

TOWN OF LEWISBORO
Westchester County, New York



Planning Board
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AGENDA

Tuesday, September 29, 2015

Cross River Plaza, Cross River

Note: Meeting will start at 7:30 p.m. and end at or before 11:30 P.M.

I. DECISION

Cal# 6-15PB

Sprint Spectrum Realty Company, LP, 377 Smith Ridge Road, South Salem, Sheet 050A, Block 09834, Lots 84, 88, 94 (Vista Fire Department, owner of record) - The applicant is proposing to remove and replace the existing three (3) panel antennas with six (6) new panel antennas, along with six (6) Remote Radio Heads (RRHs), tower mounted amplifiers, and other ancillary equipment.

II. SKETCH PLAN REVIEW

Cal# 8-14PB, Cal# 95-14WP, Cal# 20-14SW

Goldens Bridge Village Center, NYS Route 22, Goldens Bridge, Sheet 4, Block 11126, Lot 07 (Stephen Cipes, owner of record) - Applications for Sketch Plan Review/Site Development Plan Approval, Wetland Activity Permit Approval and Stormwater Permit Approval for the construction of proposed 2-story multi-use building.

Cal# 4-15PB and Cal# 6-15WP

Wild Oaks Water System Test Wells, Nash Road, South Salem, Sheet 8, Block 11137, Lot 123 (New York American Water, owner of record) - Application for Wetland Activity Permit to convert previously drilled groundwater test wells into active supply wells and tying the into the currently existing pump house via cut and cover trenching.

Cal# 54-15WP and Cal# 8-15PB

Wild Oaks Storage Tank Replacement, Fairmount Road, Goldens Bridge, Sheet 7H, Block 11139, Lot 023 (New York American Water, owner of record) - Application for Sketch Plan Review for the proposed construction of a new water storage for the Wild Oaks Water System. The replacement tank would be placed on the same site as the existing tank, on a Wild Oaks Water System property located on Fairmount Road in Lewisboro, NY.

Cal# 6-12PB

Verizon Wireless - Leon Levy Preserve, Route 35, South Salem, Sheet 0040, Block 10263, Lots 1 & 62 (American Towers LLC, owner of record) - Application for a special permit amendment and renewal for replacement and installation of antennas on an existing communication tower.

III. PROJECT REVIEW

Cal# 3-13 PB

Silvermine Preserve Subdivision, Silvermine Drive & Lockwood Road, Lewisboro, Sheet 48, Block 10057, Lot 15 (Ridgeview Designer Builders, Inc. & Daniel Higgins, owners of record) - Applications for Subdivision, Wetland Activity Permit and Stormwater Permit. Plans have been revised in response to comments from the Town Consultants in a memorandum dated December 10, 2014.

Cal# 50-15WP

South Salem Fire District Dry Hydrant at 76 Twin Lakes Road, South Salem, Sheet 34B, Block 11831, Lot 41 (Nancy and Paul Sutera, owners of record) - Application for installation of a dry hydrant.

Cal# 53-15WP and Cal# 11-15SW

Kelly, David and Judy, 57 South Shore Drive, South Salem, Sheet 33D, Block Camp, Lot 01 (David and Judy Kelly, owner of record) - Application for Wetland Permit and Town Stormwater Permit associated with the construction of an addition to a residence, new garage and rain garden.

Cal# 55-15WP

Kemp/Ahn Residence Addition and Alteration, 30 Sullivan Road, North Salem, Sheet 12, Block 11360, Lot 5 (Warren Kemp and Angie Ahn, owners of record) - Application for a Wetland Permit associated with an addition to a residence, bluestone entry walk and patio, stormwater systems and associated improvements.

IV. EXTENSION OF TIME

Cal# 6-14PB and Cal# 65-14WP

Shelby White, 199 Elmwood Road, South Salem, Sheet 49C, Block 9834, Lots 62 & 80 (Shelby White, owner of record) - Request for Extension of Time to resolution granting Final Subdivision Plat, Lot Line Change and Wetland Activity Permit, dated November 18, 2014.

V. CORRESPONDENCE AND GENERAL BUSINESS

VI. MINUTES OF July 21, 2015 AND August 18, 2015

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SEPTEMBER 29, 2015 MEETING

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**RESOLUTION
LEWISBORO PLANNING BOARD**

EXEMPTION FROM REQUIREMENTS

**SPRINT SPECTRUM UPGRADE
TOWER FACILITY AT VISTA FIRE DEPARTMENT
377 SMITH RIDGE ROAD**

Sheet 50A, Block 9834, Lots 84, 88, 94
Cal. #6-15 P.B.

September 29, 2015

WHEREAS, on December 15, 2009, the Town of Lewisboro Planning Board granted Special Use Permit Approval and Wetland Activity Permit Approval, subject to conditions, pertaining to the construction of a communication facility on ±5.95 acres of land and located at 377 Smith Ridge Road (“the subject property”); and

WHEREAS, Special Use Permit Approval, which was granted to Homeland Towers, LLC, together with Sprint/Nextel and AT&T Wireless, allowed for the construction of a 154-foot tall monopole tower, 4,000 s.f. compound area, access driveway, and the installation of antennas, equipment shelters, equipment cabinets and related equipment for both Sprint/Nextel and AT&T Wireless; and

WHEREAS, Sprint/Nextel was approved to install 12 panel antennas and associated ancillary equipment; however, according to the applicant, Sprint/Nextel installed only three (3) panel antennas; and

WHEREAS, since the original December 15, 2009 approval, the tower owner has changed from Homeland Towers, LLC to Insite Wireless Group, LLC and Sprint/Nextel is now referred to as Sprint Spectrum; and

WHEREAS, on May 19, 2015, the Planning Board granted Insite Wireless Group, LLC, AT&T, and Sprint Spectrum a five (5) year Special Use Permit renewal, subject to conditions; and

WHEREAS, Sprint Spectrum (“the applicant”) is now proposing to remove and replace the existing three (3) panel antennas with six (6) new panel antennas, along with six (6) Remote Radio Heads (RRHs), tower mounted amplifiers, and other ancillary equipment (“the proposed action”); and

WHEREAS, the applicant has submitted a request to the Planning Board that it consider the proposed action exempt from the requirements for Special Use Permit Approval in accordance with Section 220-41.1H of the Zoning Code; and

WHEREAS, to demonstrate compliance with Section 220-41.1H of the Zoning Code, the applicant has compared the equipment originally approved for Sprint/Nextel to that currently proposed by Sprint/Spectrum and has determined that the combined bulk (physical volume) of all proposed antennas and ancillary equipment will result in an increase of less than 5% (4.95%); and

WHEREAS, the applicant has submitted a Radio Frequency (RF) Exposure Analysis Report, prepared by Pinnacle Telecom Group, dated June 22, 2015, which demonstrates that the facility will continue to operate well below the maximum permissible exposure limits established by the FCC; and

WHEREAS, the applicant has submitted a structural report prepared by Bennett & Pless, dated April 29, 2015; and

WHEREAS, materials submitted by the applicant have been referred to the Antenna Advisory Board.

NOW THEREFORE BE RESOLVED THAT, the Planning Board, in its discretion, hereby finds that the proposed upgrade/alteration meets the criteria outlined under §220-41.1H of the Zoning Code and is therefore exempt from the requirements for Special Use Permit Approval, subject to the below condition; and

BE IT FURTHER RESOLVED THAT, work shall not commence without the benefit of a Building Permit as issued by the Town of Lewisboro Building Inspector; and

BE IT FURTHER RESOLVED THAT, all new antennas, mounting platforms/brackets, wiring, etc. to be mounted on the communication tower shall be painted to match the color of the tower to which same will be affixed; and

BE IT FURTHER RESOLVED THAT, should the proposed action be modified from that depicted on the below-referenced drawings, revised drawings shall be re-submitted to the Planning Board for review; and

BE IT FURTHER RESOLVED THAT, the Planning Board has based this decision on the following documents and plans submitted by the applicant:

1. The following plans prepared by LETS America, Inc. and dated (last revised) June 26, 2015:
 - “Title Sheet” (last revised February 26, 2013)
 - “Compound Plan, Antennas Plan & General Notes”
 - “Equipment Pad Plan & Notes”
 - “Monopole Elevation & Details”
 - “Remote Radio Head Mounting...”
 - “DC Power Surge Protection...”
 - “GPS Unit Mounting & Purcell Cabinet Details”

- “Ice Bridge Detail”
 - “System Diagram”
 - “RRH Wiring Diagram”
 - “Electrical, TVSS Notes...”
 - “Grounding Notes & Details”
 - “LTE Cross Sector...”
2. Radio Frequency (RF) Exposure Analysis Report, prepared by Pinnacle Telecom Group, dated June 22, 2015
 3. Structural report prepared by Bennett & Pless, dated April 29, 2015
 4. Certification letter prepared by Madhan Humar, P.E. of Blue Point, dated August 18, 2015

Conditions to be satisfied prior to the issuance of a Building Permit:

1. The applicant shall satisfactorily address and outstanding written comment provided by the Town’s professional consultants.

ADOPTION OF RESOLUTION

WHEREUPON, the Resolution herein was declared adopted by the Planning Board of the Town of Lewisboro as follows:

The motion was moved by: _____

The motion was seconded by: _____

The vote was as follows:

JEROME KERNER	_____
JOHN O’DONNELL	_____
RON TETELMAN	_____
ROBERT GOETT	_____
GREG LASORSA	_____

Jerome Kerner, Chairman

September 29, 2015

MEMORANDUM

TO: Chairman Jerome Kerner, AIA and
Members of Lewisboro Planning Board

CC: Judson Siebert, Esq.

FROM: Jan K. Johannessen, AICP 
Joseph M. Cermele, P.E., CFM 
David J. Sessions, RLA, AICP 
Town Consulting Professionals

DATE: September 23, 2015

RE: North County Shopping Center Expansion
Routes 22 & 138, Goldens Bridge
Sheet 4, Block 11126, Lot 7

Project Description

The subject property consists of ± 8.96 acres and fronts the NYS Route 22, NYS Route 128, and the NYS Route 138 Extension (aka North Street). The subject property is located within the Town's Retail Business (RB) Zoning District, within the hamlet of Goldens Bridge, and is currently developed with a shopping center, including an A & P Supermarket, U.S. Post Office, a Bank of America, Dunkin' Donuts, Subway, a restaurant, liquor store and other retail and service businesses. The shopping center property has access off of North Street and NYS Route 22, contains parking for ± 218 vehicles and contains septic systems, drainage features, lighting, landscaping and other site improvements.

The applicant is proposing the construction of a 2-story building ($\pm 16,844$ s.f.) to be located in the northeast portion of the property, in proximity to the NYS Route 138 and North Street intersection. The building is proposed to be occupied by a 2-story (6,889 s.f.) day care center, with the remaining first floor area to be occupied by retail uses and the remainder of the second floor by offices. The applicant is also proposing additional parking (± 74 spaces), lighting, an outdoor play area and other site amenities. The new building is proposed to be served by the existing septic and water systems.

SEQRA

The proposed action is an Unlisted Action under the State Environmental Quality Review Act (SEQRA) and a coordinated review is not required. Prior to making a decision on this pending application, the Planning Board must issue a Determination of Significance.

Required Approvals

1. Site Development Plan Approval, A Wetland Permit and a Town Stormwater Permit is required from the Planning Board; a public hearing is required to be held on the Wetland Permit.
2. Area variances appear to be required from the Zoning Board of Appeals (overall parking shortfall, development coverage, retaining wall and fence height).
3. The application must be referred to the Architecture and Community Appearance Review Council (ACARC) for review and recommendations; all signage must be approved by the ACARC.
4. The applicant has obtained a Change of Use Permit from the Westchester County Department of Health (WCDH) to connect the proposed building to the existing septic system.
5. The Stormwater Pollution Prevention Plan (SWPPP) must be reviewed and approved by the New York City Department of Environmental Conservation (NYCDEP).
6. The applicant has obtained a Use and Occupancy Permit from the New York State Department of Transportation (NYSDOT) for the use of the State right-of-way for drainage improvements.
7. A Highway Work Permit is required from the NYSDOT for physical improvements proposed within the right-of-way.
8. The proposed action exceeds land disturbance thresholds and the applicant will require coverage under the New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-15-002).
9. The proposed day care facility requires approval from the NYS Department of Licensure.

10. The application must be referred to the Westchester County Planning Board in accordance with Section 239-m of the General Municipal Law; the Planning Board Secretary will coordinate this referral.

EAF General Comment: The applicant should ensure that Parts 1, 2 and 3 of the EAF address all project phases.

Part 2 EAF Review:

1. Items 1.b, 1.e, 1.f, 3.d, 3.g, 3.h, 3.k, 4.c, 5.d, and 17.c should be marked “moderate to large impact may occur”.
2. Question 13, Impact on Transportation, should be revised to identify any potential traffic related impacts under Item 13.f “other”.
3. Questions 14 and 15, Impact on Energy and Impacts on Noise, Odor and Light, should be marked “yes”; the applicant should answer the subsequent questions.
4. Question 17, Consistent with Community Plans, should be marked “yes”; Item 17.c should be marked “moderate to large impact may occur”.

Part 3 EAF Review

1. The applicant should follow the instructions for completing Part 3 of the EAF provide a detailed narrative response, including identification of the potential impact and proposed mitigation measures (as necessary), for the following items identified as “moderate to large impact may occur” within the Part 2 EAF: Items 1.b, 1.e, 1.f, 3.d, 3.g, 3.h, 3.k, 4.c, 5.d, and 17.c.

Comments:

1. It is our understanding that the applicant has made application to the Zoning Board of Appeals for variances associated with parking, development coverage and retaining wall/fence height. While the applicant is operating under its own risk, we strongly encourage that decisions not be made by the Zoning Board until the Planning Board has come to agreement on the layout, which to date it has not.
2. The expansion of the shopping center presents an opportunity to analyze and perhaps improve traffic and pedestrian circulation within the existing portion of the shopping

center, including landscaping, hardscaping, and facade improvements. It is recommended that the Planning Board and applicant take this opportunity and work to make improvements to portions of the existing shopping center to enhance both its appearance and functionality. The plans illustrate various improvements throughout the existing area of the site, including walkways, planters, driveways, and parking expansions. It is not clear, however, when these improvements are to be completed. The master plan should identify the phases of construction. We would encourage the Board to require that the improvements along the existing building up to and including the parking and loading improvements immediately adjacent to the south side of the building be completed during Phase 1.

3. We note that the Town has been working towards pedestrian improvements and connections within the hamlet of Goldens Bridge. Recently, the Town Board amended its Master Plan to include a "Complete Streets" addendum and held a community workshop led by a transportation consultant and representatives of the New York Metropolitan Council, Westchester County, and the NYSDOT. Discussions included pedestrian improvements and connections between the shopping center and the MTA parking lot, sidewalks along North Street, improvements at the NYS Route 138 and North Street intersection, improvements along NYS Route 138, and pedestrian connections to the train station. While the plan now illustrates a pedestrian connection between the shopping center and the MTA parking lot, we would recommend that the applicant continue to discuss and coordinate its plans with any additional plans and goals for the immediate area with the Town.
4. The applicant has acknowledged that the State will require the outdoor play area and the site plan has been revised to illustrate this; the Landscape Plan, Sheet LA-1, should also be revised to eliminate the potential parking expansion area.
5. While the applicant has provided a lighting photometric plan for all proposed light fixtures, the applicant shall include the existing light fixtures, as previously requested. It is noted that the applicant is proposing the use of LED lights for the new installation and consideration should be given to retrofitting the existing lights with LED fixtures as well.
6. The landscaping plan must demonstrate compliance with Sections 220-15 and 220-55E of the Zoning Code; it is recommended that a landscape plan be prepared for the entire site. This office will defer further comment on the landscaping and hardscaping plan until such time as the Planning Board determines the layout acceptable.
7. As previously noted, significant retaining walls or rock cut are proposed on the north, east and south side of the proposed building. The height of the walls vary ($\pm 1'$ to 19' tall), as

does their visibility; however, certain segments of the walls will be visible from within the shopping center and from NYS Route 138. The appearance of these walls should be identified and discussed with the Planning Board.

8. The applicant has completed a traffic analysis for the project. The Traffic Consultant has provided several recommendations to improve vehicle and pedestrian traffic in and around the site. These improvements should be discussed with the Planning Board for consideration and incorporated into the plan as appropriate. The recommendations include the following:
 - a. Future monitoring of the NYS Route 22 and North Street intersection for signalization.
 - b. Improvements to the NYS Route 22 entry drive and internal access including upgrading the curb radii, widening the drive, asphalt resurfacing, new pavement markings and clearing vegetation to provide adequate sight lines.
 - c. Restriping and additional directional signage internal to the site.
 - d. Installation of a speed table.
 - e. Continued coordination with the Town for pedestrian improvements with future sidewalks along North Street and NYS Route 138.
9. The applicant has quantified the area of disturbance and area of impervious coverage proposed within the Town's 150-foot wetland buffer as 9,046 sf and 2,925 s.f., respectively. A wetland mitigation plan, prepared in conformance with Appendix B-Part II of the Wetland Ordinance, must be submitted for review. We note that the Wetland Ordinance strives for a 1:1 mitigation ratio and a no-net-loss of wetlands and buffers.
10. The wetland delineation report must be revised to include the items required, per Section 217-7A(6) of the Wetland Ordinance.
11. As previously requested, all on-site trees with a diameter of ≥ 8 " dbh must be survey-located and illustrated on the site plan. The plan should identify the diameter and specie type of each tree and whether the tree is to be protected or removed.
12. Plans have been referred to the Goldens Bridge Fire Department for review and comment; however, no response has been received.
13. As previously noted, a condition of the NYSDOT Use & Occupancy Permit requires the applicant to submit a drainage analysis for the stormwater management system for their review. The applicant should update the Board as to the status of their review and provide any correspondence it has with the NYSDOT.

14. As previously noted, building signage must be detailed on the plan to demonstrate compliance with Chapter 185 of the Town Code; traffic-related and handicap signs shall also be specified and detailed.
15. The applicant has proposed an impermeable vertical barrier downgrade of Infiltration System #1 at the request of the NYSDOT to protect adjacent State-owned property from stormwater migration. Details of the barrier installation should be included on the plans as previously requested.
16. As previously requested, the plan should indicate rock removal methods proposed for any exposed rock cut walls.
17. As previously noted, the plan includes preliminary retaining wall details with differing design data. The retaining wall design shall be detailed as the project progresses.
18. As previously noted, the SWPPP requires approval by the NYCDEP. The applicant should identify the status of the NYCDEP application, extent of their review and provide any correspondence it has with the NYCDEP to the Planning Board. This office will reserve detailed review of the SWPPP until the NYCDEP has provided comment and the plan progresses.
19. The SWPPP includes soil test data performed in 2013 in the areas of the proposed infiltration practices, which was witnessed by the NYCDEP. As it is our understanding that the NYCDEP has witnessed all deep and percolation tests and as further testing would interfere with the existing shopping center, this office will not require additional testing. Should the location of these practices need to be relocated in any way, additional deep and soil percolation testing should be performed by the applicant and witnessed by this office.
20. Given the separation of work areas associated with Infiltration System #2 and the detention system from the main construction area of the building and associated parking lot, this office still questions the lack of additional construction entrances and staging areas above what is currently shown on the Erosion Control Plan (EC-1). At a minimum, the plan shall note that "No construction access points other than illustrated on this plan may be used for the duration of the project without prior authorization from the Town and/or NYSDOT as appropriate." The plans should also note that "All existing parking spaces, other than those shown to be temporarily used during construction, shall be available at all times."
21. The labels for pipes "C" and "D" on the Diversion Manhole #1 detail appear to be reversed and should be corrected. The elevation view for Diversion Manhole #2 detail should illustrate the pipe connection from the drainage conveyance system.

