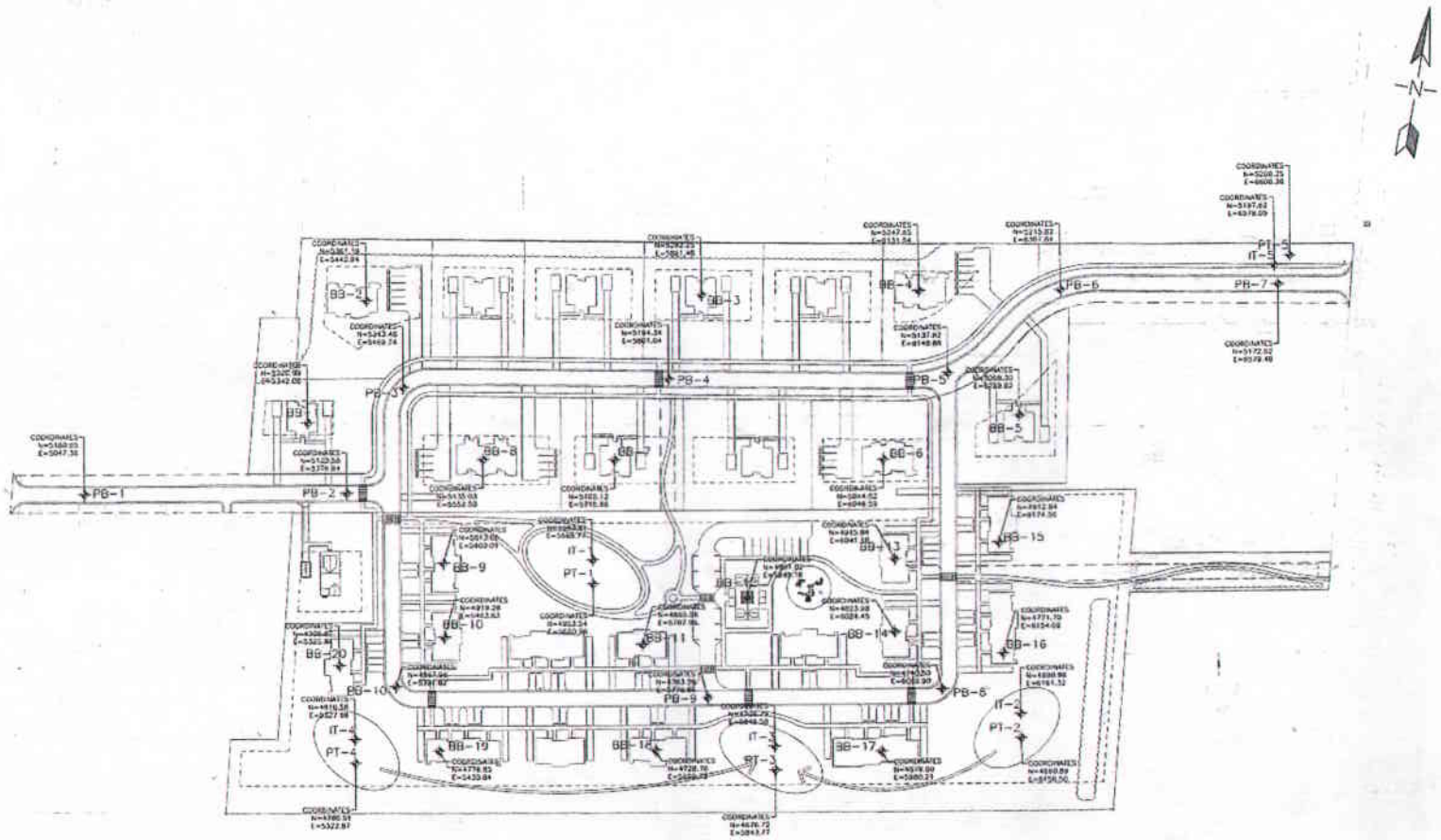
SITE LOCATION MAP

PROPOSED RESIDENTIAL DEVELOPMENT

46 SOUTH STREET

TRUMANSBURG, NEW YORK

SCALE:	AS SHOWN
DATE:	8/17
DRAWN BY:	jsh
REV'D BY:	
DWG. FILE:	ce17014
PROJ. No.:	CE-17-014
FIGURE No.:	1



SUBSURFACE INVESTIGATION PLAN
FIGURE 2

TWLA
LANDSCAPE ARCHITECTS

Ithaca Neighborhood Housing Services

46 South Street

Trumansburg, New York

BORING LOCATION

C101

APPENDIX A

Test Boring Logs and Key

Date: 6-23-17
STARTED: 6-8-2017
FINISHED: 6-8-2017

SJB SERVICES, INC.

SUBSURFACE LOG

HOLE NO. BB-1
SURF. ELEV. 993.0' (±)
G.W. DEPTH See Notes
SHEET 1 of 1

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
LOCATION: 46 South Street, Trumansburg, New York

DEPTH-FT.	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER 0-6	6-12	12-18	18-24	N	Rec (ft)	SOIL OR ROCK CLASSIFICATION	NOTES
		S-1	1	1	2	2	3	1.1	Brown SILT, little to some Clay, ML (Moist, Soft)	Driller noted approximately 0.7 feet of topsoil at the ground surface.
		S-2	3	5	3	4	8	0.9	Gray SAND, some Gravel, little Silt, SM (Wet, Loose)	
5		S-3	2	9	10	31	19	1.0	Brown SILT, some Sand, little to some Gravel, little Clay, SM (Moist, Firm)	S-3 to completion: Glacial Till
		S-4	49	50/.4	-	-	Ref.	0.9	(Very Comapct)	Ref.: Spoon refusal.
		S-5	38	50/.3	-	-	Ref.	0.8	(Very Moist)	Driller noted wet cuttings.
10		S-6	40	50/.2	-	-	Ref.	0.7	(Moist)	
15		S-7	38	50/.4	-	-	Ref.	0.9		
		S-8	49	50/.3	-	-	Ref.	0.7		
20									Test boring complete at 18.8 feet.	Freestanding water was encountered at 13.6 feet during drilling. After completion of drilling. borehole was dry.
25										
30										
35										
40										

DRILLER: C. B.
DRILL RIG: CME-850
METHOD OF INVESTIGATION: 3 1/4 inch augers, 2" Split Spoon Sampler (ASTMD1586)
JOB NUMBER: CE-17-014
CLASSIFIED BY: Geotechnical Engineer

Date: 6-20-17
STARTED: 6-9-2017
FINISHED: 6-9-2017

SJB SERVICES, INC.

SUBSURFACE LOG

HOLE NO. BB-3
SURF. ELEV. 1002.7' (±)
G.W. DEPTH See Notes
SHEET 1 of 1

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
LOCATION: 46 South Street, Trumansburg, New York

DEPTH-FT.	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER 0-6	6-12	12-18	18-24	N	Rec (ft)	SOIL OR ROCK CLASSIFICATION	NOTES
		S-1	1	1	1	2	2	0.8	Brown SILT and CLAY, trace sand, CL-ML (Moist, Very Soft)	Driller noted approximately 0.7 feet of topsoil at the ground surface.
		S-2	4	7	5	7	12	1.2	Brown SILT, little Sand, little Gravel, trace clay, ML (Moist, Firm)	
5		S-3	7	9	11	13	20	1.4		
		S-4	13	13	14	24	27	1.7	Brown SILT, some Sand, some Gravel, trace clay, SM (Moist, Firm)	
		S-5	6	14	14	20	28	1.9		
10		S-6	22	36	31	38	67	1.8	(Very Compact)	
15		S-7	3	15	21	30	36	1.5	Gray f.-m. SAND, little Silt, SM (Very Moist, Compact)	
		S-8	9	9	13	19	22	1.3	Gray SILT and SAND, some Gravel, SM (Moist, Firm)	
20									Test boring complete at 20 feet.	Freestanding water was encountered at 17.7 feet after completion of drilling.
25										
30										
35										
40										

DRILLER: C. Spizzirri
DRILL RIG: CME-850
METHOD OF INVESTIGATION: 3 1/4 inch augers, 2" Split Spoon Sampler (ASTMD1586)
JOB NUMBER: CE-17-014
CLASSIFIED BY: Geotechnical Engineer

Date: 6-20-17
STARTED: 6-7-2017
FINISHED: 6-8-2017

SJB SERVICES, INC.

SUBSURFACE LOG

HOLE NO. BB-4
SURF. ELEV. 997.9' (±)
G.W. DEPTH See Notes
SHEET 1 of 1

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
LOCATION: 46 South Street, Trumansburg, New York

DEPTH-FT.	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	18/24	N	Rec (ft)	SOIL OR ROCK CLASSIFICATION	NOTES
		S-1	1	2	2	4	4	0.8	Dark brown SILT, trace roots, ML (Moist, Very Loose)	Driller noted approximately 1 foot of topsoil at the ground surface. S-1: resembles topsoil. S-1 & S-2: Possible fill or disturbed native soils.
		S-2	6	4	1	2	5	0.2	Brown SILT, some Clay, CL-ML (Moist, Medium)	
5		S-3	6	6	7	12	13	0.7	Brown SILT, some Gravel, little Sand, little Wood/Roots GM (Moist, Firm)	
		S-4	21	15	12	16	27	2.0	Brown SILT, some Sand, little Clay, little Gravel, CL-ML (Moist, Very Stiff)	
		S-5	7	16	16	21	32	1.8	"some" Gravel (Hard)	
10		S-6	29	37	38	41	75	0.0	No recovery.	
15		S-7	25	9	11	37	20	1.4	Becomes gray, "some c. Gravel and/or Cobble frags (Very Stiff)	Driller noted rocky materials from about 18.5 to 23 feet.
20		S-8	10	14	15	31	29	0.8		
		S-9	26	57	62	100/.3	119	0.8	Gray SILT, some Sand, some Gravel, SM (Wet, Very Compact)	
25									Test boring complete at 24.8 feet.	Freestanding water was encountered at 19.4 feet after completion of drilling. on morning of 6-8-17, depth to groundwater was at 5.2 feet.
30										
35										
40										

DRILLER: C. Spizzirri
DRILL RIG: CME-850
METHOD OF INVESTIGATION: 3 1/4 inch augers, 2" Split Spoon Sampler (ASTMD1586)
JOB NUMBER: CE-17-014
CLASSIFIED BY: Geotechnical Engineer

Date: 6-26-17
STARTED: 6-7-2017
FINISHED: 6-7-2017

SJB SERVICES, INC.

SUBSURFACE LOG

HOLE NO. BB-5
SURF. ELEV. 997.9' (±)
G.W. DEPTH See Notes
SHEET 1 of 1

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
LOCATION: 46 South Street, Trumansburg, New York

DEPTH-FT.	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER 0-6	6-12	12-18	18-24	N	Rec (ft)	SOIL OR ROCK CLASSIFICATION	NOTES
		S-1	WH	1	2	2	3	0.9	Brown SILT, some Clay, trace roots, ML (Moist, Soft)	Driller noted approximately 0.8 feet of topsoil at the ground surface.
		S-2	2	4	3	5	7	1.1	Brown SILT, some Sand, little Clay, little Gravel, ML (Moist, Medium)	
5		S-3	1	1	2	3	3	1.3	(Soft)	S-1, S-2, & S-3: possible fill or reworked native soils.
		S-4	7	13	15	14	28	1.8	Brown SILT, some Sand, trace gravel, trace clay, ML (Moist, Firm)	
		S-5	27	34	33	41	67	0.0	No recovery (Very Compact)	
10		S-6	25	30	27	31	57	2.0	Brown SILT, some Clay, CL-ML (Moist, Hard)	
15		S-7	4	9	24	37	33	1.2	Gray SILT, some Gravel and/or Cobble fragments, little Sand, ML (Moist, Very Compact)	
		S-8	26	13	7	15	20	1.1	Contains sand and gravel "seam" (Firm)	
20									Test boring complete at 20 feet.	Freestanding water was encountered at 11.3 feet after completion of drilling.
25										
30										
35										
40										

DRILLER: C. Spizzirri
DRILL RIG: CME-850
METHOD OF INVESTIGATION: 3 1/4 inch augers, 2" Split Spoon Sampler (ASTMD1586)
JOB NUMBER: CE-17-014
CLASSIFIED BY: Geotechnical Engineer

Date: 6-26-17
STARTED: 6-1-2017
FINISHED: 6-1-2017

SJB SERVICES, INC.

SUBSURFACE LOG

HOLE NO. BB-6
SURF. ELEV. 997.7' (±)
G.W. DEPTH See Notes
SHEET 1 of 1

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
LOCATION: 46 South Street, Trumansburg, New York

DEPTH-FT.	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER 0-6	6-12	12-18	18-24	N	Rec (ft)	SOIL OR ROCK CLASSIFICATION	NOTES
		S-1	1	2	2	3	4	1.2	Brown SILT, little Clay, trace sand, trace gravel, ML (Moist, Soft)	Driller noted approximately 0.7 feet of topsoil at the ground surface.
		S-2	4	8	5	6	13	1.0	Contains "little" Sand, "little" Gravel (Stiff)	
5		S-3	4	6	5	5	11	1.1	Brown SILT, little to some Sand, little Gravel, trace clay, ML (Moist, Firm)	
		S-4	9	10	12	17	22	1.2		
		S-5	18	16	18	23	34	1.6	(Compact)	Driller noted boulder at about 12.3 feet to 13.7 feet.
10		S-6	23	24	26	39	50	1.8		
15		S-7	26	27	42	49	69	1.4	Gray SILT, some Sand, some Gravel, trace rock frags SM (Moist, Very Compact)	
		S-8	25	32	47	59	79	1.7		
20									Test boring complete at 20 feet.	Freestanding water was not encountered during drilling ot after completion of drilling.
25										
30										
35										
40										

DRILLER: C. Spizzirri
DRILL RIG: CME-850
METHOD OF INVESTIGATION: 3 1/4 inch augers, 2" Split Spoon Sampler (ASTMD1586)
JOB NUMBER: CE-17-014
CLASSIFIED BY: Geotechnical Engineer

Date: 6-23-17
STARTED: 6-6-2017
FINISHED: 6-7-2017

SJB SERVICES, INC.

SUBSURFACE LOG

HOLE NO. BB-7
SURF. ELEV. 993.1' (±)
G.W. DEPTH See Notes
SHEET 1 of 1

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
LOCATION: 46 South Street, Trumansburg, New York

DEPTH-FT.	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER 0-6	6-12	12-18	18-24	N	Rec (ft)	SOIL OR ROCK CLASSIFICATION	NOTES
		S-1	WH	1	4	4	5	1.2	Brown SILT, some Clay, trace roots, ML (Moist, Medium)	Driller noted approximately 0.9 feet of topsoil at the ground surface.
		S-2	4	7	11	12	18	1.4	Brown f.-m. SAND, little Silt, SM (Moist, Firm)	
5		S-3	9	18	12	12	30	1.6	Gray SAND and SILT, trace to little Gravel, SM (Moist, Compact)	Ref.: Spoon refusal. S-3 to completion: Glacial Till
		S-4	11	39	29	50/.3	68	1.2	(Very Compact)	
		S-5	23	42	48	48	90	1.8		
10		S-6	44	50/.2	-	-	Ref.	0.6		Driller noted Boulder.
15									Test boring complete at 12.9 feet with auger refusal on possible boulder.	Freestanding water was not encountered during drilling or after completion of drilling. On morning of 6-7-17, depth to groundwater was measured to be at 3.6 feet.
20										
25										
30										
35										
40										

DRILLER: C. B.
DRILL RIG: CME-850
METHOD OF INVESTIGATION: 3 1/4 inch augers, 2" Split Spoon Sampler (ASTMD1586)
JOB NUMBER: CE-17-014
CLASSIFIED BY: Geotechnical Engineer

Date: 6-20-17
STARTED: 6-6-2017
FINISHED: 6-6-2017

SJB SERVICES, INC.

SUBSURFACE LOG

HOLE NO. BB-8
SURF. ELEV. 991.6' (±)
G.W. DEPTH See Notes
SHEET 1 of 1

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
LOCATION: 46 South Street, Trumansburg, New York

DEPTH-FT.	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER 0-6	6-12	12-18	18-24	N	Rec (ft)	SOIL OR ROCK CLASSIFICATION	NOTES
		S-1	WH	1	3	3	4	1.2	Brown SILT, little Clay, little Sand, ML (Moist, Very Loose)	Driller noted approximately 0.6 feet of topsoil at the ground surface.
		S-2	3	3	4	7	7	1.6	Brown SAND and SILT, little Clay, little Gravel SM (Very Moist, Loose)	
5		S-3	12	18	22	20	40	1.5	Brownish gray SILT, some Sand, some Gravel, SM (Moist, Compact)	
		S-4	47	50/.2	-	-	Ref.	0.7	(Very Compact)	Ref. Spoon refusal.
		S-5	18	35	46	50/.4	81	1.5	Gray SILT, trace sand, trace gravel, ML (Moist, Very Compact)	
10		S-6	44	50/.3	-	-	Ref.	0.8	Grades to "little" Sand, "little" c. Gravel and/or Cobble fragments	
15		S-7	39	50/.4	-	-	Ref.	0.9		
		S-8	50/.4	-	-	-	Ref.	0.4		
20									Test boring complete at 18.4 feet.	Freestanding water was encountered at 16.4 feet after completion of drilling.
25										
30										
35										
40										

DRILLER: C. Spizzirri
DRILL RIG: CME-850
METHOD OF INVESTIGATION: 3 1/4 inch augers, 2" Split Spoon Sampler (ASTMD1586)
JOB NUMBER: CE-17-014
CLASSIFIED BY: Geotechnical Engineer

Date: 6-20-17
STARTED: 6-14-2017
FINISHED: 6-14-2017

SJB SERVICES, INC.

SUBSURFACE LOG

HOLE NO. BB-9
SURF. ELEV. 992.6' (±)
G.W. DEPTH See Notes
SHEET 1 of 1

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
LOCATION: 46 South Street, Trumansburg, New York

DEPTH-FT.	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	18/24	N	Rec (ft)	SOIL OR ROCK CLASSIFICATION	NOTES
		S-1	1	1	4	6	5	2.0	Brown SILT, trace sand, trace clay, ML (Moist, Loose)	Driller noted approximately 1.3 feet of topsoil at the ground surface.
		S-2	4	4	13	11	17	1.7	Brown SILT, some Sand, little Gravel/Cobble fragments ML (Moist, Firm)	S-2: f. sand seam.
5		S-3	1	9	21	42	30	1.6	Gray SILT and SAND, some Gravel, SM (Moist, Firm)	S-3 to Completion: Glacial Till
		S-4	48	50/.1	-	-	Ref.	0.5	(Very Compact)	Ref.: Spoon refusal.
		S-5	12	26	39	32	65	1.4	Becomes gray	
10		S-6	18	24	38	42	62	1.6		
		S-7	27	28	44	38	72	1.8		
15										
		S-8	48	50/.2	-	-	Ref.	0.5	(Very Moist)	
20										
		S-9	50/.3	-	-	-	Ref.	0.1		
25										
		S-10	50/.2	-	-	-	Ref.	0.1	(wet)	
30										
		S-11	50/.3	-	-	-	Ref.	0.0		
35										Freestanding water was not encountered during drilling or after completion of drilling.
		S-9	50/.2	-	-	-	Ref.	0.0		
40									Test boring complete at 38.2 feet.	

DRILLER: G. Spizzirri
DRILL RIG: CME-850
METHOD OF INVESTIGATION: 3 1/4 inch augers, 2" Split Spoon Sampler (ASTMD1586)
JOB NUMBER: CE-17-014
CLASSIFIED BY: Geotechnical Engineer

Date: 6-20-17
STARTED: 6-6-2017
FINISHED: 6-6-2017

SJB SERVICES, INC.

SUBSURFACE LOG

HOLE NO. BB-10
SURF. ELEV. 991.6' (±)
G.W. DEPTH See Notes
SHEET 1 of 1

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
LOCATION: 46 South Street, Trumansburg, New York

DEPTH-FT.	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER 0-6	6-12	12-18	18-24	N	Rec (ft)	SOIL OR ROCK CLASSIFICATION	NOTES
		S-1	1	2	3	6	5	1.3	Brown SILT, little Clay, ML (Moist, Medium)	Driller noted approximately 0.7 feet of topsoil at the ground surface.
		S-2	5	4	7	11	11	1.4	Brown f.-m. SAND, little-some Silt, SP-SM (Wet, Firm)	
5		S-3	5	7	6	17	13	1.6	Brown SILT, some Sand, little Gravel, trace clay, ML (Moist, Firm)	S-3: wet silty sand seam.
		S-4	24	29	28	46	57	1.2	Becomes gray, contains "trace" gravel (Very Compact)	S-3 to completion: Glacial Till
		S-5	24	40	31	43	71	1.8		
10		S-6	47	50/.3	-	-	Ref.	0.6		Ref. Spoon refusal.
15		S-7	31	50/.4	-	-	Ref.	0.9		
		S-8	50/.3	-	-	-	Ref.	0.4	Contains "Cobble" fragments	
20									Test boring complete at 18.3 feet.	Freestanding water was encountered at 15.7 feet after completion of drilling.
25										
30										
35										
40										

DRILLER: C. Spizzirri
DRILL RIG: CME-850
METHOD OF INVESTIGATION: 3 1/4 inch augers, 2" Split Spoon Sampler (ASTMD1586)
JOB NUMBER: CE-17-014
CLASSIFIED BY: Geotechnical Engineer

Date: 6-20-17
STARTED: 6-6-2017
FINISHED: 6-6-2017

SJB SERVICES, INC.

SUBSURFACE LOG

HOLE NO. BB-11
SURF. ELEV. 991' (±)
G.W. DEPTH See Notes
SHEET 1 of 1

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
LOCATION: 46 South Street, Trumansburg, New York

DEPTH-FT.	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER 0-6	6-12	12-18	18-24	N	Rec (ft)	SOIL OR ROCK CLASSIFICATION	NOTES
		S-1	1	1	3	3	4	1.3	Brown SILT, little Clay, trace sand, ML (Moist, Very Loose)	Driller noted approximately 0.9 feet of topsoil at the ground surface.
		S-2	3	3	4	8	7	1.6	Contains "some" Sand, "trace" gravel (Loose)	
5		S-3	11	16	19	33	35	1.6	Brown SILT and SAND, trace gravel, ML (Moist, Compact)	S-3 to completion: Glacial Till
		S-4	36	53	50/.3	-	Ref.	1.2	(Very Comapct)	Ref. Spoon refusal.
		S-5	31	42	41	47	83	1.8	Gray SILT and SAND, some Gravel, SM (Moist, Very Compact)	
10		S-6	47	39	34	44	73	1.6		
15		S-7	23	45	50/.3	-	Ref.	1.0	Contains "trace" clay (Wet)	
		S-8	21	25	31	50/.2	56	1.3		
20									Test boring complete at 19.7 feet.	Freestanding water was not encountered during drilling or after completion of drilling.
25										
30										
35										
40										

DRILLER: C. Spizzirri
DRILL RIG: CME-850
METHOD OF INVESTIGATION: 3 1/4 inch augers, 2" Split Spoon Sampler (ASTMD1586)
JOB NUMBER: CE-17-014
CLASSIFIED BY: Geotechnical Engineer

Date: 6-20-17
STARTED: 6-5-2017
FINISHED: 6-5-2017

SJB SERVICES, INC.

SUBSURFACE LOG

HOLE NO. BB-12
SURF. ELEV. 990.2 (±)
G.W. DEPTH See Notes
SHEET 1 of 1

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
LOCATION: 46 South Street, Trumansburg, New York

DEPTH-FT.	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER 0-6	6-12	12-18	18-24	N	Rec (ft)	SOIL OR ROCK CLASSIFICATION	NOTES
		S-1	WH	1	5	3	6	1.2	Brown SILT, little Clay, ML (Moist, Medium)	Driller noted approximately 0.9 feet of topsoil at the ground surface.
		S-2	4	5	12	18	17	1.0	Brown GRAVEL, some Silt, some Sand, little Clay, GM (Moist, Firm)	
5		S-3	19	26	28	30	54	1.1	Brown SILT, little Sand, trace gravel, ML (Moist, Very Compact)	S-3 to completion: Glacial Till
		S-4	33	50/.4	-	-	Ref.	0.6	"some "cobble fragments	Ref. Spoon refusal.
		S-5	63	50/.2	-	-	Ref.	0.7	Contains "and" SAND (Wet)	
10		S-6	25	52	59	50/.2	111	1.6	becomes gray (Moist)	
15		S-7	50/.4	-	-	-	Ref.	0.4	"trace" cobble fragments	
		S-8	32	50/.3	-	-	Ref.	0.8		
20									Test boring complete at 18.8 feet.	Freestanding water was not encountered during drilling or after completion of drilling.
25										
30										
35										
40										

DRILLER: C. Spizzirri
DRILL RIG: CME-850
METHOD OF INVESTIGATION: 3 1/4 inch augers, 2" Split Spoon Sampler (ASTMD1586)
JOB NUMBER: CE-17-014
CLASSIFIED BY: Geotechnical Engineer

Date: 6-23-17
STARTED: 6-1-2017
FINISHED: 6-2-2017

SJB SERVICES, INC.

SUBSURFACE LOG

HOLE NO. BB-13
SURF. ELEV. 993' (±)
G.W. DEPTH See Notes
SHEET 1 of 1

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
LOCATION: 46 South Street, Trumansburg, New York

DEPTH-FT.	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER 0-6	6-12	12-18	18-24	N	Rec (ft)	SOIL OR ROCK CLASSIFICATION	NOTES
		S-1	WH	1	2	4	3	1.0	Brown SILT and CLAY, trace sand, trace gravel, trace roots/organics, ML / Topsoil (Moist, Soft)	Driller noted approximately 0.7 feet of topsoil at the ground surface.
		S-2	6	5	6	5	11	0.4	Brown SILT, some Clay, trace sand, trace gravel, ML (Moist, Stiff)	
5		S-3	2	5	7	7	12	0.6	Brown SILT and CLAY, little Sand, trace gravel, CL (Moist, Stiff)	
		S-4	8	17	32	50/.4	49	1.5	Gray SAND, little Silt, SW-SM (Moist to Wet, Compact)	
		S-5	28	70	50/.2	-	Ref.	0.9	Brown-gray SAND and GRAVEL, little Silt, SM (Moist to Wet, Very Compact)	Ref. Spoon refusal. S-5: wet gravel seam.
10		S-6	61	50/.2	-	-	Ref.	0.7	"some" Silt, "some" Gravel (Moist)	Driller noted rocky material from about 10 to 18 feet.
15		S-7	30	50/.3	-	-	Ref.	0.6	Gray SILT, some Sand, little Gravel, SM (Moist, Very Compact)	
		S-8	50/.4	-	-	-	Ref.	0.3		
20									Test boring complete at 18.4 feet.	Freestanding water was initially encountered at 6.1 feet. Test boring was dry at completion.
25										
30										
35										
40										

DRILLER: C. Spizzirri
DRILL RIG: CME-850
METHOD OF INVESTIGATION: 3 1/4 inch augers, 2" Split Spoon Sampler (ASTMD1586)
JOB NUMBER: CE-17-014
CLASSIFIED BY: Geotechnical Engineer

Date: 6-23-17
STARTED: 6-2-2017
FINISHED: 6-2-2017

SJB SERVICES, INC.

SUBSURFACE LOG

HOLE NO. BB-14
SURF. ELEV. 990.9' (±)
G.W. DEPTH See Notes
SHEET 1 of 1

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
LOCATION: 46 South Street, Trumansburg, New York

DEPTH-FT.	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER 0-6	6-12	12-18	18-24	N	Rec (ft)	SOIL OR ROCK CLASSIFICATION	NOTES
		S-1	1	1	3	5	4	1.5	Brown SILT, little Clay, trace sand, trace roots, ML (Moist, Soft)	Driller noted approximately 0.9 feet of topsoil at the ground surface.
		S-2	5	5	6	10	11	1.1	Brown SILT and f. SAND (seams and partings), ML (Moist, Firm)	
5		S-3	6	6	6	11	12	1.4	Brown SILT, some Clay, trace sand, trace gravel, ML (Moist, Stiff)	Ref. Spoon refusal. Auger refusal was encountered at 7.4 feet, driller moved about 5 feet and re-drilled.
		S-4	32	47	50/.1	-	Ref.	1.0	Brown SILT, some Sand, trace gravel, trace clay, ML (Moist, Very Compact)	
		S-5	33	55	50/.3	-	Ref.	1.3	Contains "little Sand	
10		S-6	44	50/.2	-	-	Ref.	0.7	Grades to "some" Cobble or Boulder fragments	Driller noted boulder at depth of about 12.6 feet to 13.4 feet.
15		S-7	33	61	50/.3	-	Ref.	1.3	Becomes gray	
		S-8	28	41	50/.2	-	Ref.	0.8		
20									Test boring complete at 19.2 feet.	Freestanding water was not encountered during drilling or after completion of drilling.
25										
30										
35										
40										

DRILLER: C. Spizzirri
DRILL RIG: CME-850
METHOD OF INVESTIGATION: 3 1/4 inch augers, 2" Split Spoon Sampler (ASTMD1586)
JOB NUMBER: CE-17-014
CLASSIFIED BY: Geotechnical Engineer

Date: 6-20-17
STARTED: 6-13-2017
FINISHED: 6-13-2017

SJB SERVICES, INC.

SUBSURFACE LOG

HOLE NO. BB-15
SURF. ELEV. 996' (±)
G.W. DEPTH See Notes
SHEET 1 of 1

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
LOCATION: 46 South Street, Trumansburg, New York

DEPTH-FT.	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER 0-6	6-12	12-18	18-24	N	Rec (ft)	SOIL OR ROCK CLASSIFICATION	NOTES
		S-1	3	4	4	8	8	1.7	Brown SILT, little to some Clay, trace roots, ML (Moist, Loose)	Driller noted approximately 1.3 feet of topsoil at the ground surface.
		S-2	5	5	6	5	11	1.5	Contains "some" Sand, "trace" gravel (Firm)	
5		S-3	1	4	5	11	9	1.5	Brown varved SILT and CLAY, CL-ML (Moist, Stiff)	
		S-4	12	12	12	13	24	1.8	Brown SILT, little Clay, trace sand, trace gravel, ML (Moist, Firm)	Ref.: Spoon refusal.
		S-5	4	10	18	17	28	2.0	Contains "little" Sand, "trace" clay	
10		S-6	15	16	25	34	41	2.0	Contains silty Clay "seam" (Compact)	
		S-7	15	15	22	50/.4	37	1.4	Gray SILT and SAND, little Gravel, trace clay, SM (Moist, Compact)	
15										
		S-8	75	-	-	-	Ref.	0.4	"trace" cobble fragments (Wet, Very Compact)	
20										
		S-9	52	64	50/.2	-	Ref.	0.3	Gray SILT, little embedded Sand, little embedded Gravel, ML (Moist, Very Comapct)	
25										
		S-10	34	50/.1	-	-	Ref.	0.7	Gray SILT and SAND, little Gravel, trace clay, trace cobble fragments, SM (Wet, Very Compact)	
30										
		S-11	45	50/.1	-	-	Ref.	0.2		
35										Freestanding water was not encountered during drilling or after completion of drilling. After a period of about 24 hours, depth to groundwater was at 4.9 feet.
		S-12	50/.4	-	-	-	Ref.	0.3		
40									Test boring complete at 37.4 feet.	

DRILLER: C. Brown
DRILL RIG: CME-850
METHOD OF INVESTIGATION: 3 1/4 inch augers, 2" Split Spoon Sampler (ASTMD1586)
JOB NUMBER: CE-17-014
CLASSIFIED BY: Geotechnical Engineer

Date: 6-20-17
STARTED: 6-7-2017
FINISHED: 6-7-2017

SJB SERVICES, INC.

SUBSURFACE LOG

HOLE NO. BB-16
SURF. ELEV. 993.6' (±)
G.W. DEPTH See Notes
SHEET 1 of 1

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
LOCATION: 46 South Street, Trumansburg, New York

DEPTH-FT.	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER 0-6	6-12	12-18	18-24	N	Rec (ft)	SOIL OR ROCK CLASSIFICATION	NOTES
		S-1	1	2	4	5	6	1.3	Brown SILT, some Clay, ML (Moist, Medium)	Driller noted approximately 0.7 feet of topsoil at the ground surface.
		S-2	6	9	9	8	18	1.2	Contains "trace" sand, "tarce" gravel (Very Stiff)	
5		S-3	7	7	6	7	13	0.0	No recovery. (Stiff)	
		S-4	7	8	14	50/.4	22	0.6	Brown SILT and f. SAND, ML (Moist, Firm)	S-4: silty f. sand & silt seams.
		S-5	19	21	13	49	34	1.7	Brown SILT and SAND, little Gravel, SM (Moist, Compact)	
10		S-6	50/.4	-	-	-	Ref.	0.4	(Very Compact)	Ref. Spoon refusal.
15		S-7	24	46	50/.4	-	Ref.	1.2	Gray SAND, some GRAVEL, little Silt, SM (Very Moist, Very Compact)	
		S-8	50/.4	-	-	-	Ref.	0.4	Gray SILT, little Sand, little Gravel, little Clay, ML (Moist, Very Compact)	
20									Test boring complete at 18.4 feet.	Freestanding water was not encountered during drilling or after completion of drilling.
25										
30										
35										
40										

DRILLER: C. Spizzirri
DRILL RIG: CME-850
METHOD OF INVESTIGATION: 3 1/4 inch augers, 2" Split Spoon Sampler (ASTMD1586)
JOB NUMBER: CE-17-014
CLASSIFIED BY: Geotechnical Engineer

Date: 6-20-17
STARTED: 6-2-2017
FINISHED: 6-5-2017

SJB SERVICES, INC.

SUBSURFACE LOG

HOLE NO. BB-17
SURF. ELEV. 988.4' (±)
G.W. DEPTH See Notes
SHEET 1 of 1

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
LOCATION: 46 South Street, Trumansburg, New York

DEPTH-FT.	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER 0-6	6-12	12-18	18-24	N	Rec (ft)	SOIL OR ROCK CLASSIFICATION	NOTES
		S-1	1	2	3	4	5	0.8	Brown CLAY, some SILT, trace sand, trace gravel, CL (Moist, Medium)	Driller noted approximately 0.8 feet of topsoil at the ground surface.
		S-2	7	11	7	6	18	1.1	Brown SILT, some Sand, little Gravel, ML (Moist, Firm)	
5		S-3	4	23	28	36	51	1.3	Brown SILT and SAND, little to some Gravel, SM (Moist, Very Compact)	S-3 to completion: Glacial Till
		S-4	59	50/.3	-	-	Ref.	0.6	Grades to "trace" cobble fragments	Ref. Spoon refusal.
		S-5	50/.4	-	-	-	Ref.	0.4		
10		S-6	50/.4	-	-	-	Ref.	0.4		Driller noted spoon bouncing at about 12.9 ft to 15 ft.
15		S-7	50/.3	-	-	-	Ref.	0.3	Becomes gray	
		S-8	50/.3	-	-	-	Ref.	0.3		
20									Test boring complete at 18.3 feet.	Freestanding water was not encountered during drilling or after completion of drilling.
25										
30										
35										
40										

DRILLER: C. Spizzirri
DRILL RIG: CME-850
METHOD OF INVESTIGATION: 3 1/4 inch augers, 2" Split Spoon Sampler (ASTMD1586)
JOB NUMBER: CE-17-014
CLASSIFIED BY: Geotechnical Engineer

Date: 6-20-17
STARTED: 6-14-2017
FINISHED: 6-14-2017

SJB SERVICES, INC.