22. The inspection requirements described on the plans and in the SWPPP shall be revised to conform to the new General Permit, GP-0-15-002 which require qualified inspections be conducted twice every seven calendar days.
23. The applicant is proposing shorter stalls than required by Town Code with 2 foot bumper overhangs at all locations. Adequate clearances for safe pedestrian access appear to be provided at all walkway areas with the exception of the parking stalls along the north side of the parking lot. The proposed 4-foot wide sidewalk immediately adjacent to the curb will need to be shifted away from the parking lot to provide the clear space needed for the bumper overhang.
24. The Town's standard signature blocks for the Town Engineer shall be provided on all sheets.
25. The applicant has resubmitted a signed copy of the survey; however, the survey is not sealed.
26. It is recommended that the Planning Board conduct a site walk.

In order to expedite the review of subsequent submissions, the applicant should provide annotated responses to each of the comments outlined herein.

Plans Reviewed, prepared by Bibbo Associates, LLP and dated (last revised) August 12, 2015:

- Aerial Plan (AP-1)
- Existing Conditions Plan (E-1)
- Entire Property Layout (LT-1)
- Layout Plan (LA-1)
- Utilities Site Plan (US-1)
- Erosion Control Plan (EC-1)
- Erosion Control Notes (ES-1)
- Erosion Control Details (ED-1)
- Drainage Profiles (P-1)
- Site Details (SD-1)
- Drainage Details (DD-1, DD-2)
- Retaining Wall Elevations & Details (W-1)

Plans Reviewed, prepared by The Helmes Group, LLP and dated (last revised) August 6, 2015:

- Proposed Architectural Site Plan, Zoning & Site Data for Entire Property (A-1)
- Enlarged Architectural Site Plan of Phase I Development (A-2)
- Proposed Floor Plans & Floor Area Tabulations for Phase I Development (A-3)
- Proposed Exterior Elevations for Phase I Development (A-4)

Plans Reviewed, prepared by Diane Dreier Designs and dated August 26, 2015:

- Planting Plan (P-1, P-2, P-3)
- Detail (P-4)

Other Plans Reviewed:

- Lighting Plan – Phase 1 – Option 1, prepared by Philips and dated May 25, 2015
- Survey of Property, prepared by DeRosa Land Surveying and dated February 10, 2015
- Westchester County Health Department approved plan, dated April 20, 2015

Documents Reviewed:

- Letter, prepared by Bibbo Associates, LLP, dated August 25, 2015
- Full Environmental Assessment Form (Parts 1, 2, 3), dated August 24, 2015
- Wetlands Delineation Report, dated June 16, 2015
- *Stormwater Pollution Prevention Plan*, prepared by Bibbo Associates, LLP, dated (last revised) May 7, 2015
- Traffic Impact Study, prepared by Maser Consulting, P.A., dated March 27, 2015

JKJ/JMC/DJS/dc

BIBBO ASSOCIATES, L.L.P.

Consulting Engineers

Joseph J. Buschynski, P.E.

Timothy S. Allen, P.E.

Sabri Barisser, P.E.

August 25, 2015

Town of Lewisboro Planning Board
20 North Salem Road
P. O. Box 725
Cross River, NY 10518

Attn: Mr. Jerome Kerner, AIA, Chairman

Re: Site Plan and Stormwater Pollution Prevention
Plan (SWPPP) Submission
North County Shopping Center Expansion

Dear Chairman and the Members of the Board:

On behalf of our client, please find the enclosed plans and documents in support of Site Plan and Stormwater Pollution Prevention Plan (SWPPP) review and approval:

- 9 copies – Revised Environmental Assessment Long Form, dated August 24, 2015
- 9 copies – WCHD Approved Septic System/Amended Change of Use letter dated last revised April 20, 2015 (with approved Plan and Engineer's Report)
- 9 copies – Updated Wetland Report by Evans Associates, dated June 16, 2015
- 9 copies – Signed and sealed Property Survey, from DeRosa Land Surveying, PLLC dated February 10, 2015
- 3 copies – Revised Stormwater Pollution Prevention Plan, dated last revised May 7, 2015
- Traffic Impact Study, dated March 27, 2015 as prepared by Maser Consulting, P. A.
- NY Telephone Company Easement Description
- Four (4) full size and five (5) reduced size (11"x17") Engineering Plans, 19 sheet total:
 - Sheet 1 of 13, AP-1 entitled "Aerial Plan" dated last revised 8/12/2015
 - Sheet 2 of 13, E-1 entitled "Existing Conditions Plan" dated last revised 8/12/2015
 - Sheet 3 of 13, LT-1 entitled "Entire Property Layout" dated last revised 8/12/2015
 - Sheet 4 of 13, LA-1 entitled "Layout Plan" dated last revised 8/12/2015
 - Sheet 5 of 13, US-1 entitled "Utilities Site Plan" dated last revised 8/12/2015
 - Sheet 6 of 13, EC-1 entitled "Erosion Control Plan" dated last revised 8/12/2015
 - Sheet 7 of 13, ES-1 entitled "Erosion Control Notes" dated last revised 8/12/2015
 - Sheet 8 of 13, ED-1 entitled "Erosion Control Details" dated last revised 8/12/2015
 - Sheet 9 of 13, P-1 entitled "Drainage Profiles" dated last revised 8/12/2015

Site Design ♦ Environmental

- Sheet 10 of 13, SD-1 entitled "Site Details" dated last revised 8/12/2015
- Sheet 11 of 13, DD-1 entitled "Drainage Details" dated last revised 8/12/2015
- Sheet 12 of 13, DD-2 entitled "Drainage Details" dated last revised 8/12/2015
- Sheet 13 of 13, W-1 entitled "Retaining Wall Elevations and Details" dated last revised 8/12/2015
- Drawing A-1 entitled "Proposed Architectural Site Plan, Zoning & Site Data for Entire Property" as prepared by Helmes Group, LLP dated last revised 8/6/2015
- Drawing A-2 entitled "Enlarged Architectural Site Plan of Phase I Development" as prepared by Helmes Group, LLP dated last revised 8/6/2015
- Drawing A-3 entitled "Proposed Floor Plans & Floor Area Tabulations for Phase I Development" as prepared by Helmes Group, LLP dated last revised 8/6/2015
- Drawing A-4 entitled "Proposed Exterior Elevations for Phase I Development" as prepared by Helmes Group, LLP dated last revised 8/6/2015
- Site Lighting Plan dated May 25, 2015
- Drawing P-1 entitled "Planting Plan" dated August 26, 2015 as prepared by Diane Drier Designs
- Drawing P-2 entitled "Planting Plan" dated August 26, 2015 as prepared by Diane Drier Designs
- Drawing P-3 entitled "Planting Plan" dated August 26, 2015 as prepared by Diane Drier Designs
- Drawing P-4 entitled "Details" dated August 26, 2015 as prepared by Diane Drier Designs
- A CD containing the entire submission in PDF format

Below responses relate to the Town of Lewisboro Conservation Advisory Council's comment letter dated January 13, 2015:

- Sidewalks are provided to connect the new building with the existing shopping center. A designated path of pedestrian traffic is indicated on the site plan.
- Pedestrian sidewalks are proposed to connect to the existing shopping center, for liability purposes, the shopping center has a policy to restrict any bike riding or skateboarding. A few bike racks can be provided to accommodate the limited number of bikers that frequent the shopping center where they would need to walk their bicycle to the rack. This eliminates a safety hazard for the pedestrians using the shopping center including many senior citizens.
- A new sidewalk has been provided leading out to the Route 138, conditional upon approval from NYSDOT, which could then connect to any Town installed sidewalks along North Street and/or Route 138 and to any proposed crosswalk over North Street leading into the commuter parking lot.
- To avoid potential accidents due to the increased traffic, a traffic study has been performed in order to provide any recommended mitigations for safe pedestrian and vehicular traffic. Recommendations of such study have been incorporated to the current site plans.

**Below responses relate to the Kellard-Sessions Consulting, P.C.'s comment letter dated January 21, 2015:
Required Approvals/Referrals-**

1. A Wetland Permit and Town Stormwater Permit have now been or are in the process of being submitted. The Wetlands Delineation Report was just recently updated on June 16, 2015.
2. We understand that variances may be required for certain aspects of this project. In particular, a variance for the proposed retaining wall height needs to be obtained where the retaining walls exceed 6-feet. However, it is our understanding that any other variances would need to be as determined by the Building Inspector to have a clear understanding of exactly what variances will be needed. In preliminary discussions with the Building Inspector, since the parking deficiency for the existing shopping center will be significantly improved by the proposed new development, the Building Inspector has indicated that variances will not be needed; including whether a variance needs to be obtained for the existing parking that encroaches the parking buffer.
3. An Application will be made to obtain ACRA Approval. With regard to approvals for signage, individual signage permits will be submitted for ACRA approval at a later date when tenants are known. Signage will be similar to the existing signage within the shopping center. The owner is planning on making significant enhancements to the plaza area and to the façade of the shopping center.
4. The applicant has obtained a Change of Use Permit from the Westchester County Department of Health (WCDH) to connect the proposed new building to the existing septic system.
5. Acknowledged. The Stormwater Pollution Prevention Plan (SWPPP) will need to be reviewed and approved by the New York City Department of Environmental Conservation (NYCDEP). An application has been made and the review is on-going by the NYCDEP and the application has been recently declared "incomplete" on July 9, 2015 due to the lack of SEQR determination.
6. The applicant has obtained a Use and Occupancy Permit from the New York State Department of Transportation (NYSDOT) for the use of the State right-of-way for drainage improvements.
7. Acknowledged. A Highway Work Permit is required from the NYSDOT for physical improvements proposed within the right-of-way. This Permit will be obtained prior to beginning construction.
8. Comment acknowledged. Since the proposed action exceeds land disturbance thresholds the applicant will require coverage under the New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-15-002).
9. Approval will be obtained at the appropriate time. Preliminary meetings have already taken place confirming that the layout complies with NY State Licensure requirements.
10. Acknowledged. It is understood that the Application must be referred to Westchester County Planning Board in accordance with Section 239-m of the General Municipal Law and that this will be coordinated via the Planning Board Secretary.

Part 1 EAF Comments-

Items A.0 thru E.3.e/f. Comments acknowledged. EAF Part 1 has been revised to reflect these changes.

Part 2 and 3 EAF Review-

Part 2 has been also completed.

Comments-

1. The site plan has been revised to indicate Offices for Business or Professional Use as opposed to Medical Use.
2. On 1/26/15 a conference call was held with Robert Lauria, Peter Barrett, Building Inspector and Peter Helmes, Architect – The Helmes Group, LLP. Mr. Barrett advised that he has already met with Jan Johannessen, the Town Planner. It is our understanding that his only concern was that the height of the retaining walls with fences on top will require a variance since they will exceed 6-feet in height at a few locations.

Improvements are proposed for the existing shopping center, which will include upgrades to the existing parking areas (based on recommendations from the Phil Grealy, PhD, Traffic Engineer of Maser Consulting) and upgrades to the existing plaza area and enhancements to the existing façade; all of which will only improve existing conditions. Based on the above, we will try to obtain a letter from the Building Inspector confirming that he is of the opinion that the existing shopping center and the proposed upgrades are “grandfathered” and therefore are permitted to continue, as they currently exist or be upgraded as proposed.

3. It is understood that a variance will be required. The proposed retaining walls will be constructed of unit masonry using a decorative earth tone color. The wall furthest to the south in the Phase 1 Development Area will utilize the existing ledge where possible, which will be drilled and hammered leaving an exposed rock face or will be supplemented as needed with the decorative unit masonry or stone rip-rap. In addition, landscaping will be considered, which might include Virginia Creeper or Trumpet Creeper if needed. Since land area is not available to permit terracing of the retaining walls and/or fences, any sections of wall or fence over 6-feet in height will require a variance.
4. The Application before the Planning Board has been based on providing the required parking for the new building plus some additional parking to slightly reduce the existing deficiency. It is our understanding that the existing shopping center is “grandfathered”. Although the development of Phase 2 will further reduce any existing parking deficiencies, after speaking with Peter Barrett, Building Inspector, it is our understanding that a variance will not be required as the existing shopping center is considered “grandfathered.”
5. The proposed work will include improvements to traffic and pedestrian circulation, functionality as well as the overall landscaping, hardscaping and existing shopping center façade.
6. The proposed improvements will facilitate pedestrian connections within the hamlet of Goldens Bridge by providing sidewalks available for the Town and NYSDOT to connect to. Every effort will be made to coordinate the proposed improvements with the Town Board’s Master Plan and goals for the immediate area.
7. The proposed lawn / play area is a necessity for any daycare facility and will be a permanent part of project.
8. All required site related improvements are shown on the set of plans which now are under the engineer’s seal. Existing Conditions Plan for the entire property is now included in the plan set.

9. (First bullet) – The zoning tables indicated on the Site Plan for the “Proposed Phase 1” column have been revised to indicate actual dimensions rather than “no change” as requested. (Second bullet) – The floor areas and the maximum FAR have been revised as requested and all numbers now match. (Third bullet) – The parking calculations have been revised on the Site Plan to identify the maximum of 48 seats provided within the existing restaurant as was approved by the Town. (Fourth bullet) – Parking calculations have been revised to reflect the “limited service carry-out restaurant with less than 10 seats” – (Fifth bullet) – The area of disturbance identified at the bottom of the table on the Architectural Site Plan has been revised to match that which is identified on the Site Plan. (Sixth bullet) – The word “boundary” has been changed to “buffer” for the area of wetland buffer disturbance as indicated on Site Plan.
10. The Site Plan has been revised to identify all existing tenants.
11. A Site Lighting Plan and Photometric Plan along with fixture cuts will be submitted as requested.
12. A Landscape Plan for the entire site is prepared by a NYS Licensed Landscape Architect and included herewith. This plan demonstrates compliance with Sections 220-15 and 220-55E of the Zoning Code.
13. The appearance of the proposed new retaining walls will be discussed with the Planning Board as suggested.
14. Acknowledged. A landscape and hardscape plan along with traffic and pedestrian improvements will be submitted for review and comment. In addition, proposed improvements to the existing shopping center façade is included with this submission.
15. Acknowledged. Phil Grealy, PhD, Traffic Engineer with Maser Consulting has prepared a comprehensive traffic study and the Proposed Site Plan has incorporated the various recommendations. Traffic Impact Study dated March 27, 2015 and prepared by Maser Consulting, P. A. is included in this submission.
16. Acknowledged. A wetland mitigation has been addressed on the Planting Plans prepared in accordance with Appendix B-Part II of the Wetland Ordinance has been submitted for review.
17. Wetland delineation Report prepared by the Evans Associates dated June 16, 2015 has been updated to include the required items and attached hereto.
18. Since most of the trees in the northeastern section of the property are second growth and since all of the trees in the area of disturbance will be removed, the Applicant respectfully requests that only on-site trees having a diameter of greater than or equal to 8 inches and that will remain, be surveyed and illustrated on the Site Plan.
19. The Proposed Site Plan has been submitted to the Goldens Bridge Fire Department for review and comment. Pedestrian access will be provided around the entire building and vehicular access will be provided on three (3) sides. In addition, the building will be constructed utilizing non-combustible construction. (A letter from Goldens Bridge Fire Department is expected to be provided shortly.)
20. In November of 2014, a preliminary review of the proposed Site Plan and Floor Plans was completed by Mr. Joseph Romano, Fire Safety Inspector with the New York State Office of Children and Family Services, at which time, various revisions to the floor plan layout were requested. On February 4, 2015, a second meeting was held with Mr. Romano and Mr. Robert Brady to review the requested modifications. Mr. Romano acknowledged that the proposed building and site layout, including the outdoor recreation area, meets the New York State Office of Children and Family Services general licensing criteria in accordance with Section 418 Rules and Regulations for Child Day Care Centers.

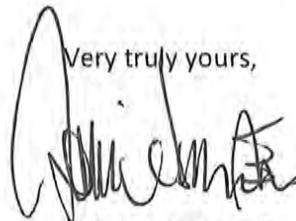
Although the Office of Children and Family Services do not issue letters of acknowledgement, Mr. Romano advised that if anyone from the Town wishes to call him to confirm the above, that they can call him direct on his mobile phone at 917-763-2452.

21. An SWPPP permit application has been made to the NYCDEP on April 2, 2015. The NYCDEP letter dated April 24, 2015 declared the project "incomplete". The comments have been responded and a resubmission is made to the NYCDEP on July 1, 2015. In their July 9, 2015 letter, the NYCDEP stated that the application is still "incomplete" due to lack of SEQRA determination. The SWPPP application will be considered complete upon SEQRA determination by the NYCDEP. A copy of the NYCDEP letter is attached.
22. A preliminary Drainage Analysis was submitted to and reviewed by the NYSDOT prior to issuance of the Use and Occupancy Permit.
23. As it is stated on the EAF Form, the entire building will be heated with electricity.
24. An updated WCHD Change of Use Permit has been reissued on April 20, 2015 and a copy is attached hereto.
25. Fence is shown as required.
26. The detail of the enclosed refuse enclosure has been revised to specify an 8-foot tall fence (which exceeds the Town Code by 2 feet) since this is apparently a requirement of the Town.
27. Building Signage will be detailed at a later date once tenants are determined and will comply with Chapter 185 of the Town Code keeping in context with all existing signage. Traffic related and handicap signs have now been specified and detailed on the Site Engineering drawings.
28. Compliance with the General Permit GP-0-15-002 Requirements have been accomplished. New NYSDEC rainfall precipitation has been applied to the drainage calculations as well as new NOI Form and all the references have been updated.
29. The impermeable vertical barrier downgrade of Infiltration System #1 has been provided at the request of NYSDOT to protect adjacent state owned property from storm water migration due to the existing grades. Similar protection is not necessary for Infiltration System #2.
30. Fence details for the retaining walls have been added to the plans.
31. A detail has been added to the plans specifying the vertical geometry and rock removal method for this rock-cut.
32. Retaining wall designs clarified.
33. All required separation distances required by the WCHD and NYCDEP have been met and shown on the plans.
34. The tests completed in 2013 were witnessed by NYCDEP. This testing was quite expensive as it involved saw-cutting existing pavement, which disrupted the existing shopping center operations, traffic, etc. Accordingly, since the tests were witnessed by NYCDEP, we respectfully request that the findings documented by NYCDEP and as confirmed by a Licensed Professional Engineer from Bibbo Associates be relied upon, rather than having to repeat the testing and related cost and disruption.
35. The construction entrances and staging areas are indicated in on the Site Engineering Drawings; however, in the event any additional staging was needed, the southern end of the property is available. No staging is anticipated along North Street.