SUBSURFACE LOG

HOLE NO. BB-18
SURF. ELEV. 990.8' (±)
G.W. DEPTH See Notes
SHEET 1 of 1

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
LOCATION: 46 South Street, Trumansburg, New York

DEPTH-FT.	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER 0-6	6-12	12-18	18-24	N	Rec (ft)	SOIL OR ROCK CLASSIFICATION	NOTES
		S-1	4	4	8	8	12	1.8	Brown SILT, little Clay, ML (Moist, Stiff)	Driller noted approximately 1 foot of topsoil at the ground surface.
		S-2	9	12	11	21	23	1.1	Brown SILT and SAND, trace f. gravel, ML (Wet, Firm)	
5		S-3	5	7	16	20	23	1.6	Contains sand "seam"	S-4 to completion: Glacial Till
		S-4	48	50/.3	-	-	Ref.	0.9	Brown SAND, trace gravel, trace silt, SM (Wet, Very Compact)	Driller notted possible boulder.
		S-5	23	49	50/.3	-	Ref.	1.0	Gray-brownish gray SILT, some Sand, some Gravel and/or Cobble fragments, SM (Moist, Very Compact)	Ref.: Spoon refusal.
10		S-6	30	50	-	-	Ref.	1.1	Gray SILT, little Sand, little Gravel, ML (Moist, Very Compact)	
15		S-7	50/.4	-	-	-	Ref.	0.1		
		S-8	50/.4	-	-	-	Ref.	0.1	Test boring complete at 18.4 feet.	Freestanding water was encountered at 3 feet during drilling and after completion of drilling. Water was at ground surface after a period of about 24 hours.
20										
25										
30										
35										
40										

DRILLER: C. B.
DRILL RIG: CME-850
METHOD OF INVESTIGATION: 3 1/4 inch augers, 2" Split Spoon Sampler (ASTMD1586)
JOB NUMBER: CE-17-014
CLASSIFIED BY: Geotechnical Engineer

Date: 6-20-17
STARTED: 6-14-2017
FINISHED: 6-14-2017

SJB SERVICES, INC.

SUBSURFACE LOG

HOLE NO. BB-19
SURF. ELEV. 992.8' (±)
G.W. DEPTH See Notes
SHEET 1 of 1

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
LOCATION: 46 South Street, Trumansburg, New York

DEPTH-FT.	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER 0-6	6-12	12-18	18-24	N	Rec (ft)	SOIL OR ROCK CLASSIFICATION	NOTES
		S-1	2	10	6	6	16	0.5	Brown SILT, little Roots, ML (Moist, Firm)	Driller noted approximately 0.7 feet of topsoil at the ground surface.
		S-2	8	10	22	31	32	0.8	Brown SILT, little to some Gravel and/or Cobble frags, little Sand, ML (Moist, Compact)	
5		S-3	6	11	22	24	33	0.9	Contains "and" GRAVEL	
		S-4	48	28	26	30	54	1.0	Brown SILT and SAND, little Gravel, ML (Moist, Very Compact)	
		S-5	46	50/.1	-	-	Ref.	0.5	Grades to "some" Sand	Ref.: Spoon refusal.
10		S-6	50/.1	-	-	-	Ref.	0.1		
15		S-7	48	50/.2	-	-	Ref.	0.7	Gray SILT and SAND, some Gravel or Cobble fragments SM (Moist, Very Compact)	
		S-8	50/.3	-	-	-	Ref.	0.1		
20									Test boring complete at 18.3 feet.	Freestanding water was not encountered during drilling or after completion of drilling.
25										
30										
35										
40										

DRILLER: C. B.
DRILL RIG: CME-850
METHOD OF INVESTIGATION: 3 1/4 inch augers, 2" Split Spoon Sampler (ASTMD1586)
JOB NUMBER: CE-17-014
CLASSIFIED BY: Geotechnical Engineer

Date: 6-26-17
STARTED: 6-8-2017
FINISHED: 6-8-2017

SJB SERVICES, INC.

SUBSURFACE LOG

HOLE NO. BB-20
SURF. ELEV. 994.3' (±)
G.W. DEPTH See Notes
SHEET 1 of 1

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
LOCATION: 46 South Street, Trumansburg, New York

DEPTH-FT.	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER 0-6	6-12	12-18	18-24	N	Rec (ft)	SOIL OR ROCK CLASSIFICATION	NOTES
		S-1	1	1	2	3	3	1.0	Brown SILT, some Clay, ML (Moist, Soft)	Driller noted approximately 0.6 feet of topsoil at the ground surface.
		S-2	4	4	3	4	7	1.1	Contains "little" embedded Sand and Gravel (Medium)	
5		S-3	2	5	9	16	14	1.1	Brown SILT and SAND, some Gravel, SM (Moist, Firm)	S-3 to completion: Glacial Till
		S-4	18	21	19	23	40	1.7	Brown SILT, ML (Moist, Compact)	
		S-5	11	22	24	28	46	1.8	Gray SILT, little embedded Sand, little embedded Gravel, ML (Moist, Compact)	
10		S-6	39	40	23	32	63	1.5	Grades to "and" SAND (Very Compact)	
15		S-7	17	21	23	21	44	1.3	"contains "trace" clay (Very Moist to Wet, Compact)	
		S-8	11	24	26	33	50	1.5	Contains "some" Sand, "some" Gravel	
20									Test boring complete at 20 feet.	Freestanding water was initially encountered at 14.6 feet. On morning of 6-9-17, depth to the groundwater was measured at 6.9 feet.
25										
30										
35										
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DRILLER: C. Spizzirri
DRILL RIG: CME-850
METHOD OF INVESTIGATION: 3 1/4 inch augers, 2" Split Spoon Sampler (ASTMD1586)
JOB NUMBER: CE-17-014
CLASSIFIED BY: Geotechnical Engineer

Date: 6-26-17
STARTED: 6-20-2017
FINISHED: 6-20-2017

SJB SERVICES, INC.

SUBSURFACE LOG

HOLE NO. IT-1
SURF. ELEV. 992.1' (±)
G.W. DEPTH See Notes
SHEET 1 of 1

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
LOCATION: 46 South Street, Trumansburg, New York

DEPTH-FT.	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER 0-6	6-12	12-18	18-24	N	Rec (ft)	SOIL OR ROCK CLASSIFICATION	NOTES
		S-1	WH	1	2	3	3	0.9	Brown SILT, little Clay, ML (Moist, Soft)	Driller noted approximately 0.7 feet of topsoil at the ground surface.
		S-2	4	6	6	7	12	1.4	Brown f. SAND, some Silt, SM (Very Moist to Wet, Firm)	
5		S-3	3	11	30	60	41	1.1	Brownish gray SILT, some Sand, some Gravel, SM (Moist, Compect)	S-3 to Completion: Glacial till
		S-4	50/.4	-	-	-	Ref.	2.0	(Very Moist, Very Comapct)	Ref.: Spoon refusal.
		S-5	50/.4	-	-	-	Ref.	1.1	Becomes gray, "trace" gravel	
10									Test boring complete at 8.4 feet.	Freestanding water was not encountered during drilling or after completion of drilling.
15										Drillers installed infiltration casing.
20										
25										
30										
35										
40										

DRILLER: C. B.
DRILL RIG: CME-850
METHOD OF INVESTIGATION: 3 1/4 inch augers, 2" Split Spoon Sampler (ASTMD1586)
JOB NUMBER: CE-17-014
CLASSIFIED BY: Geotechnical Engineer

Date: 6-26-17
STARTED: 6-20-2017
FINISHED: 6-20-2017

SJB SERVICES, INC.

SUBSURFACE LOG

HOLE NO. IT-2
SURF. ELEV. 991.3' (±)
G.W. DEPTH See Notes
SHEET 1 of 1

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
LOCATION: 46 South Street, Trumansburg, New York

DEPTH-FT.	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER 0-6	6-12	12-18	18-24	N	Rec (ft)	SOIL OR ROCK CLASSIFICATION	NOTES
		S-1	WH	1	2	4	3	1.2	Brown SILT, little Clay, trace sand, trace gravel, trace roots, ML (Moist, Soft)	Driller noted approximately 0.8 feet of topsoil at the ground surface.
		S-2	4	6	10	8	16	1.5	Brown SILT, little Clay, trace sand, ML (Moist, Stiff)	
5		S-3	4	8	12	14	20	1.7	Brown SILT, little Sand, little Gravel, SM (Moist, Firm)	S-3 to completion: Glacial Till
		S-4	24	23	33	46	56	1.5	(Very Compact)	
		S-5	48	50/.3	-	-	Ref.	1.1	Contains "some" c. Gravel and/or Cobble fragments	Ref.: Spoon refusal.
10									Test boring complete at 8.8 feet.	Freestanding water was not encountered during drilling or after completion of drilling.
15										Drillers installed infiltration casing.
20										
25										
30										
35										
40										

DRILLER: C. B.
DRILL RIG: CME-850
METHOD OF INVESTIGATION: 3 1/4 inch augers, 2" Split Spoon Sampler (ASTMD1586)
JOB NUMBER: CE-17-014
CLASSIFIED BY: Geotechnical Engineer

Date: 6-26-17
STARTED: 6-19-2017
FINISHED: 6-20-2017

SJB SERVICES, INC.

SUBSURFACE LOG

HOLE NO. IT-3
SURF. ELEV. 990.6' (±)
G.W. DEPTH See Notes
SHEET 1 of 1

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
LOCATION: 46 South Street, Trumansburg, New York

DEPTH-FT.	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	18/24	N	Rec (ft)	SOIL OR ROCK CLASSIFICATION	NOTES
		S-1	WH	WH	2	1	2	1.4	Brown SILT, some Clay, trace sand, ML (Moist, Very Soft)	Driller noted approximately 0.9 feet of topsoil at the ground surface.
		S-2	2	7	21	20	28	1.7	Contains sand "parting", "trace" cobble fragments. (Moist-Very Moist, Very Stiff)	S-2: wet sand parting.
5		S-3	6	14	50/.3	-	Ref.	0.8	Gray SILT, some Sand, some Gravel; and/or cobble fragments, SM (Moist, Very Compact)	Ref.: Spoon refusal.
		S-4	50/.2	-	-	-	Ref.	0.0	No recovery	
		S-5	17	23	29	33	52	1.3		
10									Test boring complete at 10 feet.	Freestanding water was not encountered during drilling or after completion of drilling.
15										Drillers installed infiltration casing.
20										
25										
30										
35										
40										

DRILLER: C. B.
DRILL RIG: CME-850
METHOD OF INVESTIGATION: 3 1/4 inch augers, 2" Split Spoon Sampler (ASTMD1586)
JOB NUMBER: CE-17-014
CLASSIFIED BY: Geotechnical Engineer

Date: 6-23-17
STARTED: 6-19-2017
FINISHED: 6-20-2017

SJB SERVICES, INC.

SUBSURFACE LOG

HOLE NO. IT-4
SURF. ELEV. 994.4' (±)
G.W. DEPTH See Notes
SHEET 1 of 1

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
LOCATION: 46 South Street, Trumansburg, New York

DEPTH-FT.	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER 0-6	6-12	12-18	18-24	N	Rec (ft)	SOIL OR ROCK CLASSIFICATION	NOTES
		S-1	2	2	4	4	6	1.0	Brown SILT, Some Clay, trace sand, trace gravel, ML (Moist, Medium)	Driller noted approximately 0.8 feet of topsoil at the ground surface.
		S-2	4	5	7	7	12	0.9	Brown SAND, little Silt, little Clay, trace gravel, SM-SC (Very Moist, Firm)	
5		S-3	2	9	24	29	33	1.0	Contains "little" Gravel, trace rock fragments (Compact)	
		S-4	18	17	20	20	37	1.3	"and" GRAVEL	
		S-5	18	21	20	28	41	1.6	Gray SILT, trace sand, trace gravel, ML (Moist, Compact)	
10									Test boring complete at 10 feet.	Freestanding water was encountered at about 10 feet after completion.
15										Drillers installed infiltration casing.
20										
25										
30										
35										
40										

DRILLER: C. B.
DRILL RIG: CME-850
METHOD OF INVESTIGATION: 3 1/4 inch augers, 2" Split Spoon Sampler (ASTMD1586)
JOB NUMBER: CE-17-014
CLASSIFIED BY: Geotechnical Engineer

Date: 6-23-17
STARTED: 6-20-2017
FINISHED: 6-21-2017

SJB SERVICES, INC.

SUBSURFACE LOG

HOLE NO. IT-5 / PB-7
SURF. ELEV. 978.9' ±
G.W. DEPTH See Notes
SHEET 1 of 1

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
LOCATION: 46 South Street, Trumansburg, New York

DEPTH-FT.	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER 0-6	6-12	12-18	18-24	N	Rec (ft)	SOIL OR ROCK CLASSIFICATION	NOTES
		S-1	1	2	2	4	4	0.8	Dark brown SILT, little Sand, trace gravel, ML (Moist, Very Loose)	Driller noted approximately 0.4 feet of topsoil at the ground surface.
		S-2	4	5	5	6	10	1.3	Brown SILT and SAND, little Clay, little Gravel, SM (Very Moist, Loose)	
5		S-3	5	6	7	12	13	1.5	(Firm)	
		S-4	17	13	17	23	30	2.0	Grades to "little' Sand	
		S-5	26	26	22	25	48	2.0	Becomes gray (Compact)	
10									Test boring complete at 10 feet.	Freestanding water was not encountered during drilling or after completion of drilling.
15										
20										
25										
30										
35										
40										

DRILLER: C. B.
DRILL RIG: CME-850
METHOD OF INVESTIGATION: 3 1/4 inch augers, 2" Split Spoon Sampler (ASTMD1586)
JOB NUMBER: CE-17-014
CLASSIFIED BY: Geotechnical Engineer

Date: 6-23-17
STARTED: 6-21-2017
FINISHED: 6-21-2017

SJB SERVICES, INC.

SUBSURFACE LOG

HOLE NO. PB-2
SURF. ELEV. 994.3' ±
G.W. DEPTH See Notes
SHEET 1 of 1

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
LOCATION: 46 South Street, Trumansburg, New York

DEPTH-FT.	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER 0-6	6-12	12-18	18-24	N	Rec (ft)	SOIL OR ROCK CLASSIFICATION	NOTES
		S-1	WH	1	1	2	2	1.4	Brown SILT, some Clay, some f. Sand ("seam"), ML (Moist-Very Moist, Very Soft)	Driller noted approximately 1.1 feet of topsoil at the ground surface.
		S-2	2	3	5	9	8	1.1	Brown SILT and SAND, little f. Gravel, trace clay, ML (Moist, Loose)	
5		S-3	9	16	21	21	37	2.0	Brown SILT, some Sand, some Gravel, SM (Moist, Compact)	S-3 to completion: Glacial till
		S-4	50/.2	-	-	-	Ref.	0.2	Contains "some" rock fragments (Very Compact)	Ref.: Spoon refusal.
		S-5	12	42	50/.4	-	Ref.	1.4		
10									Test boring complete at 9.4 feet.	Freestanding water was not encountered during drilling or after completion of drilling.
15										
20										
25										
30										
35										
40										

DRILLER: C. Brown
DRILL RIG: CME-850
METHOD OF INVESTIGATION: 3 1/4 inch augers, 2" Split Spoon Sampler (ASTMD1586)
JOB NUMBER: CE-17-014
CLASSIFIED BY: Geotechnical Engineer

Date: 6-23-17
STARTED: 6-9-2017
FINISHED: 6-9-2017

SJB SERVICES, INC.

SUBSURFACE LOG

HOLE NO. PB-3
SURF. ELEV. 992.3' ±
G.W. DEPTH See Notes
SHEET 1 of 1

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
LOCATION: 46 South Street, Trumansburg, New York

DEPTH-FT.	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER 0-6	6-12	12-18	18-24	N	Rec (ft)	SOIL OR ROCK CLASSIFICATION	NOTES
		S-1	1	2	5	5	7	1.8	Brown SILT, some Clay,some Sand, trace gravel, CL (Moist, Medium)	Driller noted approximately 0.9 feet of topsoil at the ground surface.
		S-2	3	5	5	9	10	1.6	Contains "little" Clay (stiff)	
5		S-3	12	19	30	50/.2	49	1.1	Brown SILT, trace sand, trace gravel, ML (Moist, Compact)	Ref.: Spoon refusal. S-3 to completion: Glacial Till.
		S-4	50/.4	-	-	-	Ref.	0.4	Contains "little" Sand (Very Compact)	
		S-5	38	50/.3	-	-	Ref.	1.0	Gray SILT, some Sand, some Gravel, SM (Moist, Very Compact)	
10									Test boring complete at 8.7 feet.	Freestanding water was not encountered during drilling or after completion of drilling.
15										
20										
25										
30										
35										
40										

DRILLER: C. B.
DRILL RIG: CME-850
METHOD OF INVESTIGATION: 3 1/4 inch augers, 2" Split Spoon Sampler (ASTMD1586)
JOB NUMBER: CE-17-014
CLASSIFIED BY: Geotechnical Engineer

Date: 6-23-17
STARTED: 6-12-2017
FINISHED: 6-12-2017

SJB SERVICES, INC.

SUBSURFACE LOG

HOLE NO. PB-4
SURF. ELEV. 996.4' ±
G.W. DEPTH See Notes
SHEET 1 of 1

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
LOCATION: 46 South Street, Trumansburg, New York

DEPTH-FT.	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER 0-6	6-12	12-18	18-24	N	Rec (ft)	SOIL OR ROCK CLASSIFICATION	NOTES
		S-1	3	6	6	7	12	1.1	Brown SILT, some Clay, trace sand, trace gravel, ML (Moist, Stiff)	Driller noted approximately 0.9 feet of topsoil at the ground surface.
		S-2	5	7	9	8	16	1.6	Brown SILT, some Clay, CL (Moist, Very Stiff)	
5		S-3	2	2	2	2	4	1.0	(Soft)	
		S-4	7	6	15	13	21	2.0	(Very Stiff)	
		S-5	26	28	47	30	75	2.0	Brown f.-m. SAND, little Silt, SM (Moist, Very Compact)	
10		S-6	17	21	16	29	37	1.0	Gray SILT, some Sand, little Gravel, SM (Moist, Compact)	S-6: silty clay seam.
									Test boring complete at 12 feet.	Freestanding water was not encountered during drilling or after completion of drilling.
15										
20										
25										
30										
35										
40										

DRILLER: C. B.
DRILL RIG: CME-850
METHOD OF INVESTIGATION: 3 1/4 inch augers, 2" Split Spoon Sampler (ASTMD1586)
JOB NUMBER: CE-17-014
CLASSIFIED BY: Geotechnical Engineer

Date: 6-23-17
STARTED: 6-12-2017
FINISHED: 6-12-2017

SJB SERVICES, INC.

SUBSURFACE LOG

HOLE NO. PB-5
SURF. ELEV. 998.6 ±
G.W. DEPTH See Notes
SHEET 1 of 1

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
LOCATION: 46 South Street, Trumansburg, New York

DEPTH-FT.	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER 0-6	6-12	12-18	18-24	N	Rec (ft)	SOIL OR ROCK CLASSIFICATION	NOTES
		S-1	3	3	5	6	8	1.8	Brown SILT, little Clay, trace sand, trace roots, ML (Moist, Loose)	Driller noted approximately 0.9 feet of topsoil at the ground surface.
		S-2	9	10	10	11	20	1.4	Brown SILT, little Clay, little Sand, little Gravel, trace rock fragments, ML (Moist, Firm)	
5		S-3	2	7	13	21	20	1.9	Grades to "some" Sand	Ref.: Spoon refusal.
		S-4	13	11	13	17	24	2.0		
		S-5	4	11	15	18	26	2.0		
10		S-6	7	17	19	21	36	2.0	(Compact)	
									Test boring complete at 12 feet.	Freestanding water was not encountered during drilling or after completion of drilling.
15										
20										
25										
30										
35										
40										

DRILLER: C. Brown
DRILL RIG: CME-850
METHOD OF INVESTIGATION: 3 1/4 inch augers, 2" Split Spoon Sampler (ASTMD1586)
JOB NUMBER: CE-17-014
CLASSIFIED BY: Geotechnical Engineer

Date: 6-23-17
STARTED: 6-12-2017
FINISHED: 6-12-2017

SJB SERVICES, INC.

SUBSURFACE LOG

HOLE NO. PB-6
SURF. ELEV. 988.2' ±
G.W. DEPTH See Notes
SHEET 1 of 1

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
LOCATION: 46 South Street, Trumansburg, New York

DEPTH-FT.	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER 0-6	6-12	12-18	18-24	N	Rec (ft)	SOIL OR ROCK CLASSIFICATION	NOTES
		S-1	1	1	1	1	2	1.2	Brown SILT, some Sand, some Clay, CL-ML (Moist, Very Soft)	Driller noted approximately 1.1 feet of topsoil at the ground surface.
		S-2	5	6	6	6	12	1.4	Brown SILT, some Sand, trace gravel, ML (Moist, Firm)	
5		S-3	9	10	20	21	30	1.1	Brown SILT and GRAVEL/COBBLE fragments, some sand, GP-GM (Moist, Firm)	Ref.: Spoon refusal.
		S-4	5	20	31	28	51	1.6	Grades to "little to some" Gravel (Moist, Very Compact)	
		S-5	35	28	39	47	67	1.5		
10									Test boring complete at 10 feet.	Freestanding water was not encountered during drilling or after completion of drilling.
15										
20										
25										
30										
35										
40										

DRILLER: C. B.
DRILL RIG: CME-850
METHOD OF INVESTIGATION: 3 1/4 inch augers, 2" Split Spoon Sampler (ASTMD1586)
JOB NUMBER: CE-17-014
CLASSIFIED BY: Geotechnical Engineer

Date: 6-23-17
STARTED: 6-12-2017
FINISHED: 6-12-2017

SJB SERVICES, INC.

SUBSURFACE LOG

HOLE NO. PB-8
SURF. ELEV. 991' (±)
G.W. DEPTH See Notes
SHEET 1 of 1

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
LOCATION: 46 South Street, Trumansburg, New York

DEPTH-FT.	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER 0-6	6-12	12-18	18-24	N	Rec (ft)	SOIL OR ROCK CLASSIFICATION	NOTES
		S-1	4	6	5	7	11	1.2	Brown SILT, some Clay, ML (Moist, Stiff)	Driller noted approximately 1 foot of topsoil at the ground surface.
		S-2	4	7	7	9	14	1.6	Brown f.-m. SAND and SILT, trace f. gravel, SM (Wet, Firm)	
5		S-3	18	12	21	22	33	0.0	No recovery (Compact)	
		S-4	6	23	50/.4	-	Ref.	1.0	Brown SILT, some Sand, little Gravel and/or rock fragments, ML (Moist, Very Compact)	Ref.: Spoon refusal.
		S-5	50/.1	-	-	-	Ref.	0.1	"trace" sand, "trace" gravel	
10									Test boring complete at 8.1 feet.	Freestanding water was initially encountered at 5.8 feet during drilling and at 5.3 feet after completion of drilling.
15										
20										
25										
30										
35										
40										

DRILLER: C. Brown
DRILL RIG: CME-850
METHOD OF INVESTIGATION: 3 1/4 inch augers, 2" Split Spoon Sampler (ASTMD1586)
JOB NUMBER: CE-17-014
CLASSIFIED BY: Geotechnical Engineer

Date: 6-26-17
STARTED: 6-21-2017
FINISHED: 6-21-2017

SJB SERVICES, INC.

SUBSURFACE LOG

HOLE NO. PB-9
SURF. ELEV. 991' ±
G.W. DEPTH See Notes
SHEET 1 of 1

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
LOCATION: 46 South Street, Trumansburg, New York

DEPTH-FT.	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER 0-6	6-12	12-18	18-24	N	Rec (ft)	SOIL OR ROCK CLASSIFICATION	NOTES
		S-1	WH	1	2	3	3	1.4	Brown SILT, trace sand, ML (Moist, Very Loose)	Driller noted approximately 0.9 feet of topsoil at the ground surface.
		S-2	4	4	5	11	9	1.3	Contains "some" f. Sand (Loose)	
5		S-3	14	16	18	21	34	1.8	Brown SILT, little to some Sand, little Gravel, ML (Moist, Compact)	Ref.: Spoon refusal.
		S-4	39	50/.3	-	-	Ref.	0.8	"trace" cobble frags. (Very Compact)	
		S-5	44	50/.2	-	-	Ref.	0.7		
10									Test boring complete at 8.7 feet.	Freestanding water was not encountered during drilling or after completion of drilling.
15										
20										
25										
30										
35										
40										

DRILLER: C. B.
DRILL RIG: CME-850
METHOD OF INVESTIGATION: 3 1/4 inch augers, 2" Split Spoon Sampler (ASTMD1586)
JOB NUMBER: CE-17-014
CLASSIFIED BY: Geotechnical Engineer

Date: 6-26-17
STARTED: 6-16-2017
FINISHED: 6-16-2017

SJB SERVICES, INC.

SUBSURFACE LOG

HOLE NO. PB-10
SURF. ELEV. 993.7' ±
G.W. DEPTH See Notes
SHEET 1 of 1

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
LOCATION: 46 South Street, Trumansburg, New York

DEPTH-FT.	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER 0-6	6-12	12-18	18-24	N	Rec (ft)	SOIL OR ROCK CLASSIFICATION	NOTES
		S-1	3	6	6	7	12	1.8	Brown SILT, little Clay, ML (Moist, Stiff)	Driller noted approximately 1 foot of topsoil at the ground surface.
		S-2	6	9	10	9	19	1.1	Brown f. SAND and SILT, ML (Wet, Firm)	
5		S-3	3	3	26	46	29	1.2	Grades to gray silt and sand with gravel	Ref.: Spoon refusal.
		S-4	7	29	46	48	75	2.0	Gray SILT and SAND, some Gravel, trace clay, SM (Moist, Very Compact)	S-4: Sand parting
		S-5	32	46	50/.4	-	Ref.	1.1	"some" Sand	
10									Test boring complete at 9.4 feet.	Freestanding water was not encountered during drilling or after completion of drilling. On morning of 6-19-17, depth to groundwater was measured at 2.7 feet.
15										
20										
25										
30										
35										
40										

DRILLER: C. B.
DRILL RIG: CME-850
METHOD OF INVESTIGATION: 3 1/4 inch augers, 2" Split Spoon Sampler (ASTMD1586)
JOB NUMBER: CE-17-014
CLASSIFIED BY: Geotechnical Engineer

GENERAL INFORMATION & 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 borings as determined through visual identification by technicians in the laboratory. It is cautioned that the materials removed from 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 the sampled intervals. The data presented on the Subsurface Logs together with the recovered samples provide a 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 recovered samples must be performed by qualified professionals. The following information defines some of the procedures and terms used on the Subsurface Logs to describe the conditions encountered, consistent with the numbered identifiers shown on the Key opposite this page.

1. The figures in the Depth column define the scale of the Subsurface Log.

2. The Samples column shows, graphically, the depth range from which a sample was recovered. See Table I for descriptions of the symbols used to represent the various types of samples.

3. The Sample No. is used for identification on sample containers and/or Laboratory Test Reports.

4. Blows on Sampler - shows the results of the "Penetration Test", recording the number of blows required to drive a split spoon sampler into the soil. The number of blows required for each six inches is recorded. The first 6 inches of penetration is considered a seating drive. The number of blows required for the second and third 6 inches of penetration is termed the penetration resistance, N. The outside diameter of the sampler, hammer weight and length of drop are noted at the bottom of the Subsurface Log.

5. Blows on Casing - Shows the number of blows required to advance the casing a distance of 12 inches. The casing size, hammer weight, and length of drop are noted at the bottom of the Subsurface Log. If the casing is advanced by means other than driving, the method of advancement will be indicated in the Notes column or under the Method of Investigation at the bottom of the Subsurface Log. Alternatively, sample recovery may be shown in this column, or other data consistent with the column heading.

6. All recovered soil samples are reviewed in the laboratory by an engineering technician, geologist or geotechnical engineer, unless noted otherwise. Visual descriptions are made on the basis of a combination of the driller's field descriptions and noted observations together with the sample as received in the laboratory. The method of visual classification is based primarily on the Unified Soil Classification System (ASTM D 2487) with regard to the particle size and plasticity (See Table No. II), and the Unified Soil Classification System group symbols for the soil types are sometimes included with the soil classification. Additionally, the relative portion, by weight, of two 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 479, June 1970. (See Table No. III). Description of the relative soil density or consistency is based upon the penetration records as defined in Table No. IV. The description of the soil moisture is based upon the relative wetness of the soil as recovered and is described as dry, moist, wet and saturated. Water introduced into the boring either naturally or during drilling may have affected the moisture condition of the recovered sample. Special terms are used as required to describe soil deposition in greater detail; several such terms are listed in Table V. When sampling gravelly soils with a standard two inch diameter split spoon, the true percentage of gravel is often not recovered due to the relatively small sampler diameter. The presence of boulders and large gravel is sometimes, but not necessarily, detected by an evaluation of the casing and sampler blows or through the "action" of the drill rig as reported by the driller.

7. Rock description is based on review of the recovered rock core and the driller's notes. Frequently used rock classification terms are included in Table VI.

8. The stratification lines represent the approximate boundary between soil types and the transition may be gradual. Solid stratification lines delineate apparent changes in soil type, based upon review of recovered soil samples and the driller's notes. Dashed lines convey a lesser degree of certainty with respect to either a change in soil type or where such change may occur.

9. Miscellaneous observations and procedures noted by the driller are shown in this column, 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 any drill water used to advance the boring may have influenced the observations. The ground water level will fluctuate seasonally, typically. One or more perched or trapped water levels may exist in the ground seasonally. All the available readings should be evaluated. If definite conclusions cannot be made, it is often prudent to examine the conditions more thoroughly through test pit excavations or groundwater observation wells.

10. The length of 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 length of pieces of NX core exceeding 4 inches divided by the core run. The size core barrel used is also noted in the Method of Investigation at the bottom of the Subsurface Log.

DATE		SJB SERVICES, INC. SUBSURFACE LOG	PROJ. No.	AE-09-099
STARTED	7/29/09		HOLE No.	B-1
FINISHED	7/30/09		SURF. ELEV.	325.6
SHEET 1 OF 1			G.W. DEPTH	see notes

PROJECT _____ LOCATION _____

DEPTH (ft)	SAMPLES	SAMPLE No.	BLOWS ON SAMPLER 0/6	6/12	12/18	18/24	N	BLOWS ON CASING C	SOIL OR ROCK CLASSIFICATION	NOTES
0		1	3	3	4	8	7	10	3" TOPSOIL	Groundwater at 10' upon completion, and 5' 24 hrs. after completion
								15	Brown SILT, some Sand, trace clay, ML (Moist-Loose)	
								50/.5		
5									Gray SHALE, medium hard, weathered, thin bedded, some fractures	Run#1, 2.5'-5.0' 95% Recovery 50% RQD

1 2 3 4 5 6 7 (numbered features explained on reverse) 8 9 10

TABLE I

- Split Spoon Sample
- Shelby Tube Sample
- Geoprobe Macro-Core
- Auger or Test Pit Sample
- Rock Core

TABLE II

Identification of soil type is made on basis of an estimate of particle sizes, and in the case of fine grained soils also on basis of plasticity.

Soil Type	Soil Particle Size	
Boulder	>12"	Coarse Grained (Granular)
Cobble	3" - 12"	
Gravel - Coarse	3" - 3/4"	
- Fine	3/4" - #4	
Sand - Coarse	#4 - #10	
- Medium	#10 - #40	
- Fine	#40 - #200	
Silt - Non Plastic (Granular)	<#200	Cohesive
Clay - Plastic (Cohesive)		

TABLE III

The following terms are used in classifying soils consisting of mixtures of two or more soil types. The estimate is based on weight of total sample.

Term	Percent of Total Sample
"and"	35 - 50
"some"	20 - 35
"little"	10 - 20
"trace"	less than 10

(When sampling gravelly soils with a standard split spoon, the true percentage of gravel is often not recovered due to the relatively small sampler diameter.)

TABLE IV

The relative compactness or consistency is described in accordance with the following terms:

Granular Soils		Cohesive Soils	
Term	Blows per Foot, N	Term	Blows per Foot, N
Loose	<11	Very Soft	<3
Firm	11 - 30	Soft	3 - 5
Compact	31 - 50	Medium	6 - 15
Very Compact	>50	Stiff	16 - 25
		Hard	>25

(Large particles in the soils will often significantly influence the blows per foot recorded during the penetration test)

TABLE V

Varved	Horizontal uniform layers or seams of soil(s).
Layer	Soil deposit more than 6" thick.
Seam	Soil deposit less than 6" thick.
Parting	Soil deposit less than 1/8" thick.
Laminated	Irregular, horizontal and angled seams and partings of soil(s).

TABLE VI

Rock Classification Term		Meaning
Hardness	- Soft	Scratched by fingernail
	- Medium Hard	Scratched easily by penknife
	- Hard	Scratched with difficulty by penknife
	- Very Hard	Cannot be scratched by penknife
Weathering	- Very Weathered	Judged from the relative amounts of disintegration, iron staining, core recovery, clay seams, etc.
	- Weathered	
	- Sound	

Rock Classification Term		Meaning	
Bedding	- Laminated	(<1")	Natural breaks in Rock Layers
	- Thin Bedded	(1" - 4")	
	- Bedded	(4" - 12")	
	- Thick Bedded	(12" - 36")	
	- Massive	(>36")	

(Fracturing refers to natural breaks in the rock oriented at some angle to the rock layers)

APPENDIX B

Laboratory Testing Results

July 20, 2017
Project No.: CE-17-014

TABLE 1

SUMMARY OF LABORATORY TESTS

PROPOSED HOUSING & SITE DEVELOPMENT
SOUTH STREET
TRUMANSBURG, NEW YORK

Test Boring Number	Sample Number	Sample Depth	Moisture Content (%)	Grain Size Distribution			Atterberg Limits			Soil Description	USCS Group Soil
				Gravel (%)	Sand (%)	Silt & Clay (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index		
BB-1	S-3	4'-6'	8.5	19.1	32.4	48.5				silty sand with gravel	SM
BB-3	S-4	6'-8'	9.6	21.3	33.2	45.5				silty sand with gravel	SM
BB-4	S-4	6'-8'	11.6	14.1	28.6	57.3	24	17	7	sandy silty clay	CL-ML
BB-5	S-2	2'-4'	12.5	20.3	28.2	51.5				sandy silt with gravel	ML
BB-6	S-6	10'-12'	11.4	15.8	25.6	58.6				sandy silt with gravel	ML
BB-7	S-3	4'-6'	16.6	0.3	62.0	37.7				silty sand	SM
BB-8	S-2	2'-4'	16.1	13.8	38.7	47.5				silty sand	SM
BB-10	S-4	6'-8'	10.8	3.3	21.9	74.8				silt with sand	ML
BB-11	S-5	8'-10'	5.5	22.4	32.6	45.0				silty sand with gravel	SM
BB-12	S-2	2'-4'	13.4	34.9	25.9	39.2				silty gravel with sand	GM
BB-13	S-3	4'-6'	21.0	4.2	14.7	81.1	36	24	12	lean clay with sand	CL
BB-14	S-2	2'-4'	22.8	0.6	34.0	65.4				sandy silt	ML
BB-15	S-2	2'-4'	17.3	5.2	32.6	62.2				sandy silt	ML
BB-15	S-4	6'-8'	17.5	8.3	5.8	85.9				silt	ML
BB-16	S-5	8'-10'	9.2	16.4	36.4	47.2				silty sand with gravel	SM
BB-17	S-3	4'-6'	10.1	20.4	46.1	33.5				silty sand with gravel	SM
BB-18	S-2	2'-4'	24.1	1.8	36.6	61.6				sandy silt	ML
BB-20	S-6	10'-12'	7.3	12.8	35.6	51.6				sandy silt	ML
PB-2	S-2	2'-4'	11	12.4	36.3	51.3				sandy silt	ML
PB-3	S-1	0'-2'	17.3	7.9	25.8	66.3	32	22	10	sandy lean clay	CL
PB-4	S-2	2'-4'	19.2	1.8	7.1	91.1	28	20	8	lean clay	CL
PB-5	S-3	4'-6'	11.2	12.8	33.2	54				sandy silt	ML
PB-6	S-1	0'-2'	22.7	3.6	30.1	66.3	28	21	7	sandy silty clay	CL-ML
PB-7	S-2	2'-4'	17.7	10.9	40.9	48.2				silty sand	SM
PB-7	S-4	6'-8'	9.7	8.1	41.6	50.3				sandy silt	ML
PB-8	S-2	2'-4'	23.1	1.4	50.8	47.8				silty sand	SM
PB-9	S-2	2'-4'	24.1	0.0	22.2	77.8				silt with sand	ML
PB-10	S-2	2'-4'	23.3	0	51.1	48.9				silty sand	SM

Empire Geo-Services, Inc.
60 Miller Street
Cortland, New York 13045

Contract Drilling and Testing

SJB SERVICES, INC.

60 Miller Street, Cortland, NY 13045

PROJECT: Proposed Housings & Site Development

Project Location: South Ave. Trumansburg, New York

EGS Project No.: CE-17-014

CLIENT: Ithaca Neighborhood Housing Services, INC.