36. The construction sequence notes have been revised to describe timing of the installation of each of the infiltration and detention systems and their connections to the main collection system. A two-week time period is anticipated for constructing Infiltration System #2.
37. According to the easement document, the easement involves an area from the finished grade to approximately 2-feet below finished grade for New York Telephone. Any work involving the new storm drainage system will be completed such that it will not disturb any existing telephone lines and will maintain the 2-foot unobstructed depth required by the easement.
38. Conflict has been corrected.
39. Diversion Manhole #1 and #2 and the outlet control structure detail and plan views have been coordinated.
40. Water and sewer service installations have been added to the plans.
41. Retaining Wall drainage discharge points have been specified on the plans.
42. Swale detail has been added.
43. The sidewalk along the north side of the new parking lot will be 5-feet in width in order to accommodate the 2-foot overhang from parking spaces. In general, all other sidewalks will provide a 4-foot clear minimum sidewalk. The sidewalk along the front of the building will provide a minimum width of 4-feet plus the additional space, which is available under the covered colonnade.
44. A signed and sealed property survey is attached to this submission.
45. A technical meeting with the Town Engineer and Town Planner took place several months ago in the Town of Lewisboro offices. The meeting was productive and we believe that the updated Site Engineering Drawings satisfactorily address the items, which were discussed at this meeting.
46. Comment acknowledged. The Planning Board is welcome to conduct a site walk at their convenience. However, we would appreciate being advised of a date and time so that the Owner and someone from the Design Team can accompany them during the site walk and answer any questions that may arise.

We respectfully request to be placed on your Board's next available agenda to discuss the above referenced. As always, please do not hesitate to call our office if you have any questions or concerns regarding this matter.

Very truly yours,



Sabri Barisser, P.E.
Partner

SB/mme
Enclosures

cc: Robert Lauria, National Realty Corp. (with enclosures)
Peter Helmes, AIA, The Helmes Group – Architecture
File

**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 1 is accurate and complete.

A. Project and Sponsor Information.

Name of Action or Project: North County Shopping Center Expansion		
Project Location (describe, and attach a general location map): Property is located at NYS Routes 22 & 138, Goldens Bridge, Town of Lewisboro, NY (aka North County Shopping Center. Location map attached.		
Brief Description of Proposed Action (include purpose or need): The applicant is proposing the construction of a 2-story building (16,844 +/- s.f.) to be located in the northeast portion of the property, in proximity to the NYS Route 138 and North Street intersection. The building is proposed to be occupied by a 2-story (6,889 s.f.) day care center, with the remaining first floor area to be occupied by retail uses and the remainder of the second floor by offices. The applicant is also proposing additional parking (80 +/- spaces), lighting, an outdoor play area and other site amenities. The new building is proposed to be served by the existing septic and water system.		
Name of Applicant/Sponsor: Mr. Stephen Cipes		Telephone: (914) 767-3380
		E-Mail: natro@aol.com
Address: c/o Robert Lauria, P.O. Box 544		
City/PO: Goldens Bridge	State: NY	Zip Code: 10526
Project Contact (if not same as sponsor; give name and title/role): Sabri Barisser, P.E., Bibbo Associates, LLP, Project Engineer		Telephone: (914) 277-5805 ext. 324
		E-Mail: sabribarisser@optonline.net
Address: 293 Route 100, Suite 203		
City/PO: Somers	State: NY	Zip Code: 10589
Property Owner (if not same as sponsor):		Telephone:
		E-Mail:
Address:		
City/PO:	State:	Zip Code:

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, <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No or Village Board of Trustees		
b. City, Town or Village Planning Board or Commission <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Lewisboro Planning Board - Site Plan Approval, Wetland Setback Activities, Stormwater Permit	12/30/2014
c. City Council, Town or Village Zoning Board of Appeals <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Zoning Board of Appeals	
d. Other local agencies <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	ACARC	
e. County agencies <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1) DOH-Septic & Water, Change of Use. 2) Westchester Cty Planning Board-239m referral	1) Approved 12/13/2014
f. Regional agencies <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	NYCDEP - Stormwater Permit	
g. State agencies <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	DEC - Stormwater Permit, N.O.I. DOT-Use & Occupancy & Highway Work Permit	
h. Federal agencies <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
i. Coastal Resources.		
i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
iii. Is the project site within a Coastal Erosion Hazard Area?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<ul style="list-style-type: none"> • 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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?) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
If Yes, identify the plan(s): NYC East of Hudson Watershed	
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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?
 RB District _____

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? Katonah-Lewisboro School District

b. What police or other public protection forces serve the project site?
Town of Lewisboro Police Dept., NY State Police

c. Which fire protection and emergency medical services serve the project site?
Goldens Bridge Fire Dept., Lewisboro Volunteer Ambulance Corp., Westchester EMS

d. What parks serve the project site?
Town of Lewisboro Parks

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)? Commercial, child daycare, retail, office.

b. a. Total acreage of the site of the proposed action? _____ 8.961 acres
 b. Total acreage to be physically disturbed? _____ 2.02 acres
 c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? _____ 8.961 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)? % 14 Units: _____ acres

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) _____
 ii. Is a cluster/conservation layout proposed? Yes No
 iii. Number of lots proposed? _____
 iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will proposed action be constructed in multiple phases? Yes No
 i. If No, anticipated period of construction: _____ 12 months
 ii. If Yes:
 • Total number of phases anticipated _____
 • Anticipated commencement date of phase I (including demolition) _____ month _____ year
 • Anticipated completion date of final phase _____ month _____ year
 • Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases: _____

f. Does the project include new residential uses? Yes No
 If Yes, show numbers of units proposed.

	<u>One Family</u>	<u>Two Family</u>	<u>Three Family</u>	<u>Multiple Family (four or more)</u>
Initial Phase	_____	_____	_____	_____
At completion	_____	_____	_____	_____
of all phases	_____	_____	_____	_____

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: _____ 30 height; _____ 64 +/- width; and _____ 149 +/- length

iii. Approximate extent of building space to be heated or cooled: _____ 16,844 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: _____

ii. If a water impoundment, the principal source of the water: Ground water Surface water streams Other specify: _____

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

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

v. Dimensions of the proposed dam or impounding structure: _____ height; _____ 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): Small local wetland located near Rte. 138, adjacent area would be affected.

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:
Local wetland adjacent area shall have fill for parking and playground area, retaining walls & infiltration system.
Total wetland adjacent area disturbance of 9,046 s.f.

iii. Will proposed action cause or result in disturbance to bottom sediments? Yes No
 If Yes, describe: _____

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: _____
Remaining area will be reclaimed as lawn.

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: _____ 1,672 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: North County Shopping Center - PWS #5906828
- 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: _____
Extending water distribution lines with 2" water service to serve the proposed project.
- Source(s) of supply for the district: North County Shopping Center - PWS NY 5906828

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: _____ 15 gallons/minute.

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

i. Total anticipated liquid waste generation per day: _____ 1,672 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 sewer.

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

- Name of wastewater treatment plant to be used: _____
- Name of district: _____
- 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: _____

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):
Proposed building will be connected to the existing subsurface sewage disposal system.

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

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:

- How much impervious surface will the project create in relation to total size of project parcel?
 _____ Square feet or 0.905 acres (impervious surface)
 _____ Square feet or 8.961 acres (parcel size)
- Describe types of new point sources. _____
- 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 structures, (2) infiltration systems & detention facility discharging overflows to NYSDOT catch basin.
 - 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:

- Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)
- Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)
- 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:

- 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
- In addition to emissions as calculated in the application, the project will generate:
 - _____ Tons/year (short tons) of Carbon Dioxide (CO₂)
 - _____ Tons/year (short tons) of Nitrous Oxide (N₂O)
 - _____ Tons/year (short tons) of Perfluorocarbons (PFCs)
 - _____ Tons/year (short tons) of Sulfur Hexafluoride (SF₆)
 - _____ Tons/year (short tons) of Carbon Dioxide equivalent of Hydrofluorocarbons (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: _____
 275,000 KWH

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

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:		ii. During Operations:	
• Monday - Friday:	7:00 AM - 4:00 PM	• Monday - Friday:	6:30 AM - 10:00 PM
• Saturday:	7:00 AM - 4:00 PM	• Saturday:	6:30 AM - 10:00 PM
• Sunday:	Closed	• Sunday:	Closed
• Holidays:	Closed	• Holidays:	Closed

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:

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:
Lamp post - 12' height with down lighting.

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: _____ 1.00 tons per _____ month (unit of time)
 • Operation : _____ 1.80 tons per _____ month (unit of time)
 ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:
 • Construction: Recycling provided by waste disposal contractor.

 • Operation: Recycling provided by waste disposal contractor.

iii. Proposed disposal methods/facilities for solid waste generated on-site:
 • Construction: Local carters to approved waste disposal sites.

 • Operation: Local carters to approved waste disposal sites.

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:

b. Land uses and covertypes on the project site.

Land use or Covertypes	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	3.64	4.50	+ 0.86
• Forested	3.52	2.42	- 1.10
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	0	0	0
• 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)	0	0	0
• Non-vegetated (bare rock, earth or fill)	0	0	0
• Other Describe: <u>Grass/lawn</u>	1.80	2.04	+ 0.24

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: _____

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): 0609076, 1009676
 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: _____
 Completed. Spill closed dates are: 7/10/2007 and 12/10/2010. No further remedial activities are necessary
 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):
 Both cases are 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? _____ 0-10 feet

b. Are there bedrock outcroppings on the project site? Yes No
 If Yes, what proportion of the site is comprised of bedrock outcroppings? _____ 5 %

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

Urban Land	_____	34 %
Udorthents	_____	56 %
Charlton-Chatfield Complex	_____	10 %

d. What is the average depth to the water table on the project site? Average: _____ 10+ feet

e. Drainage status of project site soils: Well Drained: _____ 95 % of site
 Moderately Well Drained: _____ % of site
 Poorly Drained _____ 5 % of site

f. Approximate proportion of proposed action site with slopes: 0-10%: _____ 68.6 % of site
 10-15%: _____ 7.0 % of site
 15% or greater: _____ 24.4 % 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 Local wetland _____ Approximate Size 367 s.f.
- 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/a _____

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: _____
 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

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): _____

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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If Yes:	
<i>i.</i> Nature of historic/archaeological resource: <input type="checkbox"/> Archaeological Site <input type="checkbox"/> Historic Building or District	
<i>ii.</i> Name: _____	
<i>iii.</i> 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
g. Have additional archaeological or historic site(s) or resources been identified on the project site?	
If Yes:	
<i>i.</i> Describe possible resource(s): _____	
<i>ii.</i> Basis for identification: _____	
h. Is the project site within five miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource?	
If Yes:	
<i>i.</i> Identify resource: _____	
<i>ii.</i> Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): _____	
<i>iii.</i> Distance between project and resource: _____ miles.	
i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666?	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
If Yes:	
<i>i.</i> Identify the name of the river and its designation: _____	
<i>ii.</i> Is the activity consistent with development restrictions contained in 6NYCRR Part 666?	
<input type="checkbox"/> Yes <input type="checkbox"/> No	

F. Additional Information

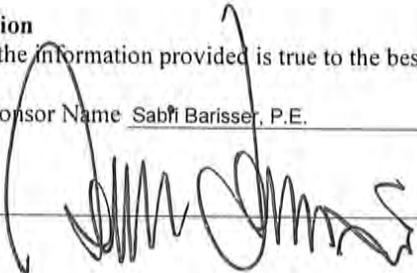
Attach any additional information which may be needed to clarify your project.

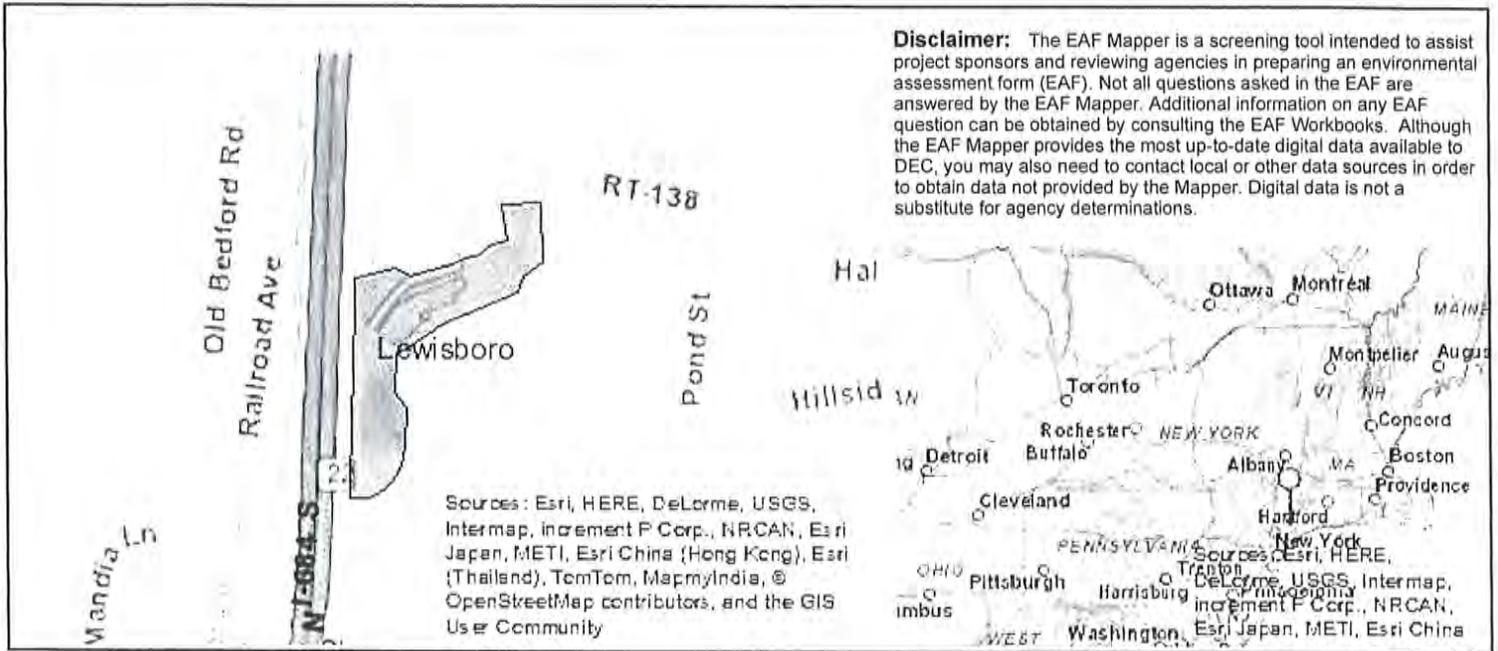
If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

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

Applicant/Sponsor Name Sabri Barisser, P.E. Date Revised 8/24/2015

Signature  Title Partner



B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Yes - Digital mapping data are not available for all Special Planning Districts. Refer to EAF Workbook.
C.2.b. [Special Planning District - Name]	NYC Watershed Boundary
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]	No
E.2.j. [100 Year Floodplain]	No
E.2.k. [500 Year Floodplain]	No
E.2.l. [Aquifers]	No
E.2.n. [Natural Communities]	No
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]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.3.f. [Archeological Sites]	No
E.3.i. [Designated River Corridor]	No



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866-778-5552
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www.tankremovalservices.com

Licensed Contractor
Westchester Co. #WC-13160-H02
Putnam Co. #PC2147-A
N.Y.S.D.E.C. #3A-504
E.P.A. #NY000121335
C.T.D.E.P. #CTHW-732
GSA-10F-092AA
Rockland Co. #H-12077-10-00-00
Email: Info@tankremovalservices.com



April 27, 2015

Town of Lewisboro
Attn: Building Department
P.O. Box 725
Cross River, NY 10518

Re: Permit # 2015-0080
North County Center
Rt 22 & 138
Goldens Bridge, NY 10526

To Whom It May Concern:

On April 1, 2015, Envirostar Corp. removed (1) 275 gallon AST from the above referenced location.

Envirostar cut man way into the top of the tank, disposed of the remaining liquids and tank bottoms, and hand cleaned inside tank walls. The tank was disposed of.

Enclosed, please find copies of the following documents:

- 1) Liquid Disposal Manifest
- 2) Tank Disposal Receipt
- 3) Copy of permit

If you have any questions, please do not hesitate to contact us at 845-279-9555.

Thank you,

Mary Catherine Welch

Cc: *Stephen Cipes*



PAYMENT RECEIPT

Brookfield Resource Management
100 Lamont Street
Elmsford, NY 10523
914-592-5250

Receipt: 1007794
Customer: 382
ENVIROSTAR
50 Fields Lane
Brewster, NY 10509

Date: 04/17/2015
Time: 13:17

Ticket: 1122413
Operator: 6
Weigh In: 04/17/2015 13:04
Weigh Out: 04/17/2015 13:17

Commodity	Gross	Tare	Net	Price	TOTAL \$
# 1 Unprepared	42500	33540	8960	4.141/CW	\$371.03
Ticket Total					\$371.03

of Tickets: 1
Paid by EZCash

Total Paid	\$371.00
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Let Us Know How We're Doing
(info@brookfieldco.com)

NON-HAZARDOUS WASTE MANIFEST		1. Generator ID Number EXEMPT	2. Page 1 of	3. Emergency Response Phone 845-829-1814	4. Waste Tracking Number	
5. Generator's Name and Mailing Address ENVIROSTAR CORP 50 FIELDS LANE BREWSTER NJ 10809 Generator's Phone: 845-279-9555						
6. Transporter 1 Company Name ENVIROSTAR CORP.				U.S. EPA ID Number NYR000121336		
7. Transporter 2 Company Name				U.S. EPA ID Number		
8. Designated Facility Name and Site Address CLEWATER 3249 RICHMOND ST. WYCKE STATEVILLE NY 10303-0312 Facility's Phone:				U.S. EPA ID Number NY0000968545		
GENERATOR	9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt/Vol.
	1.		No.	Type		
	PETROLEUM CONTAMINATED WASTE		001	TT	231	6
	2.					
	3.					
4.						
13. Special Handling Instructions and Additional Information EMERGENCY # 845-829-1814 ADDITIONAL CODE 1109-001						
14. GENERATOR/OFFICER'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/manifested, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.						
Generator's/Officer's Printed/Typed Name JOHN WADE AS AGENT FOR Signature: <i>[Signature]</i> Month Day Year: 14 5 15						
TRANSPORTER (INTL)	15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Part of entry/exit: _____ Date leaving U.S.: _____					
	16. Transporter Acknowledgment of Receipt of Materials					
	Transporter 1 Printed/Typed Name JOHN WADE Signature: <i>[Signature]</i> Month Day Year: 14 9 15					
Transporter 2 Printed/Typed Name Signature: _____ Month Day Year: _____						
DESIGNATED FACILITY	17. Discrepancy					
	17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection					
	Manifest Reference Number: _____ U.S. EPA ID Number: _____					
	17b. Alternate Facility (or Generator) Facility's Phone: _____ U.S. EPA ID Number: _____					
17c. Signature of Alternate Facility (or Generator) _____ Month Day Year: _____						
18. Designated Facility Owner or Operator. Certification of receipt of materials covered by the manifest except as noted in item 17a. Printed/Typed Name: <i>[Signature]</i> Signature: <i>[Signature]</i> Month Day Year: 14 9 15						

OFFICE OF BUILDING INSPECTOR
SOUTH SALEM, N. Y. 10590

TOWN OF LEWISBORO
WESTCHESTER COUNTY, N.Y.