Moisture Content (Test Borings)

HOLE NUMBER	BB-1	BB-3	BB-4	BB-5	BB-6	BB-7	BB-8
SAMPLE NUMBER	S-3	S-4	S-4	S-2	S-6	S-3	S-2
DEPTH (feet)	4'-6'	6'-8'	6'-8'	2'-4'	10'-12'	4'-6'	2'-4'
W_t+TARE (grams)	376.8	367.8	418.9	422.2	352.6	434.0	471.3
W_s+TARE (grams)	355.5	344.0	386.9	387.5	327.7	388.3	421.5
W_w (grams)	21.3	23.8	32.0	34.7	24.9	45.7	49.8
TARE (grams)	105.0	95.4	111.1	108.9	110.0	112.6	112.6
W_s (grams)	250.5	248.6	275.8	278.6	217.7	275.7	308.9
% Moisture	8.5%	9.6%	11.6%	12.5%	11.4%	16.6%	16.1%

Moisture Content (Test Borings)

HOLE NUMBER	BB-10	BB-11	BB-12	BB-13	BB-14	BB-15	BB-15
SAMPLE NUMBER	S-4	S-5	S-2	S-3	S-2	S-2	S-4
DEPTH (feet)	6'-8'	8'-10'	2'-4'	4'-6'	2'-4'	2'-4'	6'-8'
W_t+TARE (grams)	435.8	443.7	389.2	335.6	388.2	371.1	367.4
W_s+TARE (grams)	404.2	426.1	356.7	296.0	336.5	330.8	329.3
W_w (grams)	31.6	17.6	32.5	39.6	51.7	40.3	38.1
TARE (grams)	112.6	108.2	113.4	107.6	109.9	97.7	111.9
W_s (grams)	291.6	317.9	243.3	188.4	226.6	233.1	217.4
% Moisture	10.8%	5.5%	13.4%	21.0%	22.8%	17.3%	17.5%

Technician: P.A. , C. H.

Date: 6/27/2017 through 6/29/2017

Contract Drilling
and Testing

SJB SERVICES, INC.

60 Miller Street, Cortland, NY 13045

PROJECT: Proposed Housings & Site Development
Project Location: South Ave. Trumansburg, New York
EGS Project No.: CE-17-014
CLIENT: Ithaca Neighborhood Housing Services, INC.

Moisture Content (Test Borings)

HOLE NUMBER	BB-16	BB-17	BB-18	BB-20	PB-2	PB-3	BB-4
SAMPLE NUMBER	S-5	S-3	S-2	S-6	S-2	S-1	S-2
DEPTH (feet)	8'-10'	4'-6'	2'-4'	10'-12'	2'-4'	0'-2'	2'-4'
W_t+TARE (grams)	359.7	410.1	425.4	398.6	389.7	399.3	375.5
W_s+TARE (grams)	338.8	382.6	364.2	379.2	362.1	356.9	332.1
W_w (grams)	20.9	27.5	61.2	19.4	27.6	42.4	43.4
TARE (grams)	111.2	110.1	110.4	112.6	111.9	111.8	106.5
W_s (grams)	227.6	272.5	253.8	266.6	250.2	245.1	225.6
% Moisture	9.2%	10.1%	24.1%	7.3%	11.0%	17.3%	19.2%

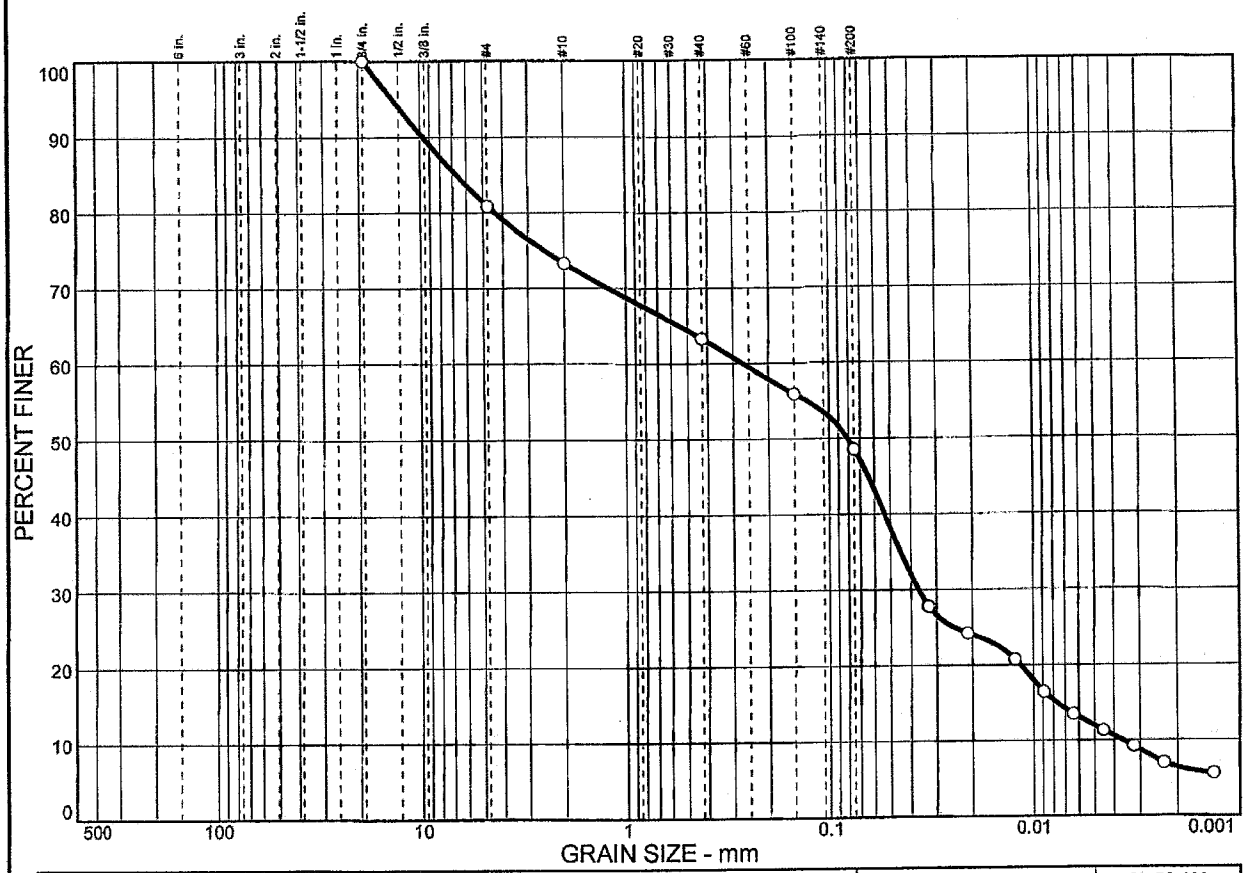
Moisture Content (Test Borings)

HOLE NUMBER	PB-5	PB-6	PB-7	PB-7	PB-8	PB-9	PB-10
SAMPLE NUMBER	S-3	S-1	S-2	S-4	S-2	S-2	S-2
DEPTH (feet)	4'-6'	0'-2'	2'-4'	6'-8'	2'-4'	2'-4'	2'-4'
W_t+TARE (grams)	355.0	347.2	331.6	375.8	379.8	400.9	382.9
W_s+TARE (grams)	330.0	303.0	296.4	351.1	329.0	344.1	331.8
W_w (grams)	25.0	44.2	35.2	24.7	50.8	56.8	51.1
TARE (grams)	107.0	108.3	97.7	97.7	108.8	108.9	112.4
W_s (grams)	223.0	194.7	198.7	253.4	220.2	235.2	219.4
% Moisture	11.2%	22.7%	17.7%	9.7%	23.1%	24.1%	23.3%

Technician: P.A. , C. H.

Date: 6/27/2017 through 6/29/2017

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	19.1	32.4	36.6	11.9

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4 in.	100.0		
#4	80.9		
#10	73.3		
#40	63.3		
#100	55.9		
#200	48.5		

* (no specification provided)

Soil Description

Silty sand with gravel

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 6.71 D_{60}= 0.269 D_{50}= 0.0813
D_{30}= 0.0368 D_{15}= 0.0077 D_{10}= 0.0037
C_u= 73.59 C_c= 1.37

Classification

USCS= SM AASHTO=

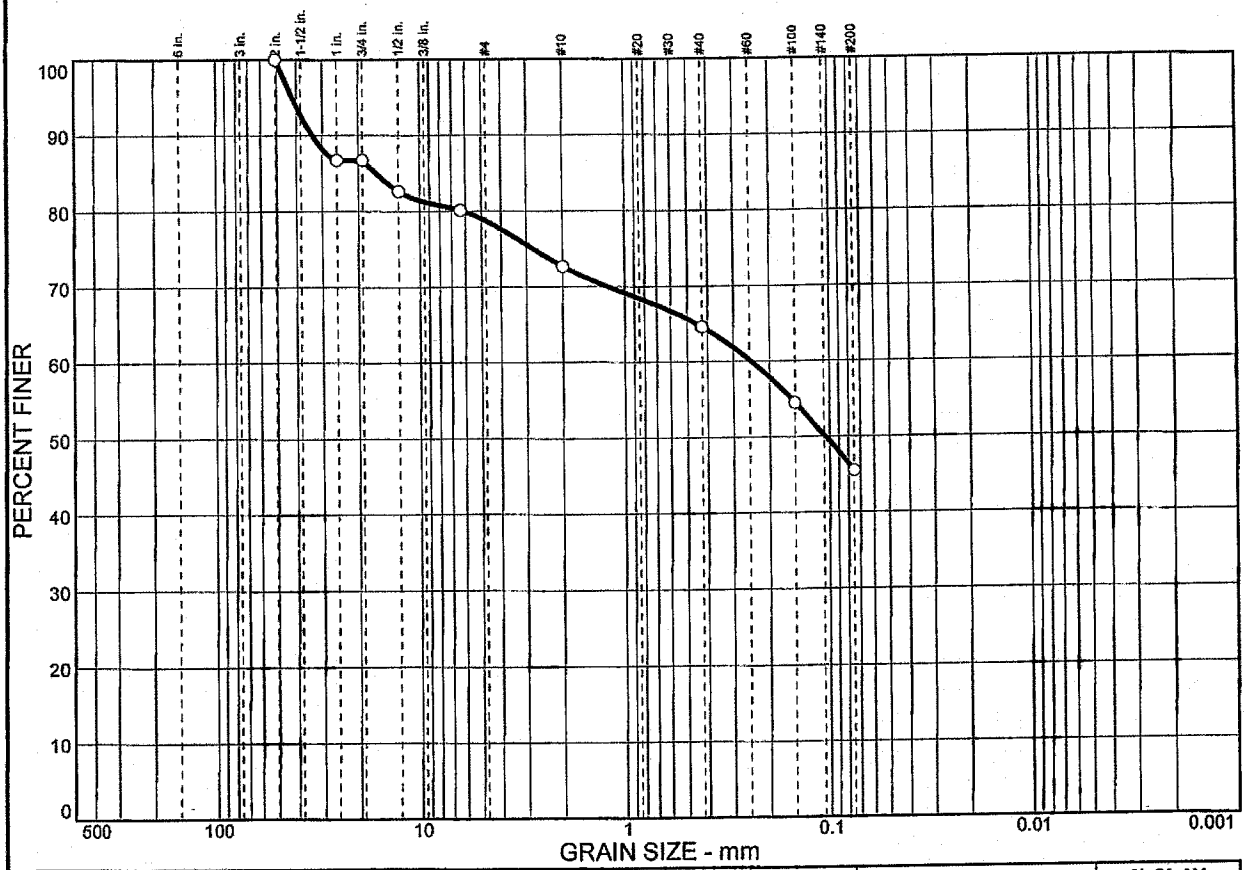
Remarks

Sample No.: 363 **Source of Sample:** **Date:** 7-5-17
Location: BB-1,S-3 **Elev./Depth:** 4'-6'

SJB SERVICES, INC.

Client: Ithaca Neighborhood Housing Services, Inc.
Project: Proposed Housing and Site Development
Project No: CE-17-014 **Plate** 363

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	21.3	33.2	45.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2 in.	100.0		
1 in.	86.7		
3/4 in.	86.7		
1/2 in.	82.6		
1/4 in.	80.1		
#10	72.7		
#40	64.6		
#100	54.5		
#200	45.5		

* (no specification provided)

Soil Description

Silty sand with gravel

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 16.4 D_{60}= 0.247 D_{50}= 0.105
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= SM AASHTO=

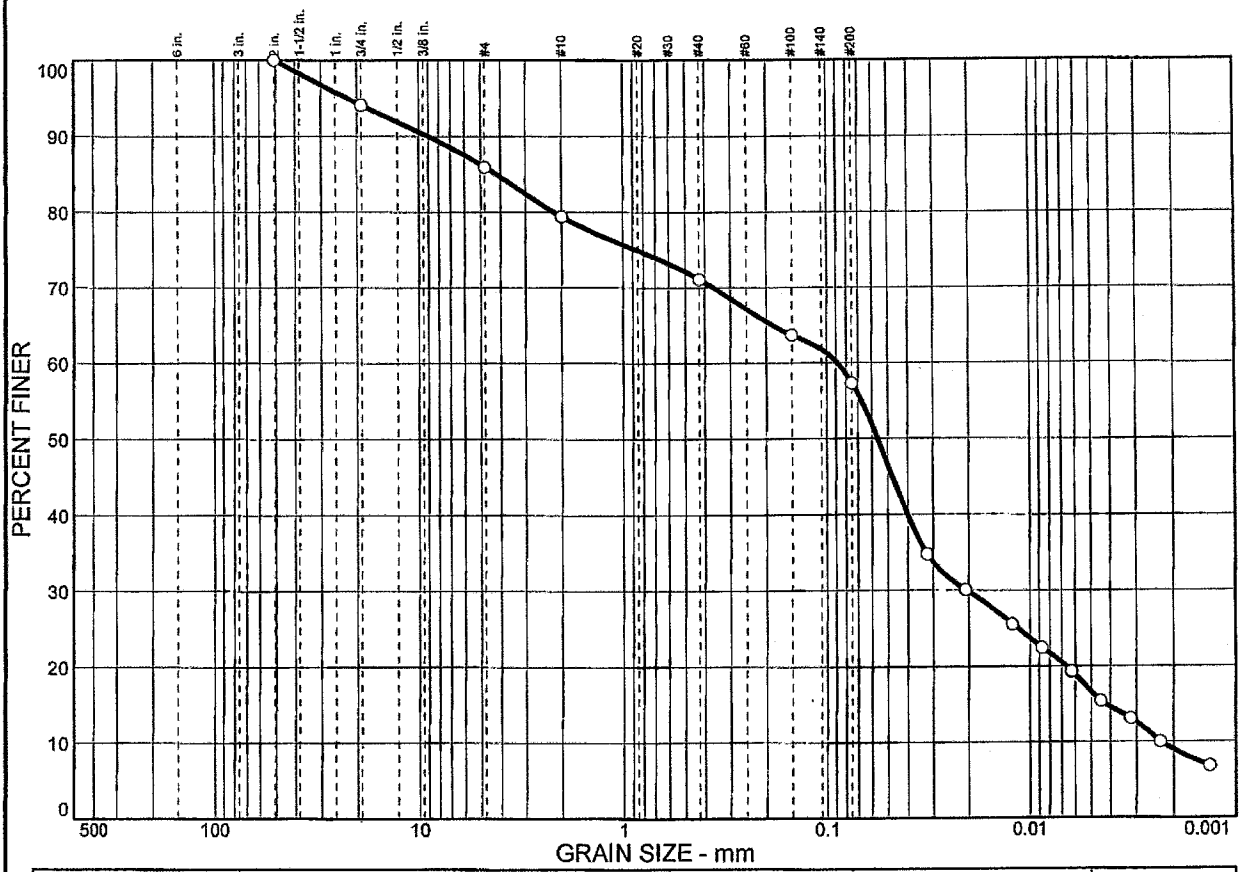
Remarks

Sample No.: 364 **Source of Sample:** **Date:** 7-3-17
Location: BB-3,S-4 **Elev./Depth:** 6'-8'

SJB SERVICES, INC.

Client: Ithaca Neighborhood Housing Services, Inc.
Project: Proposed Housing and Site Development
Project No: CE-17-014 **Plate** 364

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	14.1	28.6	40.7	16.6

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2 in.	100.0		
3/4 in.	94.1		
#4	85.9		
#10	79.4		
#40	71.1		
#100	63.7		
#200	57.3		

* (no specification provided)

Soil Description

Sandy silty clay

Atterberg Limits

PL= 17 LL= 24 PI= 7

Coefficients

D_{85}= 4.21 D_{60}= 0.0886 D_{50}= 0.0563
D_{30}= 0.0205 D_{15}= 0.0043 D_{10}= 0.0023
C_u= 38.81 C_c= 2.07

Classification

USCS= CL-ML AASHTO=

Remarks

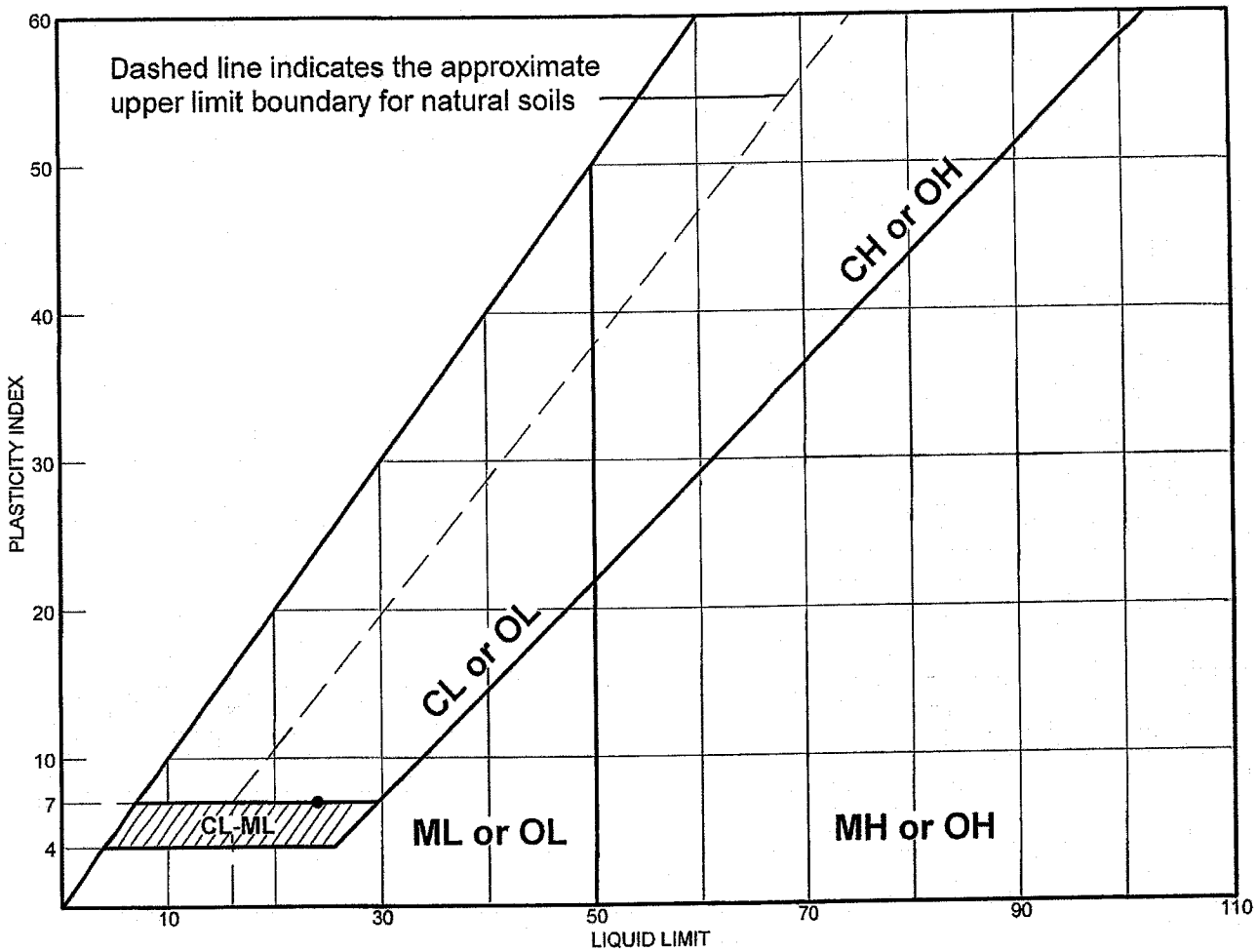
Sample No.: 366 **Source of Sample:** **Date:** 7-5-17
Location: BB-4,S-4 **Elev./Depth:** 6'-8'

SJB SERVICES, INC.

Client: Ithaca Neighborhood Housing Services, Inc.
Project: Proposed Housing and Site Development

Project No: CE-17-014 **Plate** 366

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	Sandy silty clay	24	17	7	71.1	57.3	CL-ML

Project No. CE-17-014 **Client:** Ithaca Neighborhood Housing Services, Inc.

Project: Proposed Housing and Site Development

● **Location:** BB-4,S-4

Remarks:

● Date Tested:7-6-17

LIQUID AND PLASTIC LIMITS TEST REPORT

SJB SERVICES, INC.

Plate 366

Particle Size Distribution Report

% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	20.3	28.2	38.5	13.0

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2 in.	100.0		
3/4 in.	85.9		
#4	79.7		
#10	74.4		
#40	65.9		
#100	58.5		
#200	51.5		

* (no specification provided)

Soil Description

Sandy silt with gravel

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 17.2 D_{60}= 0.193 D_{50}= 0.0706
D_{30}= 0.0363 D_{15}= 0.0062 D_{10}= 0.0032
C_u= 60.87 C_c= 2.16

Classification

USCS= ML AASHTO=

Remarks

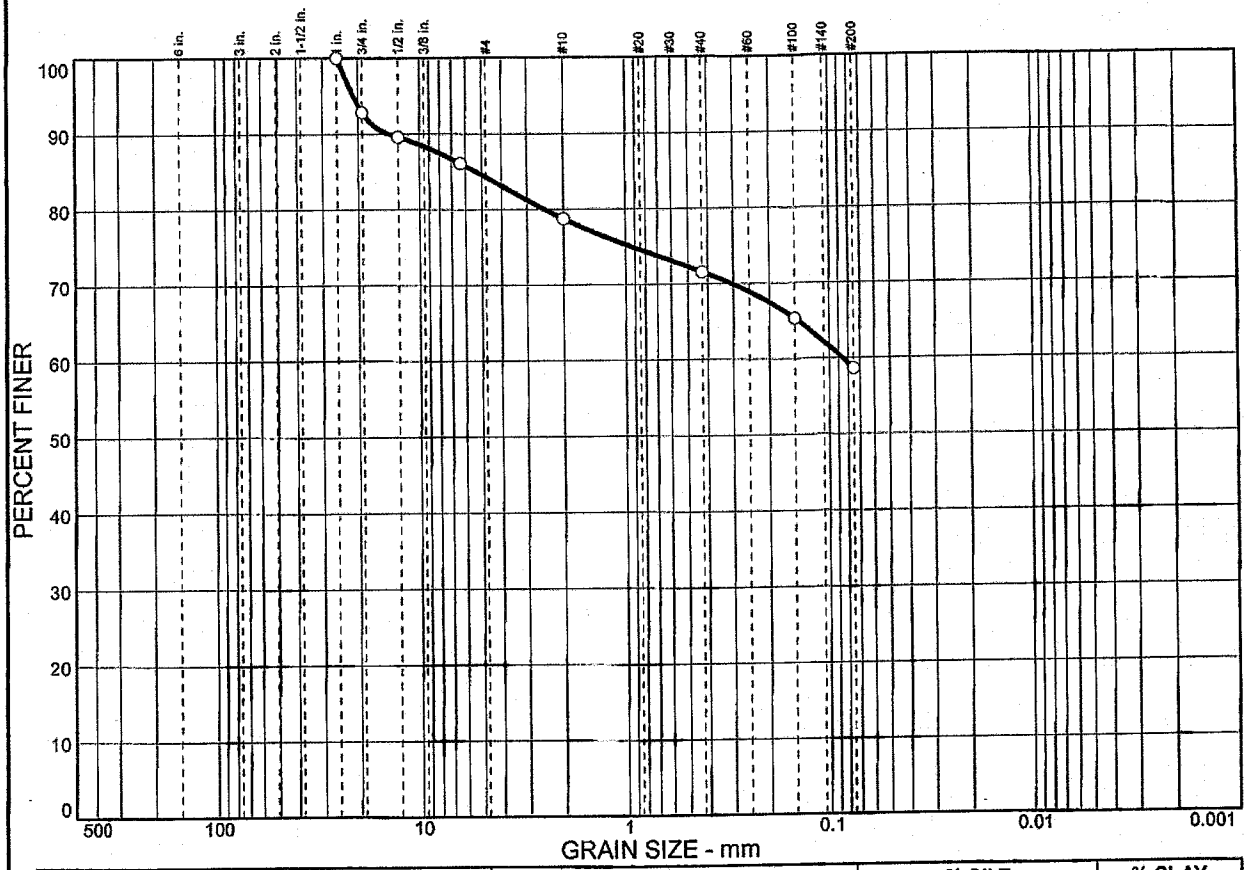
Sample No.: 367 **Source of Sample:** **Date:** 7-5-17
Location: BB-5,S-2 **Elev./Depth:** 2'-4'

SJB SERVICES, INC.

Client: Ithaca Neighborhood Housing Services, Inc.
Project: Proposed Housing and Site Development

Project No: CE-17-014 **Plate** 367

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	15.8	25.6	58.6	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1 in.	100.0		
3/4 in.	92.8		
1/2 in.	89.6		
1/4 in.	86.1		
#10	78.7		
#40	71.6		
#100	65.3		
#200	58.6		

* (no specification provided)

Soil Description

Sandy silt with gravel

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 5.34 D_{60}= 0.0859 D_{50}=
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= ML AASHTO=

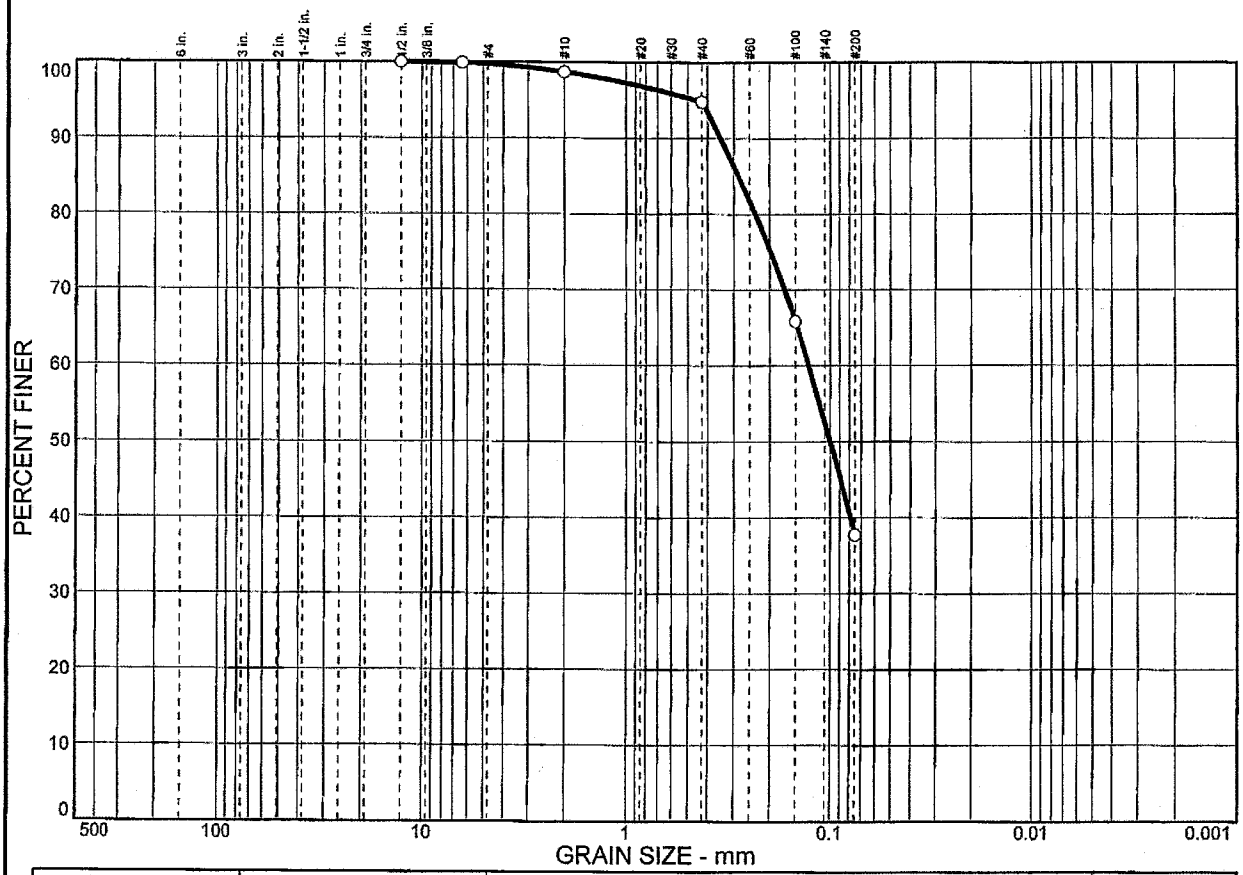
Remarks

Sample No.: 368 **Source of Sample:** **Date:** 7-3-17
Location: BB-6,S-6 **Elev./Depth:** 10'-12'

SJB SERVICES, INC.

Client: Ithaca Neighborhood Housing Services, Inc.
Project: Proposed Housing and Site Development
Project No: CE-17-014 **Plate** 368

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.3	62.0	37.7	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1/2 in.	100.0		
1/4 in.	99.9		
#10	98.7		
#40	94.8		
#100	65.8		
#200	37.7		

* (no specification provided)

Soil Description

Silty sand

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 0.285 D_{60}= 0.128 D_{50}= 0.100
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= SM AASHTO=

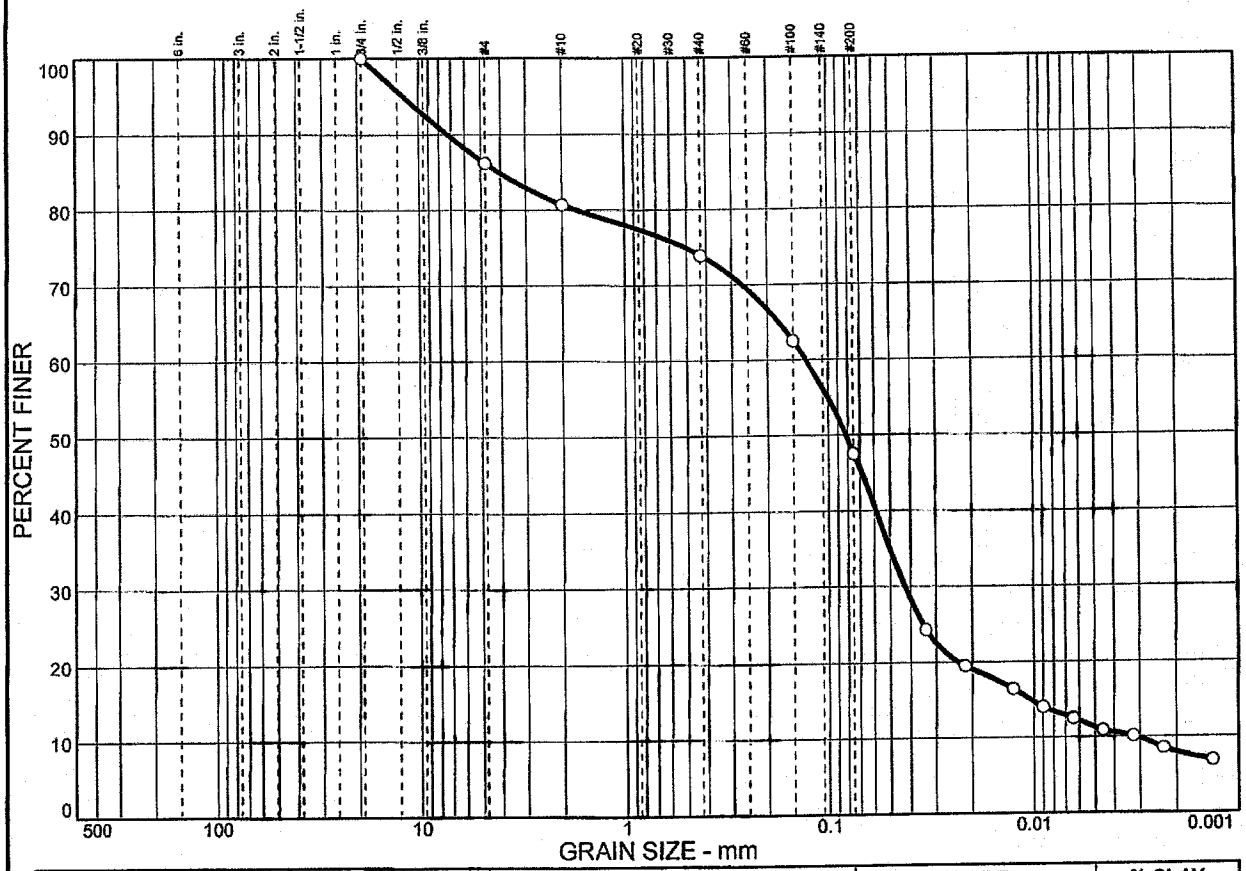
Remarks

Sample No.: 369 **Source of Sample:** **Date:** 7-3-17
Location: BB-7,S-3 **Elev./Depth:** 4'-6'

SJB SERVICES, INC.

Client: Ithaca Neighborhood Housing Services, Inc.
Project: Proposed Housing and Site Development
Project No: CE-17-014 **Plate** 369

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	13.8	38.7	36.2	11.3

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4 in.	100.0		
#4	86.2		
#10	80.7		
#40	73.9		
#100	62.5		
#200	47.5		

* (no specification provided)

Soil Description

Silty sand

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 4.07 D_{60}= 0.129 D_{50}= 0.0821
D_{30}= 0.0426 D_{15}= 0.0105 D_{10}= 0.0031
C_u= 41.23 C_c= 4.47

Classification

USCS= SM AASHTO=

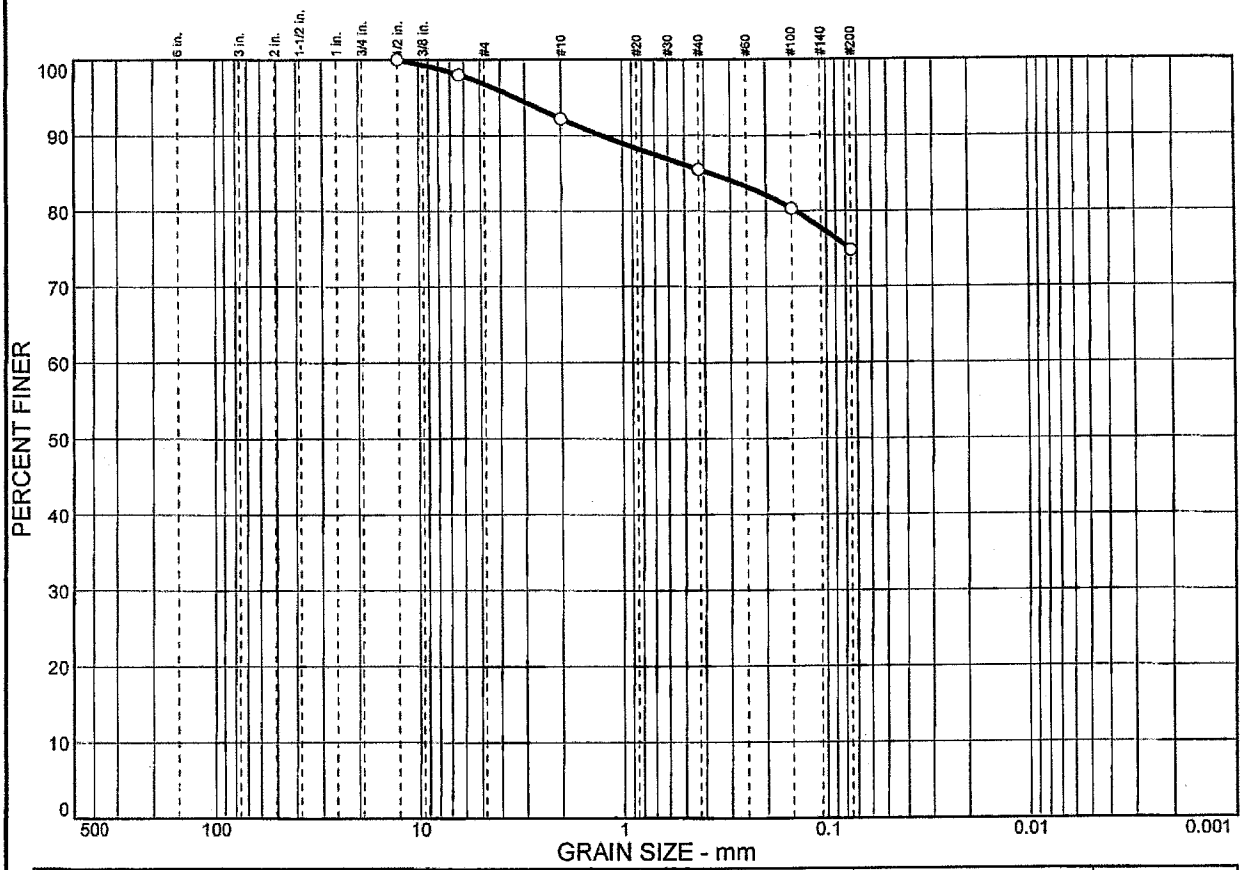
Remarks

Sample No.: 370 **Source of Sample:** **Date:** 7-5-17
Location: BB-8,S-2 **Elev./Depth:** 2'-4'

SJB SERVICES, INC.