Telephone
914-763-3080



Building Permit

TOWN OF LEWISBORO
South Salem, New York 10590

Permit No: 2015-0080
Application No: 0067-2015

Permission is hereby issued to: CIPES,STEPHEN

P.O.BOX 544
GOLDENS BRIDGE NY 10528

Description of work:
COMMERCIAL MINOR WORK - AST REMOVAL

on property designated on the Tax Map as: 11126-007-0004, including LOT 7, and located on RT.22,
pursuant to above numbered application, and specifications approved by the Building Inspector.

Cost of Construction: \$ 950.00

Fees:

BUILDING PERMIT FEE	\$110.00
CERTIFICATE OF COMPLIANCE FEE	\$20.00
RECORDS MANAGEMENT FEE	\$2.00

Total Paid: 132.00

Permit Date: 3/25/2015
Expiration Date: 9/23/2016

Building Inspector

Handwritten signature of the Building Inspector, appearing to be "P. R. D." in cursive.

AFFIDAVIT OF FINAL COST IS REQUIRED PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY

A CERTIFICATE OF OCCUPANCY OR COMPLIANCE IS REQUIRED BEFORE OCCUPANCY OR USE



Archaeological Sensitive Areas



**NEW YORK STATE
DEPARTMENT OF
ENVIRONMENTAL CONSERVATION**

Spill Incidents Database Search Details

Spill Record

Administrative Information

DEC Region: 3

Spill Number: 0609076

Spill Date/Time

Spill Date: 11/03/2006 **Spill Time:** 10:43:00 AM

Call Received Date: 11/08/2006 **Call Received Time:** 10:43:00 AM

Location

Spill Name: A & P SHOPPING CENTER

Address: CORNER OF RT 22 & 138

City: GOLDENS BRIDGE **County:** WESTCHESTER

Spill Description

Material Spilled Amount Spilled Resource Affected

#2 Fuel Oil UNKNOWN Soil

Cause: Unknown

Source: Commercial/Industrial

Waterbody: MUSCOOT RESERVOIR

Record Close

Date Spill Closed: 07/10/2007

"Date Spill Closed" means the date the spill case was closed by the case manager in the Department of Environmental Conservation (the Department). The spill case was closed because either; a) the records and data submitted indicate that the necessary cleanup and removal actions have been completed and no further remedial activities are necessary, or b) the case was closed for administrative reasons (e.g., multiple reports of a single spill consolidated into a single spill number). The Department however reserves the right to require additional remedial work in relation to the spill, if in the future it determines that further action is necessary.



Spill Incidents Database Search Details

Spill Record

Administrative Information

DEC Region: 3

Spill Number: 1009676

Spill Date/Time

Spill Date: 12/10/2010 Spill Time: 12:29:00 PM

Call Received Date: 12/10/2010 Call Received Time: 01:17:00 PM

Location

Spill Name: NORTH COUNTY SHOPPING CTR

Address: RT 22 AND RT 138

City: GOLDENS BRIDGE County: WESTCHESTER

Spill Description

Material Spilled	Amount Spilled	Resource Affected
TRANSFORMER OIL	30 Gal.	Soil , Surface Water , Utililty Conduit/Vault

Cause: Traffic Accident

Source: Commercial/Industrial

Waterbody:

Record Close

Date Spill Closed: 12/10/2010

"Date Spill Closed" means the date the spill case was closed by the case manager in the Department of Environmental Conservation (the Department). The spill case was closed because either; a) the records and data submitted indicate that the necessary cleanup and removal actions have been completed and no further remedial activities are necessary, or b) the case was closed for administrative reasons (e.g., multiple reports of a single spill consolidated into a single spill number). The Department however reserves the right to require additional remedial work in relation to the spill, if in the future it determines that further action is necessary.



Spill Incidents Database Search Details

Spill Record

Administrative Information

DEC Region: 3

Spill Number: 0609076

Spill Date/Time

Spill Date: 11/03/2006 **Spill Time:** 10:43:00 AM

Call Received Date: 11/08/2006 **Call Received Time:** 10:43:00 AM

Location

Spill Name: A & P SHOPPING CENTER

Address: CORNER OF RT 22 & 138

City: GOLDENS BRIDGE **County:** WESTCHESTER

Spill Description

Material Spilled Amount Spilled Resource Affected

#2 Fuel Oil UNKNOWN Soil

Cause: Unknown

Source: Commercial/Industrial

Waterbody: MUSCOOT RESERVOIR

Record Close

Date Spill Closed: 07/10/2007

"Date Spill Closed" means the date the spill case was closed by the case manager in the Department of Environmental Conservation (the Department). The spill case was closed because either: a) the records and data submitted indicate that the necessary cleanup and removal actions have been completed and no further remedial activities are necessary, or b) the case was closed for administrative reasons (e.g., multiple reports of a single spill consolidated into a single spill number). The Department however reserves the right to require additional remedial work in relation to the spill, if in the future it determines that further action is necessary.



Spill Incidents Database Search Details

Spill Record

Administrative Information

DEC Region: 3

Spill Number: 1009676

Spill Date/Time

Spill Date: 12/10/2010 **Spill Time:** 12:29:00 PM

Call Received Date: 12/10/2010 **Call Received Time:** 01:17:00 PM

Location

Spill Name: NORTH COUNTY SHOPPING CTR

Address: RT 22 AND RT 138

City: GOLDENS BRIDGE **County:** WESTCHESTER

Spill Description

Material Spilled	Amount Spilled	Resource Affected
TRANSFORMER OIL	30 Gal	Soil, Surface Water, Utility Conduit/Vault

Cause: Traffic Accident

Source: Commercial/Industrial

Waterbody:

Record Close

Date Spill Closed: 12/10/2010

"Date Spill Closed" means the date the spill case was closed by the case manager in the Department of Environmental Conservation (the Department). The spill case was closed because either: a) the records and data submitted indicate that the necessary cleanup and removal actions have been completed and no further remedial activities are necessary, or b) the case was closed for administrative reasons (e.g., multiple reports of a single spill consolidated into a single spill number). The Department however reserves the right to require additional remedial work in relation to the spill, if in the future it determines that further action is necessary.

Full Environmental Assessment Form
Part 2 - Identification of Potential Project Impacts

Agency Use Only [If applicable]

Project:
 Date:

Part 2 is to be completed by the lead agency. Part 2 is designed to help the lead agency inventory all potential resources that could be affected by a proposed project or action. We recognize that the lead agency's reviewer(s) will not necessarily be environmental professionals. So, the questions are designed to walk a reviewer through the assessment process by providing a series of questions that can be answered using the information found in Part 1. To further assist the lead agency in completing Part 2, the form identifies the most relevant questions in Part 1 that will provide the information needed to answer the Part 2 question. When Part 2 is completed, the lead agency will have identified the relevant environmental areas that may be impacted by the proposed activity.

If the lead agency is a state agency **and** the action is in any Coastal Area, complete the Coastal Assessment Form before proceeding with this assessment.

Tips for completing Part 2:

- Review all of the information provided in Part 1.
- Review any application, maps, supporting materials and the Full EAF Workbook.
- Answer each of the 18 questions in Part 2.
- If you answer "Yes" to a numbered question, please complete all the questions that follow in that section.
- If you answer "No" to a numbered question, move on to the next numbered question.
- Check appropriate column to indicate the anticipated size of the impact.
- Proposed projects that would exceed a numeric threshold contained in a question should result in the reviewing agency checking the box "Moderate to large impact may occur."
- The reviewer is not expected to be an expert in environmental analysis.
- If you are not sure or undecided about the size of an impact, it may help to review the sub-questions for the general question and consult the workbook.
- When answering a question consider all components of the proposed activity, that is, the "whole action".
- Consider the possibility for long-term and cumulative impacts as well as direct impacts.
- Answer the question in a reasonable manner considering the scale and context of the project.

1. Impact on Land Proposed action may involve construction on, or physical alteration of, the land surface of the proposed site. (See Part 1. D.1) <i>If "Yes", answer questions a - j. If "No", move on to Section 2.</i>			
	<input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES	
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may involve construction on land where depth to water table is less than 3 feet.	E2d	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may involve construction on slopes of 15% or greater.	E2f	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
c. The proposed action may involve construction on land where bedrock is exposed, or generally within 5 feet of existing ground surface.	E2a	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may involve the excavation and removal of more than 1,000 tons of natural material.	D2a	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may involve construction that continues for more than one year or in multiple phases.	D1e	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
f. The proposed action may result in increased erosion, whether from physical disturbance or vegetation removal (including from treatment by herbicides).	D2e, D2q	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
g. The proposed action is, or may be, located within a Coastal Erosion hazard area.	B1i	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h. Other impacts: _____		<input type="checkbox"/>	<input type="checkbox"/>

2. Impact on Geological Features

The proposed action may result in the modification or destruction of, or inhibit access to, any unique or unusual land forms on the site (e.g., cliffs, dunes, minerals, fossils, caves). (See Part 1. E.2.g)

NO

YES

If "Yes", answer questions a - c. If "No", move on to Section 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Identify the specific land form(s) attached: _____ _____	E2g	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may affect or is adjacent to a geological feature listed as a registered National Natural Landmark. Specific feature: _____	E3c	<input type="checkbox"/>	<input type="checkbox"/>
c. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

3. Impacts on Surface Water

The proposed action may affect one or more wetlands or other surface water bodies (e.g., streams, rivers, ponds or lakes). (See Part 1. D.2, E.2.h)

NO

YES

If "Yes", answer questions a - l. If "No", move on to Section 4.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may create a new water body.	D2b, D1h	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in an increase or decrease of over 10% or more than a 10 acre increase or decrease in the surface area of any body of water.	D2b	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may involve dredging more than 100 cubic yards of material from a wetland or water body.	D2a	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may involve construction within or adjoining a freshwater or tidal wetland, or in the bed or banks of any other water body.	E2h	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may create turbidity in a waterbody, either from upland erosion, runoff or by disturbing bottom sediments.	D2a, D2h	<input type="checkbox"/>	<input type="checkbox"/>
f. The proposed action may include construction of one or more intake(s) for withdrawal of water from surface water.	D2c	<input type="checkbox"/>	<input type="checkbox"/>
g. The proposed action may include construction of one or more outfall(s) for discharge of wastewater to surface water(s).	D2d	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h. The proposed action may cause soil erosion, or otherwise create a source of stormwater discharge that may lead to siltation or other degradation of receiving water bodies.	D2e	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i. The proposed action may affect the water quality of any water bodies within or downstream of the site of the proposed action.	E2h	<input type="checkbox"/>	<input type="checkbox"/>
j. The proposed action may involve the application of pesticides or herbicides in or around any water body.	D2q, E2h	<input type="checkbox"/>	<input type="checkbox"/>
k. The proposed action may require the construction of new, or expansion of existing, wastewater treatment facilities.	D1a, D2d	<input type="checkbox"/>	<input type="checkbox"/>

l. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>
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4. Impact on groundwater

The proposed action may result in new or additional use of ground water, or may have the potential to introduce contaminants to ground water or an aquifer.

NO

YES

(See Part 1. D.2.a, D.2.c, D.2.d, D.2.p, D.2.q, D.2.t)

If "Yes", answer questions a - h. If "No", move on to Section 5.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may require new water supply wells, or create additional demand on supplies from existing water supply wells.	D2c	<input type="checkbox"/>	<input type="checkbox"/>
b. Water supply demand from the proposed action may exceed safe and sustainable withdrawal capacity rate of the local supply or aquifer. Cite Source: _____	D2c	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may allow or result in residential uses in areas without water and sewer services.	D1a, D2c	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may include or require wastewater discharged to groundwater.	D2d, E2l	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may result in the construction of water supply wells in locations where groundwater is, or is suspected to be, contaminated.	D2c, E1f, E1g, E1h	<input type="checkbox"/>	<input type="checkbox"/>
f. The proposed action may require the bulk storage of petroleum or chemical products over ground water or an aquifer.	D2p, E2l	<input type="checkbox"/>	<input type="checkbox"/>
g. The proposed action may involve the commercial application of pesticides within 100 feet of potable drinking water or irrigation sources.	E2h, D2q, E2l, D2c	<input type="checkbox"/>	<input type="checkbox"/>
h. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

5. Impact on Flooding

The proposed action may result in development on lands subject to flooding.

NO

YES

(See Part 1. E.2)

If "Yes", answer questions a - g. If "No", move on to Section 6.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in development in a designated floodway.	E2i	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in development within a 100 year floodplain.	E2j	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may result in development within a 500 year floodplain.	E2k	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may result in, or require, modification of existing drainage patterns.	D2b, D2e	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may change flood water flows that contribute to flooding.	D2b, E2i, E2j, E2k	<input type="checkbox"/>	<input type="checkbox"/>
f. If there is a dam located on the site of the proposed action, is the dam in need of repair, or upgrade?	E1e	<input type="checkbox"/>	<input type="checkbox"/>

g. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>
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6. Impacts on Air

The proposed action may include a state regulated air emission source.
(See Part 1. D.2.f., D.2.h, D.2.g)

NO

YES

If "Yes", answer questions a - f. If "No", move on to Section 7.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. If the proposed action requires federal or state air emission permits, the action may also emit one or more greenhouse gases at or above the following levels: i. More than 1000 tons/year of carbon dioxide (CO ₂) ii. More than 3.5 tons/year of nitrous oxide (N ₂ O) iii. More than 1000 tons/year of carbon equivalent of perfluorocarbons (PFCs) iv. More than .045 tons/year of sulfur hexafluoride (SF ₆) v. More than 1000 tons/year of carbon dioxide equivalent of hydrochloroflourocarbons (HFCs) emissions vi. 43 tons/year or more of methane	D2g D2g D2g D2g D2g D2h	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
b. The proposed action may generate 10 tons/year or more of any one designated hazardous air pollutant, or 25 tons/year or more of any combination of such hazardous air pollutants.	D2g	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may require a state air registration, or may produce an emissions rate of total contaminants that may exceed 5 lbs. per hour, or may include a heat source capable of producing more than 10 million BTU's per hour.	D2f, D2g	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may reach 50% of any of the thresholds in "a" through "c", above.	D2g	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may result in the combustion or thermal treatment of more than 1 ton of refuse per hour.	D2s	<input type="checkbox"/>	<input type="checkbox"/>
f. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

7. Impact on Plants and Animals

The proposed action may result in a loss of flora or fauna. (See Part 1. E.2. m.-q.)

NO

YES

If "Yes", answer questions a - j. If "No", move on to Section 8.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may cause reduction in population or loss of individuals of any threatened or endangered species, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2o	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in a reduction or degradation of any habitat used by any rare, threatened or endangered species, as listed by New York State or the federal government.	E2o	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may cause reduction in population, or loss of individuals, of any species of special concern or conservation need, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2p	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may result in a reduction or degradation of any habitat used by any species of special concern and conservation need, as listed by New York State or the Federal government.	E2p	<input type="checkbox"/>	<input type="checkbox"/>

e. The proposed action may diminish the capacity of a registered National Natural Landmark to support the biological community it was established to protect.	E3c	<input type="checkbox"/>	<input type="checkbox"/>
f. The proposed action may result in the removal of, or ground disturbance in, any portion of a designated significant natural community. Source: _____	E2n	<input type="checkbox"/>	<input type="checkbox"/>
g. The proposed action may substantially interfere with nesting/breeding, foraging, or over-wintering habitat for the predominant species that occupy or use the project site.	E2m	<input type="checkbox"/>	<input type="checkbox"/>
h. The proposed action requires the conversion of more than 10 acres of forest, grassland or any other regionally or locally important habitat. Habitat type & information source: _____	E1b	<input type="checkbox"/>	<input type="checkbox"/>
i. Proposed action (commercial, industrial or recreational projects, only) involves use of herbicides or pesticides.	D2q	<input type="checkbox"/>	<input type="checkbox"/>
j. Other impacts: _____		<input type="checkbox"/>	<input type="checkbox"/>

8. Impact on Agricultural Resources			
The proposed action may impact agricultural resources. (See Part I. E.3.a. and b.)		<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES
<i>If "Yes", answer questions a - h. If "No", move on to Section 9.</i>			
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may impact soil classified within soil group I through 4 of the NYS Land Classification System.	E2c, E3b	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may sever, cross or otherwise limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc).	E1a, E1b	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may result in the excavation or compaction of the soil profile of active agricultural land.	E3b	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may irreversibly convert agricultural land to non-agricultural uses, either more than 2.5 acres if located in an Agricultural District, or more than 10 acres if not within an Agricultural District.	E1b, E3a	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may disrupt or prevent installation of an agricultural land management system.	E1 a, E1b	<input type="checkbox"/>	<input type="checkbox"/>
f. The proposed action may result, directly or indirectly, in increased development potential or pressure on farmland.	C2c, C3, D2c, D2d	<input type="checkbox"/>	<input type="checkbox"/>
g. The proposed project is not consistent with the adopted municipal Farmland Protection Plan.	C2c	<input type="checkbox"/>	<input type="checkbox"/>
h. Other impacts: _____		<input type="checkbox"/>	<input type="checkbox"/>

9. Impact on Aesthetic Resources The land use of the proposed action are obviously different from, or are in sharp contrast to, current land use patterns between the proposed project and a scenic or aesthetic resource. (Part 1. E.1.a, E.1.b, E.3.h.) <i>If "Yes", answer questions a - g. If "No", go to Section 10.</i>				<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur		
a.	Proposed action may be visible from any officially designated federal, state, or local scenic or aesthetic resource.	E3h	<input type="checkbox"/>	<input type="checkbox"/>	
b.	The proposed action may result in the obstruction, elimination or significant screening of one or more officially designated scenic views.	E3h, C2b	<input type="checkbox"/>	<input type="checkbox"/>	
c.	The proposed action may be visible from publicly accessible vantage points: i. Seasonally (e.g., screened by summer foliage, but visible during other seasons) ii. Year round	E3h	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	
d.	The situation or activity in which viewers are engaged while viewing the proposed action is: i. Routine travel by residents, including travel to and from work ii. Recreational or tourism based activities	E3h E2q, E1c	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	
e.	The proposed action may cause a diminishment of the public enjoyment and appreciation of the designated aesthetic resource.	E3h	<input type="checkbox"/>	<input type="checkbox"/>	
f.	There are similar projects visible within the following distance of the proposed project: 0-1/2 mile 1/2 -3 mile 3-5 mile 5+ mile	D1a, E1a, D1f, D1g	<input type="checkbox"/>	<input type="checkbox"/>	
g.	Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>	

10. Impact on Historic and Archeological Resources The proposed action may occur in or adjacent to a historic or archaeological resource. (Part 1. E.3.e, f. and g.) <i>If "Yes", answer questions a - e. If "No", go to Section 11.</i>				<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur		
a.	The proposed action may occur wholly or partially within, or substantially contiguous to, any buildings, 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.	E3e	<input type="checkbox"/>	<input type="checkbox"/>	
b.	The proposed action may occur wholly or partially within, or substantially contiguous to, an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory.	E3f	<input type="checkbox"/>	<input type="checkbox"/>	
c.	The proposed action may occur wholly or partially within, or substantially contiguous to, an archaeological site not included on the NY SHPO inventory. Source: _____	E3g	<input type="checkbox"/>	<input type="checkbox"/>	

d. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>
e. If any of the above (a-d) are answered "Yes", continue with the following questions to help support conclusions in Part 3:			
i. The proposed action may result in the destruction or alteration of all or part of the site or property.	E3e, E3g, E3f	<input type="checkbox"/>	<input type="checkbox"/>
ii. The proposed action may result in the alteration of the property's setting or integrity.	E3e, E3f, E3g, E1a, E1b	<input type="checkbox"/>	<input type="checkbox"/>
iii. The proposed action may result in the introduction of visual elements which are out of character with the site or property, or may alter its setting.	E3e, E3f, E3g, E3h, C2, C3	<input type="checkbox"/>	<input type="checkbox"/>

11. Impact on Open Space and Recreation

The proposed action may result in a loss of recreational opportunities or a reduction of an open space resource as designated in any adopted municipal open space plan.