Client: Ithaca Neighborhood Housing Services, Inc.
Project: Proposed Housing and Site Development
Project No: CE-17-014 **Plate** 370

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	3.3	21.9	74.8	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1/2 in.	100.0		
1/4 in.	98.0		
#10	92.2		
#40	85.5		
#100	80.3		
#200	74.8		

* (no specification provided)

Soil Description

Silt with sand

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 0.376 D_{60}= D_{50}=
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= ML AASHTO=

Remarks

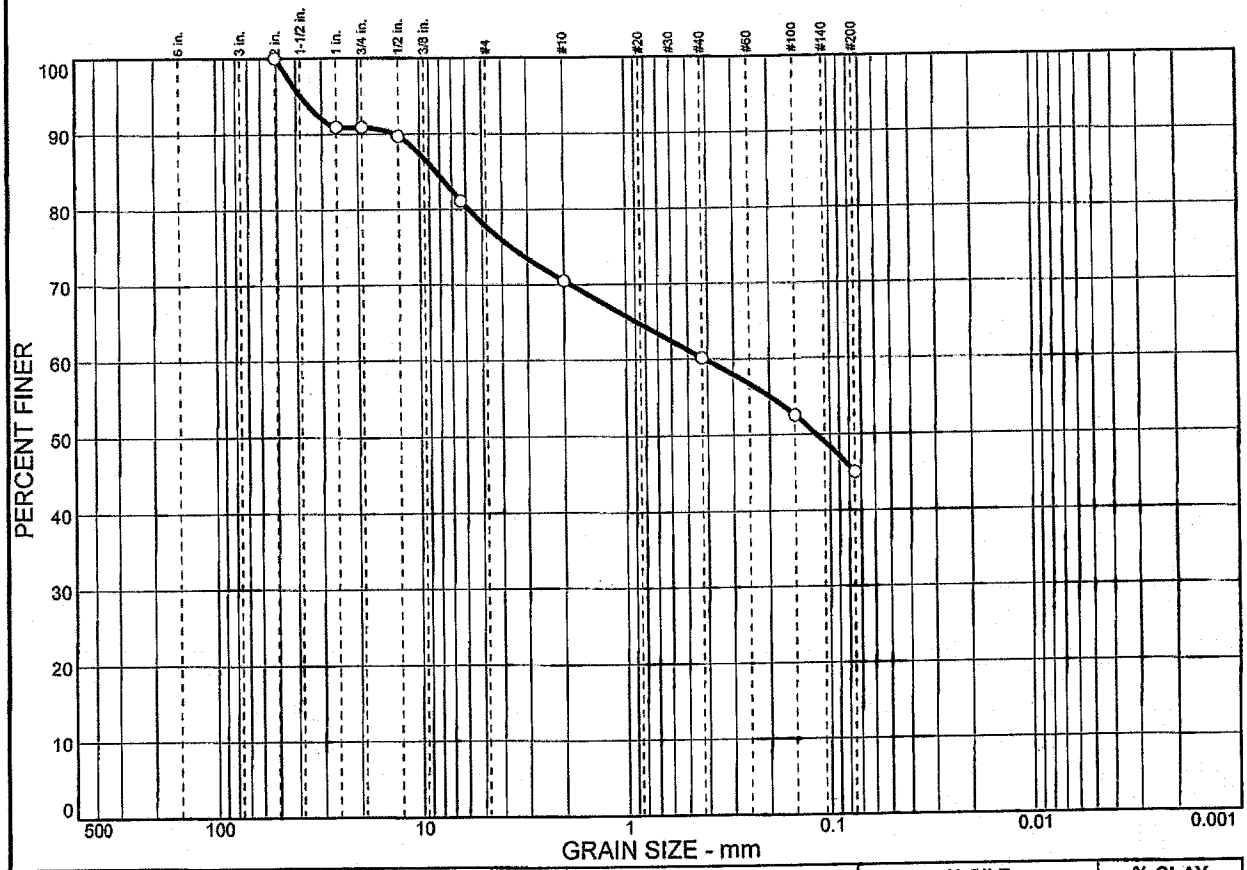
Sample No.: 372 **Source of Sample:** **Date:** 7-3-17
Location: BB-10,S-4 **Elev./Depth:** 6'-8'

SJB SERVICES, INC.

Client: Ithaca Neighborhood Housing Services, Inc.
Project: Proposed Housing and Site Development

Project No: CE-17-014 **Plate** 372

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	22.4	32.6	45.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2 in.	100.0		
1 in.	90.9		
0.75 in.	90.9		
0.5 in.	89.7		
0.25 in.	81.1		
#10	70.5		
#40	60.2		
#100	52.5		
#200	45.0		

* (no specification provided)

Soil Description

Silty sand with gravel

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 8.38 D_{60}= 0.412 D_{50}= 0.117
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= SM AASHTO=

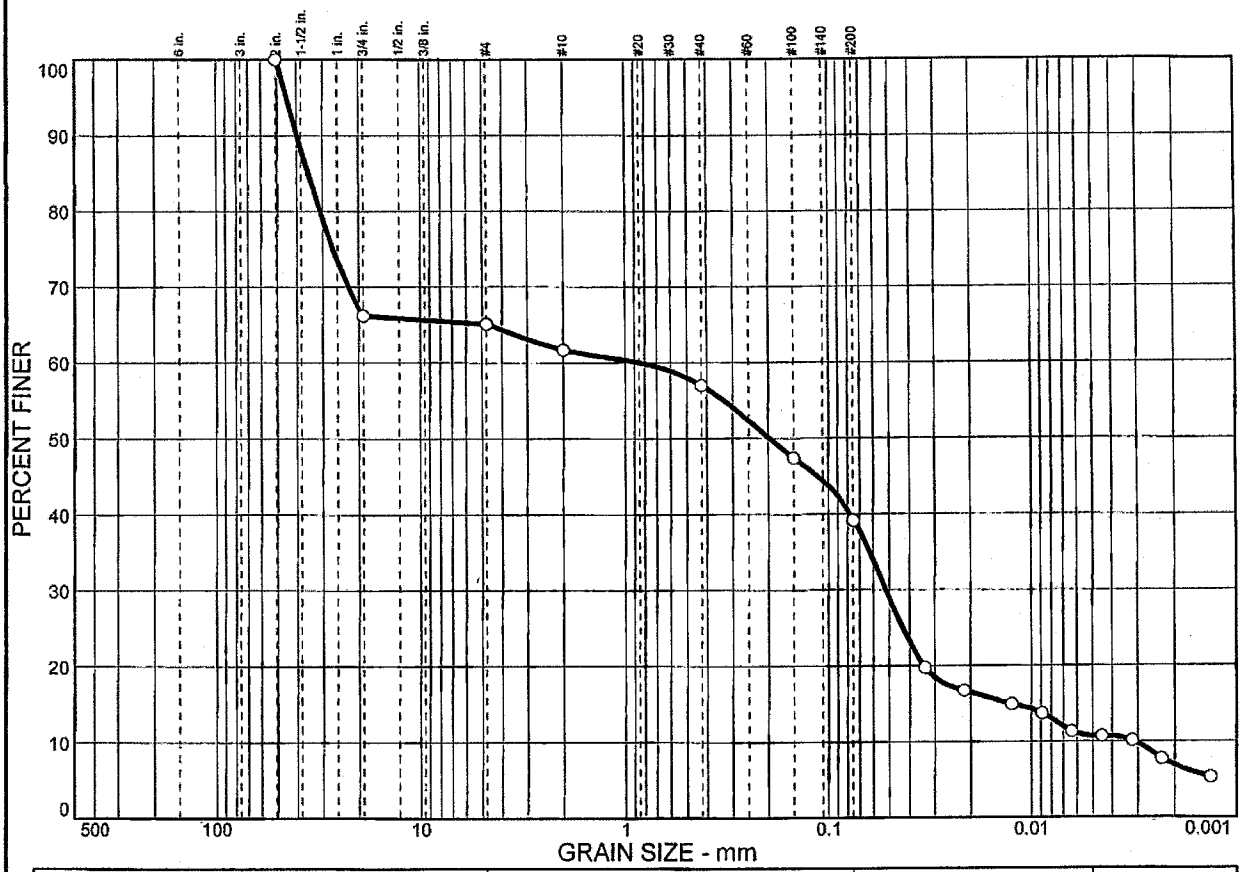
Remarks

Sample No.: 373 **Source of Sample:** **Date:** 7-3-17
Location: BB-11,S-5 **Elev./Depth:** 8'-10'

SJB SERVICES, INC.

Client: Ithaca Neighborhood Housing Services, Inc.
Project: Proposed Housing and Site Development
Project No: CE-17-014 **Plate** 373

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	34.9	25.9	28.5	10.7

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2 in.	100.0		
0.75 in.	66.2		
#4	65.1		
#10	61.7		
#40	57.0		
#100	47.4		
#200	39.2		

* (no specification provided)

Soil Description

Silty gravel with sand

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 35.3 D_{60}= 0.852 D_{50}= 0.198
D_{30}= 0.0522 D_{15}= 0.0129 D_{10}= 0.0031
C_u= 272.05 C_c= 1.02

Classification

USCS= GM AASHTO=

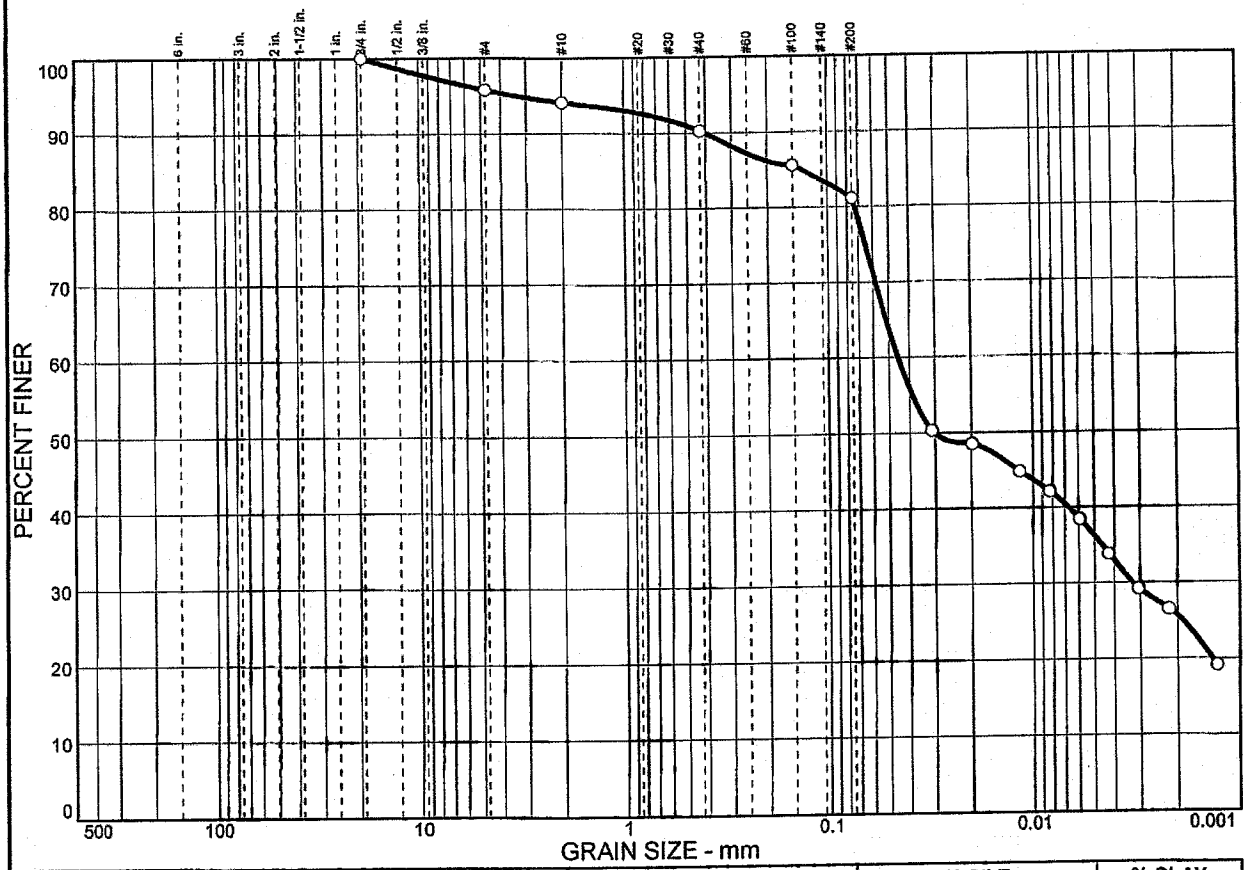
Remarks

Sample No.: 374 **Source of Sample:** **Date:** 7-6-17
Location: BB-12,S-2 **Elev./Depth:** 2'-4'

SJB SERVICES, INC.

Client: Ithaca Neighborhood Housing Services, Inc.
Project: Proposed Housing and Site Development
Project No: CE-17-014 **Plate** 374

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	4.2	14.7	45.0	36.1

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.75 in.	100.0		
#4	95.8		
#10	94.1		
#40	90.2		
#100	85.6		
#200	81.1		

* (no specification provided)

Soil Description

Lean clay with sand

Atterberg Limits

PL= 24 LL= 36 PI= 12

Coefficients

D_{85}= 0.135 D_{60}= 0.0455 D_{50}= 0.0303
D_{30}= 0.0033 D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= CL AASHTO=

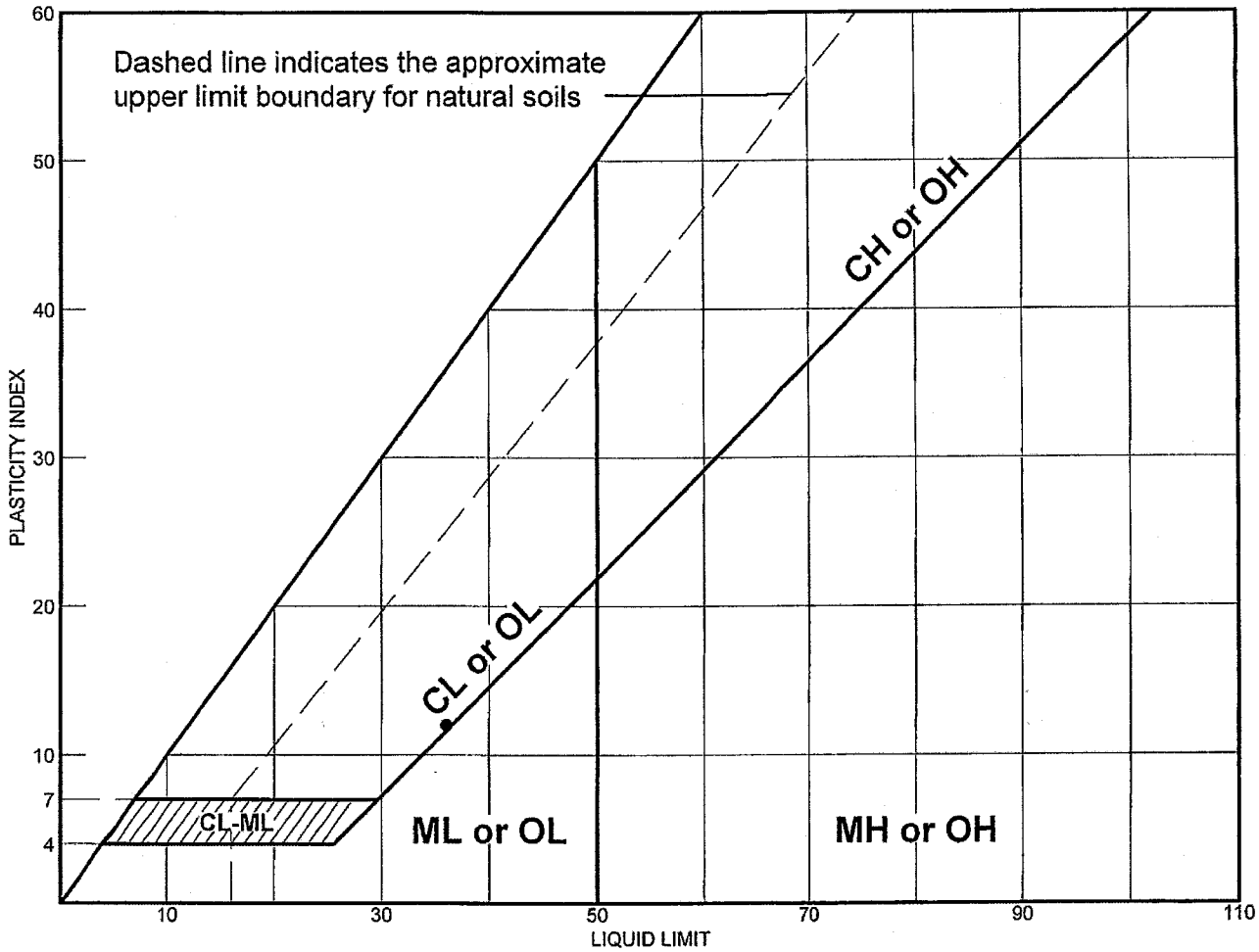
Remarks

Sample No.: 375 **Source of Sample:** **Date:** 7-5-17
Location: BB-13,S-3 **Elev./Depth:** 4'-6'

SJB SERVICES, INC.

Client: Ithaca Neighborhood Housing Services, Inc.
Project: Proposed Housing and Site Development
Project No: CE-17-014 **Plate** 375

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	Lean clay with sand	36	24	12	90.2	81.1	CL

Project No. CE-17-014 **Client:** Ithaca Neighborhood Housing Services, Inc.

Project: Proposed Housing and Site Development

● **Location:** BB-13,S-3

Remarks:

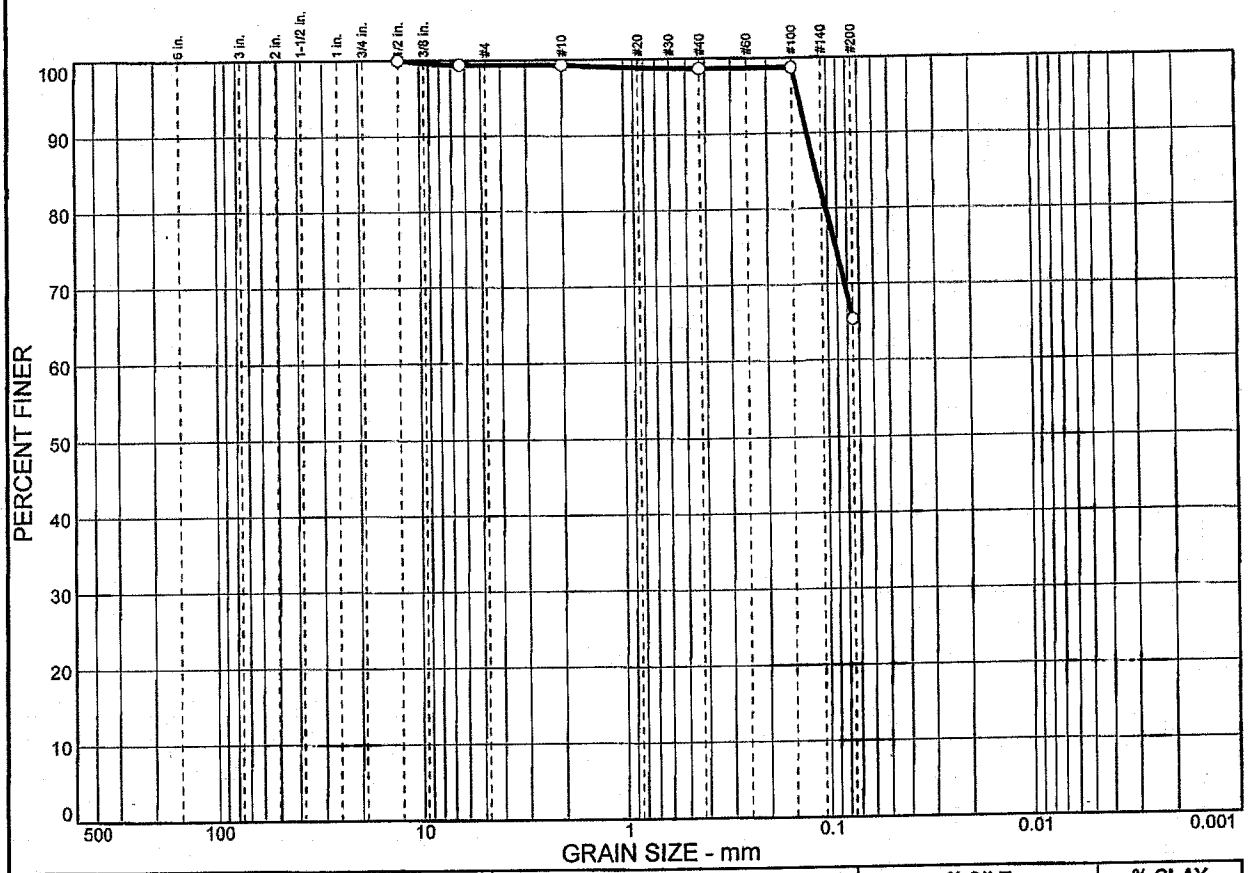
● Date Tested:7-6-17

LIQUID AND PLASTIC LIMITS TEST REPORT

SJB SERVICES, INC.

Plate 375

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.6	34.0	65.4	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.5 in.	100.0		
0.25 in.	99.4		
#10	99.3		
#40	98.7		
#100	98.7		
#200	65.4		

* (no specification provided)

Soil Description

Sandy silt

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 0.113 D_{60}= D_{50}=
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= ML AASHTO=

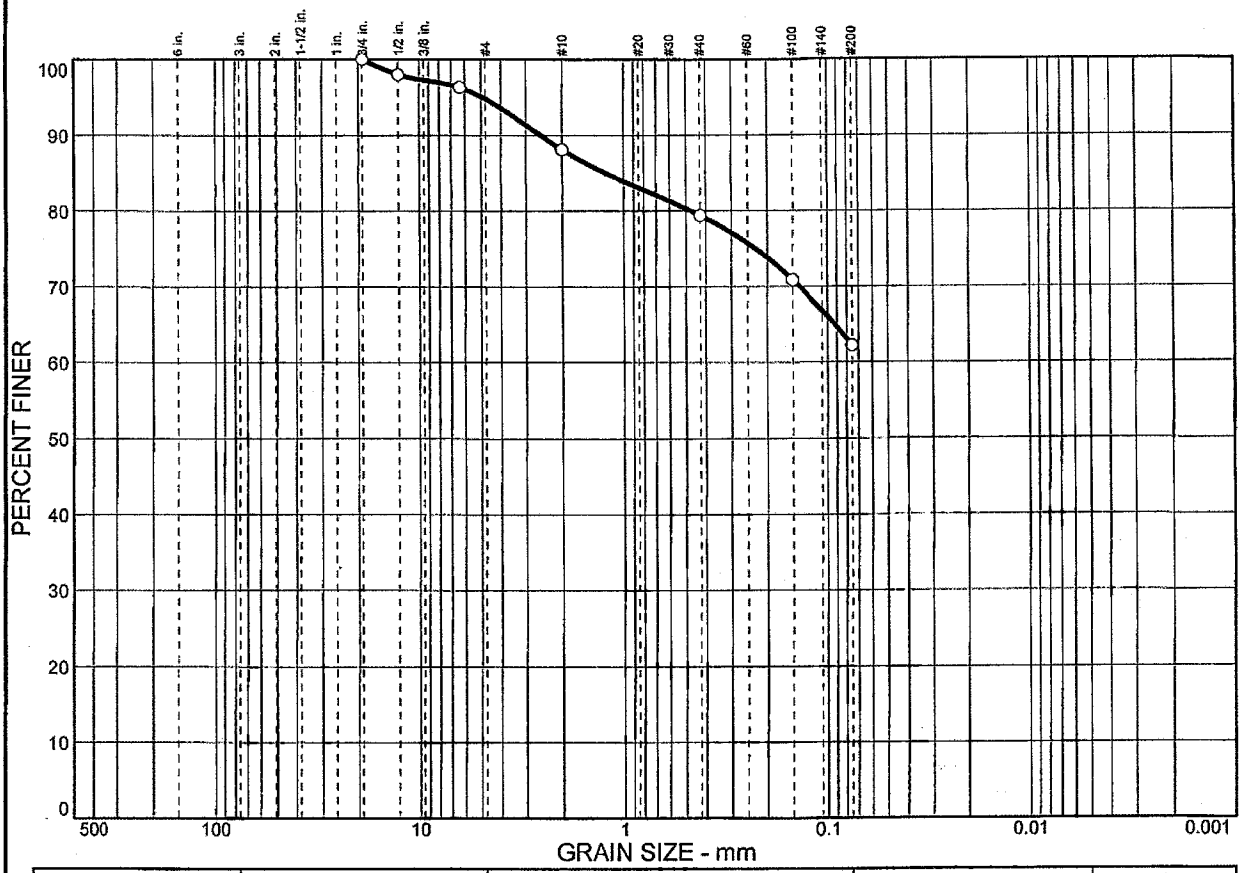
Remarks

Sample No.: 376 **Source of Sample:** **Date:** 7-3-17
Location: BB-14,S-2 **Elev./Depth:** 2'-4'

SJB SERVICES, INC.

Client: Ithaca Neighborhood Housing Services, Inc.
Project: Proposed Housing and Site Development
Project No: CE-17-014 **Plate** 376

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	5.2	32.6	62.2	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.75 in.	100.0		
0.5 in.	98.0		
0.25 in.	96.3		
#10	88.1		
#40	79.4		
#100	70.9		
#200	62.2		

* (no specification provided)

Soil Description

Sandy silt

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 1.23 D_{60}= D_{50}=
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= ML AASHTO=

Remarks

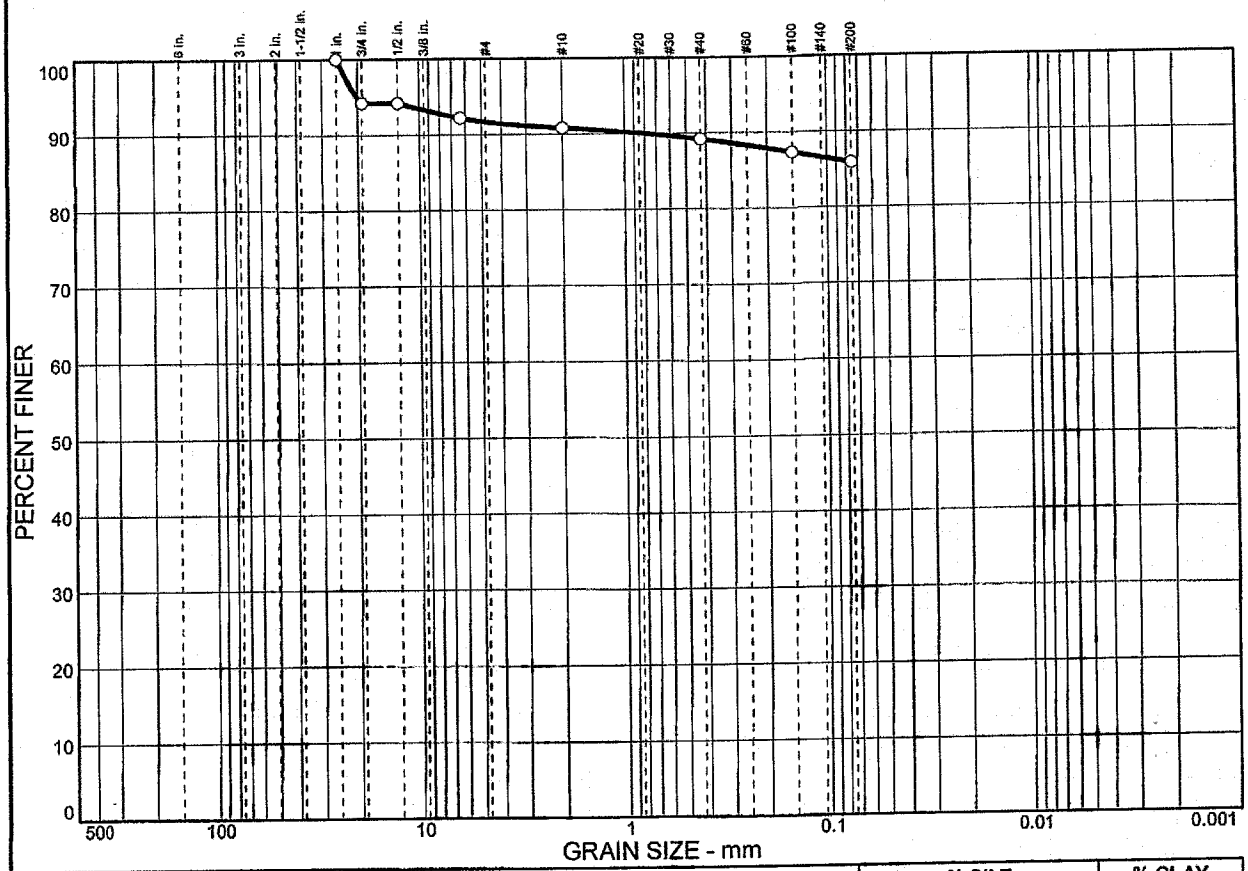
Sample No.: 377 **Source of Sample:** **Date:** 7-3-17
Location: BB-15,S-2 **Elev./Depth:** 2'-4'

SJB SERVICES, INC.

Client: Ithaca Neighborhood Housing Services, Inc.
Project: Proposed Housing and Site Development

Project No: CE-17-014 **Plate** 377

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	8.3	5.8	85.9	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1 in.	100.0		
0.75 in.	94.2		
0.5 in.	94.2		
0.25 in.	92.2		
#10	90.8		
#40	89.2		
#100	87.3		
#200	85.9		

* (no specification provided)

Soil Description

Silt

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= D_{60}= D_{50}=
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= ML AASHTO=

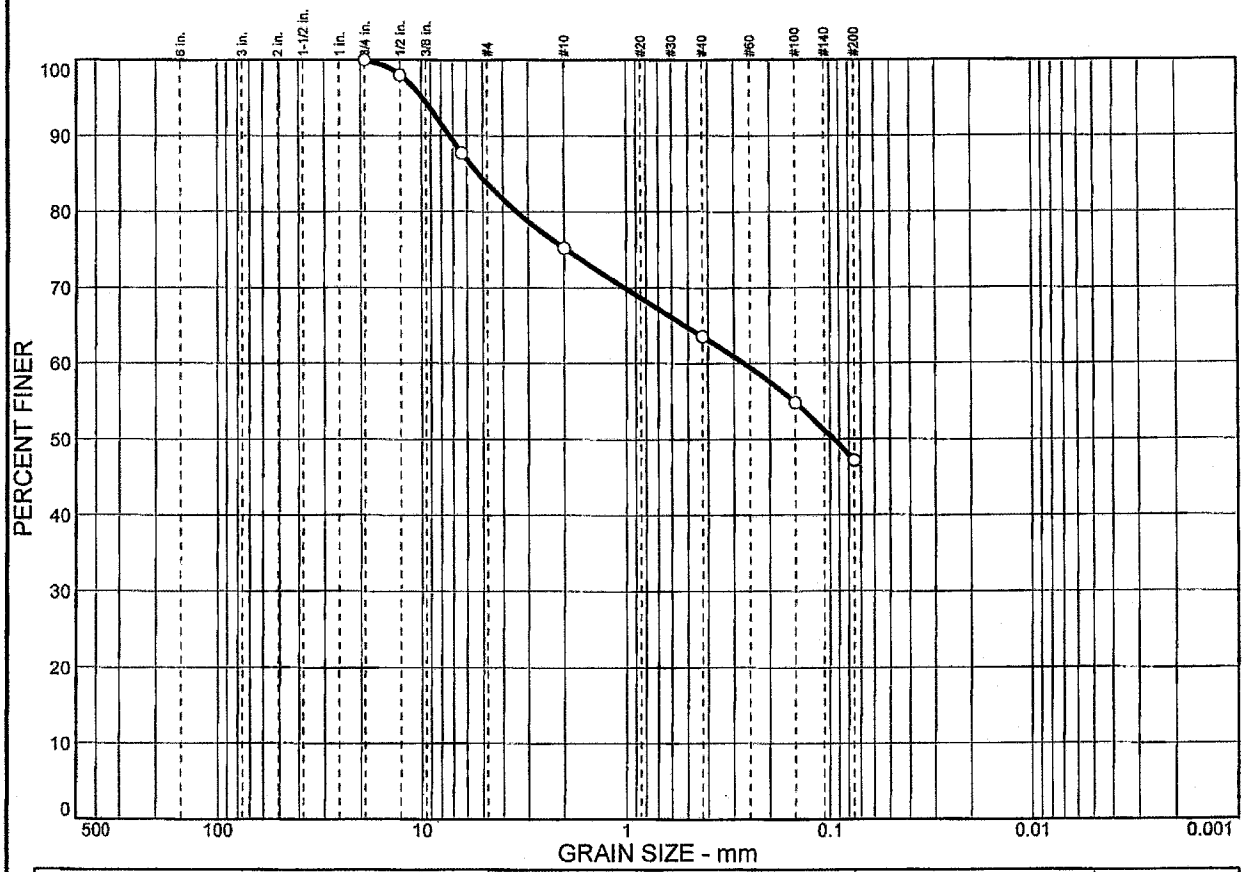
Remarks

Sample No.: 378 **Source of Sample:** **Date:** 7-3-17
Location: BB-15,S-4 **Elev./Depth:** 6'-8'

SJB SERVICES, INC.