(See Part 1. C.2.c, E.1.c., E.2.q.)

If "Yes", answer questions a - e. If "No", go to Section 12.

NO

YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in an impairment of natural functions, or "ecosystem services", provided by an undeveloped area, including but not limited to stormwater storage, nutrient cycling, wildlife habitat.	D2e, E1b E2h, E2m, E2o, E2n, E2p	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in the loss of a current or future recreational resource.	C2a, E1c, C2c, E2q	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may eliminate open space or recreational resource in an area with few such resources.	C2a, C2c E1c, E2q	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may result in loss of an area now used informally by the community as an open space resource.	C2c, E1c	<input type="checkbox"/>	<input type="checkbox"/>
e. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

12. Impact on Critical Environmental Areas

The proposed action may be located within or adjacent to a critical environmental area (CEA). (See Part 1. E.3.d)

If "Yes", answer questions a - c. If "No", go to Section 13.

NO

YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in a reduction in the quantity of the resource or characteristic which was the basis for designation of the CEA.	E3d	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in a reduction in the quality of the resource or characteristic which was the basis for designation of the CEA.	E3d	<input type="checkbox"/>	<input type="checkbox"/>
c. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

13. Impact on Transportation

The proposed action may result in a change to existing transportation systems.
(See Part I. D.2.j)

 NO YES

If "Yes", answer questions a - g. If "No", go to Section 14.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Projected traffic increase may exceed capacity of existing road network.	D2j	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in the construction of paved parking area for 500 or more vehicles.	D2j	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action will degrade existing transit access.	D2j	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action will degrade existing pedestrian or bicycle accommodations.	D2j	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may alter the present pattern of movement of people or goods.	D2j	<input type="checkbox"/>	<input type="checkbox"/>
f. Other impacts: _____		<input type="checkbox"/>	<input type="checkbox"/>

14. Impact on Energy

The proposed action may cause an increase in the use of any form of energy.
(See Part I. D.2.k)

 NO YES

If "Yes", answer questions a - e. If "No", go to Section 15.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action will require a new, or an upgrade to an existing, substation.	D2k	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action will require the creation or extension of an energy transmission or supply system to serve more than 50 single or two-family residences or to serve a commercial or industrial use.	D1f, D1q, D2k	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may utilize more than 2,500 MWhrs per year of electricity.	D2k	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may involve heating and/or cooling of more than 100,000 square feet of building area when completed.	D1g	<input type="checkbox"/>	<input type="checkbox"/>
e. Other Impacts: _____			

15. Impact on Noise, Odor, and Light

The proposed action may result in an increase in noise, odors, or outdoor lighting.
(See Part I. D.2.m., n., and o.)

 NO YES

If "Yes", answer questions a - f. If "No", go to Section 16.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may produce sound above noise levels established by local regulation.	D2m	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in blasting within 1,500 feet of any residence, hospital, school, licensed day care center, or nursing home.	D2m, E1d	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may result in routine odors for more than one hour per day.	D2o	<input type="checkbox"/>	<input type="checkbox"/>

d. The proposed action may result in light shining onto adjoining properties.	D2n	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may result in lighting creating sky-glow brighter than existing area conditions.	D2n, E1a	<input type="checkbox"/>	<input type="checkbox"/>
f. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

16. Impact on Human Health

The proposed action may have an impact on human health from exposure to new or existing sources of contaminants. (See Part 1.D.2.q., E.1. d. f. g. and h.)
If "Yes", answer questions a - m. If "No", go to Section 17.

NO

YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action is located within 1500 feet of a school, hospital, licensed day care center, group home, nursing home or retirement community.	E1d	<input type="checkbox"/>	<input type="checkbox"/>
b. The site of the proposed action is currently undergoing remediation.	E1g, E1h	<input type="checkbox"/>	<input type="checkbox"/>
c. There is a completed emergency spill remediation, or a completed environmental site remediation on, or adjacent to, the site of the proposed action.	E1g, E1h	<input type="checkbox"/>	<input type="checkbox"/>
d. The site of the action is subject to an institutional control limiting the use of the property (e.g., easement or deed restriction).	E1g, E1h	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may affect institutional control measures that were put in place to ensure that the site remains protective of the environment and human health.	E1g, E1h	<input type="checkbox"/>	<input type="checkbox"/>
f. The proposed action has adequate control measures in place to ensure that future generation, treatment and/or disposal of hazardous wastes will be protective of the environment and human health.	D2t	<input type="checkbox"/>	<input type="checkbox"/>
g. The proposed action involves construction or modification of a solid waste management facility.	D2q, E1f	<input type="checkbox"/>	<input type="checkbox"/>
h. The proposed action may result in the unearthing of solid or hazardous waste.	D2q, E1f	<input type="checkbox"/>	<input type="checkbox"/>
i. The proposed action may result in an increase in the rate of disposal, or processing, of solid waste.	D2r, D2s	<input type="checkbox"/>	<input type="checkbox"/>
j. The proposed action may result in excavation or other disturbance within 2000 feet of a site used for the disposal of solid or hazardous waste.	E1f, E1g E1h	<input type="checkbox"/>	<input type="checkbox"/>
k. The proposed action may result in the migration of explosive gases from a landfill site to adjacent off site structures.	E1f, E1g	<input type="checkbox"/>	<input type="checkbox"/>
l. The proposed action may result in the release of contaminated leachate from the project site.	D2s, E1f, D2r	<input type="checkbox"/>	<input type="checkbox"/>
m. Other impacts: _____ _____			

17. Consistency with Community Plans

The proposed action is not consistent with adopted land use plans.
(See Part 1. C.1, C.2. and C.3.)

NO

YES

If "Yes", answer questions a - h. If "No", go to Section 18.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action's land use components may be different from, or in sharp contrast to, current surrounding land use pattern(s).	C2, C3, D1a E1a, E1b	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action will cause the permanent population of the city, town or village in which the project is located to grow by more than 5%.	C2	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action is inconsistent with local land use plans or zoning regulations.	C2, C2, C3	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. The proposed action is inconsistent with any County plans, or other regional land use plans.	C2, C2	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may cause a change in the density of development that is not supported by existing infrastructure or is distant from existing infrastructure.	C3, D1c, D1d, D1f, D1d, E1b	<input type="checkbox"/>	<input type="checkbox"/>
f. The proposed action is located in an area characterized by low density development that will require new or expanded public infrastructure.	C4, D2c, D2d D2j	<input type="checkbox"/>	<input type="checkbox"/>
g. The proposed action may induce secondary development impacts (e.g., residential or commercial development not included in the proposed action)	C2a	<input type="checkbox"/>	<input type="checkbox"/>
h. Other: _____		<input type="checkbox"/>	<input type="checkbox"/>

18. Consistency with Community Character

The proposed project is inconsistent with the existing community character.
(See Part 1. C.2, C.3, D.2, E.3)

NO

YES

If "Yes", answer questions a - g. If "No", proceed to Part 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may replace or eliminate existing facilities, structures, or areas of historic importance to the community.	E3e, E3f, E3g	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may create a demand for additional community services (e.g. schools, police and fire)	C4	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may displace affordable or low-income housing in an area where there is a shortage of such housing.	C2, C3, D1f D1g, E1a	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may interfere with the use or enjoyment of officially recognized or designated public resources.	C2, E3	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action is inconsistent with the predominant architectural scale and character.	C2, C3	<input type="checkbox"/>	<input type="checkbox"/>
f. Proposed action is inconsistent with the character of the existing natural landscape.	C2, C3 E1a, E1b E2g, E2h	<input type="checkbox"/>	<input type="checkbox"/>
g. Other impacts: _____		<input type="checkbox"/>	<input type="checkbox"/>

Project : Date :

Full Environmental Assessment Form
Part 3 - Evaluation of the Magnitude and Importance of Project Impacts
and
Determination of Significance

Part 3 provides the reasons in support of the determination of significance. The lead agency must complete Part 3 for every question in Part 2 where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.

Based on the analysis in Part 3, the lead agency must decide whether to require an environmental impact statement to further assess the proposed action or whether available information is sufficient for the lead agency to conclude that the proposed action will not have a significant adverse environmental impact. By completing the certification on the next page, the lead agency can complete its determination of significance.

Reasons Supporting This Determination:

To complete this section:

- Identify the impact based on the Part 2 responses and describe its magnitude. Magnitude considers factors such as severity, size or extent of an impact.
- Assess the importance of the impact. Importance relates to the geographic scope, duration, probability of the impact occurring, number of people affected by the impact and any additional environmental consequences if the impact were to occur.
- The assessment should take into consideration any design element or project changes.
- Repeat this process for each Part 2 question where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.
- Provide the reason(s) why the impact may, or will not, result in a significant adverse environmental impact
- For Conditional Negative Declarations identify the specific condition(s) imposed that will modify the proposed action so that no significant adverse environmental impacts will result.
- Attach additional sheets, as needed.

Determination of Significance - Type 1 and Unlisted Actions

SEQR Status: Type 1 Unlisted

Identify portions of EAF completed for this Project: Part 1 Part 2 Part 3

Upon review of the information recorded on this EAF, as noted, plus this additional support information

and considering both the magnitude and importance of each identified potential impact, it is the conclusion of the _____ as lead agency that:

A. This project will result in no significant adverse impacts on the environment, and, therefore, an environmental impact statement need not be prepared. Accordingly, this negative declaration is issued.

B. Although this project could have a significant adverse impact on the environment, that impact will be avoided or substantially mitigated because of the following conditions which will be required by the lead agency:

There will, therefore, be no significant adverse impacts from the project as conditioned, and, therefore, this conditioned negative declaration is issued. A conditioned negative declaration may be used only for UNLISTED actions (see 6 NYCRR 617.d).

C. This Project may result in one or more significant adverse impacts on the environment, and an environmental impact statement must be prepared to further assess the impact(s) and possible mitigation and to explore alternatives to avoid or reduce those impacts. Accordingly, this positive declaration is issued.

Name of Action:

Name of Lead Agency:

Name of Responsible Officer in Lead Agency:

Title of Responsible Officer:

Signature of Responsible Officer in Lead Agency:

Date:

Signature of Preparer (if different from Responsible Officer)

Date:

For Further Information:

Contact Person:

Address:

Telephone Number:

E-mail:

For Type I Actions and Conditioned Negative Declarations, a copy of this Notice is sent to:

Chief Executive Officer of the political subdivision in which the action will be principally located (e.g., Town / City / Village of)

Other involved agencies (if any)

Applicant (if any)

Environmental Notice Bulletin: <http://www.dec.ny.gov/enb/enb.html>



Evans Associates
Environmental Consulting, Incorporated

WETLANDS DELINEATION REPORT

DATE: August 24, 2010, Updated June 16, 2015

PROPERTY: Proposed Village Centre Daycare and Office Building
National Realty Property on Route 22 and Route 138
Town of Lewisboro (Goldens Bridge), Westchester County, New York



INTRODUCTION

Wetlands on the above-captioned property were field delineated in accordance with Chapter 217 of the Code of the Town of Lewisboro and the technical criteria in the 1987 Army Corps of Engineers (ACOE) Wetland Delineation Manual (TR-Y-87-1). The original field delineation was conducted on August 17, 2010 by a field biologist and a soil scientist of Evans Associates Environmental Consulting, Inc, and was confirmed as accurate on June 16, 2015 by a Professional Wetland Scientist. The property is located on the Route 138 Extension with frontage on the south side of Route 138 and the east side of Route 22. The subject property (the site) is the undeveloped northeast portion of the Golden's Bridge Village Centre that contains a shopping center with a supermarket, post office, retail stores a restaurant along with associated paved parking lots. The site consists of wooded areas, grassed areas and gravel parking areas.

One wetland was identified on the site, consisting of a small section of a perennial stream that is located in the northeast corner of the site, along Route 138. A short section of the watercourse flows onto the site from the east before entering a large culvert. The wetland/upland boundary of the on-site portion of the wetland was flagged with sequentially-numbered, orange ribbon flagging depicting the words "Wetland Boundary." The flags were numbered A-1 through A-4. The perimeter of the site was also investigated for the potential presence of off-site wetlands whose wetland buffer may extend onto the site. No additional off site wetlands or watercourses were identified within 150 feet of the site other than the stream that flows into the on-site portion of Wetland A. The regulatory jurisdictions of the wetland are described below. The vegetation, soils, and hydrology of the wetland, and the vegetation and soils of the adjacent uplands are also described below.

205 Amity Road
Bethany, CT 06524
Tel: 203.393.0690
Fax: 203.393.0196

REGULATORY JURISDICTIONS

Town of Lewisboro Wetland Regulations The Town of Lewisboro regulates wetlands based on the presence of hydrophytic vegetation, hydric soils, and wetland hydrology as defined in Chapter 217 of the Code of the Town of Lewisboro. In addition to regulating wetlands, the Town also regulates 150-foot buffers around wetlands. The wetland on the property is regulated by the Town.

New York State Department of Environmental Conservation Wetland Regulations The New York State Department of Environmental Conservation (DEC) regulates wetlands in accordance with the New York State Freshwater Wetlands Act (Article 24 of the New York State Environmental Conservation Law). The DEC regulates wetlands that are 12.4 acres in size or greater, primarily based on vegetation, that are shown on, or are connected to wetlands shown on, the DEC Freshwater Wetland maps. In addition to regulating wetlands, the DEC also regulates 100-foot adjacent areas around the wetlands. Based on review of the most recent NYS DEC Freshwater Wetlands Maps there are no DEC wetlands on, or adjacent to, the site. Therefore the on-site wetland is not regulated by the DEC.

Federal Wetland Regulations (Army Corps of Engineers) The United States ACOE is the federal agency that regulates wetlands under the Clean Water Act. The ACOE regulates wetlands based on the presence of hydrophytic vegetation, hydric soils, and wetland hydrology as defined in the 1987 ACOE Wetland Delineation Manual (TR-Y-87-1). The ACOE regulates wetlands that are associated with hydrologic features that are connected to interstate waters (e.g., wetlands connected to streams that ultimately drain to the Hudson River). There is no adjacent area or wetland buffer regulated under federal jurisdiction. The watercourse within the wetland drains off site to the west, through a culvert, eventually reaching the Croton River. Therefore, the wetland is regulated by the ACOE.

New York City Watershed Regulations (NYC Department of Environmental Protection) Within the New York City Watershed, the New York City Department of Environmental Protection (DEP) regulates certain activities that occur within 100 feet of DEC-regulated wetlands and perennial watercourses and within 50 feet of intermittent watercourses. The site is within the New York City Watershed as part of the Croton River East Basin. The property is therefore subject to DEP regulations.

VEGETATION

The watercourse was sparsely vegetated with some skunk cabbage (*Symplocarpus foetidus*) along the stream banks. Other vegetation adjacent to the stream includes green ash (*Fraxinus pennsylvanica*), and sycamore (*Platanus occidentalis*) trees and saplings, multiflora rose (*Rosa multiflora*) shrubs, poison ivy (*Toxicodendron radicans*), and Asiatic bittersweet (*Celastrus orbiculata*) vines, along with jewelweed (*Impatiens capensis*).



Vegetation in the wooded uplands includes black locust (*Robinia pseudoacacia*), black cherry (*Prunus serotina*), tree-of-heaven (*Ailanthus altissima*), box-elder (*Acer negundo*), black birch (*Betula lenta*), pin oak (*Quercus palustris*), gray birch (*Betula populifolia*), and cottonwood (*Populus deltoides*) trees and saplings, Japanese barberry (*Berberis thunbergii*), and multiflora rose shrubs, poison ivy, and Asiatic bittersweet vines, along with garlic mustard (*Alliaria petiolata*), Japanese stilt-grass (*Microstegium vimineum*), and mugwort (*Artemisia vulgaris*).

SOILS

The watercourse within the wetland had a gravelly, rocky bottom. Other wetland soils along the edge of the watercourse may include Leicester and Sun loams. Leicester and Sun loams are formed in glacial till and can be found in concave areas between ridges, along drainageways, and in depressions. Leicester loam is poorly drained and Sun loam is poorly drained to very poorly drained. Wetland soils that have been altered in the past may also be present, and are called Udorthents, wet substratum. Leicester, and Sun loams and Udorthents, wet substratum have aquic moisture regimes and are listed on hydric soils lists.