Client: Ithaca Neighborhood Housing Services, Inc.
Project: Proposed Housing and Site Development
Project No: CE-17-014 **Plate** 378

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	16.4	36.4	47.2	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.75 in.	100.0		
0.5 in.	98.0		
0.25 in.	87.7		
#10	75.2		
#40	63.5		
#100	54.8		
#200	47.2		

* (no specification provided)

Soil Description

Silty sand with gravel

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 5.28 D_{60}= 0.269 D_{50}= 0.0959
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= SM AASHTO=

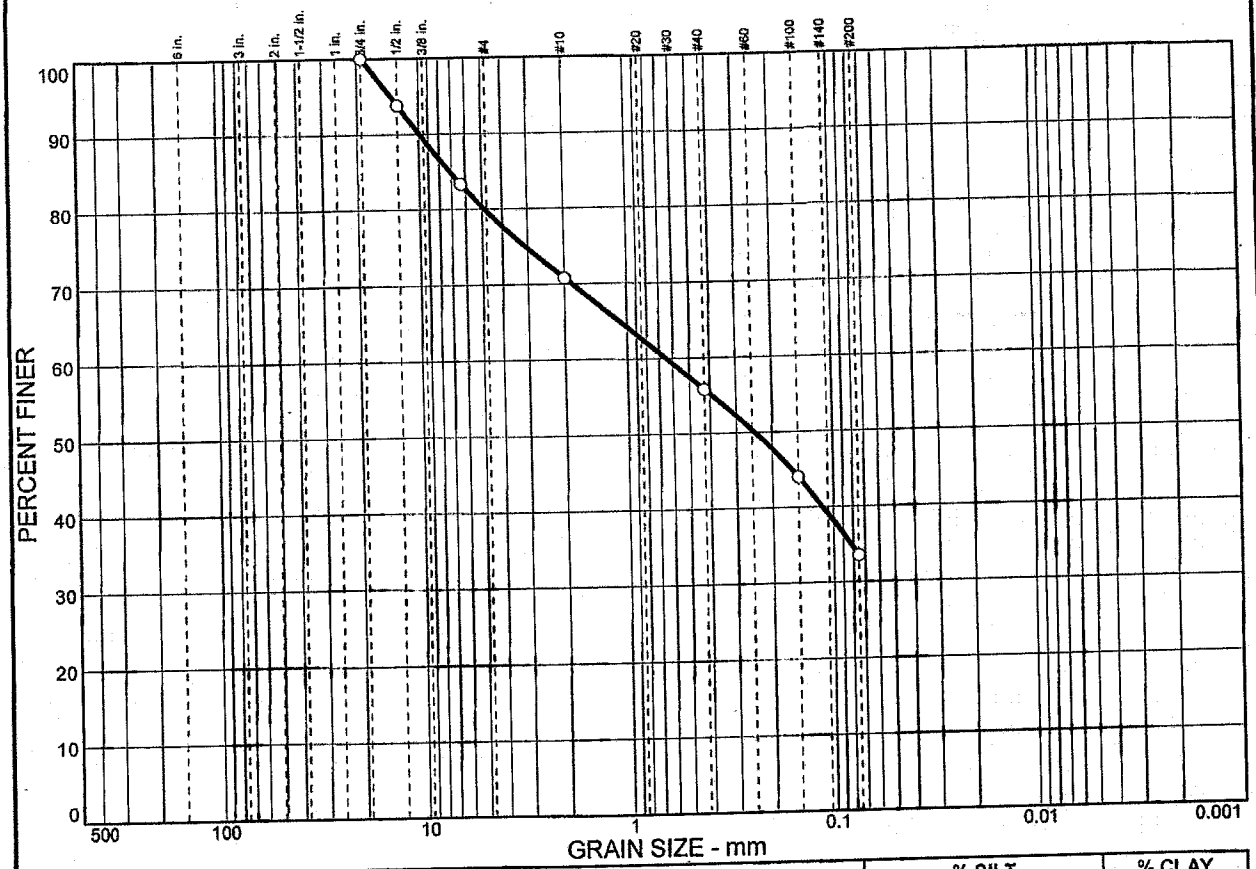
Remarks

Sample No.: 379 **Source of Sample:** **Date:** 7-3-17
Location: BB-16,S-5 **Elev./Depth:** 8'-10'

SJB SERVICES, INC.

Client: Ithaca Neighborhood Housing Services, Inc.
Project: Proposed Housing and Site Development
Project No: CE-17-014 **Plate** 379

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	20.4	46.1	33.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.75 in.	100.0		
0.5 in.	93.8		
0.25 in.	83.3		
#10	70.8		
#40	55.8		
#100	44.0		
#200	33.5		

* (no specification provided)

Soil Description

Silty sand with gravel

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 7.17 D_{60}= 0.649 D_{50}= 0.244
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= SM AASHTO=

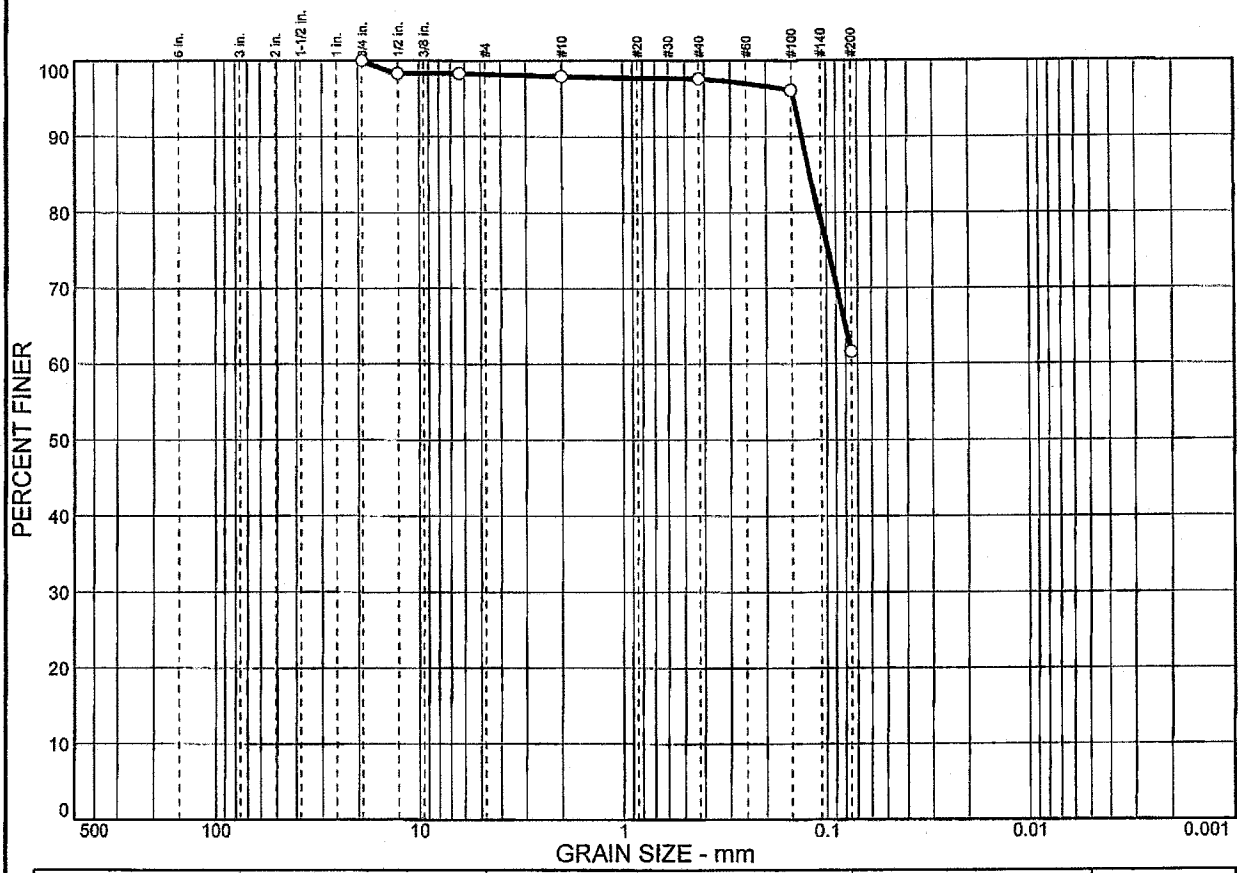
Remarks

Sample No.: 380 **Source of Sample:** **Date:** 7-3-17
Location: BB-17,S-3 **Elev./Depth:** 4'-6'

SJB SERVICES, INC.

Client: Ithaca Neighborhood Housing Services, Inc.
Project: Proposed Housing and Site Development
Project No: CE-17-014 **Plate** 380

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	1.8	36.6	61.6	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.75 in.	100.0		
0.5 in.	98.3		
0.25 in.	98.3		
#10	97.9		
#40	97.6		
#100	96.1		
#200	61.6		

* (no specification provided)

Soil Description

Sandy silt

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 0.120 D_{60}= D_{50}=
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= ML AASHTO=

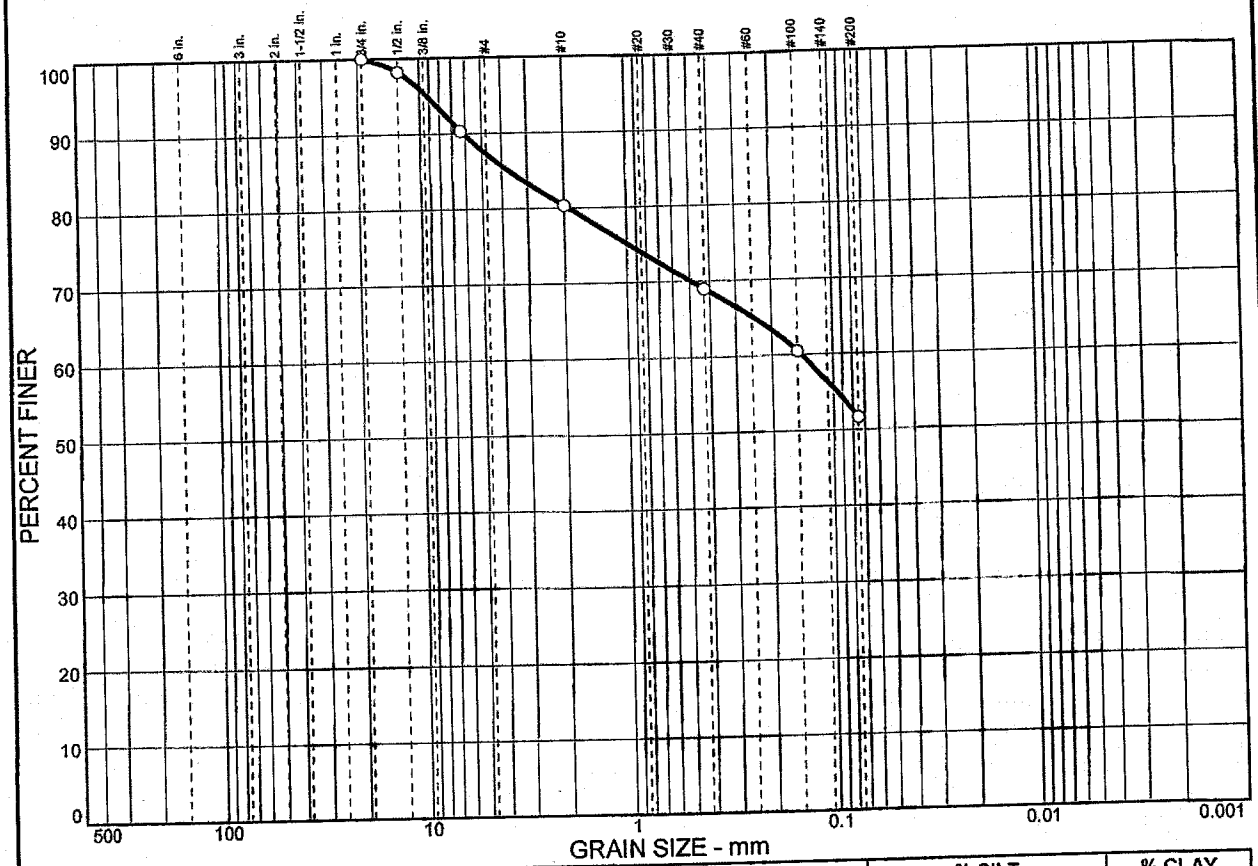
Remarks

Sample No.: 381 **Source of Sample:** **Date:** 7-3-17
Location: BB-18,S-2 **Elev./Depth:** 10'-12'

SJB SERVICES, INC.

Client: Ithaca Neighborhood Housing Services, Inc.
Project: Proposed Housing and Site Development
Project No: CE-17-014 **Plate** 381

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	12.8	35.6	51.6	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.75 in.	100.0		
0.5 in.	98.2		
0.25 in.	90.3		
#10	80.3		
#40	69.0		
#100	60.5		
#200	51.6		

* (no specification provided)

Soil Description

Sandy silt

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 3.73 D_{60}= 0.143 D_{50}=
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= ML AASHTO=

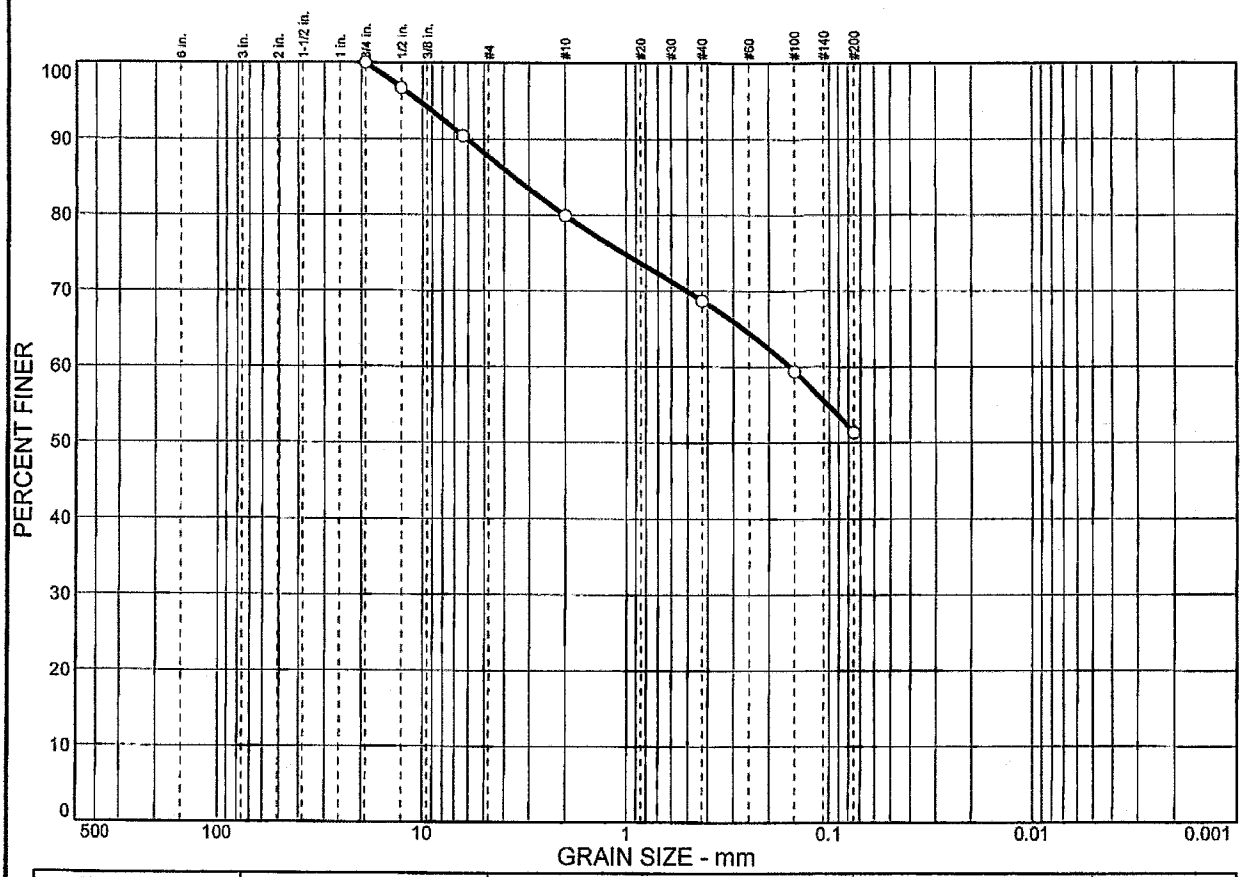
Remarks

Sample No.: 382 **Source of Sample:** **Date:** 7-3-17
Location: BB-20,S-6 **Elev./Depth:** 10'-12'

SJB SERVICES, INC.

Client: Ithaca Neighborhood Housing Services, Inc.
Project: Proposed Housing and Site Development
Project No: CE-17-014 **Plate** 382

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	12.4	36.3	51.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.75 in.	100.0		
0.5 in.	96.7		
0.25 in.	90.4		
#10	79.9		
#40	68.7		
#100	59.4		
#200	51.3		

* (no specification provided)

Soil Description

Sandy silt

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 3.58 D_{60}= 0.159 D_{50}=
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= ML AASHTO=

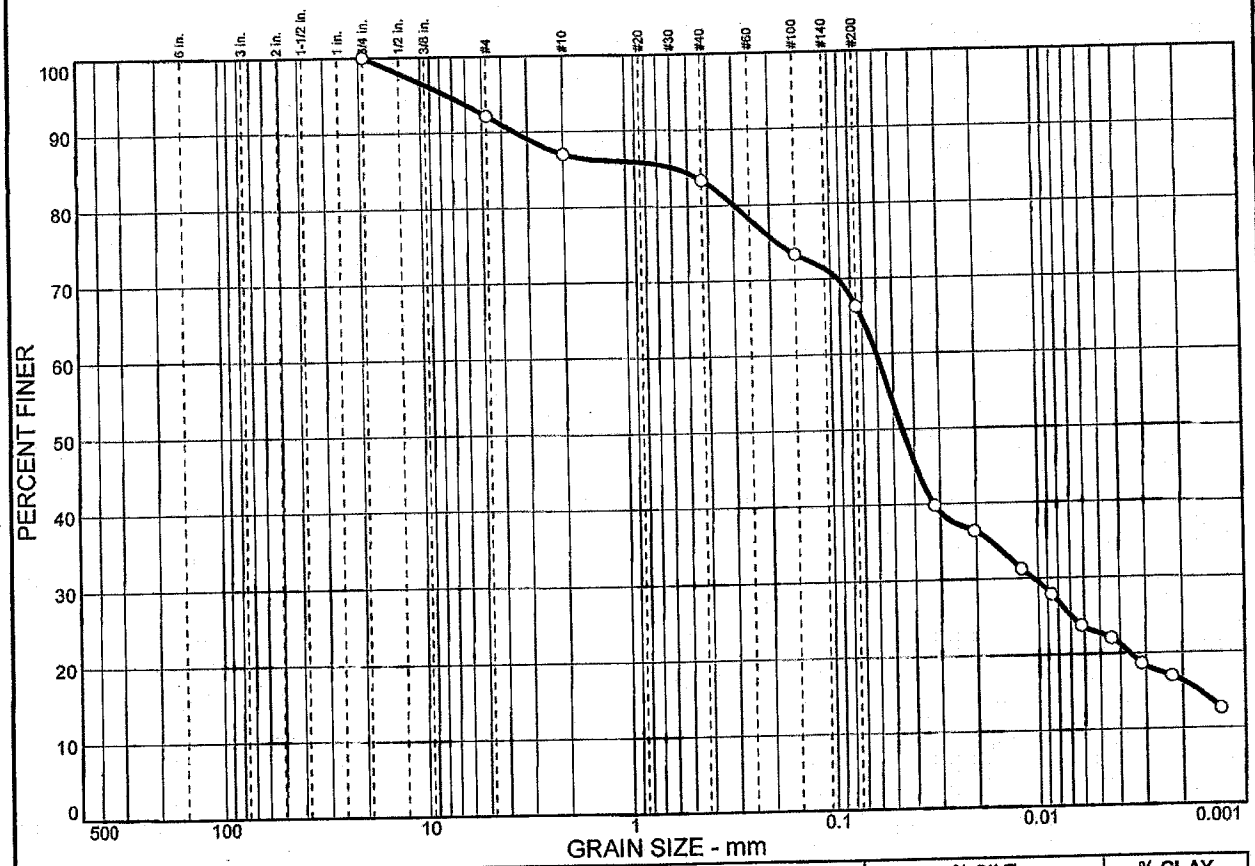
Remarks

Sample No.: 383 **Source of Sample:** **Date:** 7-3-17
Location: PB-2,S-2 **Elev./Depth:** 2'-4'

SJB SERVICES, INC.

Client: Ithaca Neighborhood Housing Services, Inc.
Project: Proposed Housing and Site Development
Project No: CE-17-014 **Plate** 383

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	7.9	25.8	43.7	22.6

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.75 in.	100.0		
#4	92.1		
#10	87.0		
#40	83.3		
#100	73.3		
#200	66.3		

* (no specification provided)

Soil Description

Sandy lean clay

Atterberg Limits

PL= 22 LL= 32 PI= 10

Coefficients

D_{85}= 0.580 D_{60}= 0.0605 D_{50}= 0.0458
D_{30}= 0.0105 D_{15}= 0.0017 D_{10}=
C_u= C_c=

Classification

USCS= CL AASHTO=

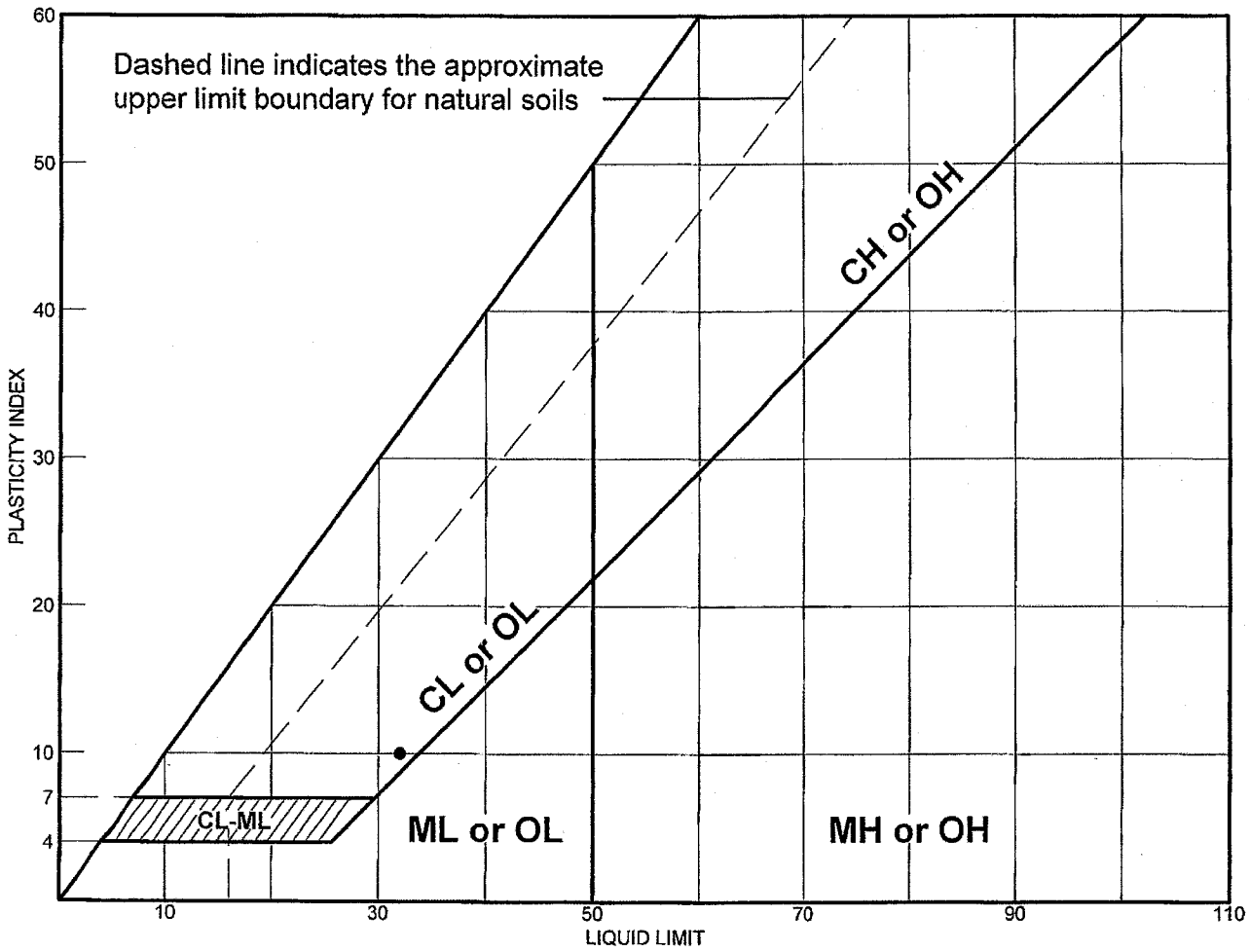
Remarks

Sample No.: 384 **Source of Sample:** **Date:** 7-5-17
Location: PB-3,S-1 **Elev./Depth:** 0'-2'

SJB SERVICES, INC.

Client: Ithaca Neighborhood Housing Services, Inc.
Project: Proposed Housing and Site Development
Project No: CE-17-014 **Plate** 384

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	Sandy lean clay	32	22	10	83.3	66.3	CL

Project No. CE-17-014 **Client:** Ithaca Neighborhood Housing Services, Inc.

Project: Proposed Housing and Site Development

● **Location:** PB-3,S-1

Remarks:

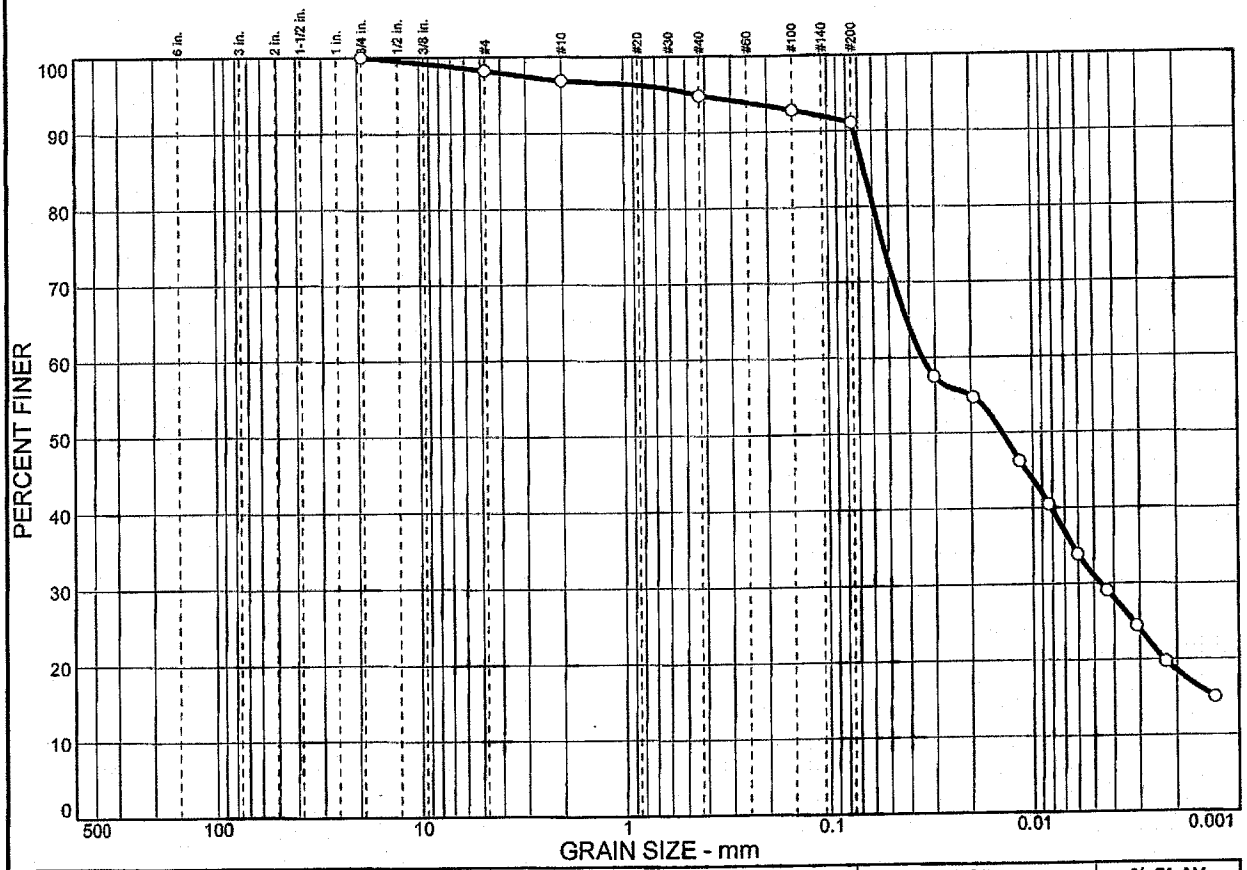
● Date Tested:7-6-17

LIQUID AND PLASTIC LIMITS TEST REPORT

SJB SERVICES, INC.

Plate 384

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	1.8	7.1	60.1	31.0

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.75 in.	100.0		
#4	98.2		
#10	96.9		
#40	94.8		
#100	92.8		
#200	91.1		

* (no specification provided)

Soil Description

Lean clay

Atterberg Limits

PL= 20 LL= 28 PI= 8

Coefficients

D_{85}= 0.0661 D_{60}= 0.0347 D_{50}= 0.0142
D_{30}= 0.0046 D_{15}= 0.0013 D_{10}=
C_u= C_c=

Classification

USCS= CL AASHTO=

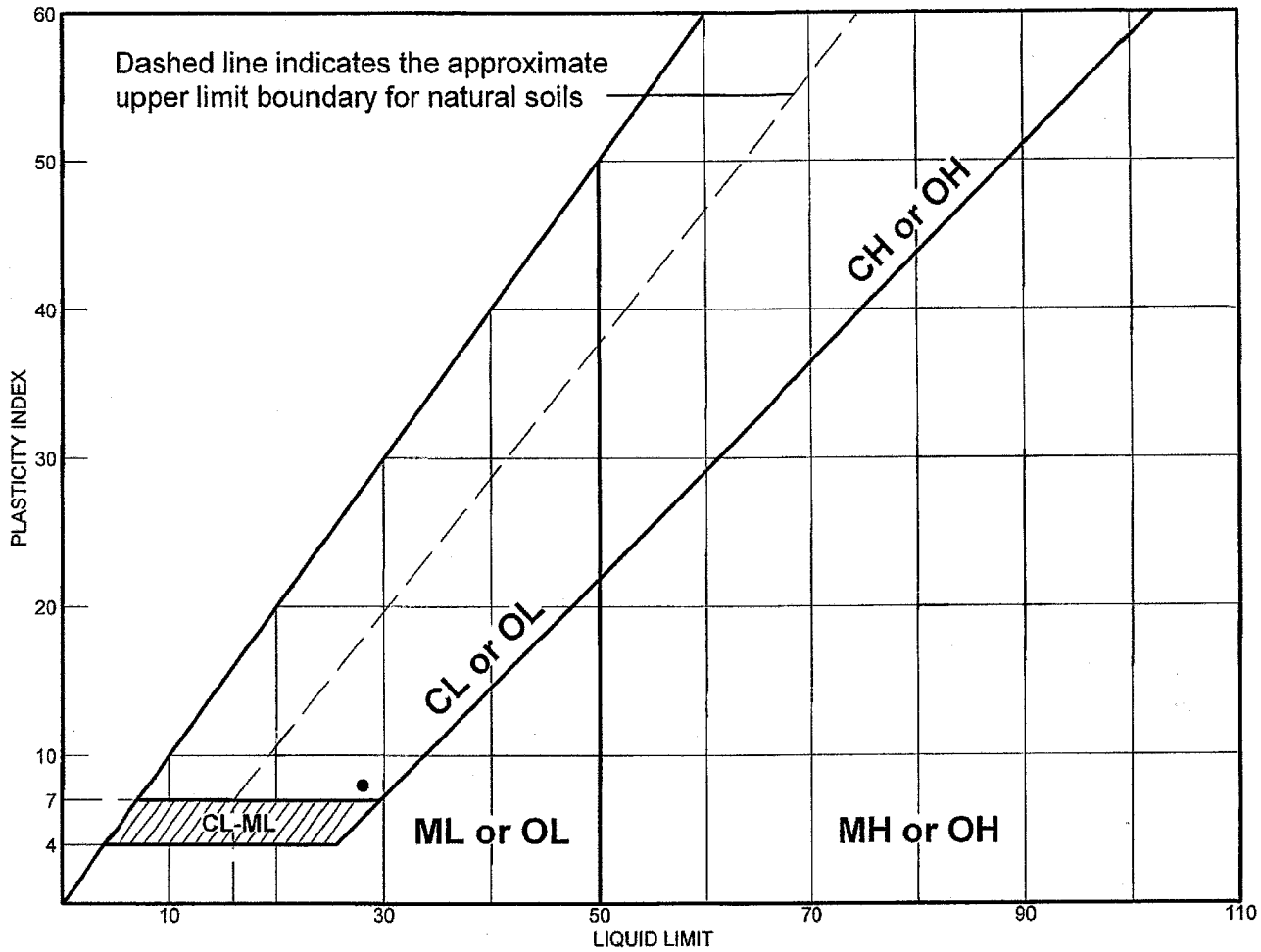
Remarks

Sample No.: 385 **Source of Sample:** **Date:** 7-10-17
Location: PB-4,S-2 **Elev./Depth:** 2'-4'

SJB SERVICES, INC.

Client: Ithaca Neighborhood Housing Services, Inc.
Project: Proposed Housing and Site Development
Project No: CE-17-014 **Plate** 385

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	Lean clay	28	20	8	94.8	91.1	CL

Project No. CE-17-014 **Client:** Ithaca Neighborhood Housing Services, Inc.

Project: Proposed Housing and Site Development

● **Location:** PB-4,S-2

Remarks:

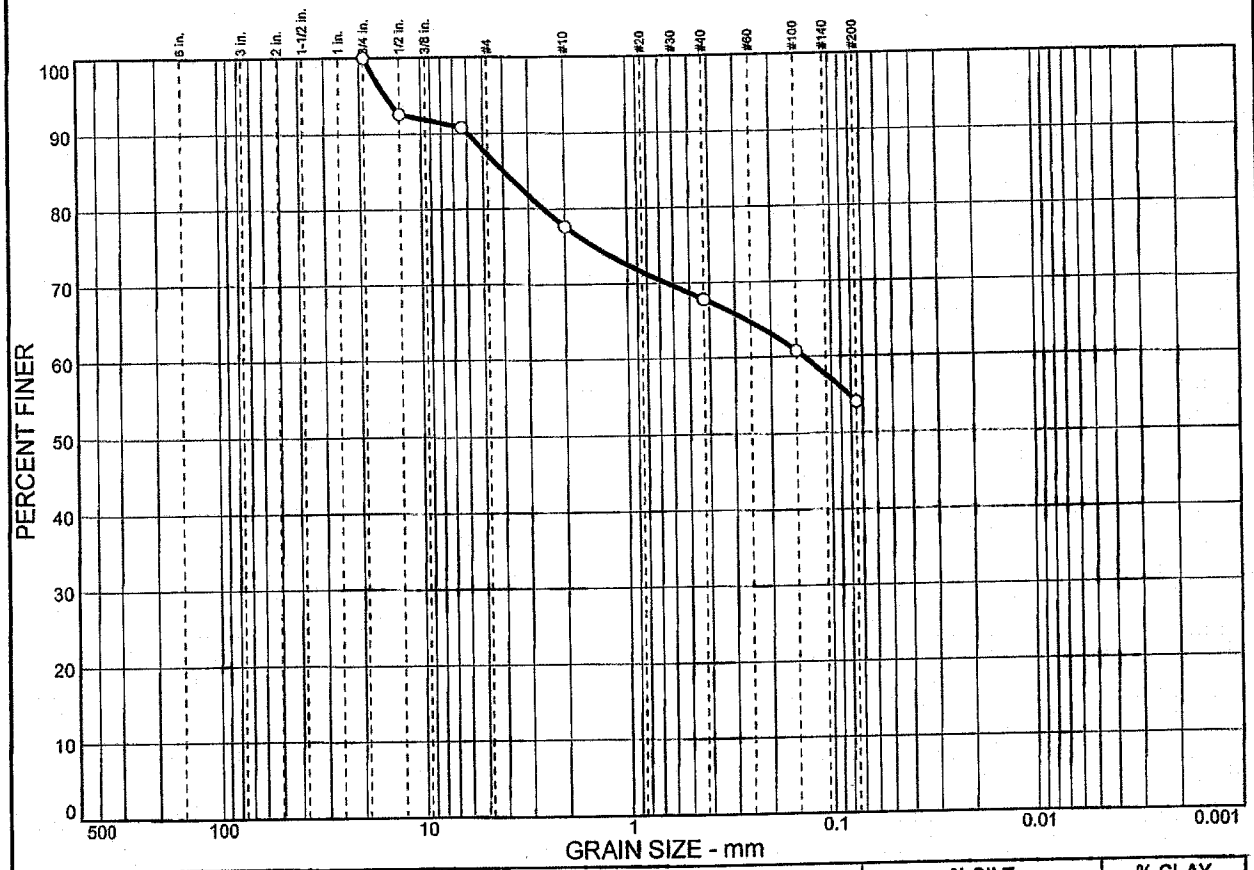
● Date Tested:7-11-17

LIQUID AND PLASTIC LIMITS TEST REPORT

SJB SERVICES, INC.