Soils in the uplands include mainly Urban land, and Udorthents, smoothed. Udorthents, smoothed soils are soils that have been developed and/or otherwise altered, including by cutting and filling. Charlton, Chatfield, and Hollis loams, along with rock outcrops, occur along the southern periphery of the property. Charlton, Chatfield, and Hollis loams are well drained to excessively drained and are found on hilltops and hillsides in areas of glacial till. Charlton is very deep, Chatfield is moderately deep, and Hollis is shallow to bedrock. These soils are often complexed with each other and with rock outcroppings.

HYDROLOGY

The wetland is primarily sustained by the interception of the underlying, seasonally-high groundwater table. Runoff from upgradient areas, including roadways (Route 138), also contributes to the hydrology of the wetland. Evidence of wetland hydrology includes flowing water and saturated soils.

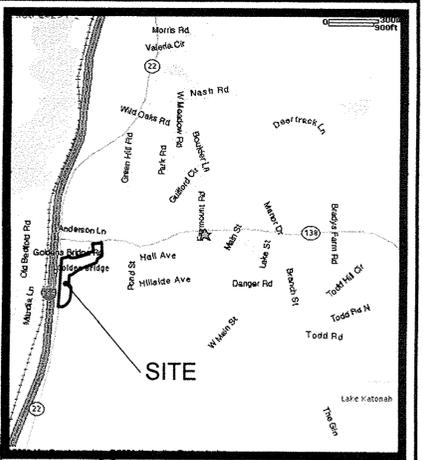
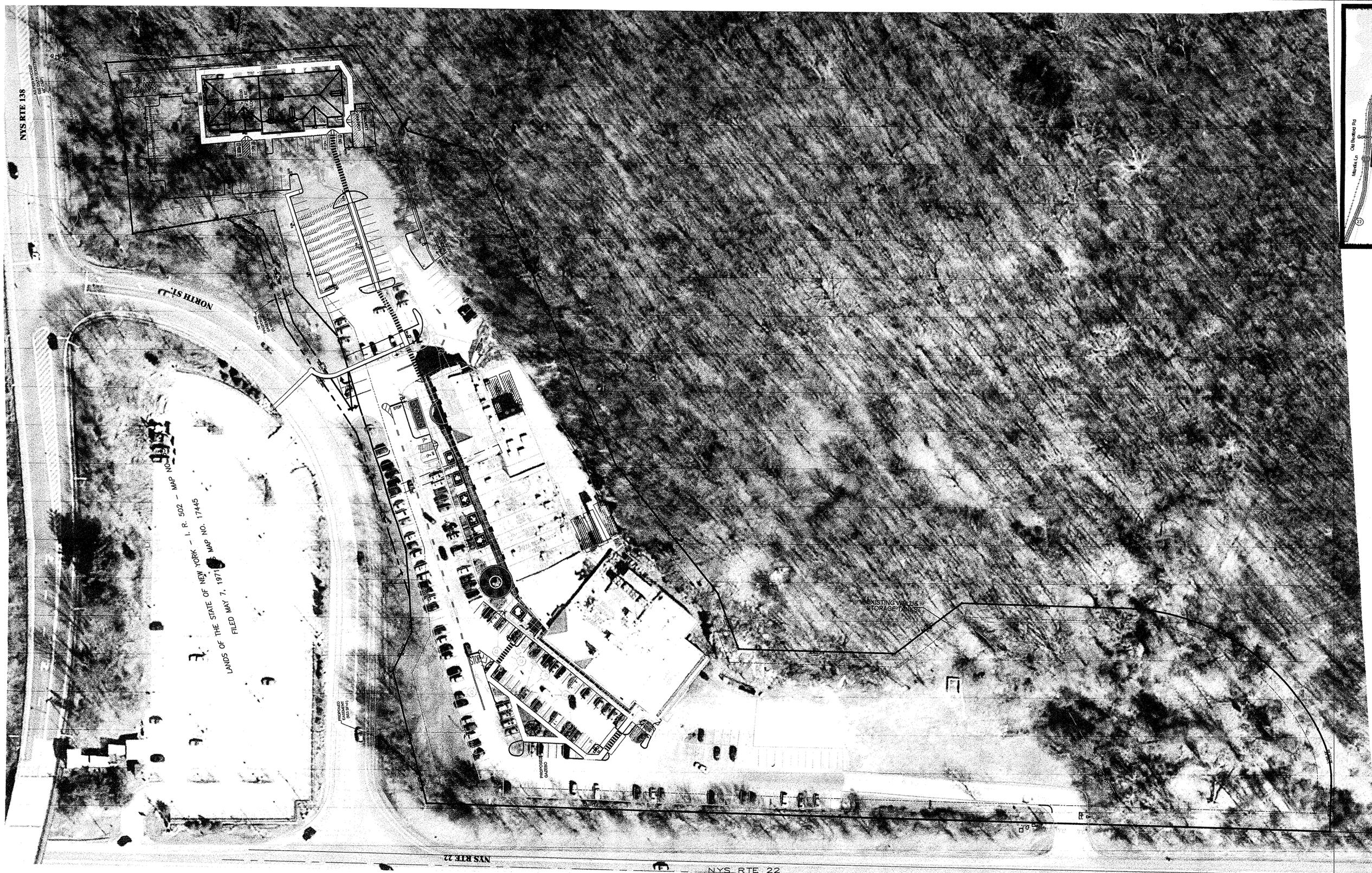
REGULATORY STATUS

The wetland described in this report is subject to the Local Freshwater Wetland regulations of the Town of Lewisboro and the U.S. ACOE (Federal) Wetland regulations. The Town of Lewisboro also regulates a 150' wetland adjacent area.

Beth Evans

Beth Evans, PWS



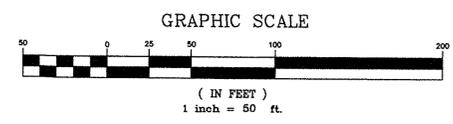


LOCATION MAP
NTS

- EXISTING UTILITIES AND BASEMAP, STORMWATER, SEPTIC AND WATER SYSTEM COMPONENTS HAVE BEEN BASED ON THE FOLLOWING:
- BIBBO ASSOCIATES'S FIELD INSPECTIONS AND SURFACE OBSERVATIONS
 - PRIOR AS-BUILT AND PROPOSED PLANS AND SURVEYS
 - PROPERTY SURVEY PROVIDED BY DEROSA ASSOCIATES DATED: 2-10-2015
 - AERIAL MAPS
 - DISCUSSIONS WITH THE PROPERTY OWNER
 - LIMITED FIELD SURVEY OF PIPE INVERTS AT PIPE CROSSINGS.

SITE LAYOUT BY HELMES GROUP, LLP
184 KATONAH AVENUE, KATONAH, NY
TEL: (914)- 232-4633

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OWNER _____ DATE _____

APPROVED BY RESOLUTION OF THE LEWISBORO TOWN PLANNING BOARD:

PLANNING BOARD CHAIRMAN _____ DATE _____

PLANNING BOARD SECRETARY _____ DATE _____

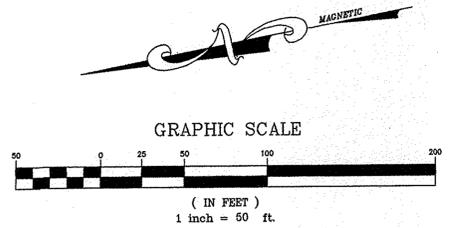
REVISIONS		DATE	DESCRIPTION	DATE	DESCRIPTION
8/12/15	TOWN COMMENTS	DK/SB	6/30/15	TOWN & DEP COMMENTS	DK/SB
	DATE:	BY/CK		DATE:	BY/CK

AERIAL PLAN		DATE: 12-22-14
NORTH COUNTY SHOPPING CENTER EXPANSION		SCALE: 1" = 50'
NYS. RTE 22 & NYS RTE 138 TOWN OF LEWISBORO, WESTCHESTER COUNTY, NY		FILE:
		DSGN / CHK: SB
293 ROUTE 100 SUITE 203 SOMERS, NEW YORK 10589 TEL. 914 277 5805		DRN. BY: DK
SABRI BARISSER P.E.		SHT NO. 1 OF 13
DWG NO. AP-1		



LANDS OF THE STATE OF NEW YORK - I. R. 502 - MAP NO. 657
 FILED MAY 7, 1971 AS MAP NO. 17445

- LEGEND**
- EXIST-SHM - EXISTING SANITARY MANHOLE
 - DTE-C - DEEP TEST LOCATION
 - PCT - PERCOLATION TEST LOCATION
 - EXISTING CONTOUR
 - EXISTING SPOT ELEVATION
 - EXISTING RETAINING WALL
 - EXISTING STORM DRAIN PIPE
 - EXISTING SANITARY SEWER PIPE



EXISTING UTILITIES AND BASEMAP, STORMWATER, SEPTIC AND WATER SYSTEM COMPONENTS HAVE BEEN BASED ON THE FOLLOWING:

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- DISCUSSIONS WITH THE PROPERTY OWNER
- LIMITED FIELD SURVEY OF PIPE INVERTS AT PIPE CROSSINGS.

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OWNER _____ DATE _____

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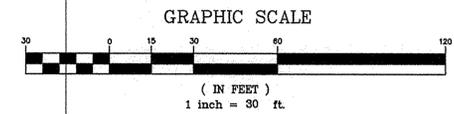
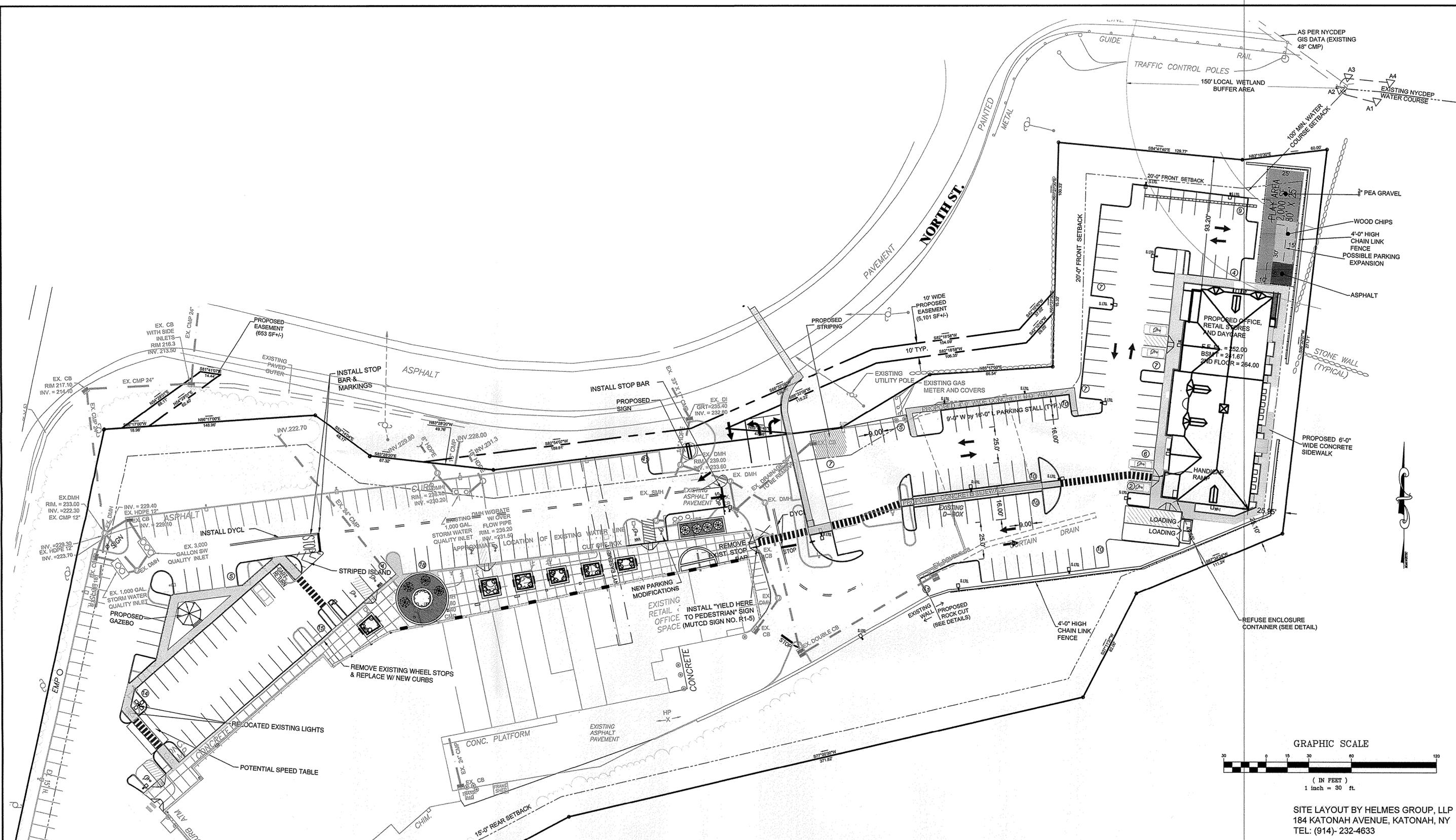
PLANNING BOARD CHAIRMAN _____ DATE _____

PLANNING BOARD SECRETARY _____ DATE _____

8/12/15	TOWN COMMENTS	DK/SB	6/30/15	TOWN & DEP COMMENTS	DK/SB
DATE:	DESCRIPTION	BY/CK	DATE:	DESCRIPTION	BY/CK

		EXISTING CONDITIONS PLAN		DATE: 12-22-14
		NORTH COUNTY SHOPPING CENTER EXPANSION NYS. RTE 22 & NYS RTE 138 TOWN OF LEWISBORO, WESTCHESTER COUNTY, NY		SCALE: 1" = 50'
		FILE:	DSGN /	SB
		CHK:	DRN. BY:	DK
BIBBO ASSOCIATES, LLP 283 ROUTE 100 SUITE 203 SOMERS, NEW YORK 10589 TEL. 914 277 5805		SHT NO.	2 OF 13	
		DWG NO.	E-1	

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 PLANNING BOARD CHAIRMAN _____ DATE _____
 PLANNING BOARD SECRETARY _____ DATE _____

REVISIONS	DATE	DESCRIPTION	DATE	DESCRIPTION	DATE	DESCRIPTION
8/12/15	TOWN COMMENTS	DK/SB	6/30/15	TOWN & DEP COMMENTS	DK/SB	BY/CK

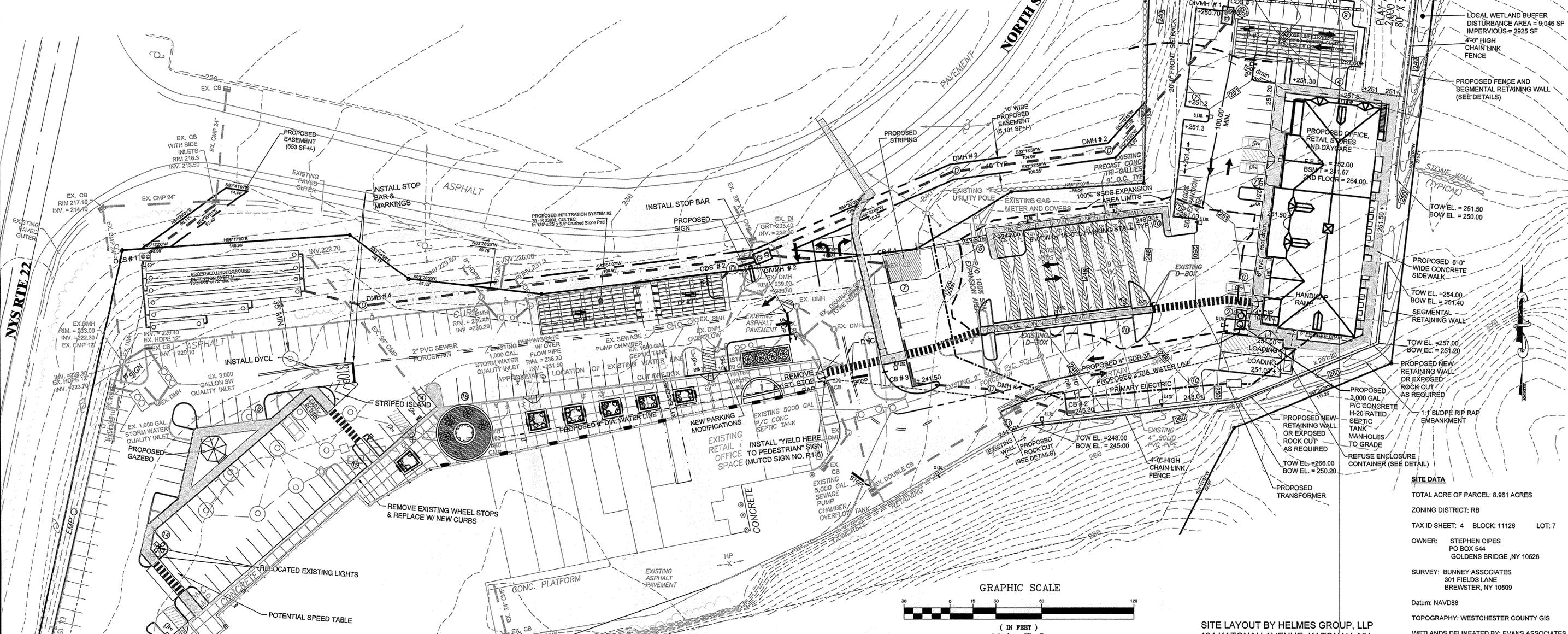
	LAYOUT PLAN		DATE: 12-22-14
	NORTH COUNTY SHOPPING CENTER EXPANSION NYS RTE 22 & NYS RTE 138 TOWN OF LEWISBORO, WESTCHESTER COUNTY, NY		SCALE: 1" = 30'
	BIBBO ASSOCIATES, LLP		FILE: SB
	293 ROUTE 100 SUITE 203 SOMERS, NEW YORK 10589 TEL. 914 277 5805		DRN. BY: DK
			SHT NO. 4 OF 13
		DWG NO.	LA-1

DRAINAGE SCHEDULE		
STRUCTURE	RIM	INVERT
CB #2	245.30	241.80 (OUT)
CB #3	241.50	238.00 (IN & OUT)
CB #4	241.00	237.00 (IN & OUT)
DMH #1	244.20	240.50 (IN & OUT)
DMH #2	246.00	243.35 (IN & OUT)
DMH #3	240.00	236.50 (IN & OUT)
DMH #4	236.00+/-	227.18 (IN) 224.25 (OUT)
CDS 1	250.80+/-	244.41 (IN & OUT)
CDS 2	236.00+/-	229.46 (IN & OUT)
DIV MH #1	250.70+/-	244.41 (12.0" X 11.0' LONG CULVERT) 244.40 (15.00" X 110.0' LONG CULVERT) 247.27 (6.0' LONG X 0.5' BREADTH BROAD CRESTED RECTANGULAR WEIR)

DRAINAGE SCHEDULE		
STRUCTURE	RIM	INVERT
DIVMH #2	236.00+/-	229.46 (12.0" X 12' LONG CULVERT) 229.50 (15.00" X 255' LONG CULVERT) 233.00 (6.0' LONG X 0.5' BREADTH BROAD CRESTED RECTANGULAR WEIR) 230.50 (IN FROM DMH #3) 233.00 (IN FROM CB #4)
OCS #1	222.60	216.00 (15.0" X 55' LONG CULVERT) 216.00 (1.0' VERT ORIFICE/GRATE) 220.73 (4.0' X 0.5' BREADTH BOARD-CRESTED RECTANGULAR WEIR)
EX. CB	216.3+/-	213.50 (OUT)

STRUCTURE	PIPE			
	LENGTH (LF)	SLOPE (FT/FT)	TYPE	REMARKS
CB 2	49'	2.65%	15"HDPE	
DMH 1	47'	5.32%	15"HDPE	
CB 3	75'	1.33%	15"HDPE	
CB 4	73'	5.48%	15"HDPE	
DIVMH 2	255'	0.91%	15"HDPE	
DMH 4	36'	12.50%	15"HDPE	
DETENTION SYS.	4'	0.00%	15"HDPE	
OCS 1	54'	4.63%	15"HDPE	
EX. CB				

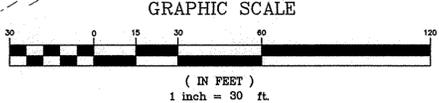
STRUCTURE	PIPE			
	LENGTH (LF)	SLOPE (FT/FT)	TYPE	REMARKS
DIVMH 2	12'	0.00%	12"HDPE	
CDS 2	5'	0.00%	12"HDPE	
INF. 2				
DIVMH 1	6'	0.00%	12"HDPE	
CDS 1	7'	0.00%	12"HDPE	
INF. 1				
DIVMH 1	110'	0.95%	15"HDPE	
DMH 2	95'	7.21%	15"HDPE	
DMH 3	131'	4.58%	15"HDPE	
DIVMH 2				



LEGEND

- ⊙ DMH - PROPOSED SANITARY MANHOLE
- ⊙ EXIST DMH - EXISTING SANITARY MANHOLE
- ⊙ DMH - PROPOSED DRAIN MANHOLE
- ⊙ CB - PROPOSED CATCH BASIN
- ⊙ 250.30 x - PROPOSED SPOT ELEVATION
- ⊙ DTP-C - DEEP TEST LOCATION
- ⊙ - PERCOLATION TEST LOCATION
- - - - - EXISTING CONTOUR
- - - - - EXISTING SPOT ELEVATION
- - - - - PROPOSED SANITARY FORCEMAIN
- - - - - PROPOSED STORM DRAIN PIPE
- - - - - PROPOSED ELECTRIC LINE
- - - - - PROPOSED RETAINING WALL
- - - - - PROPOSED CONTOUR
- - - - - EXISTING RETAINING WALL
- - - - - EXISTING STORM DRAIN PIPE
- - - - - EXISTING SANITARY SEWER PIPE
- BIBBO ASSOCIATES'S FIELD INSPECTIONS AND SURFACE OBSERVATIONS
- PRIOR AS-BUILT AND PROPOSED PLANS AND SURVEYS
- PROPERTY SURVEY PROVIDED BY: DEROSA ASSOCIATES DATED: 2-10-2015
- AERIAL MAPS
- DISCUSSIONS WITH THE PROPERTY OWNER
- LIMITED FIELD SURVEY OF PIPE INVERTS AT PIPE CROSSINGS.

EXISTING UTILITIES AND BASEMAP, STORMWATER, SEPTIC AND WATER SYSTEM COMPONENTS HAVE BEEN BASED ON THE FOLLOWING:



SITE LAYOUT BY HELMES GROUP, LLP
184 KATONAH AVENUE, KATONAH, NY
TEL: (914)-232-4633

SITE DATA
TOTAL ACRE OF PARCEL: 8.961 ACRES
ZONING DISTRICT: RB
TAX ID SHEET: 4 BLOCK: 11126 LOT: 7
OWNER: STEPHEN CIPES
PO BOX 544
GOLDENS BRIDGE, NY 10526
SURVEY: BUNNEY ASSOCIATES
301 FIELDS LANE
BREWSTER, NY 10509
Datum: NAVD88
TOPOGRAPHY: WESTCHESTER COUNTY GIS
WETLANDS DELINEATED BY: EVANS ASSOCIATES
DATE: 8-17-10

APPROVED FOR FILING: _____ DATE _____

OWNER: _____ DATE _____

APPROVED BY RESOLUTION OF THE LEWISBORO TOWN PLANNING BOARD:

PLANNING BOARD CHAIRMAN: _____ DATE _____

PLANNING BOARD SECRETARY: _____ DATE _____

REVISIONS	DATE	DESCRIPTION	DATE	DESCRIPTION
8/12/15		TOWN COMMENTS	6/30/15	TOWN & DEP COMMENTS

SABRI BARISSER P.E.

UTILITIES SITE PLAN

NORTH COUNTY SHOPPING CENTER EXPANSION

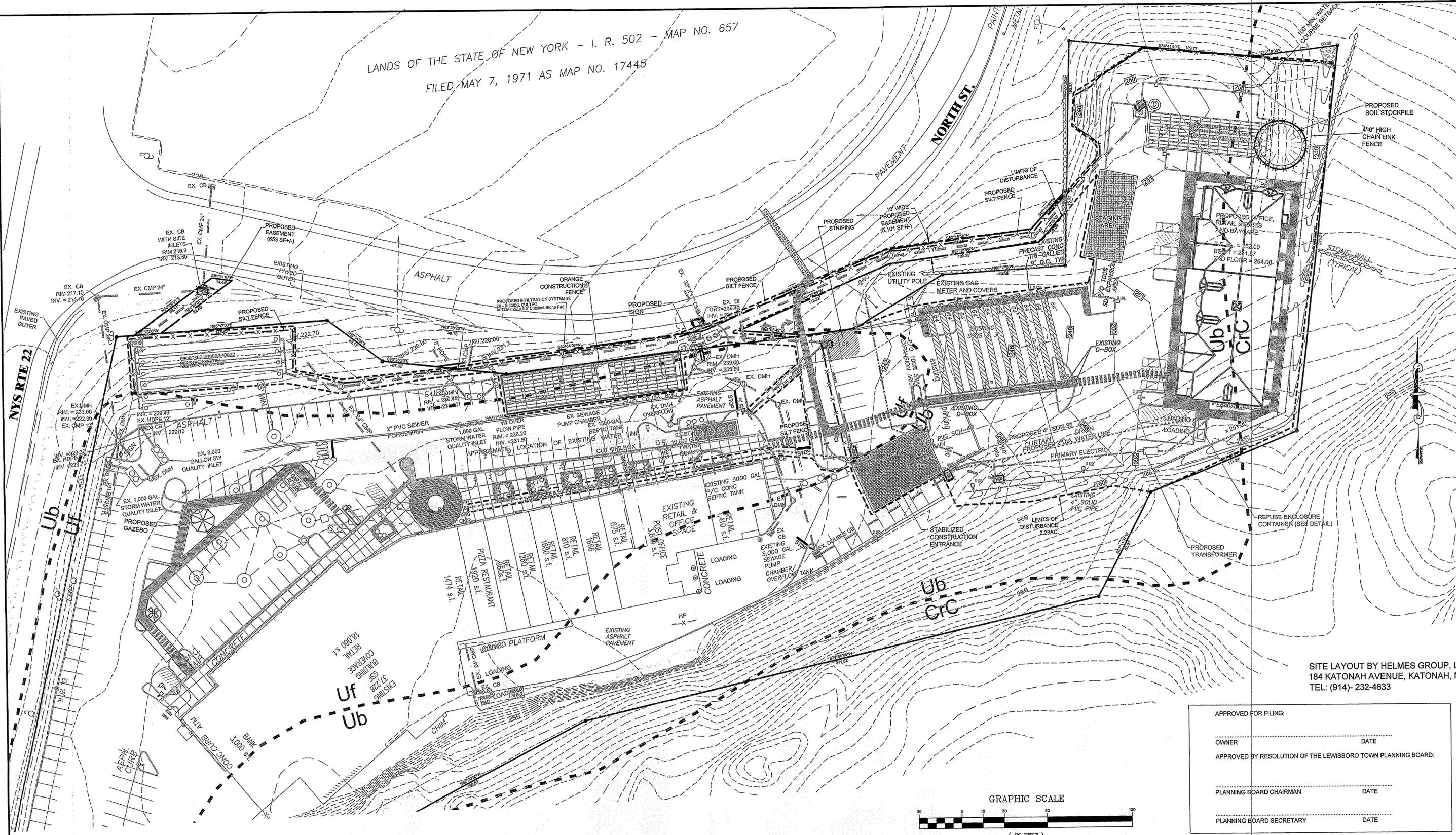
NYS RTE 22 & NYS RTE 138
TOWN OF LEWISBORO, WESTCHESTER COUNTY, NY

BIBBO ASSOCIATES, LLP
293 ROUTE 100 SUITE 203
SOMERS, NEW YORK 10589
TEL. 914 277 5905

DATE: 12-22-14
SCALE: 1" = 30'
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DRN. BY: DK
SHT NO. 5 of 13
DWG NO. **US-1**

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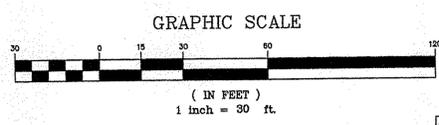
LANDS OF THE STATE OF NEW YORK - I. R. 502 - MAP NO. 657
 FILED MAY 7, 1971 AS MAP NO. 17445



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PLANNING BOARD CHAIRMAN	DATE
PLANNING BOARD SECRETARY	DATE



EXISTING UTILITIES AND BASEMAP, STORMWATER, SEPTIC AND WATER SYSTEM COMPONENTS HAVE BEEN BASED ON THE FOLLOWING:

- BIBBO ASSOCIATES'S FIELD INSPECTIONS AND SURFACE OBSERVATIONS
- PRIOR AS-BUILT AND PROPOSED PLANS AND SURVEYS
- PROPERTY SURVEY PROVIDED BY: DEROSA ASSOCIATES DATED: 9-13-2010
- AERIAL MAPS
- DISCUSSIONS WITH THE PROPERTY OWNER

EROSION CONTROL LEGEND

- - - PROPOSED SILT FENCE
- ☐ PROPOSED INLET PROTECTION
- - - PROPOSED ORANGE CONSTRUCTION FENCE
- - - LIMITS OF DISTURBANCE
- ▨ PROPOSED STABILIZED CONSTRUCTION ENTRANCE
- ▭ STAGING AREA
- ⊙ SOIL STOCK PILE

LEGEND

- ⊙ SMH - PROPOSED SANITARY MANHOLE
- ⊙ EXIST. SMH - EXISTING SANITARY MANHOLE
- ⊙ DMH - PROPOSED DRAIN MANHOLE
- ⊙ CB - PROPOSED CATCH BASIN
- ⊙ 200.30'-C - PROPOSED SPOT ELEVATION
- ⊙ DTP-C - DEEP TEST LOCATION
- ⊙ - PERCOLATION TEST LOCATION
- - - EXISTING CONTOUR
- ⊙ EXISTING SPOT ELEVATION
- - - PROPOSED SANITARY FORCEMAIN
- - - PROPOSED STORM DRAIN PIPE
- - - PROPOSED RETAINING WALL
- - - PROPOSED CONTOUR
- - - EXISTING RETAINING WALL
- - - EXISTING STORM DRAIN PIPE
- - - EXISTING SANITARY SEWER PIPE

UNAUTHORIZED ALTERATIONS AND ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 2209 (2) OF THE NEW YORK STATE EDUCATION LAW.

REVISIONS	DATE	TOWN COMMENTS	BY/CK	DATE	TOWN & DEP COMMENTS	BY/CK
	8/12/15			6/30/15		

SABRI BARISSER P.E.

EROSION CONTROL PLAN

NORTH COUNTY SHOPPING CENTER EXPANSION

NYS, RTE 22 & NYS RTE 138
 TOWN OF LEWISBORO, WESTCHESTER COUNTY, NY

BIBBO ASSOCIATES, LLP
 293 ROUTE 100 SUITE 203
 SOMERS, NEW YORK 10589
 TEL. 914 277 5805

DATE: 12-22-14
 SCALE: 1" = 30'
 FILE: DSGN/CHK/SB
 DRN. BY: DK
 SHT NO. 6 of 13
 DWG NO. **EC-1**

Maintenance and Inspection Requirements

A. Construction Phase

Throughout project construction, the responsibility for installation, maintenance and repair of erosion controls and SMP's will rest with the site contractor as the owner's representative. Oversight of the preparedness of erosion controls and SMP's will be conducted by the owner's qualified professional through regular inspections in accordance with NYSDEC SPDES General Permit requirements. On a daily basis, the project superintendent shall check for damaged silt fence, the need to clean must tracked onto North Street. Street sweeping should be conducted as required. Monitor catch basin sumps for sediment accumulation and clean out when one half full.

Construction debris, such as sheet metal and wood scrap, paper and insulation products, styrofoam cups and paper wrappers can become windblown litter over and off the site if neglected. Such litter is easily controlled and prevented when the project superintendent sets the tone for vigilant litter control at the outset of the project. Suitable and ample refuse containers will be provided on the site and emptied when full. Any scattered debris will be picked up and placed in containers on a daily basis. Heavy equipment will be refueled by daily deliveries to the site. Gasoline and oil for small engine equipment will be stored in construction equipment storage sheds. Refueling will take place at least 100 feet from the drainage swales to preclude any possible escape of spilled fuel to stormwater. In the event of any major spill, its capture and the removal of contaminated soil will be conducted under NYSDEC regulations for spill remediation.

As work progresses, the superintendent must ensure that the new work area is first protected with perimeter erosion controls. As important as the need to identify areas requiring protection, is the need to determine disturbed areas that can be stabilized with temporary vegetation. Site management responsibilities will include identification of sections in a work phase where active site work will not occur over the next 7 days. If disturbed earth is present, the superintendent will direct the spreading of rye grass seed and mulch for a temporary protective cover.

B. Post Construction

Following completion of construction, stabilization of the site and establishment of turf material, responsibility and maintenance will remain with the Owner. These items will require the following maintenance tasks:

Inspection - Following construction, each Infiltration System, detention system, CDS's outlet and diversion MH's will require regular inspections on at least a semi-annual basis and following major storm events to check for:

- A. Evidence of clogging of detention system outlet structure
- B. Accumulation of sediment at the inlet and around detention system outlet control structure
- C. Sediment accumulation at the Infiltration Systems
- D. Accumulation of debris and sediment in the diversion manholes, detention system inlet and equalization piping and catch basins
- E. Swale erosion

Debris and Litter Control - Removal of debris and litter should be undertaken during the mowing operation.

Erosion Control - Eroding soil on slopes, contributory areas noted during inspections and in diversion swales should be stabilized immediately with topsoil replacement, seeding and mulching. Any riprap dislodged at pipe outlets and in swales should be repositioned.

Sediment Removal - Sediment deposition in the detention and infiltration Systems, CDS pretreatments and diversion Manholes will need to be removed in order to maintain capacity for stormwater treatment and prevent clogging of the outlet structure. The need for sediment removal should be determined during routine inspections and the appropriate equipment and manpower scheduled for the task.

Catch Basin Cleanout - Catch basins are provided with sumps 18 inches below the pipe inverts for sediment trapping purposes. Catch basin sumps should be cleaned annually using a vacuum cleaning service.

CRITICAL AREA SEEDING SPECIFICATION

This practice applies to all disturbed areas void of vegetation except where specific seeding/planting recommendations exist in other standards and specifications for specific uses such as recreation.

SEEDING

Site preparation-scarify soil surface for seedbed preparation if compacted. Remove debris and obstacles such as rocks and stumps.

Soil Amendments

- 1) Lime to PH 6.0
- 2) Fertilize with 800lbs. of 5-10-10 or equivalent per acre (14lbs./1000 sq.ft.).

Seed Mixtures

1) Temporary Seedings

- a. Ryegrass (annual or perennial) @ 30lbs. per acre (0.7 lbs./100sq.ft.).
- b. Certified "arostook" winter rye (cereal rye) @ 100 lbs. per acre (2.5lbs./1000 sq.ft.).

Use winter rye if seeding in October/November.

2) Permanent Seedings

a. Rough or occasionally mowed areas:

	lbs./acre	lbs./1000sq.ft
Empire birdsfoot trefol(1) OR Common white clover(1)	8	0.20

PLUS

Tall fescue	20	0.45
-------------	----	------

PLUS

Redtop OR Ryegrass (perennial)	2	0.05
	5	0.10

(1) add inoculant immediately prior to seeding.

Time of seeding

The optimum time for permanent seedings with legumes (birdsfoot trefol or clover) is early spring.

Permanent seedings may be any time of the year if properly mulched and adequate moisture is provided. Mid summer is not a good time to seed, but these seedings if construction is complete, will facilitate covering the land. Portions may fall and may need reseeding the following year.

Temporary seedings should be made within 24 hours of construction or disturbance. If not, the soil must be scarified prior to seeding.

Method of seeding

Broadcasting, drilling with cultipack type seeder or hydroseeding are acceptable. Good soil to seed contact is the key to successful seedings.

Mulching and Mulch Anchoring

See specifications below.

Irrigation

Watering may be essential to establish a new seeding. Weather conditions and the intended use of the area will dictate when to water. Irrigation is specialized practice and care needs to be taken not to exceed the application rate/infiltration rate of a given soil.

Each application must be uniformly applied and 1 to 2 inches of water should be applied per application set up.

Mulching

The mulching specifications provided hereon apply to any disturbed areas or exposed slopes 20' vertical or greater that are exposed outside of the spring and fall grass growing season.

Mulch Material: Air-dried hay or straw: free of undesirable seeds and coarse materials.

Application Rate: 90-100 lbs per 1000 s.f. or 2 tons per acre.

Recommended Surface Coverage: Approximately 90%

Mulch Anchoring Material: Biodegradable Mulch netting: light-weight paper, jute wood fiber, or plastic netting

Method of Anchoring Application: Staple mulch netting to soil surface in accordance with netting manufacturers recommendations.