Plate 385

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	12.8	33.2	54.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.75 in.	100.0		
0.5 in.	92.6		
0.25 in.	90.8		
#10	77.6		
#40	67.8		
#100	60.8		
#200	54.0		

* (no specification provided)

Soil Description

Sandy silt

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 3.98 D_{60}= 0.137 D_{50}=
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= ML AASHTO=

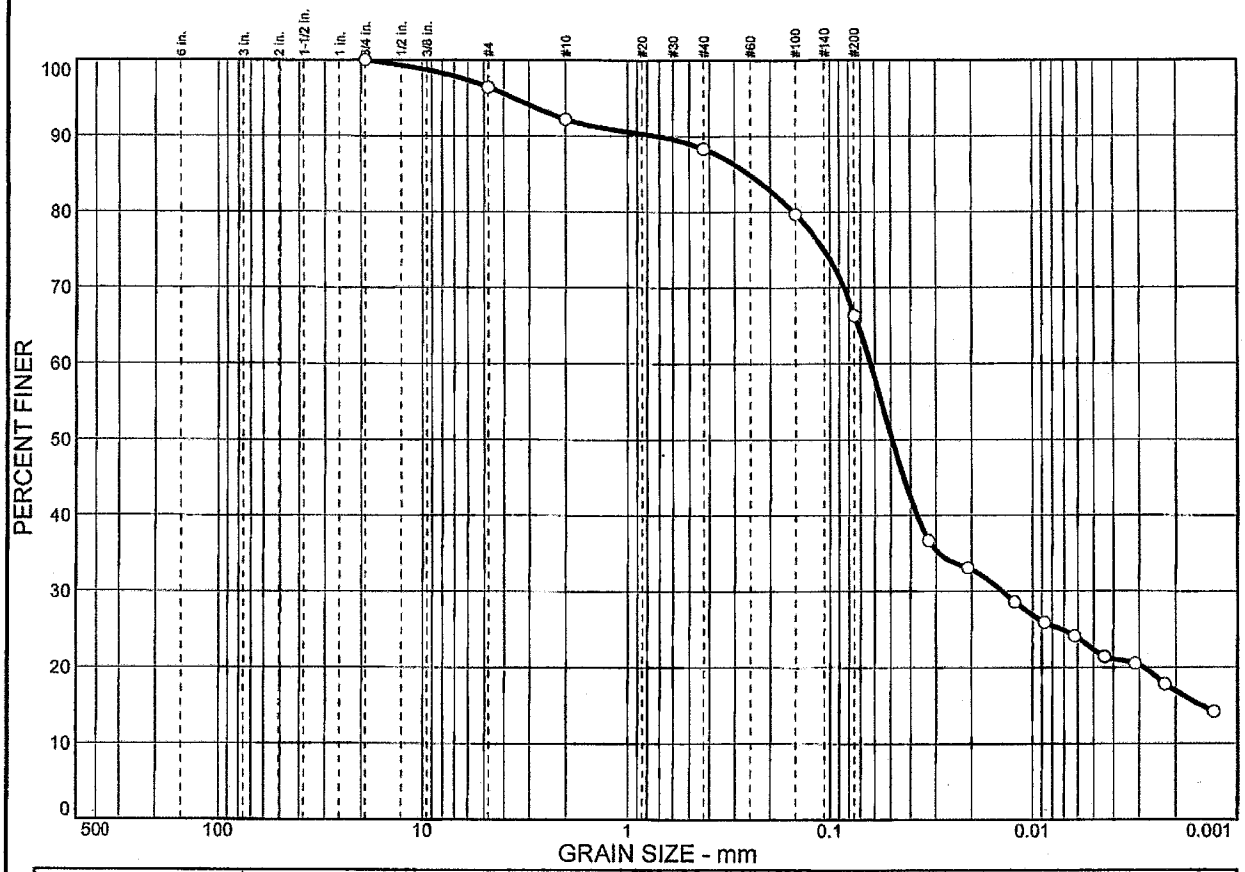
Remarks

Sample No.: 386 **Source of Sample:** **Date:** 7-3-17
Location: PB-5,S-3 **Elev./Depth:** 4'-6'

SJB SERVICES, INC.

Client: Ithaca Neighborhood Housing Services, Inc.
Project: Proposed Housing and Site Development
Project No: CE-17-014 **Plate** 386

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	3.6	30.1	44.1	22.2

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.75 in.	100.0		
#4	96.4		
#10	92.2		
#40	88.3		
#100	79.7		
#200	66.3		

* (no specification provided)

Soil Description

Sandy silty clay

Atterberg Limits

PL= 21 LL= 28 PI= 7

Coefficients

D_{85}= 0.255 D_{60}= 0.0630 D_{50}= 0.0493
D_{30}= 0.0141 D_{15}= 0.0015 D_{10}=
C_u= C_c=

Classification

USCS= CL-ML AASHTO=

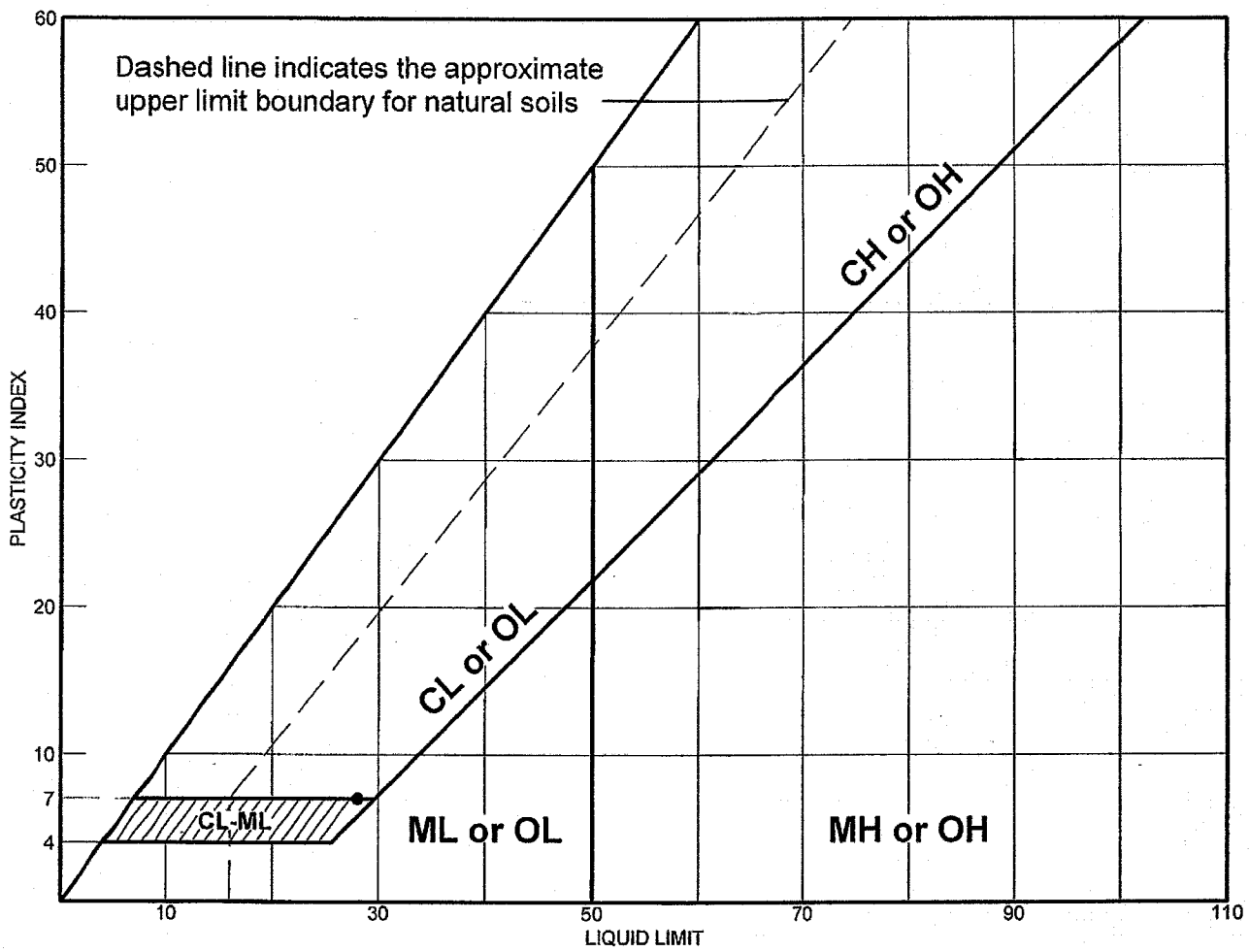
Remarks

Sample No.: 387 **Source of Sample:** **Date:** 7-10-17
Location: PB-6,S-1 **Elev./Depth:** 0'-2'

SJB SERVICES, INC.

Client: Ithaca Neighborhood Housing Services, Inc.
Project: Proposed Housing and Site Development
Project No: CE-17-014 **Plate** 387

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	Sandy silty clay	28	21	7	88.3	66.3	CL-ML

Project No. CE-17-014 **Client:** Ithaca Neighborhood Housing Services, Inc.

Project: Proposed Housing and Site Development

● **Location:** PB-6,S-1

Remarks:

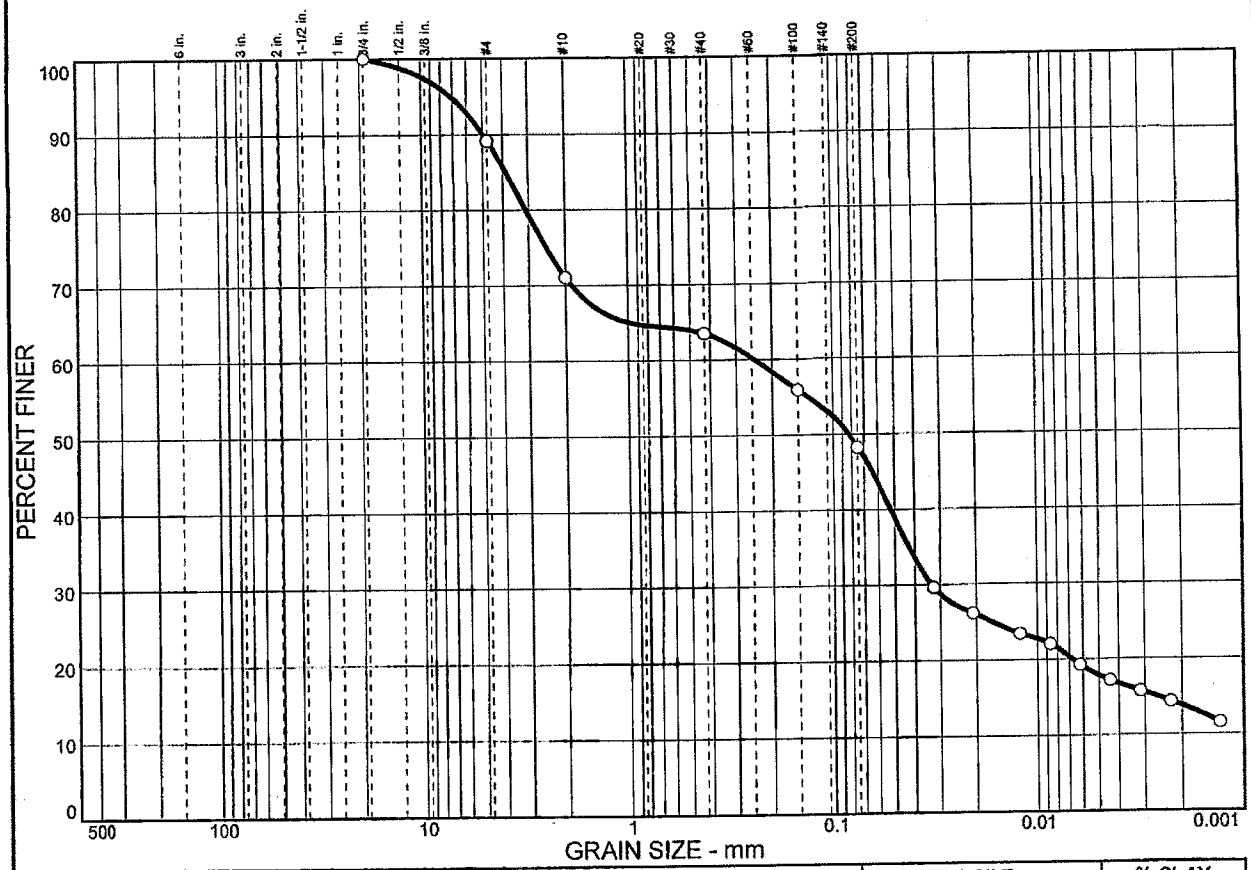
● Date Tested:7-11-17

LIQUID AND PLASTIC LIMITS TEST REPORT

SJB SERVICES, INC.

Plate 387

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	10.9	40.9	30.4	17.8

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.75 in.	100.0		
#4	89.1		
#10	71.0		
#40	63.5		
#100	55.9		
#200	48.2		

* (no specification provided)

Soil Description

Silty sand

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 3.88 D_{60}= 0.245 D_{50}= 0.0834
D_{30}= 0.0332 D_{15}= 0.0026 D_{10}=
C_u= C_c=

Classification

USCS= SM AASHTO=

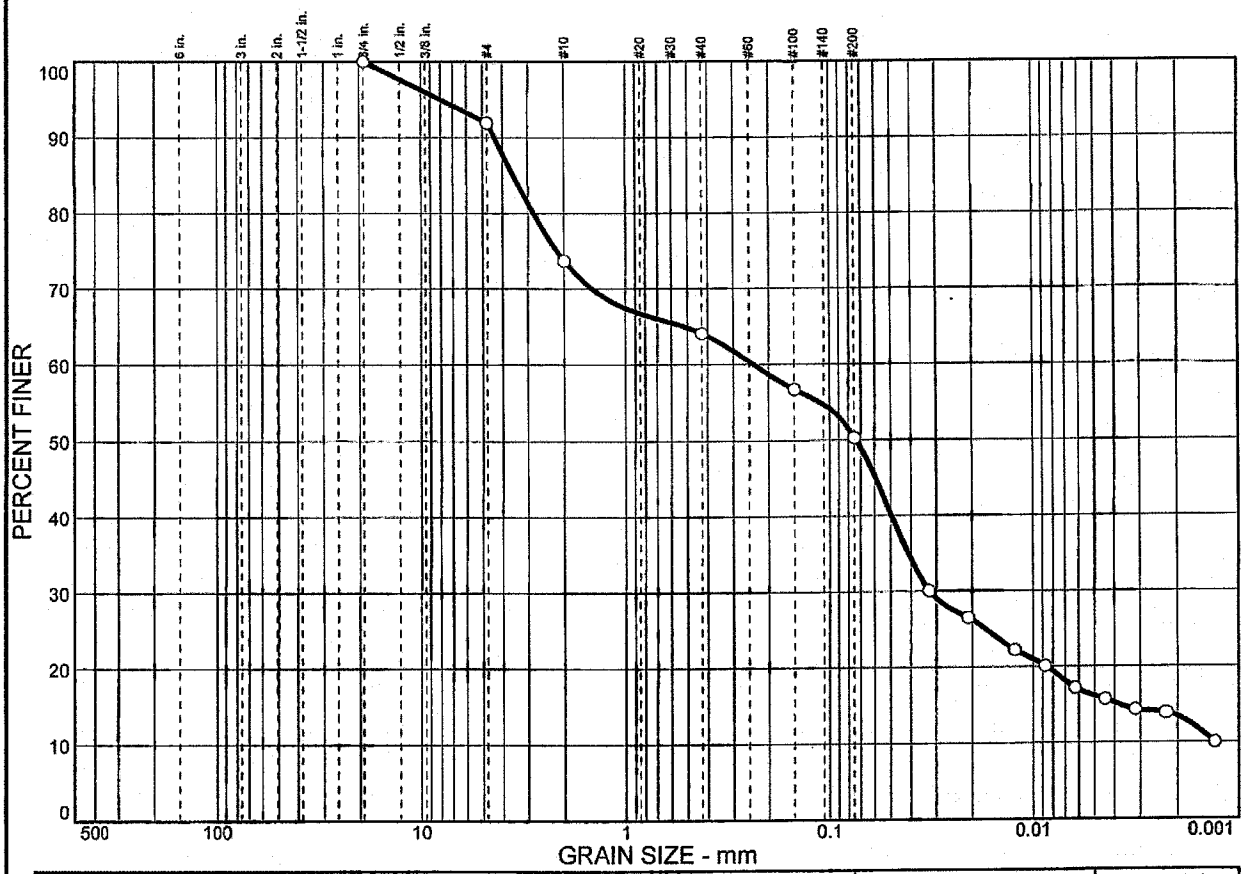
Remarks

Sample No.: 388 **Source of Sample:** **Date:** 7-10-17
Location: PB-7/IT-5,S-2 **Elev./Depth:** 2'-4'

SJB SERVICES, INC.

Client: Ithaca Neighborhood Housing Services, Inc.
Project: Proposed Housing and Site Development
Project No: CE-17-014 **Plate** 388

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	8.1	41.6	34.2	16.1

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.75 in.	100.0		
#4	91.9		
#10	73.7		
#40	64.1		
#100	56.7		
#200	50.3		

* (no specification provided)

Soil Description

Sandy silt

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 3.55 D_{60}= 0.238 D_{50}= 0.0738
D_{30}= 0.0322 D_{15}= 0.0038 D_{10}= 0.0013
C_u= 181.19 C_c= 3.32

Classification

USCS= ML AASHTO=

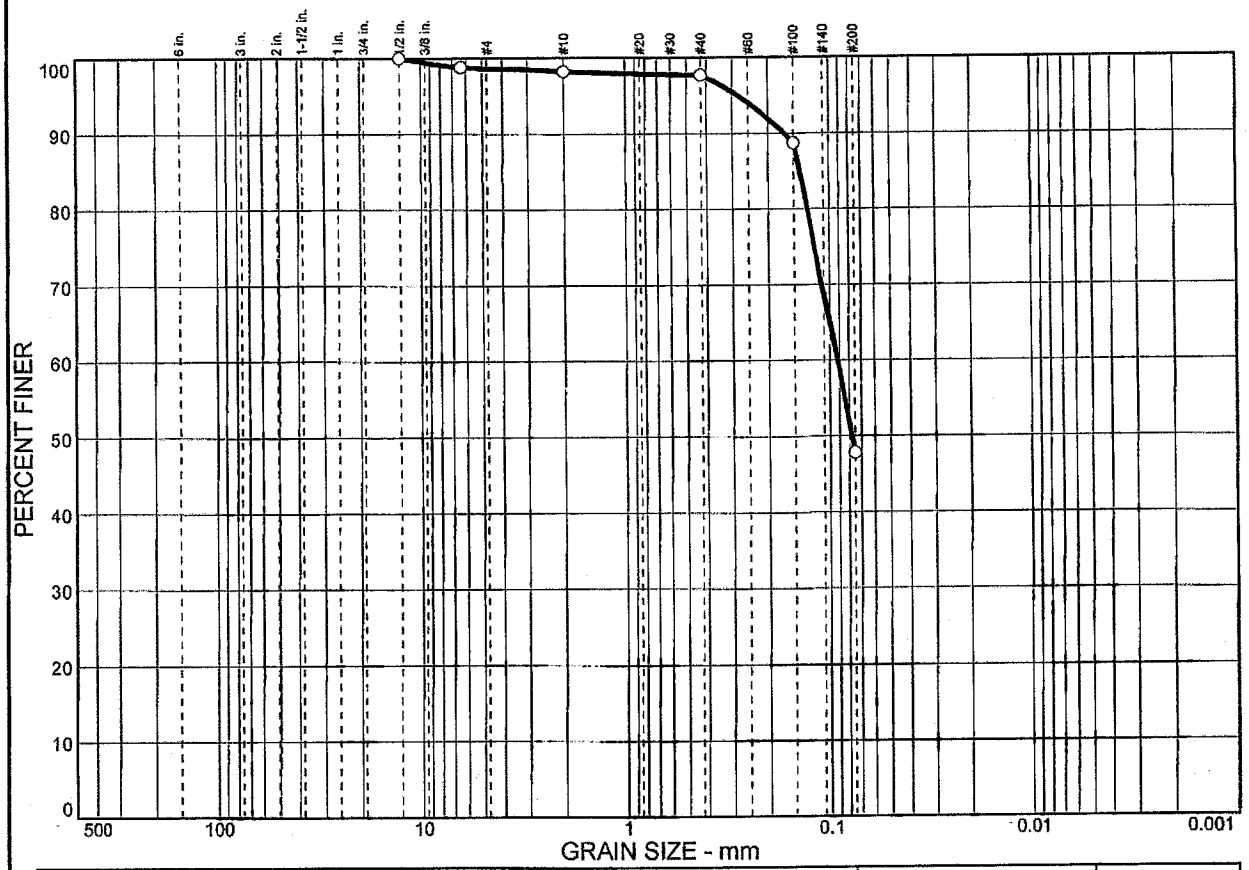
Remarks

Sample No.: 389 **Source of Sample:** **Date:** 7-10-17
Location: PB-7/IT-5,S-4 **Elev./Depth:** 6'-8'

SJB SERVICES, INC.

Client: Ithaca Neighborhood Housing Services, Inc.
Project: Proposed Housing and Site Development
Project No: CE-17-014 **Plate** 389

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	1.4	50.8	47.8	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.5 in.	100.0		
0.25 in.	98.8		
#10	98.2		
#40	97.7		
#100	88.7		
#200	47.8		

* (no specification provided)

Soil Description

Silty sand

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 0.141 D_{60}= 0.0920 D_{50}= 0.0778
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= SM AASHTO=

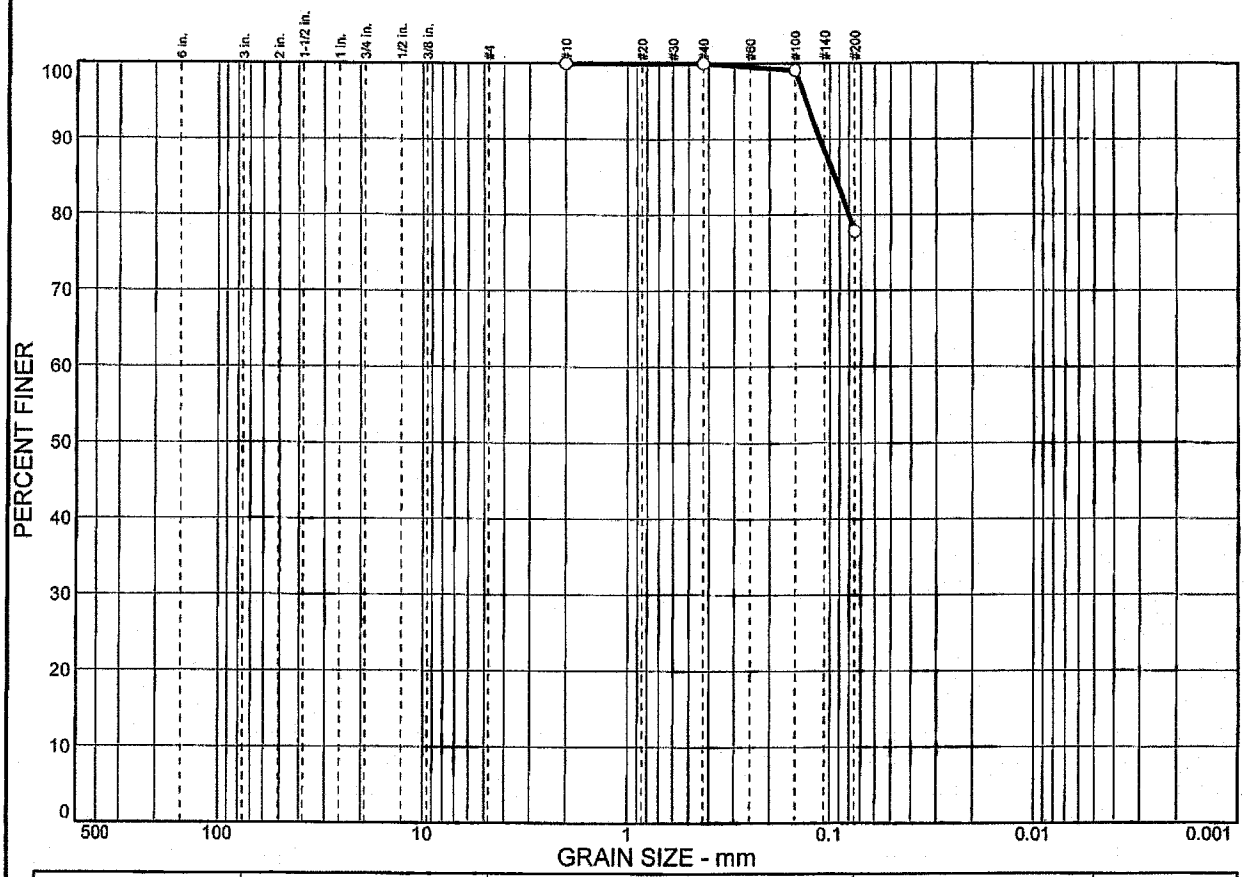
Remarks

Sample No.: 390 **Source of Sample:** **Date:** 7-3-17
Location: PB-8,S-2 **Elev./Depth:** 2'-4'

SJB SERVICES, INC.

Client: Ithaca Neighborhood Housing Services, Inc.
Project: Proposed Housing and Site Development
Project No: CE-17-014 **Plate** 390

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	22.2	77.8	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#10	100.0		
#40	100.0		
#100	99.1		
#200	77.8		

* (no specification provided)

Soil Description

Silt with sand

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 0.0948 D_{60}= D_{50}=
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= ML AASHTO=

Remarks

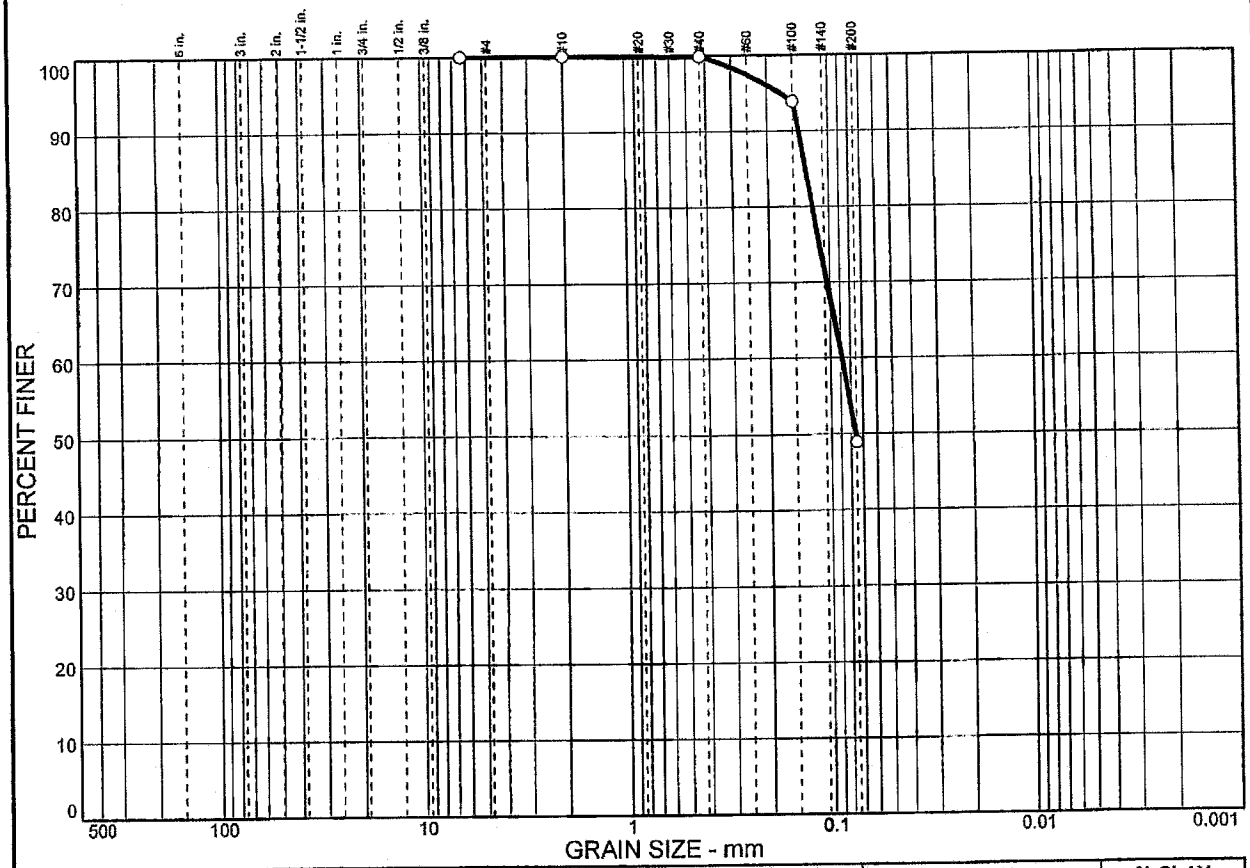
Sample No.: 391 **Source of Sample:** **Date:** 7-3-17
Location: PB-9,S-2 **Elev./Depth:** 2'-4'

SJB SERVICES, INC.

Client: Ithaca Neighborhood Housing Services, Inc.
Project: Proposed Housing and Site Development

Project No: CE-17-014 **Plate** 391

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	51.1	48.9	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.25 in.	100.0		
#10	100.0		
#40	99.9		
#100	93.9		
#200	48.9		

* (no specification provided)

Soil Description

Silty sand

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 0.131 D_{60}= 0.0889 D_{50}= 0.0763
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= SM AASHTO=

Remarks

Sample No.: 392 **Source of Sample:** **Date:** 7-3-17
Location: PB-10,S-2 **Elev./Depth:** 2'-4'

SJB SERVICES, INC.

Client: Ithaca Neighborhood Housing Services, Inc.
Project: Proposed Housing and Site Development
Project No: CE-17-014 **Plate** 392

APPENDIX C

Field Infiltration Test Results

SJB SERVICES, INC.

INFILTRATION TEST DATA SUMMARY

PROJECT: Proposed Housing & Site Development

LOCATION: Trumansburg, NY

PROJECT NO.: CE-17-014

INFILTRATION TEST POINT: IT-1

PRESOAK DATE: 6/27/2017

PRESOAK TIME: AM

Diameter of Casing **4.0** inches

Casing Stickup: **1.3** feet (El. ')

Existing Grade (El. ')

Water level at start of presoak from top of casing **5.0** feet (El. ')

Total depth of infiltration test point- from top of casing: **7.0** feet

Bottom of Casing **5.7** feet below ground surface (El. ')

TEST DATA

TEST DATE: 6/28/2017

START OF TEST TIME: 10:13 AM

IS THERE PRESOAK WATER IN TEST CASING?

YES

IF YES, WHAT DEPTH:

4.70 **FEET FROM TOP OF CASING.**

(El. ')

RUN NUMBER	START TIME (HOURS)	END TIME (HOURS)	ELAPSED TIME (MIN)	DROP IN WATER LEVEL DURING TEST RUN (FEET)	REFILLED WITH WATER, LEVEL FROM TOP OF CASING (FEET)
START					4.95
RUN #1	10:13	11:13	60	0.00	4.95
RUN #2	11:13	12:13	60	0.00	4.95
RUN #3	12:13	1:13	60	0.00	4.95
RUN #4	1:13	2:13	60	0.00	

AVERAGE INFILTRATION RATE **0.00** FEET PER HOUR

AVERAGE INFILTRATION RATE **0.0** INCHES PER HOUR

TESTED BY: C. Hill

SJB SERVICES, INC.

INFILTRATION TEST DATA SUMMARY

PROJECT: Proposed Housing & Site Development

LOCATION: Trumansburg, NY

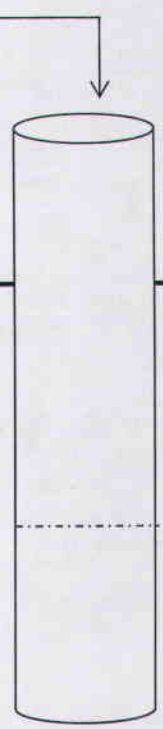
PROJECT NO.: CE-17-014

INFILTRATION TEST POINT: IT-2

PRESOAK DATE: 6/27/2017

PRESOAK TIME: AM

Diameter of Casing
4.0 inches



Casing Stickup:
1.0 feet
(El. ')

Existing Grade
(El. ')

TEST DATA

TEST DATE: 6/28/2017

START OF TEST TIME: 10:41 AM

IS THERE PRESOAK WATER IN TEST CASING?
YES

IF YES, WHAT DEPTH:
3.23 FEET FROM TOP OF CASING.
(El. ')

Water level at start of presoak from top of casing
4.7 feet
(El. ')

Total depth of infiltration test point- from top of casing:
6.7 feet

Bottom of Casing
5.7 feet below ground surface (El. ')

RUN NUMBER	START TIME (HOURS)	END TIME (HOURS)	ELAPSED TIME (MIN)	DROP IN WATER LEVEL DURING TEST RUN (FEET)	REFILLED WITH WATER, LEVEL FROM TOP OF CASING (FEET)
START					4.64
RUN #1	10:41	11:41	60	-0.05	4.59
RUN #2	11:41	12:41	60	0.00	4.59
RUN #3	12:42	1:42	60	-0.02	4.57
RUN #4	1:43	2:43	60	-0.01	

Note: Water moved slightly upward inside casing during course of test, no infiltration occurring.

AVERAGE INFILTRATION RATE **-0.02** FEET PER HOUR

AVERAGE INFILTRATION RATE **-0.2** INCHES PER HOUR

TESTED BY: C. Hill

INFILTRATION TEST DATA SUMMARY

PROJECT: Proposed Housing & Site Development

LOCATION: Trumansburg, NY

PROJECT NO.: CE-17-014

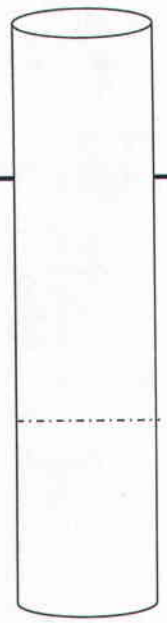
INFILTRATION TEST POINT: IT-3

PRESOAK DATE: 6/27/2017

PRESOAK TIME: AM

Diameter of Casing **4.0** inches

Casing Stickup: **0.9** feet (El. ')



Existing Grade (El. ')

Water level at start of presoak from top of casing **5.8** feet (El. ')

Total depth of infiltration test point- from top of casing: **6.8** feet

Bottom of Casing **6.0** feet below ground surface (El. ')

TEST DATA

TEST DATE: 6/28/2017

START OF TEST TIME: 10:41 AM

IS THERE PRESOAK WATER IN TEST CASING?
YES

IF YES, WHAT DEPTH:

2.31 **FEET FROM TOP OF CASING.**
(El. ')

RUN NUMBER	START TIME (HOURS)	END TIME (HOURS)	ELAPSED TIME (MIN)	DROP IN WATER LEVEL DURING TEST RUN (FEET)	REFILLED WITH WATER, LEVEL FROM TOP OF CASING (FEET)
START					4.64
RUN #1	10:31	11:31	60	-0.07	4.59
RUN #2	11:32	12:32	60	-0.02	4.59
RUN #3	12:34	1:34	60	-0.05	4.57
RUN #4	1:35	2:35	60	-0.05	

Note: Water moved slightly upward inside casing during course of test, no infiltration occurring.

AVERAGE INFILTRATION RATE **-0.05** FEET PER HOUR

AVERAGE INFILTRATION RATE **-0.6** INCHES PER HOUR

TESTED BY: C. Hill

SJB SERVICES, INC.

INFILTRATION TEST DATA SUMMARY

PROJECT: Proposed Housing & Site Development

LOCATION: Trumansburg, NY

PROJECT NO.: CE-17-014

INFILTRATION TEST POINT: IT-4

PRESOAK DATE: 6/27/2017

PRESOAK TIME: AM

TEST DATA

TEST DATE: 6/28/2017

START OF TEST TIME: 10:22 AM

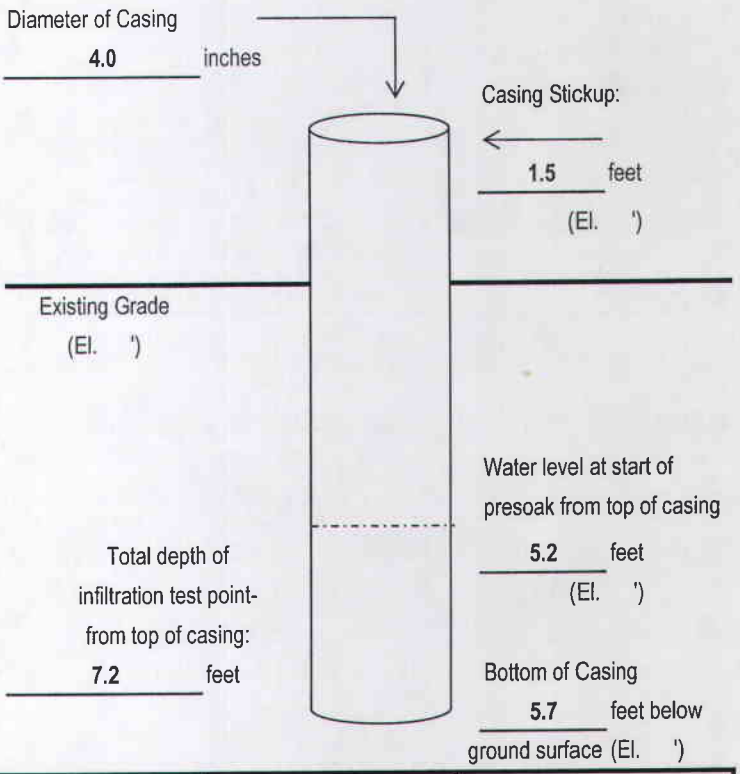
IS THERE PRESOAK WATER IN TEST CASING?

YES

IF YES, WHAT DEPTH:

3.60 **FEET FROM TOP OF CASING.**

(El. ')



RUN NUMBER	START TIME (HOURS)	END TIME (HOURS)	ELAPSED TIME (MIN)	DROP IN WATER LEVEL DURING TEST RUN (FEET)	REFILLED WITH WATER, LEVEL FROM TOP OF CASING (FEET)
START					5.15
RUN #1	10:22	11:22	60	-0.44	5.19
RUN #2	11:22	12:22	60	-0.39	5.17
RUN #3	12:23	1:23	60	-0.35	5.20
RUN #4	1:24	2:24	60	-0.36	

Water moved upward inside casing during course of test, no infiltration occurring.

AVERAGE INFILTRATION RATE **-0.39** FEET PER HOUR

AVERAGE INFILTRATION RATE **-4.6** INCHES PER HOUR

TESTED BY: C. Hill

SJB SERVICES, INC.

INFILTRATION TEST DATA SUMMARY

PROJECT: Proposed Housing & Site Development

LOCATION: Trumansburg, NY

PROJECT NO.: CE-17-014

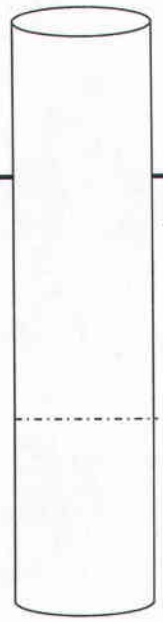
INFILTRATION TEST POINT: IT-5

PRESOAK DATE: 6/27/2017

PRESOAK TIME: AM

Diameter of Casing **4.0** inches

Casing Stickup: **1.5** feet (El. ')



Existing Grade (El. ')

Water level at start of presoak from top of casing **4.0** feet (El. ')

Total depth of infiltration test point- from top of casing: **6.0** feet

Bottom of Casing **4.6** feet below ground surface (El. ')

TEST DATA

TEST DATE: 6/28/2017

START OF TEST TIME: 8:50 AM

IS THERE PRESOAK WATER IN TEST CASING?

YES

IF YES, WHAT DEPTH:

4.48 **FEET FROM TOP OF CASING.**

(El. ')

RUN NUMBER	START TIME (HOURS)	END TIME (HOURS)	ELAPSED TIME (MIN)	DROP IN WATER LEVEL DURING TEST RUN (FEET)	REFILLED WITH WATER, LEVEL FROM TOP OF CASING (FEET)
START					3.30
RUN #1	8:50	9:50	60	0.00	3.30
RUN #2	9:51	10:51	60	0.00	3.30
RUN #3	10:51	11:51	60	0.00	3.30
RUN #4	11:51	12:51	60	0.01	

AVERAGE INFILTRATION RATE **0.00** FEET PER HOUR

AVERAGE INFILTRATION RATE **0.0** INCHES PER HOUR

TESTED BY: C. Hill

APPENDIX D

Percolation Test Results

Contract Drilling and Testing
SJB SERVICES, INC.

CORTLAND OFFICE
60 Miller Street
Cortland, New York 13045

Phone: (607) 758-7182
Fax: (607) 758-7188

REPORT OF PERCOLATION TEST

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
WEATHER & TEMPERATURE: Sun & clouds

TEST NO: PT-1
JOB NO: CE-17-014
DATE OF TEST: 6/28/2017

SUBSOIL DATA

Soil Types and Depth Encountered:
12-inches of Topsoil
12 to 18-inches: Brown/clayey SILT with trace of roots
18 to 24-inches; Sandy SILT

Ground Water Data: Water seeping in at bottom of hole, Wet to saturated at 24-inches (Bottom)

Bedrock Encountered: None

PERCOLATION TEST HOLE DATA

Depth to the Bottom of Test Hole (top of percolation hole) : N/A
Dimension of Percolation Hole: Depth: 24-inches Length: _____ Width: _____ Diameter: 12-inches
Presoak Drainage Time: Overnight

TEST DATA

Time required for water to drop from 6" level to 5" level.

RUN NO	TIME (MINUTES)
1	>60
2	
3	
4	
5	
6	

Remarks: No percolation occurred at this location.

Respectfully submitted,
SJB Service, Inc.

Technician: M. Warner

Parviz Akbari
Geotechnical Engineer, E.I.T.

Contract Drilling and Testing
SJB SERVICES, INC.

CORTLAND OFFICE
60 Miller Street
Cortland, New York 13045

Phone: (607) 758-7182
Fax: (607) 758-7188

REPORT OF PERCOLATION TEST

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
WEATHER & TEMPERATURE: Sun & clouds

TEST NO: PT-2
JOB NO: CE-17-014
DATE OF TEST: 6/28/2017

SUBSOIL DATA

Soil Types and Depth Encountered: 11-inches; Topsoil
11 to 24-inches; sandy SILT with gravel

Ground Water Data: Dry

Bedrock Encountered: None

PERCOLATION TEST HOLE DATA

Depth to the Bottom of Test Hole (top of percolation hole) : N/A

Dimension of Percolation Hole: Depth: 24-inches Length: _____ Width: _____ Diameter: 12-inches

Presoak Drainage Time: Overnight

TEST DATA

Time required for water to drop from 6" level to 5" level.

RUN NO	TIME (MINUTES)
1	>60
2	
3	
4	
5	
6	

Remarks: No percolation occurred at this location.

Respectfully submitted,
SJB Service, Inc.

Technician: M. Warner

Parviz Akbari
Geotechnical Engineer, E.I.T.

Contract Drilling and Testing
SJB SERVICES, INC.

CORTLAND OFFICE
60 Miller Street
Cortland, New York 13045

Phone: (607) 758-7182
Fax: (607) 758-7188

REPORT OF PERCOLATION TEST

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
WEATHER & TEMPERATURE: Sun & Clouds

TEST NO: PT-3
JOB NO: CE-17-014
DATE OF TEST: 6/28/2017

SUBSOIL DATA

Soil Types and Depth Encountered:
10.5-inches of Topsoil
10.5 to 24-inches; Brown Silt with trace of roots
24 to 26-inches; Wet gray silty fine sand,
.

Ground Water Data: Wet at 24-inches, water was infiltrating into test hole at a depth of about 24 inches

Bedrock Encountered: None

PERCOLATION TEST HOLE DATA

Depth to the Bottom of Test Hole (top of percolation hole) : N/A
Dimension of Percolation Hole: Depth: 26-inches Length: _____ Width: _____ Diameter: 12-inches
Presoak Drainage Time: Overnight

TEST DATA

Time required for water to drop from 6" level to 5" level.

RUN NO	TIME (MINUTES)
1	>60
2	
3	
4	
5	
6	

Remarks: No percolation occurred at this location.

Respectfully submitted,
SJB Service, Inc.

Technician: M. Warner

Parviz Akbari
Geotechnical Engineer, E.I.T.

Contract Drilling and Testing
SJB SERVICES, INC.

CORTLAND OFFICE
60 Miller Street
Cortland, New York 13045

Phone: (607) 758-7182
Fax: (607) 758-7188

REPORT OF PERCOLATION TEST

PROJECT: Proposed Housing & Site Development
CLIENT: Ithaca Neighborhood Housing Services, Inc.
WEATHER & TEMPERATURE: Sun & Clouds

TEST NO: PT-4
JOB NO: CE-17-014
DATE OF TEST: 6/28/2017

SUBSOIL DATA

Soil Types and Depth Encountered: 10-inches of Topsoil
10 to 24-inches; Light Brown Silt, medium to course gravel with trace of roots.

Ground Water Data: Dry

Bedrock Encountered: None

PERCOLATION TEST HOLE DATA

Depth to the Bottom of Test Hole (top of percolation hole) : N/A
Dimension of Percolation Hole: Depth: 24-inches Length: _____ Width: _____ Diameter: 12-inches
Presoak Drainage Time: Overnight

TEST DATA

Time required for water to drop from 6" level to 5" level.

RUN NO	TIME (MINUTES)
1	>60
2	
3	
4	
5	
6	

Remarks: No percolation occurred at this location.

Respectfully submitted,
SJB Service, Inc.

Technician: M. Warner

Parviz Akbari
Geotechnical Engineer, E.I.T.

Contract
Drilling
and
Testing
SJB SERVICES, INC.

CORTLAND OFFICE
60 Miller Street
Cortland, New York 13045

Phone: (607) 758-7182
Fax: (607) 758-7188

REPORT OF PERCOLATION TEST

PROJECT: Proposed Housing & Site Development
TEST NO: PT-5
CLIENT: Ithaca Neighborhood Housing Services, Inc.
JOB NO: CE-17-014
WEATHER & TEMPERATURE: Sun & Clouds
DATE OF TEST: 6/28/2017

SUBSOIL DATA

Soil Types and Depth Encountered:
4-inches of Topsoil
4 to 10.5-inches; Ash cinders
10.5 to 27-inches; SILT, some gravel, trace roots

Ground Water Data: Dry

Bedrock Encountered: None

PERCOLATION TEST HOLE DATA

Depth to the Bottom of Test Pit (Top of Percolation Hole): N/A
Dimension of Percolation Hole: Depth: 27-inches Length: _____ Width: _____ Diameter: 12-inches
Presoak Drainage Time: Overnight

TEST DATA

Time required for water to drop from 6" level to 5" level.

RUN NO	TIME (MINUTES)
1	7
2	7
3	14
4	13
5	16
6	14

Remarks: Percolation rate stabilized at approx. 16 minutes per inch.

Respectfully submitted,
SJB Service, Inc.

Technician: M. Warner

Parviz Akbari
Geotechnical Engineer, E.I.T.

APPENDIX E

Summary of Groundwater Measurements (Table 2)

Table 2: Groundwater Observations Inside Borings					
Boring No.	Total Depth Drilled (ft. bgs)	Ground Surface Elevations (±) (ft)	Depths to Groundwater (feet)		
			During Drilling	After Completion of Drilling	Measurements on following day / days
BB-1	18.8	993.0	13.6	-	-
BB-2	Test boring was not drilled due to wet/standing water conditions				
BB-3	20.0	1002.7	-	17.7	-
BB-4	24.8	997.9	-	19.4	5.2
BB-5	20.0	997.9	-	11.3	-
BB-6	20.0	997.7	-	-	-
BB-7	12.9	993.1	-	-	3.6
BB-8	18.4	991.6	-	16.4	-
*BB-9	38.2	992.6	-	-	-
BB-10	18.3	991.6	-	15.7	-
BB-11	19.7	991.0	-	-	-
BB-12	18.8	990.2	-	-	-
BB-13	18.4	993.0	6.1	-	--
BB-14	19.2	990.9	-	-	-
BB-15	37.4	996.0	-	-	4.9
BB-16	18.4	993.6	-	-	-
BB-17	18.3	988.4	-	-	-
BB-18	18.4	990.8	3	3	At ground surface
BB-19	18.3	992.8	-	-	-
BB-20	20.0	994.3	14.6	-	6.9
PB-1	Test boring was not drilled due to insufficient access				
PB-2	9.4	994.3	-	-	-
PB-3	8.7	992.3	-	-	-
PB-4	12	996.4	-	-	-
PB-5	12	998.6	-	-	-
PB-6	10	988.2	-	-	-
PB-7	10	978.9	-	-	-
PB-8	8.1	991.0	5.8	5.3	-
PB-9	8.7	991.0	-	-	-
PB-10	9.4	993.7	-	-	2.7
IT-1	8.4	992.1	-	-	-
IT-2	8.8	991.3	-	-	-
IT-3	10.0	990.6	-	-	-
IT-4	10.0	994.4	-	-	Wet at bottom
IT-5	10.0	978.9	-	-	-

BB: Building borings, PB: Pavement borings, IT: Infiltration borings
IT-5/PB-7: Due to close proximity of these borings to each other, one boring was performed to serve as both
***Elevation is estimated from site plans**

APPENDIX F

General Fill Material and Earthwork Recommendations

APPENDIX F

GENERAL FILL MATERIAL AND EARTHWORK RECOMMENDATIONS

I. Material Recommendations

A. Structural Fill

Structural Fill should consist of processed sand and gravel or crusher run stone, free of clay, organics and friable or deleterious particles. As a minimum, the material should meet the requirements of NYS Department of Transportation Standard Specifications, Item 733.0402 or 733.0404 – Type 2 or 4 Subbase, with the following general gradation limits.

Sieve Size Distribution	Percent Finer by Weight
2 inch	100
¼ inch	25-65
No. 40	5-40
No. 200	0-10

B. Suitable Granular Fill

Suitable soil material, classified as GW, GP, GM, SW, SP and SM soils using the Unified Soil Classification System (ASTM D-2487) and having no more than 85- percent material by weight passing the No. 40 sieve, no more than 20- percent material by weight passing the No. 200 sieve and which is generally free of particles greater than 6 inches, will be acceptable as Suitable Granular Fill. It should also be free of topsoil, asphalt, concrete rubble, wood, debris, clay and other deleterious materials. Suitable Granular Fill should be used as foundation backfill.

II. Placement and Compaction Requirements

All controlled fill placed beneath foundations, and all foundation backfill should be compacted to a minimum 95 percent of the maximum dry density as determined by the modified Proctor test (ASTM D1557). During placement, individual fill layers should not exceed a loose lift thickness of 6 to 9 inches, and lift thickness should be limited as necessary to ensure that adequate compaction is achieved with the compaction equipment in use.

Fill should have a moisture content within two percent of the optimum moisture content prior to compaction. Subgrades should be properly drained and protected from moisture and frost. Placement of fill on frozen subgrades is not acceptable. It is recommended that all fill placement and compaction be monitored and tested by

a representative of Empire Geo-Services, Inc.

III. Quality Assurance Testing

The following minimum laboratory and field quality assurance testing frequencies are recommended to verify fill material quality, and to ensure satisfactory placement and compaction of the fill. These minimum frequencies are based on generally uniform material properties and placement conditions. Should material properties vary or conditions at the time of placement vary (e.g., moisture content, placement and compaction, procedures or equipment, etc.) Then more frequent testing would be recommended. Any additional testing which may be necessary should be determined by qualified geotechnical personnel, based on evaluation of the actual fill material and construction conditions.

A. Laboratory Testing of Material Properties

- Moisture content (ASTM D-2216) - 1 test per 4000 cubic yards or no less than 2 tests per each material type.
- Grain size analysis (ASTM D-422) - 1 test per 4000 cubic yards or no less than 2 tests per each material type.
- Liquid and plastic limits (ASTM D-4318) - 1 test per 4000 cubic yards or no less than 2 tests per each material type. Liquid and plastic limit testing would generally be necessary only if deemed appropriate based on material composition (e.g., clayey or silty soils).
- Modified Proctor moisture-density relationship (ASTM D-1557) - 1 test per 4000 cubic yards or no less than 1 test per each material type. A maximum/minimum density relationship (ASTM D-4253 and ASTM D-4254) may be an appropriate substitute for ASTM D-1557 depending on material gradation.

B. Field In-Place Moisture/Density Testing (ASTM D-3017 and ASTM D-2922)

- Backfilling along trenches and foundation walls - 1 test per 50 lineal feet per lift.
- Backfilling isolated excavations (e.g., column foundations, manholes, etc.) - 1 test per lift.

APPENDIX G

Information Regarding Geotechnical Report

GEOTECHNICAL REPORT LIMITATIONS

Empire Geo-Services, Inc. (Empire) has endeavored to meet the generally accepted standard of care for the services completed, and in doing so is obliged to advise the geotechnical report user of our report limitations. Empire believes that providing information about the report preparation and limitations is essential to help the user reduce geotechnical-related delays, cost over-runs, and other problems that can develop during the design and construction process. Empire would be pleased to answer any questions regarding the following limitations and use of our report to assist the user in assessing risks and planning for site development and construction.

PROJECT SPECIFIC FACTORS: The conclusions and recommendations provided in our geotechnical report were prepared based on available project specific factors described in the report, such as size, loading, and intended use of structures; general configuration of structures, roadways, and parking lots; existing and proposed site grading; or any other pertinent project information. Changes to the project details may alter the factors considered in development of the report conclusions and recommendations. *Accordingly, Empire cannot accept responsibility for problems which may develop if we are not consulted regarding any changes to the project specific factors that were assumed during the report preparation.*

SUBSURFACE CONDITIONS: The site exploration investigated subsurface conditions only at discrete test locations. Empire has used judgment to infer subsurface conditions between the discrete test locations, and on this basis the conclusions and recommendations in our geotechnical report were developed. It should be understood that the overall subsurface conditions inferred by Empire may vary from those revealed during construction, and these variations may impact on the assumptions made in developing the report conclusions and recommendations. *For this reason, Empire should be retained during construction to confirm that conditions are as expected, and to refine our conclusions and recommendations in the event that conditions are encountered that were not disclosed during the site exploration program.*

USE OF GEOTECHNICAL REPORT: Unless indicated otherwise, our geotechnical report has been prepared for the use of our client for specific application to the site and project conditions described in the report. *Without consulting with Empire, our geotechnical report should not be applied by any party to other sites or for any uses other than those originally intended.*

CHANGES IN SITE CONDITIONS: Surface and subsurface conditions are subject to change at a project site subsequent to preparation of the geotechnical report. Changes may include, but are not limited to, floods, earthquakes, groundwater fluctuations, and construction activities at the site and/or adjoining properties. *Empire should be informed of any such changes to determine if additional investigative and/or evaluation work is warranted.*

MISINTERPRETATION OF REPORT: The conclusions and recommendations contained in our geotechnical report are subject to misinterpretation. *To limit this possibility, Empire should review project plans and specifications relative to geotechnical issues to confirm that the recommendations contained in our report have been properly interpreted and applied.*

Subsurface exploration logs and other report data are also subject to misinterpretation by others if they are separated from the geotechnical report. This often occurs when copies of logs are given to contractors during the bid preparation process. *To minimize the potential for misinterpretation, the subsurface logs should not be separated from our geotechnical report and the use of excerpted or incomplete portions of the report should be avoided.*

OTHER LIMITATIONS: Geotechnical engineering is less exact than other design disciplines, as it is based partly on judgment and opinion. For this reason, our geotechnical report may include clauses that identify the limits of Empire's responsibility, or that may describe other limitations specific to a project. These clauses are intended to help all parties recognize their responsibilities and to assist them in assessing risks and decision making. Empire would be pleased to discuss these clauses and to answer any questions that may arise.

Exhibit U

Board of Education
Jane Gallagher, President
Gary Astles, Vice-President
Douglas Ann Land
Frank S. Rossi
Michelle E. Wright
Sarah Vakkas
Tina Lincoln, District Clerk

TRUMANSBURG CENTRAL SCHOOL DISTRICT
"A Great Place to Learn, Live and Grow"
100 Whig Street, Trumansburg, NY 14886-9179
(607) 387-7551
www.tburgschools.org

Administration
Michael McGuire
Superintendent of Schools
Kimberly Bell
Assistant Superintendent for
Business & Administration
Angela Gemignani
Director of Special Education
&Instructional Services
Michael Pliss
Director of Technology

June 12, 2017

Dear Mr. Bowes,

I am writing to confirm that the Trumansburg Central School District does have capacity to absorb the additional enrollment After reviewing the Hamilton Square proposal and various projected numbers (as high as 71) for students who may enroll in the Trumansburg Central School District.

My confirmation is based on our current enrollment of 1068 students as of June 3rd, 2017 (including Pre-K) and the fact that our district has served enrollments of 1275 within the past ten years.

Please contact me if you have any questions.

Best Regards,

Michael B McGuire

Superintendent

Ithaca Neighborhood
HOUSING SERVICES

CELEBRATING 40 YEARS

June 12, 2017

Michael McGuire
Superintendent
Trumansburg Central School District
100 Whig St.
Trumansburg, NY 14886

Re: Hamilton Square Development

Dear Superintendent McGuire:

The attached analysis provides an estimate of the number of children that will live at Hamilton Square when the project is fully built out. This letter is to request that the school district provide a letter that indicates whether or not the district has capacity to serve the number of children identified. It would be extremely helpful if you could provide a letter prior to June 20th when we plan to submit our application to the Village. If you have any questions regarding the information attached please do not hesitate to contact me.

Sincerely,

Joseph L. Bowes
Director of Real Estate Development

Projected # of children at Hamilton Square

Based on the proposed unit mix for 46 South Street, approximately 71 individuals age 18 or younger can be expected to live in Hamilton Square. A projection of the number of children who would live in rental units was calculated using the rent rolls for all INHS properties, with the exclusion of senior housing. A projection of the number of children who would live in the for-sale properties was calculated using data collected about individuals and families who purchased homes through the INHS Community Land Trust.

Please note that not all of these children will be new to the district. Based on tenant applications from past projects, we expect a percentage of the residents will already be enrolled in the district when they move to Hamilton Square. Additionally, children not yet eligible for school, ages 1-4, were included in these projections. Children ages 1-4 made up approximately 20% of the population of children in INHS rental properties. The table below estimates the number of units and number of bedrooms as of the writing of this memo.

Hamilton Square Development Projection Total			
Bedrooms	# of units	# of units with children	Projected # of children
1	20	0	0
2	21	9	11
3	30	19	40
4	10	10	20
	81		**71**

*all data rounded to nearest whole number.
**81 Units is higher than currently projected.

Rental Projection			
Bedrooms	# of units	# of units with children	Projected # of children
1	14	0	0
2	21	9	11
3	13	10	21
4	0	0	0
	48		32

Homeowner Projection			
Bedrooms	# of units	# of units with children	Projected # of children
1	6	0	0
2	0	0	0
3	17	10	19
4	10	10	20
	33		39

Ithaca Neighborhood HOUSING SERVICES

CELEBRATING 40 YEARS

Methods used to calculate projected # of children

Example: Calculating the projected number of children in 2 BR rental units at Hamilton Square Development.

1. Calculate total number of children living in INHS 2 BR rental units, with the exclusion of senior housing.

39

2. Find the proportion of 2 BR rental units with children.

32 of 76 2 BR units had children. 42.11% of 2 BR units have residents age 18 and under.

3. Of the 2 BR rental households with children, calculate the average number of children per household.

39 children/32 households = 1.22 children per 2 BR household

4. Calculate expected number of children for 2 BR rental units at Hamilton Square

Hamilton Square will have 20 2 BR units. Approximately 42.11% of INHS 2 BR units have children, so it can be expected that approximately 8.42 units will have children. 2 BR units have an average of 1.21 children per household; therefore 10.26 children are projected to live in the 2 BR units at Hamilton Square.

5. Repeat process for all rental sizes using INHS rent rolls. Repeat for all for-sale sizes using Community Land Trust data.

Hamilton Square Total Development Projection

# of bedrooms	# of units	# of units w/ children	# of children	
1	20	0.12173913	0.12173913	
2	21	8.842105263	10.7763158	
3	30	19.312921	40.4568279	
4	10	10	20	
	81		**71.3548828**	**total # of children**

Calculation of Number of Children at Hamilton Square Based on Existing INHS Rental Properties

total # of children in all BRs:	**164**
total children in 1 BR:	**1**
% of 1BR with children:	**0.87%**
for households with children, average number:	**1**
total children in 2 BR:	**39**
% of 2BR with children:	**42.11%**
for households with children, average number:	**1.21875**
total children in 3 BR:	**116**
% of 3BR with children:	**74.65%**
for households with children, average number:	**2.188679245**
total children in 4 BR:	**8**
% of 4BR with children:	**100.00%**
for households with children, average number:	**2.666666667**

Hamilton Square Rental Projection

# of bedrooms	# of units	# of units w/ children	# of children	
1	14	0.12173913	**0.12173913**	
2	21	8.842105263	**10.77631579**	
3	13	9.704225352	**21.23943662**	
4	0	0	**0**	
	48		***32.13749154***	***total # of children***

Ithaca Neighborhood HOUSING SERVICES

CELEBRATING 40 YEARS

Calculation of Number of Children at Hamilton Square Based on INHS Community Land Trust

total # of children in all BRs:	**38**
total children in 2 BR:	**10**
% of 1BR with children:	**33.33%**
for households with children, average number:	**1.25**
total children in 3 BR:	**26**
% of 2BR with children:	**56.52%**
for households with children, average number:	**2**
total children in 5 BR:	**2**
% of 5BR with children:	**100.00%**
for households with children, average number:	**2**

Hamilton Square Homeowner Projection

# of bedrooms	# of units	# of units w/ children	# of children	
1	6	0	**0**	
2	0	0	**0**	
3	17	9.608695652	**19.21739**	
4	10	10	**20**	
	33		**39.21739**	***total # of children***

From: Dana Swick
To: Alena Fast
Subject: Re: Road design 46 South Street
Date: Wednesday, August 02, 2017 12:57:05 PM

Hi Alena, I found the proposed road design for Hamilton Square to follow the road specs in the Subdivision rules and regulations. I think the road design will be sufficient. Dana

From: Alena Fast
Sent: Tuesday, August 01, 2017 10:52 AM
To: 'Dana Swick'
Subject: Road design 46 South Street

Hi Dana,

Thanks again for the meeting last week to discuss the proposed road design for Hamilton Square. Would you be willing to write a quick note stating that you think the road design will be sufficient? It's fine to just respond to this email, too. Thank you!

Alena Fast
Real Estate Developer
Ithaca Neighborhood Housing Services, Inc.
115 West Clinton Street
Ithaca, NY 14850
Direct: 607-277-4500 x236
Cell: 336-207-7476
afast@ithacanhs.org

From: [redacted]
To: [redacted]
Subject: FW: Hamilton Square
Date: [redacted]

From: Anthony Martin Petrovic [mailto:amp4@cornell.edu]
Sent: Thursday, July 13, 2017 1:58 PM
To: Joe Bowes
Cc: Watkins, Debbie; Tammy Morse (clerk@trumansburg-ny.gov)
Subject: RE: Hamilton Square

Hi Joe, I may make it tonight. The short answer is yes we have the capacity to handle a project of this scope. I would suggest that as soon as you put in your application you officially ask the Village if it can be supply the water necessary for the number of units proposed and have the sewer plant capacity to handle the number of units proposed. I have copied Debbie Watkins our Water and Sewer Commissioner who will respond to your request after we receive it, Marty

A. Martin Petrovic
Mayor
Village of Trumansburg
56 E. Main St.
Trumansburg, NY 14886
Email: mayor@trumansburg-ny.gov
Tel at Village Office: (607)387-6501
cell: (607)227-0310
fax: (607)387-6938
home (607)387-6770
http://www.trumansburg-ny.gov/index.htm

From: Joe Bowes [mailto:jbowes@ithacanhs.org]
Sent: Thursday, July 13, 2017 11:09 AM
To: Anthony Martin Petrovic <amp4@cornell.edu>
Subject: RE: Hamilton Square

Thanks Marty,
I was wondering if you are planning to attend the community meeting tonight? We have been asked several times about capacity of the water and sewer system and the need for new users to help defray the costs associated with the new water system in particular. We cannot answer those questions so having someone from the Village who knows more about the inner workings I think would be helpful. Feel free to call or email with any questions.
Best,
Joe

Joseph L. Bowes
Director of Real Estate Development
Ithaca Neighborhood Housing Services, Inc.

From: Jason Fulton
To: Alena Fast
Subject: Re: Fire/EMS response capacity
Date: Wednesday, August 02, 2017 7:39:50 PM

Alena,

As the Fire Chief of the Trumansburg Fire Department I do not see any reason for increasing our department or needing any additional resources due to the building of Hamilton Square.

Sincerely,

Chief Fulton

Jason Fulton
City of Ithaca Firefighter / EMT
Trumansburg Fire Department - Fire Chief

On Wednesday, August 2, 2017 4:25 PM, Alena Fast <afast@ithacanhs.org> wrote:

Hello Jason and Bryan,

Thanks again for meeting with us this morning to discuss the proposed development at 46 South Street and whether fire and EMS services would need to increase personnel or equipment to properly handle the estimated 200 person increase in population over 10 years. It'd be great to get a note from you about this by this Friday, if possible. Thank you!

Alena Fast
Real Estate Developer
Ithaca Neighborhood Housing Services, Inc.
115 West Clinton Street
Ithaca, NY 14850
Direct: 607-277-4500 x236
Cell: 336-207-7476
afast@ithacanhs.org

From: Brian Snyder
To: Alena Fast
Subject: Re: Fire/EMS response capacity
Date: Monday, August 07, 2017 2:06:15 PM

Good afternoon Alena.

I would like to thank you for the opportunity review the plans for the proposed development at 46 South Street. As we discussed in our meeting, I do not have any concerns about the increase demands placed on the Trumansburg EMS agency. The village has the resources in both equipment and personnel to handle this increase now and for the foreseeable future.

I wish you all the best moving forward with your project.

Respectfully,

Brian Snyder
EMS Manager
The Village of Trumansburg

On Wednesday, August 2, 2017 4:25 PM, Alena Fast <afast@ithacanhs.org> wrote:

Hello Jason and Bryan,

Thanks again for meeting with us this morning to discuss the proposed development at 46 South Street and whether fire and EMS services would need to increase personnel or equipment to properly handle the estimated 200 person increase in population over 10 years. It'd be great to get a note from you about this by this Friday, if possible. Thank you!

Alena Fast
Real Estate Developer
Ithaca Neighborhood Housing Services, Inc.
115 West Clinton Street
Ithaca, NY 14850
Direct: 607-277-4500 x236
Cell: 336-207-7476
afast@ithacanhs.org

Exhibit V

F. Robert Wesley
212 Hill Road
Ithaca, NY 14850
(607) 227-7961
8 June 2017

Alena Fast
Real Estate Developer
Ithaca Neighborhood Housing Services, Inc.
115 West Clinton Street
Ithaca, NY 14850

Dear Alena Fast;

In May and June of 2017, I completed a rare flora and fauna survey for the approximately 19-acre 46 South Street parcel in the Village of Trumansburg located between South Street and Pennsylvania Avenue, as shown in the attached map. The field work was done between 30 May and 5 June of 2017. I was unable to find any state-listed rare species or rare ecological community types on the property, even though NYS DEC Environmental Resource Mapper suggested some may be found in the vicinity of the site. A thorough search of the site revealed no species or ecological communities listed as rare, threatened or endangered by New York State. No federally listed species were found or have ever been recorded here.

I completed a detailed visual examination of the site. Also, I looked for records of rare species in the relevant literature, on or adjacent to the site. No records exist for rare species on the site itself, nor are there any immediately adjacent. In addition, unpublished herbarium and museum records were sought by examining the collections at Cornell University. The NYS DEC Environmental Resource Mapper and Nature Explorer suggested that the following New York State-listed rare ecological community type, Calcareous shoreline outcrop may be found here. Further research indicated that this natural feature is associated with the shores of Taughannock Creek. Some rare plant and animal species came up in some searches, but these proved to be located within Taughannock Gorge. I put in an information request to the NY Natural Heritage Program, but have not received a reply from them yet. Again, I was unable to find any of these, or any other species, that is listed as Rare, Threatened or Endangered in New York State.

Sincerely,

F. Robert Wesley

Ithaca Neighborhood Housing Services

46 South Street

Trumansburg, NY

Safe Routes to School

Existing Sidewalks

Planned Sidewalks

Context Plan

February 22, 2017

Scale: 1" = 200'

TWLA LANDSCAPE ARCHITECTS

From: Bailey, Amanda M (DEC)
To: Andrew Sciarabba
Subject: Northern long-eared bat occurrences in Tompkins County
Date: Friday, June 09, 2017 4:14:33 PM
Attachments: NLEB_occurrence by town.pdf

Hello!

I'm just sending an email confirming that we have no known occurrences of northern long-eared bats in Tompkins County, NY (winter or summer occurrences). As a result, there are no restrictions on clearing trees in the county.

Attached is a map showing all of our northern long-eared bat occurrences by town, for future reference.

Please let me know if there is anything else that I can do for you!

Thanks,
Mandy

Amanda Bailey
NEIWPCC Environmental Analyst; Wildlife Biologist
New York State Department of Environmental Conservation
625 Broadway, Albany, NY 12233
p: 518-402-8859; f: 518-402-8925
Amanda.Bailey@dec.ny.gov
www.neiwpcc.org

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Fish and Wildlife, New York Natural Heritage Program
625 Broadway, Fifth Floor, Albany, NY 12233-4757
P: (518) 402-8935 I F: (518) 402-8925
www.dec.ny.gov

June 22, 2017

F. Robert Wesley
212 Hill Road
Ithaca, NY 14850

Re: 46 South Street, Trumansburg
County: Tompkins Town/City: Ulysses

Dear Mr. Wesley:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

We have no records of rare or state-listed animals or plants, or significant natural communities at the project site or in its immediate vicinity.

The absence of data does not necessarily mean that rare or state-listed species, significant natural communities, or other significant habitats do not exist on or adjacent to the proposed site. Rather, our files currently do not contain information that indicates their presence. For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other resources may be required to fully assess impacts on biological resources.

This response applies only to known occurrences of rare or state-listed animals and plants, significant natural communities, and other significant habitats maintained in the Natural Heritage database. Your project may require additional review or permits; for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the NYS DEC Region 7 Office, Division of Environmental Permits, as listed at www.dec.ny.gov/about/39381.html.

Sincerely,

Nicholas Conrad
Information Resources Coordinator
New York Natural Heritage Program

633

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Exhibit W

NEW YORK STATE OF OPPORTUNITY.

Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ROSE HARVEY
Commissioner

March 09, 2017

Ms. Alena Fast
115 W. Clinton Street
Ithaca, NY 14850

Re: NYSHCR
New Construction
46 South Street, Trumansburg, NY 14886
17PR01553

Dear Ms. Fast:

Thank you for requesting the comments of the State Historic Preservation Office (SHPO). We have reviewed the project in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the National Environmental Policy Act and/or the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8).

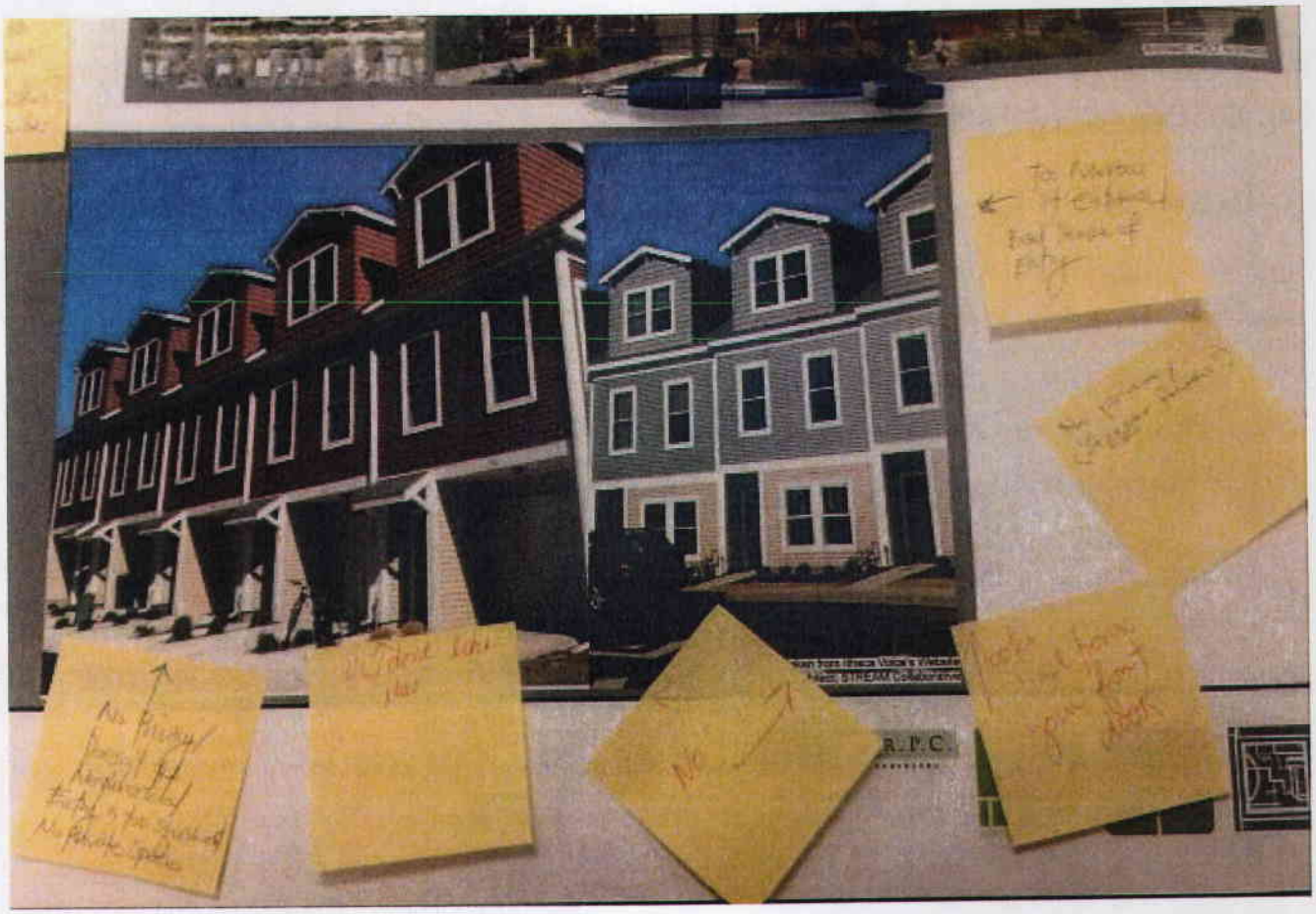
Based upon this review, the New York SHPO has determined that no historic properties will be affected by this undertaking.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above.

Sincerely,

Michael F. Lynch, P.E., AIA
Director, Division for Historic Preservation

Exhibit X



Opinion: 22 T-burg residents say 'Yes In My Backyard' to proposed housing project

DEVELOPMENT (HTTPS://ITHACAVOICE.COM/CATEGORY/ECONOMY/DEVELOPMENT/), OPINION (HTTPS://ITHACAVOICE.COM/CATEGORY/OPINION/) , TOMPKINS COUNTY (HTTPS://ITHACAVOICE.COM/CATEGORY/NEWS/TOMPKINS-COUNTY/) , TOP (HTTPS://ITHACAVOICE.COM/CATEGORY/TOP/) / MAY 25, 2017 / BY GUEST CONTRIBUTOR (HTTPS://ITHACAVOICE.COM/AUTHOR/GUEST/)

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Editor's Note: This is a guest editorial submitted by several Trumansburg residents. It was not written by the Ithaca Voice. Submit guest columns to tips@ithacavoice.com.

TRUMANSBURG, N.Y. — Recent discussion around a mixed housing development project between South St. and Pennsylvania Ave has prompted some of our neighbors to voice their concerns about affordable housing. One concern about the project, proposed by Ithaca Neighborhood Housing Services (INHS) and developer Claudia Brenner, seems to be that project will attract new residents to the Village who will threaten "the Trumansburg way of life."

But what is the Trumansburg Way of Life?

To us, the Trumansburg way of life includes people of all means and backgrounds.

It prioritizes making our community more affordable, rather than more exclusive. It opens our community to more young families and seniors, so that our village institutions and businesses grow and thrive well into the future. It cares for current residents, while welcoming new ones.bThere are people who currently work in Trumansburg but cannot afford to live here. There are seniors who wish to stay but cannot find affordable housing to do so.

We embrace these groups as people who make village life better, and make valuable contributions to our businesses and our organizations. As such, we believe we should be exploring all opportunities to meet their needs.

The proposed market- rate single family homes and affordable houses have the potential to fill this void for much needed new housing in our village, at a location within walking distance to our local downtown business district.

ARTICLE CONTINUES BELOW

The Village, INHS, and Claudia Brenner appear to be approaching this proposal thoughtfully, while ensuring that opportunities for public feedback are a top priority. We expect no less, and hope that all residents will participate with an open mind and an eye toward Trumansburg's long term future. We are excited to see the continued development plans, including the market-rate single family homes, green building infrastructure, and innovative water management strategies that utilize our updated and expanded water supply and sewer treatment facilities.

This project is in its early days. Let's give it a chance. Let's demonstrate the character of our community by showing an openness to socio-economic diversity. Let's demonstrate leadership in the county by taking a stand against a "property values first" mentality, in favor of a vibrant future that helps lift up people from all walks of life. Let's come together and start the conversation about how we shape the Trumansburg way of life.

INHS and Claudia Brenner anticipate submitting a formal proposal in July and we encourage all residents to attend the July 20th planning board meeting at 7:00pm as well as any public informational meetings held before then to share your questions and concerns with the folks working hard to address them.

Your Neighbors,

1. Keith Hannon, Whig St.
2. Cait Darfler, Whig St.
3. Erin Fierst, South St.
4. Sean Taylor, South St.
5. Dave Breeden, East Main St.
6. Maria Barry, East Main St.
7. Neil Shallish, Larchmont Dr.
8. Martha Kennedy, Lake St.
9. Chris Manly, Old Main St.
10. Marlaine Darfler, Elderado Dr.

11. Tim Bond, Washington St.
12. Don Kennedy, Lake St.
13. Casey Keller, Whig St.
14. Rick Darfler, Elderado Dr.
15. Maureen Shallish, Larchmont Dr.
16. Sarah Kennedy, Hector St.
17. Michele Mitrani, Washington St.
18. Nicole McGuire, Washington St.
19. Alexis Alexander, Cayuga St.
20. Marianne Arcangeli, Lake St.
21. Michelle Paolillo, Lake St.
22. Patricia Conroy, Cayuga St.

Featured image: Residents offer feedback on design aspects of a proposed new housing development in Trumansburg.

ECONOMY UNDERWRITER

Hilton Garden Inn, Ithaca

Located in downtown Ithaca across the street from the Ithaca Commons, famous for outstanding restaurants and shops. Also, just minutes to Cornell University, Ithaca College and many major businesses. LEARN MORE

ECONOMY UNDERWRITER

Coltivare Culinary Center

The downtown Ithaca culinary center, special event venue, & farm-to-bistro restaurant of Tompkins Cortland Community College LEARN MORE

ECONOMY UNDERWRITER

Tompkins County Area Development (TCAD)

TCAD supports business creation, retention, and expansion - contributing to a thriving and sustainable local economy. LEARN MORE

http://www.ithaca.com/opinion/guest_opinions/south-street-project-addressing-trumansburg-residents-concerns/article_ff277630-56a2-11e7-aeed-ab07b225a5d7.html

46 South Street Project: Addressing Trumansburg Residents' Concerns

Antonia Saxon Jun 21, 2017

It is a little daunting as a single individual to be writing a reply to an editorial piece signed by 72 Trumansburg friends and neighbors. But addressing some of the charges made in last week's editorial ("Way More Work to Do Before Getting to Yes on Hamilton Square," June 14, 2017, Trumansburg Free Press, Ovid Gazette, Interlaken Review) with actual data may lower the temperature of the discussion.

The editorial argues that the proposed South Street development will lead to an unacceptable increase in the population of Trumansburg; increase traffic congestion; burden infrastructure and emergency services; and suck up all the tax revenues it generates.

First, to state the obvious: Ithaca and its environs were recently determined by the Economic Policy Institute to be the eighth most expensive place to raise a family in the country. Not eighth in New York State: eighth in the United States. It is now more expensive to raise a family in the Ithaca area than it is to raise a family in San Francisco. Those of us who are fortunate enough to own our own homes are not experiencing the consequences of a housing crisis that is happening right here, right now. We need housing for the people who work at our doctor's offices, at our food stores, and deliver the other services we depend on.

The list of concerns voiced in opposition to the South Street proposal are the ones property owners often express in reaction to planned developments, but they may not reflect what the data actually show.

The first charge the editorial makes is that the development will cause an immediate 17 percent population increase to the Village's population. This is a scary number, but we can think about it another way. Many more people drive, walk and eat in the Village than those who live within the Village boundaries. If compared to greater Trumansburg—the number of people who live in the school district, for example—the increase becomes a blip.

Furthermore, the study produced for the school district's building use plans last fall notes that the district's K-12 school population fell 14.2 percent in the past six years alone, a precipitous drop. The study's authors forecast that the decline is likely to continue. We need young families to keep our community healthy.

Trumansburg saw an expansion this large when it annexed Auble Trailer Park. The park's 80 or so mobile homes are densely sited and fully occupied. The village added 24 more subsidized multifamily units in 2004 with Country Estates. The village supplies all services to both these projects. Neither is a burden to taxpayers.

Compact development is easier on services. Sewer and water lines are shorter. Emergency vehicle trips and school bus routes are shorter. This is the opposite of suburban sprawl that progressive communities want to avoid.

Increase in traffic is a concern. Single-family homeowners may envision car use like their own. Apartment-dwellers have fewer cars and make fewer trips. During every time segment of the week, a study of the Institute of Transportation Engineers found, single-family house dwellers took over 40 percent more automobile trips than apartment dwellers; on Saturdays, they used their cars 81 percent more often than apartment dwellers.

The editorial concludes with an appeal to preserve "the Trumansburg we love and cherish." We know that the Trumansburg we love and cherish is impossible to recreate. The kind of housing that makes Village streets so picturesque is not permitted now; lot size for single-family dwellings has grown. The scale of the South Street development is closer to old Trumansburg than it is to house construction under current zoning regulations.

It's natural for property owners to advocate on behalf of their own concerns, and the developers should be prepared to address them. Let the concessions they ask for be based on close study and temperate analysis.

Antonia Saxon

Washington St., Trumansburg

From: David Means
To: Alena Fast
Subject: T-Burg Housing
Date: Friday, June 30, 2017 12:57:38 PM

Hi Alena, I'm writing to tell you how pleased I am with your approach to getting more affordable housing in the village here in T-Burg ! Keep up the good work in trying to get as much input as you can to incorporate in your plans, looking forward to your next meeting in July.

Thanks, David Means

From: Joe Bowes
To: afast@ithacanhs.org
Subject: FW: Hamilton Square
Date: Wednesday, July 12, 2017 4:49:13 PM

Joseph L. Bowes
Director of Real Estate Development
Ithaca Neighborhood Housing Services, Inc.
115 West Clinton Street
Ithaca, NY 14850
Direct: 607-277-4500 x 204
Cell: 607-279-5616
jbowes@ithacanhs.org

From: Anthony Martin Petrovic [mailto:amp4@cornell.edu]
Sent: Wednesday, July 12, 2017 3:27 PM
To: Richard D. Geiger; 'Joe Bowes'
Subject: FW: Hamilton Square

fyi

From: Susan [mailto:smpeaceseeker@hotmail.com]
Sent: Wednesday, July 12, 2017 3:22 PM
To: mayor@trumansburg-ny.gov; watkins@trumansburg-ny.gov; carver@trumansburg-ny.gov; hart@trumansburg-ny.gov; kennedy@trumansburg-ny.gov
Subject: Hamilton Square

To: The Board of Trustees--Village of Trumansburg

I am writing this to you to give my opinion on the Hamilton Square project. The property in question has been for sale for quite some time. Anyone could have purchased it. It is my feeling that the buyer, whom I understand to be Claudia Brenner, has every right to do with her property what she wants as long as it fits within the many, many zoning regulations that can be found on pages and pages of well thought out scenarios. I would hope there would be no tax abatement discussion, but that the project financing would stand alone. The INHS and Claudia Brenner have been very kind to host numerous sessions, trying to get the public's input. They need not have done that. Again I say, the current owner should be allowed to do with her property whatever it is that she wants if it meets current zoning.

Susan Means
26A Prospect Street
Trumansburg NY 14886-8910

http://www.ithaca.com/opinion/guest_opinions/a-village-trustee-sticks-her-neck-out/article_cad7f4de-68bf-11e7-b219-7f1c8eecfd03.html

A Village Trustee Sticks Her Neck Out

Rachel Kennedy Jul 14, 2017

By Rachel Kennedy, T-burg Village Trustee

A recent opinion piece in the Ithaca Voice was, I believe, given an unfortunate title: "22 Residents Say 'Yes in My Backyard.'" The title obscured the purpose and sentiment of the piece, which is not a call to rubber stamp the proposed development at 46 South Street in Trumansburg, but to reflect on life in Trumansburg, and who it is for. It was triggered by a letter distributed door to door, in reaction to the proposal, that warned of outsiders and change in discriminatory language. That letter called for the preservation of the "Trumansburg Way of Life." But, as the 22 residents ask, what is the Trumansburg Way of Life, and who decides?

The authors and signers of the opinion piece are open to the project, but no less alert to the importance of the planning process, which all agree should be rigorous and public. As of this writing, there is not yet a plan for review on the planning board table. Based on concept plans (available to view at southstreetproject.org), residents are trying to hash out what a change like this will mean for the village they love. The neighborhood may feel and look differently. The view from some backyards bordering the property could change dramatically. Understandably, there are questions and opinions about density, traffic, design, environmental impact, and the processes in place for the village planning board to shepherd such a project to a satisfying conclusion. And, threading in and out of the conversation are concerns about who will live at 46 South Street, as the proposal includes affordable housing options. I write this not in the hopes of addressing every concern, but in an attempt to balance out the claim some have made that the fabric of the community is threatened. I would argue that the change we fear, a degradation of Trumansburg "character," may come if more affordable choices do not arrive.

A stable community is one that has a diversity of housing, for different circumstances and stages of life. Among those who want to live in Trumansburg are young adults who were once children here, seniors who wish to downsize, and those who work in or around Trumansburg. For some, renting is a preference. For others, a necessity because of traditionally lower costs. And for many young families, an opportunity to save toward a future home purchase. Without affordable rental and for-sale options, Trumansburg may cease to be a place where people of all ages and means can make a life and grow into the long-term residents who sustain the community. New housing opportunities will keep our streets and schools lively, and strengthen our Main Street business district, which we cherish, and which can't be taken for granted.

According to the Tompkins County comprehensive plan, median home purchase prices in the county almost doubled between 2000 and 2013. In 2014, nearly one in three homeowners and two in three renters spent more than 30 percent of income on housing, which is more than the standard for affordability established by HUD (U.S. Department of Housing and Urban Development). In 2014, according to the New York Times, Tompkins County had the 11th highest housing costs relative to income in the nation. Last month, the National Low Income Housing Coalition reported that the wage a full-time worker must earn to afford a modest two bedroom apartment at HUD's average fair market rent is $21.21 per hour, or just over $44,000 annually. This is more than twice the current New York State and Tompkins County minimum wage of $9.70 per hour.

Cost of housing is outpacing wage growth, and many people who want to live in Trumansburg because of family ties, because they work here, or because they want to work here can't afford to. Such a development could help close this gap. To achieve a mixed income development, INHS (Ithaca Neighborhood Housing Service), one of the partners proposing to develop here, sets aside rental units for people at various income levels based on county medians. Rent is based on 30 percent of income, and there is a minimum and a maximum income allowed for each type of unit. The numbers for "affordability" are surprising. According to INHS, to qualify for the moderate-income tier of three-bedroom apartments, the maximum allowable income is $68,000. This bears emphasizing. Your income could be $55,771, the median salary for a teacher in the T-burg district, and your family may qualify for affordable housing. Costs are that high. And certainly, units are also made available to workers earning at or closer to minimum wage, for whom obstacles to housing security are profound.

It is true that this proposal does not emphasize detached single-family homes, which have been a building block of the American dream for decades, but are by no means the only good option, nor necessarily best for the future. Who is to say the American dream cannot be reshaped? The "missing middle" is the term given to the housing gap that exists between single-family housing and multi-story apartment buildings. Filling in this gap may help solve some of the problems associated with affordability and environmental costs associated with sprawl, or the creeping expansion of development into rural areas. This model for housing is relatively dense, and located so to optimize walkability. The units have smaller footprints and therefore use fewer materials and less energy. The proposed location is close to the village center, and to public transportation, which may respond to higher demand with increased service. Every

teen may desire a car, but excuses will be fewer if they live within the village. A neighborhood of this scale may strengthen community through its shared spaces and the opportunities for socializing that are sometimes missing in the model of housing that prioritizes single family homes on relatively large lots. Interestingly, the density of the current proposal, at upward of 80 units on 19 acres, is approximately four units per acre, or a lot size just over 10K square feet. This is not unusual in the village; more than 20 percent of existing residential lots are smaller than 15K square feet. Simply for comparison, using a neighborhood with which most of us are familiar: Fall Creek in Ithaca has a minimum lot size of 3,000 square feet, or more than 14 units per acre. The proposed housing may be concentrated differently than the village norm, but multi-family units allow for more continuous green space.

I've heard some opponents of this proposal say, essentially, that they pulled themselves up by their bootstraps to live in Trumansburg, and therefore others should. I would suggest that bootstraps are getting longer. A house in Trumansburg currently valued at just under $230,000 according to zillow.com was purchased in 1999 for $110,000. On another side of town, a home currently valued at $360,000 was purchased in 2010 for just over $200,000. Granted, these values are estimates, and improvements can dramatically impact value, but a quick glance at estimated values, as well as historical assessment and sale data for our village tells a story. Our village comprehensive plan prioritizes cultural and economic diversity and affordable housing options, and we will need creative solutions and commitment to achieve such goals. And again, while I respect the need for a rigorous planning process, I believe this proposal is a step, albeit a big one, in the right direction toward a strong, vibrant future for Trumansburg.

A second community meeting with the developers is scheduled for 7-9 p.m., July 13, at the T-burg Conservatory of Fine Arts. The Trumansburg Planning Board meets 4th Thursdays at 7 p.m. in the Village Hall.

Editor's note: The Trumansburg Free Press also ran the guest op-ed mentioned in this piece, but with a different headline: The Trumansburg Way of Life.

From: no-reply@parastorage.com
To: 210hancock@ithacanhs.org
Subject: New message via your website, from [redacted]
Date: Friday, July 14, 2017 4:02:33 PM

You have a new message:

Via: https://www.southstreetproject.org/

Message Details:

Name [redacted]

Email [redacted]

Subject comment from Community meeting 2

Message Hello, I attended community meeting 2 but when it seemed clear people were there to complain rather than ask questions I left. [redacted] I wanted to pass along my comments. Overall I think you have done a good job trying to find solutions to the issues people have brought up. Of the house concepts I will say the third one with the large roof line seems out of place from the others. The broken up roof lines look more home like. I am also very interested in the traffic study as the intersection of School House Lane and South Street is already very busy on school days and I am concerned having the incoming street from the development will cause more back up. In particular this is the location where the new side walk will switch sides of the street so a lot of students crossing the street there as well. Over all I think it would be nice to have more opportunities for young couples or families move to Tburg. Thank you,

Sent on: 14 July, 2017

Thank you!

From: no-reply@parastorage.com
To: 210hancock@ithacanhs.org
Subject: New message via your website, from [redacted]
Date: Friday, July 14, 2017 3:28:30 PM

You have a new message:

Via: https://www.southstreetproject.org/

Message Details:

Name [redacted]

Email [redacted]

Subject commentsts from meeting #2

Message hello, I attended your community meeting in Trumansburg last night. I commend your research for this project and generally support the new development. As noted by others, there are still remaining drainage concerns for the site and surrounding property. Although you have suggested the site will not increase drainage issues, there are mitigating factors as follows: •Increased hardscape, roofing, and roads will speed runoff, •Non permeable soil vegetation removal will impact containment of storm water on the site, •Topography directs water runoff to Tamarack & Larchmont Dr. [redacted] an you offer assurance there will not be flooding? I have other questions including: Demographics of Trumansburg residents wishing to downsize skew older. Where will residents park? Are there any garages, a parking structure on just driveways? Can rental units convert to for sale if they fail to rent? Is there an Environmental impact statement? Is an EIS required? Thank you for your consideration. I would appreciate your answers.

Sent on: 14 July, 2017

Thank you!

From: no-reply@parastorage.com
To: 210hancock@ithacanhs.org
Subject: New message via your website, from [redacted]
Date: Friday, July 14, 2017 2:45:00 PM

You have a new message:

Via: https://www.southstreetproject.org/

Message Details:

Name [redacted]

Email [redacted]

Subject 7/13/17 Community Meeting

Message Claudia & All, Although I had no opportunity to speak at the meeting last night at the T-burg Conservatory, I hope it's not too late to let you know that I appreciate the time and money that you are investing in attempting to approach this project in a transparent and open-handed manner. I'm embarrassed and ashamed of the rabid, uninformed and unfair responses made by many of the members of my village and town last evening. While I have no issue with folks disagreeing and expressing that disagreement, I found many of their responses to be hateful, perhaps owing to the fact that they are afraid of losing something that they think they have. Fear and hate are so close to one another. I find myself in a place, much like [redacted] who stood up and admitted to being undecided about the project. Although, after your presentation last evening, I did find myself very interested in aging-in-place in one of your homes. I only wish that those homes would be built sooner, as my own parents are currently living in a home that is too far from the village, too large and not accessible. Since they are in their mid eighties and not well, this is quite a challenge. When I told them about your ideas, they were very excited and hoped that this would be happening very soon, as they would qualify to live at Hamilton Square (or whatever name is finally assigned to the area.) I must trust the engineers to "know their stuff" but I admit to being very wary of the drainage problem in that area and I can't imagine living in a home surrounded on 3 sides by wetland. In other areas of the village, our folks have trouble with wet basements. Is it safe to assume that these homes would be slab on grade with no basements? Thank you again for your time and effort. I look forward to watching this project progress and hope a solution suitable to all can be found. [redacted]

Sent on: 14 July, 2017

Thank you!

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Letters: Another perspective in T'burg

Posted on July 17, 2017 in Opinion (http://tompkinsweekly.com/news/category/opinion/)

My neighbors have urged me to share my family's story, since we have benefited personally from access to affordable housing.
Five years ago, when my husband received a job transfer to Portland, Oregon, I was self-employed, with a new baby and an overworked partner. When I explored the rental market, our options were dingy, noisy apartments, not walkable or appealing by any standards.
I Googled "Portland affordable housing" and learned about The Ramona.

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Keeping You Connected

A new, LEED-certified building was just completed on the outskirts of a yuppie neighborhood. I called, they reserved a unit for us, and the journey began.
We underwent a lengthy and stringent criminal background, credit and rental history checks. Under the wire and in a ball of stress, we secured a home and settled in.
We were the first family to inhabit our apartment and we were thrilled.

Of the approximately 125 families that inhabited The Ramona, many were single moms just starting out on their own. It was AMAZING to see the supportive community they created in our building.
There was also an entrepreneur married to a musician, with three kids at home and one in college. A law student married to a nursing student, with a toddler and a new baby.
Without access to affordable housing my husband couldn't walk or bike to work. With access, we gathered for parties in the community room and playdates in the courtyard playground.

Single houses may feel like "The American Dream," but the proximity was a strong positive – for us and for the most vulnerable families, especially. A neighbor watched my daughter when we delivered our second daughter. We felt safe and included.
When we moved back east, we saved up to buy a house in our most desired neighborhood – the Village of Trumansburg – a walkable community with a bus line to work and pretty amazing amenities for a village its size.
For us, it wasn't all grit and bootstraps. We were given a path to affordable housing with dignity – even joy – and it was a springboard to home ownership.

As homeowners between the Hamilton Square site and Main Street – arguably one of the section that would be most affected by the proposed housing development – I see this as a much-needed alternative to the long, demoralizing commutes that keep area families from spending time together.

I see life-changing walkable access to a great library and public schools. Neighbors with a sense of pride and satisfaction in their tidy, attractive new quarters, close to families like ours who will share the benefits of our close-knit community.

When I think about a bump in the number of young families, I envision a MORE sustainable T'burg without frequent turnover of small businesses into empty storefronts. A place where we can sustain our schools, support more family-oriented initiatives and uplift more families.

So let's not simply ask "How will this affect me?" Let's also support practical solutions for mitigating the existing problems that put T'burg and Tompkins County out of reach for so many families.

Erin Fierst
Trumansburg

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From: [redacted]
To: [redacted]
Subject: FW: Hamilton Square Support
Date: Friday, August 04, 2017 9:40:59 AM

From: [redacted]
Sent: Wednesday, July 26, 2017 10:19 AM
To: Claudia Brenner <cbrenner@claudiabrennerdesign.com>
Subject: Hamilton Square Support

Hi Claudia,

[redacted] filled me in on her conversation with you about Hamilton Square, and I just wanted to say that I support you 100% on it as well. Don't give up on it!

I love our little town of Tburg, too, and I like it "just the way it is" just like all the NIMBYs – but I still feel there is room for growth and development without compromising the quality of life we've come to know and love here, and I think the proposal that you have laid out does that, and more... the ability to develop a proper nursery for TCNS is awesome. I love the idea of bringing in diverse incomes – 30 years ago Trumansburg was mostly lower income. Over time, it has gentrified, and it's disappointing that the new higher income folks are against having more of the lower income folks here, and even further disappointing that they don't recognize that the "screening" that INHS does on those potential residents should reduce their elitist concerns. I understand that some people were concerned about the mess that was left behind after the Tamarack Lane development. I don't remember it being a problem then, but I was a teen so I probably wasn't aware of local politics at the time. I just thought it was a pretty development with nice houses that were diverse and colorful. A lot better than some of the old housing stock with siding falling off (not that I'm against old houses, I actually love them, they just need maintenance).

[redacted] I'm looking forward to you speaking [redacted] and learning more, and finding out what [redacted] we can do to help you move this project forward.

[redacted]

Tompkins County Legislature
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July 27, 2017

Re: Hamilton Square project in the Village of Trumansburg

To Whom It May Concern:

As a member of the Tompkins County Legislature and Chair of the Legislature's Planning, Development, and Environmental Quality Committee, I write to support the Hamilton Square development in Trumansburg. Working families and seniors looking to downsize in Tompkins County desperately need this project. Claudia Brenner and INHS are bringing their long-term experience to bear to help these families.

Our county faces a critical housing shortage. We conducted a Housing Needs Assessment in 2006 and again in 2016. The earlier study found a need for 4,000 new housing units between 2005 and 2014, but we fell short: 3,200 units were built during that period. At the same time, several thousand more college students than expected were added to our housing market. The 2016 Assessment documents even more of a need – for a total of 5,800 new rental and ownership units through 2025, not including new beds for students.

Moderate cost housing is especially scarce. The 2006 Assessment called for 54 percent of the 4,000 new units to be within reach for households earning less than 80 percent of area median income. However, fewer than 10 percent of the new units met that goal. According to the 2016 Assessment, we need to build 200 rentals per year at the Hamilton Square price point, and 380 for-sale homes per year; at least 90 of those 380 should be at Hamilton's price. See http://www.tompkinscountyny.gov/planning/housing-choices for much more detail on the need and the County's new Housing Strategy.

Hamilton Square is well-planned in an excellent, walkable location. It meets the Village zoning laws and comprehensive plan, and addresses needs identified in the Village's 2015 Housing Study. The residents will be new customers for Main Street businesses and restaurants, and will help pay for the Village's new water system and other Village services. The project will add walking trails and a playground open to the entire community. In addition, INHS is now partnering with the Trumansburg Community Nursery School with a new opportunity for expansion of their program.

Trumansburg is a vibrant community and Hamilton Square will help it continue to thrive. This project will help us meet our critical housing shortage, and create a more equitable and sustainable community for all.

Sincerely,

Martha Robertson
Tompkins County Legislator, District 13, Dryden (west)
Chair, Planning, Development, and Environmental Quality Committee
607-592-3119

Inclusion through Diversity

From: Alexis Alexander
To: Alena Fast
Subject: Thank You: Community Meetings
Date: Friday, August 04, 2017 11:51:44 AM

Dear Alena,

I just wanted to follow up with you on the original thank you note I sent to you and Scott following the very informative Info Sessions in June, in order to add additional thanks for the two Hamilton Square Community Meetings in July. As I stated in my prior email, it's an exciting project that is so needed in the Village. It's obvious that you are taking a very conscientious, collaborative approach to the project, and I really appreciate and commend you for those efforts. That approach is so often lacking in today's society.

In addition, I was very pleased that in the second meeting you were able to answer some of the questions raised in the first meeting that you did not yet have information on at the time, of particular note, the drainage issue. From people's comments at the second meeting, I don't think some residents are recognizing the fact that the answers to these questions need to evolve over time as you get more into the project and necessary studies are fully completed (e.g. the Traffic Study). So, I want to let you know that I recognize this and truly appreciate your efforts to be open and transparent with the community as information comes in.

As you know, my support for this project comes from both an affordability and an environmental sustainability aspect. I have long admired INHS's commitment to green housing, both in terms of energy efficiency and green materials. This commitment was crystallized when I visited two town homes that were on Cooperative Extension's Green Building Tour, perhaps 3 or 4 years ago. I was impressed with the quality of materials used as well as the thoughtful interior design of the homes. As a person with moderate chemical sensitivities and a grave concern over the rising asthma rates amongst children, I believe the quality of housing you provide, with LEEDS certification, will provide affordable and healthy housing to those suffering from these illnesses. I know I am not alone in this thinking, and have spoken to many others who are supportive of the project, in part, because of the environmental health sustainability aspect of your housing developments. I also greatly appreciate the openness you've shown in exploring suggestions made by myself and others, such as community garden space and solar energy, if possible within the confines of the space and grants. And the nursery school -- how cool is that!

I look forward to seeing how the project develops, and you can continue to guarantee a strong voice of support from me even though I likely won't qualify for the affordable housing units based on financial status. In the meantime, I met with Claudia this week to explore possibilities on the market rate side of the project, so perhaps I will be part of this new community in one way or another.

Best wishes,
Alexis Alexander

Exhibit Y

Case Studies			
Study	**Location**	**Development Type**	**Results**
Albright, L., Derickson, E. S., & Massey, D. S. (2013). Do affordable housing projects harm suburban communities? Crime, property values, and taxes in Mount Laurel, NJ. *City & community*, *12*(2), 89-112.	Mount Laurel, New Jersey	Low-Income Rental	Case: Researchers examined the impact on crime, taxes, and property values for a highly contentious 140-unit affordable housing development in the suburbs of New Jersey. Conclusion: Using comparative data from adjacent neighborhoods and municipalities, researchers determined that the introduction of the affordable housing development had no statistically significant effects on crime, taxes, or property values. Their study found that stringent management practices and local design features mitigated any potential social externalities.
Blanchard, Christopher and Clegg, Elaine and Martin, Leslie (2008). *The Consequences of Residential Infill Development on Existing Neighborhoods in the Treasure Valley.* Project Report. Urban Land Institute, Idaho/Smart Growth, Idaho.	Boise, Idaho	Residential: Single Family and Townhomes	Case: The Idaho District Council, in partnership with Idaho Smart Growth, studied twelve infill projects over a three year period to determine whether resident's fears about the consequences of development could be substantiated. Conclusion: New infill development did not produce harmful traffic or adversely impact property values. Researchers found that design quality can improve project acceptance.
Di, W., & Murdoch, J. C. (2013). The impact of the low income housing tax credit program on local schools. *Journal of Housing Economics*, *22*(4), 308-320.	Texas	Low-Income Rental	Case: The study examines the relationship between the development of Low-Income Housing Tax Credit (LIHTC) projects and school performance for 4,000 elementary schools in Texas. Conclusion: There is no evidence to support the claim that LIHTC developments produce negative

			impacts on local elementary schools.
Funderburg, R., & MacDonald, H. (2010). Neighbourhood valuation effects from new construction of low-income housing tax credit projects in Iowa: A natural experiment. *Urban Studies*, *47*(8), 1745-1771.	Polk County, Iowa	Low-Income Rental	Case: The study examined the impact on single-family property values surrounding 11 multi-family LIHTC properties in Polk County, Iowa. Conclusion: There is no clear effect on property values when LIHTC projects are "high quality and targeted to mixed-income groups." LIHTC projects serving the elderly are associated with a short acceleration in home values for nearby single-family residences.
Pollakowski, H. O., Ritchay, D., & Weinrobe, Z. (2005). *Effects of mixed-income, multi-family rental housing developments on single-family housing values*. Center for Real Estate, Massachusetts Institute of Technology.	Boston, Massachusetts	Low Income Rental	Case: Researchers tracked single-family sales prices before, during, and after the construction of seven low-income, high-density rental developments in the suburbs of Boston. Conclusion: High-density, mixed-income rental developments do not adversely impact the sales prices of nearby single-family homes.

Exhibit Z

Projected # of Residents at 46 South Street

Based on the proposed unit mix for 46 South Street, there would be approximately **140** residents. The number of residents who would live in rental units was calculated using the rent rolls for all INHS properties. The number of residents who would live in the for-sale properties was calculated using data collected about individuals and families who purchased homes through the INHS Community Land Trust.

Please note that not all of these residents will be new to the village. Based on tenant applications from past projects, we expect a percentage of the residents will already live in the Village. Of the applicants for INHS's most recent development, 210 Hancock in Ithaca, 83 percent of applicants were Ithaca residents, 12 percent of applicants were from communities within 30 minutes of Ithaca, and the remaining 5 percent were from other Upstate communities or out of state. Of the residents currently living at Juniper Manor I and II, which are located in Trumansburg, 41.67 percent were from Trumansburg when they moved. 23.33 percent had lived in the bordering communities of Ithaca (15 percent) and Interlaken (8.33 percent). An additional 18.33% of the current residential population had lived in various cities and towns throughout the state of New York. 15 percent of residents moved from outside the state, and one resident did not list any prior address as they had been homeless.

The table below estimates the number of units and number of bedrooms as of the writing of this memo.

Total Resident Projection		
# of bedrooms	# of units	# of residents
1	27	28
2	23	42
3	20	58
4	3	12
	73	**140**

Homeowner Resident Projection		
# of bedrooms	# of units	# of residents
1	3	4
2	9	15
3	12	31
4	3	12
	27	62

Rental Resident Projection		
# of bedrooms	# of units	# of residents
1	24	25
2	14	27
3	8	27
4	0	0
	46	78

Methods used to calculate projected # of residents

Example: Calculating the projected number of residents in 2 BR rental units.

1. Calculate the total number of residents living in INHS 2 BR rental units.

   159 residents

2. Calculate the average number of residents in INHS 2 BR rental units.

   159 residents/84 households = 1.89 residents per 2 bedroom household

3. Calculate expected number of residents for 2 BR rental units.

   The project will have 14 2 BR rental units. 2 BR rental units have approximately 1.89 residents per household; therefore 26.46 residents are projected to live in the 2 BR rental units.

4. Repeat process for all rental sizes using INHS rent rolls. Repeat for all for-sale sizes using Community Land Trust data.

Average # of residents in Rental and Community Land Trust Properties by Bedroom Size

Rental Data	
Average # of people in 1 BR	1
Average # of people in 2 BR	2
Average # of people in 3 BR	3
Average # of people in 4 BR	4

CHT Data	
Average # of people in 1 BR	
Average # of people in 2 BR	2
Average # of people in 3 BR	3
Average # of people in 4 BR	
Average # of people in 5 BR	4

Exhibit AA

Architectural Precedent Images

Apartment building precedents

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Pocket neighborhood clusters

Architectural Precedent Images

Joined townhome precedents

Architectural Precedent Images

INHS- developed project 210 Hancock: 59 unit apartment building with commercial space and a HeadStart facility, 7 rental townhomes, 5 for sale townhomes, a multiuse path along Cascadilla Creek, and a playground.