SEDIMENTATION & EROSION CONTROL NOTES

A. General Notes

1. Prior to commencement of any clearing, grading, or excavation in connection with any proposed construction activity, the Owner of Record shall file a notice of Intent (NOI) with the New York State Department of Environmental Conservation (NYSDEC) and the Town of Lewisboro. When all construction has been completed and the site has reached final stabilization, the Owner shall submit a Notice of Termination (NOT) to the NYSDEC and the Town of Lewisboro.
2. A copy of all Notice of Intents and all Contractor's Certifications, required pursuant to the NYS DEC's "SPDES General Permit for Stormwater Discharges from Construction Activity" (Permit No. GP-02-01) for all land disturbances, development or redevelopment located within the Town of Lewisboro, shall also be filed with the Lewisboro Planning Department.
3. All construction activities involving the removal or deposition of soil are to be provided with appropriate protective measures to minimize erosion and contain sediment deposition within the site. Minimum soil erosion and sediment control measures shall be implemented as shown on the plans approved by the Town of Lewisboro. All erosion and sediment control measures employed during construction shall comply with the NYS DEC's "New York Standards and Specifications for Erosion and Sediment Control," latest edition.
4. The Owner's Field Representative (O.F.R.) will be responsible for the implementation and maintenance of sediment and erosion control measures on the site prior to and during construction. All erosion control measures are to be maintained in proper functioning order and are to be repaired or replaced as necessary, or as required by the Town Planner, Building Inspector, Town ECI, or Town Engineer.
5. Sedimentation and erosion control measures shall be inspected and maintained on a daily basis by the O.F.R. to ensure that channels, temporary and permanent ditches and pipes are clear of debris, that embankments and berms have not been breached and that all straw bales and silt fences are intact. Any failure of sediment and erosion control measures shall be immediately repaired by the Contractor and inspected for approval by the O.F.R. and/or Site Engineer.
6. The O.F.R. shall inspect downstream conditions for evidence of sedimentation on a weekly basis and after rainstorms of 0.5 inches or greater.
7. All erosion control measures are to be inspected and maintained on a regular basis throughout the construction period and until all disturbed land has been stabilized by vegetation or paving. Responsibility for the erosion and sediment control plan rests with the landowner of record. This responsibility includes installation and maintenance of all control measures, informing all parties involved in site construction of the plan's objectives and requirements, notifying the Town of Lewisboro of any transfer of its responsibility and transferring a copy of the certified erosion and sediment control plan should the title of all or part of the land be transferred.
8. Site inspections shall be conducted by a qualified soil erosion control professional (retained by the Owner) at least every seven (7) calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater.
9. Wherever feasible, natural vegetation should be retained and protected. Only the smallest practical area of land should be exposed at any one time during development, and the exposure shall be kept to the shortest practical period of time. Disturbance shall be limited to the areas required to perform construction.
10. Stabilized construction entrances, silt fences and other erosion and sediment controls shall be installed as shown on plans approved by the Town of Lewisboro prior to beginning any clearing and grubbing or earthwork.
11. The exposure of an area by site preparation shall be kept to the shortest practical period of time. Erosion and sediment control requirements shall include surface stabilization measures applied as soon as practical in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than seven (7) days after the construction activity in that portion of the site has temporarily or permanently ceased. From November 1 through March 31 any disturbed area must be stabilized using a heavy mulch layer, a rolled erosion control product or another method that does not require seed germination to control erosion. Any graded areas not subject to further disturbance or construction traffic shall be immediately brought to final grade and receive permanent vegetation cover in combination with a suitable mulch.
12. The permanent final vegetation and structures shall be installed as soon as practical and as may be directed by the Town Planner, Town ECI, or Town Engineer.
13. All topsoil to be stripped from the area being developed shall be stockpiled not less than two hundred (200) feet from any body of surface water and shall be immediately seeded with a rye grass mixture having a quick germination time.
14. Grass seed mix may be applied by either mechanical or hydroseeding methods. All seeding and turf establishment shall be performed in accordance with the current edition of the NYS DOT's "Standard Specifications- Construction and Materials," Section 610-3.02, Method No. 1. If seeding is performed between May 15th and August 15th irrigation may be required to ensure proper lawn establishment, and shall be performed if so directed by the project engineer or the Town's representatives.
15. All cut slopes and embankment fills are to be immediately laid back and stabilized using appropriate techniques which meet the design standards found in the "New York Standards and Specifications for Erosion and Sediment Control," latest edition. At a minimum, slopes and embankments shall be stabilized as follows:
 - a. Grade to finished slopes.
 - b. Scarified.
 - c. Topsoiled with not less than four (4) inches of suitable topsoil material.
 - d. Seeded with perennial rye grass. Seed shall be applied at the rate of not less than five (5) pounds per one thousand (1,000) square feet.
 - e. Mulched with not less than one (1) inch and not more than three (3) inches of straw (two tons per acre) and anchored in a suitable manner.
 - f. All graded slopes greater than a 2h:1v shall use a rolled erosion control product or other means necessary to provide permanent stabilization, and shall be approved by the Town of Lewisboro prior to installation.
16. On all embankment fill slopes, topsoil shall be stripped at least five (5) feet wider than required for the embankment toe of slope. A protective berm of topsoil shall be left in this area, running parallel to the contours for the purpose of restricting drainage runoff. The topsoil berm shall be seeded as required for stockpiles.
17. Paved roadways shall be kept clean at all times.
18. The site shall at all times be graded and maintained such that all stormwater runoff is diverted to soil erosion and sediment control facilities.
19. All storm drainage outlets shall be stabilized, as required, before the discharge points become operational.
20. Stormwater from disturbed areas must be passed through sediment control devices before discharge beyond disturbed areas or discharged into other drainage systems.
21. Dust shall be controlled by sprinkling or other approved methods as necessary, or as directed by the O.F.R.
22. Cut and fills shall not endanger adjoining property, nor divert water onto the property of others.
23. All fills shall be compacted to provide stability of material and to prevent settlement.
24. Erosion control measures shall remain in place until all soil disturbing activities have been completed and all disturbed areas are suitably stabilized. A disturbed area shall be deemed to be "suitably stabilized" upon establishment of a uniform perennial vegetative cover (having a density of at least 80%) on all unpaved areas or areas not covered by permanent structures. Areas which are paved or covered by a permanent structures shall also be considered to be "suitably stabilized."
25. Construction equipment shall not unnecessarily cross live streams except by means of bridges and culverts or other approved methods.
26. Temporary on-site sedimentation basins for the immediate control of erosion and sediment transport are to be provided when and where required or ordered. The length, width and depth of such basins are to be determined in the field in accordance with the "New York Standards and Specifications for Erosion and Sediment Control," latest edition.
27. As warranted by field conditions, special additional sedimentation and erosion control measures, as specified by the site Engineer, the Building Inspector, the Town Planner the Town ECI and/or the Town Engineer shall be installed by the Contractor at no cost to the Town.

B. Streams

1. All construction activities in or around streams are to be provided with temporary erosion control structures, dewatering devices, or temporary stream diversions as approved by the Town of Lewisboro. These structures shall be in place as shown on the approved plans prior to the start of any construction activity.
2. Construction of temporary erosion control measures shall begin with the installation of devices/measures located farthest downstream, and thence proceed upstream until all required erosion control measures are in place.
3. After construction, the temporary erosion control measures are to be removed in reverse order, with the erosion control measures located farthest upstream removed first, and thence proceeding downstream.
4. Construction activities are to begin with the farthest downstream work and proceed to activities farthest upstream. Prior to commencement of upstream activities, all downstream construction must be completed and permanently stabilized.
5. All temporary erosion control measures are to be left in place, maintained and replaced as needed or as directed, until all work upstream therefrom has been completed and all related temporary erosion control measures have been removed.

CONSTRUCTION SEQUENCING :

General.

North County Shopping Center Expansion is a development project which is proposed to be developed in one (1) phase, taking approximately 1 year of construction time. Expected year of the project completion is based on the start date of the project construction, which is based upon receiving approvals from all regulatory agencies. However, it is estimated that project construction could begin in 2015. The total area of disturbance for the entire project will be approximately 2.23 acres.

Although a plan has been prepared to establish the required erosion controls, it is important to note that these controls are considered to be the minimum that the contractor must implement with the development of the property. Furthermore, and depending upon site or weather conditions, additional sediment & erosion control mitigation may be required during site work.

General Construction Sequencing

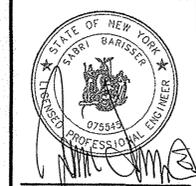
- Stake out access driveway and parking lot and drainage improvements
- Installation of erosion and sediment control measures for the site improvements and the tree protection measures, where applicable.
- Cut and clear trees and vegetation for the site improvements.
- All stumps and material generated from this operation shall be removed from the site and legally disposed of. No on-site burial of this material shall be permitted.
- Establish staging area for equipment and material.
- Concurrent with the clearing and grubbing operations, the contractor shall be required to install a stabilized construction entrance in conformance with the details and location illustrated on the approved plans.
- Strip topsoil and stockpile. Stockpile areas to be sited within the limits of disturbance shown. Stockpiled material to remain unused over seven(7) days shall receive a mulch cover.
- Stake-out the existing septic systems' location, cord-on-off with orange construction fencing to insure "no-construction vehicle activity"
- Commence with rock out operation at the south side of the project construct top-of-wall swales.
- Construct segmental fill retaining wall at the north side of the project. Extend geotextiles into the soil, protect buried geotextiles.
- Commence rough grading for the parking and access drive, with immediate stabilization of all disturbed areas upon completion.
- Install proposed infiltration system # 1, crushed stone, Culec System, diversion manhole and pretreatment. Do not connect infiltration system to the site conveying piping until all site stabilization has been accomplished
- Proceed with site drainage, catch basins, drain manholes, and drainage piping.
- Commence building construction activities.
- Install proposed infiltration system #2, crushed stone, cultec systems, diversion manhole and pretreatment. Do not connect infiltration system to the site conveying piping until all site stabilization has been accomplished
- Install site underground detention system, outlet control structures, piping, etc.
- Install building water/sewer connection piping
- Final grading and paving of driveway and parking lots (install base and binder course- as required- according to the details outlined) Construct walkways/sidewalks.
- Spreading top soil, seed and mulch on shoulders, and all disturbed areas. Fine grade of shoulders and embankments. All shoulder areas shall receive topsoil seed and mulch as required. Other landscaped areas to be seeded and/or mulched as required.
- Installation of street trees and landscaping as specified
- Clean diversion manholes and CDS structures of collected sediment.
- Connect infiltration systems to the drainage conveying systems.

Upon completion of construction within drainage sheds:

- Upon stabilization of disturbed areas, remove sediment and erosion control measures

APPROVED FOR FILING:	
OWNER	DATE
APPROVED BY RESOLUTION OF THE LEWISBORO TOWN PLANNING BOARD:	
PLANNING BOARD CHAIRMAN	DATE
PLANNING BOARD SECRETARY	DATE

REVISIONS	DATE	DESCRIPTION	DK/SB BY/CK	6/30/15 DATE	TOWN & DEP COMMENTS	DK/SB BY/CK
	8/12/15	TOWN COMMENTS				



EROSION CONTROL NOTES

NORTH COUNTY SHOPPING CENTER EXPANSION
NYS. RTE 22 & NYS RTE 138
TOWN OF LEWISBORO, WESTCHESTER COUNTY, NY

BIBBO ASSOCIATES, LLP
293 ROUTE 100 SUITE 203
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TEL. 914 277 5805

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SHT NO. 7 OF 13

DWG NO. **ES-1**

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LEGEND



Date	Issue

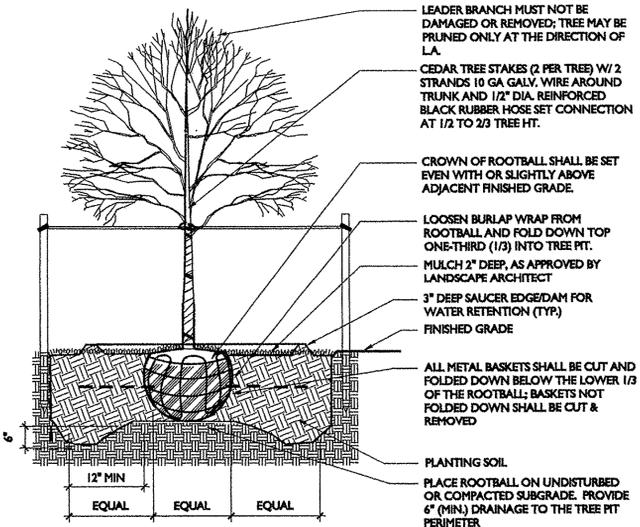
PLANTING NOTES

- All plant material shall meet standard specifications of the American Standards for Nursery Stock sponsored by the American Association of Nurserymen Inc.
- All plant material shall be in good condition, vigorous, free of diseases and pests. All plants shall be subject to the Landscape Architect's inspection and approval at the nursery and at the site before any planting.
- All installation to be done in workmanlike manner conforming to the standard specification of the American Association of Nurserymen.
- No plant material substitution shall be made without approval by the Landscape Architect.
- Locations of all new plants shall be verified in the field with the Landscape Architect or Owner's Representative for approval prior to planting.
- All planting beds to have 2" of mulch. Mulch material to be selected by owner. All new plant beds edges to be spade cut.
- Prior to planting verify in field locations of all existing and proposed underground utilities. Where necessary plants are to be relocated at the direction of the Landscape Architect or Owner's Representative.
- Protect all existing vegetation to remain from damage during construction. It is the intent of the is contract to avoid any disturbance to existing vegetation on the site other than those specifically designated for removal. Adjustments shall be made in the field a the direction of the Landscape Architect or Owner's Representative.
- Quantities given in the plant list are for reference only. The Contractor shall verify all quantities shown on the list and shall be responsible for furnishing all materials required to complete the project.
- Contractor shall guarantee all plant material for one year from time of written approval from Landscape Architect or Owner's Representative.
- Contractor responsible for restoring all areas disturbed due to planting operations.
- Topsoil shall be fertile, friable, natural loam free of subsoil, clay, lumps, brush, stones or other deleterious materials larger than 2 inches in greatest dimension, conforming to the requirements of NYSDOT with 3%-8% organic content and meeting the following requirements:
Sand (0.05 to 2 mm) 40% to 75%
Silt (0.002 to 0.05mm) 15% to 65%
Clay (<0.002mm) 20% maximum
pH range: 5.5-7.6
- Natural topsoil may be amended with the approved materials by approved methods to meet the above specifications.
- The Contractor shall verify all grades, dimensions and existing conditions and report any discrepancies to the Owner's Representative.
- Place topsoil on compacted subgrade only after subgrade has been approved by Owner's Representative.
- Subgrade shall conform tot he specified lines and grade of this contract documents.
- Scarify the subgrade parallel to the contours to permit sufficient bonding with the topsoil. Do not scarify to the extent that the subgrade stability or density is compromised.
- Place a minimum depth of 6" of topsoil in areas where seeding is to be performed. Fine grade topsoil to eliminate uneven areas and to ensure proper drainage. Maintain finished grade elevations required.
- Remove all stones, roots, grass, weeds or other foreign matter. Lightly compact the topsoil to ensure its stability.
- Grass mixture shall be
60% Tall Fescue - 98% Purity Seed, 85% Max. Germination, .25% Weed
20% Bluegrass - 98% Purity Seed, 80% Max. Germination, .10% Weed
20% Perennial Ryegrass - 98% Purity Seed, 85% Max. Germination, .25% Weed
Rate of seed shall be 10 pounds per 1,000 square feet. Time of seeding is in the Fall during August and September or in the Spring during March, April and May.
- Fertilize shall be Commercial Fertilizer Low Phosphorus (Slow Release) composed of Nitogen(N) 7% min. -10% max. of which 50% is slow release, Phosphorus(P) 1%min.-2% max, Potash(K) 4%min-12%max. Apply two application of fertilizer by machine at at rate of 20pounds per thousand square feet. First application shall be at the time of installation. Second application shall be approximately 6 months after the first application Second applications shall be applied to the surface only and incorporated by thoroughly watering the entire area after application.
- Seeded area to mulched with weed seed free hay mulch or approved equal.

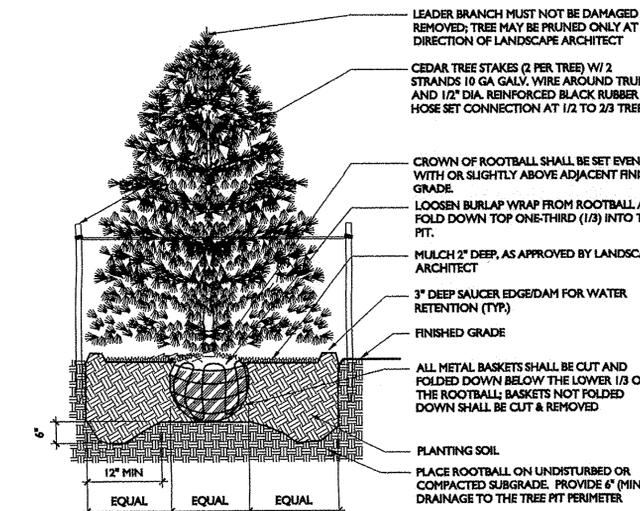
PLANTING SCHEDULE

Qty	Sym	Botanical Name	Common Name	Size	Remarks
TREES					
2	AC	Abies concolor	White Fir	8'-10' ht.	B&B
6	GB	Ginkgo biloba	Ginko-Maiden Hair Tree	2 1/2"-3" Cal.	B&B
7	GT	Gleditsia triacanthos inermis	Honolocust	2 1/2"-3" Cal.	B&B
4	TH	Thuja plicata	Green Giant Arborvitae	6'-7' ht.	B&B
3	KD	Cornus kousa	Kousa Dogwood	7'-8' ht.	B&B
7	ZV	Zelkova serrate	Zelkova	2 1/2"-3" Cal.	
SHRUBS					
14	CA	Clethra alnifolia	Summersweet	3'-4' ht.	B&B
75	BX	Buxus sempervirens	Common Boxwood	30"-36"	B&B
38	IC	Ilex crenata	Green Luster Holly	5 gal.	
6	IH	Itea virginica 'Little Henry'	Sweetspire	3 gal.	
22	JC	Juniper chinensis sargentii	Sargent Juniper	3 gal.	
10	JH	Juniper wichita blue	Blue Upright Juniper	4'-5' ht.	B&B
3	PJM	Rhododendron PJM	PJM Rhododendron	3 gal.	
28	SB	Spiraea bumalda	Anthony's Waterer Spirea	3 gal.	
3	SC	Sambucus nigra	Black Elder	5 gal.	
6	VD	Viburnum dentatum	Arrowwood Viburnum	3'-4' ht.	B&B
6	VO	Viburnum trilobum	Cranberry Viburnum	5 gal.	
3	VT	Viburnum tomentosum 'Mariesii'	Doublefile Viburnum	3'-4'ht.	B&B
PERENNIALS					
51	BS	Rubecula fulgida 'Goldsturm'	Black Eyed Susie	1 gal.	Perennial
88	DL	Hemerocallis x Stella D'Oro	Daylily	1 gal.	Perennial
144	NP	Nepeta x Walker's Low	Nepeta	1 gal.	Perennial
55	SL	Salvia nemorosa	Salvia -Mixed Colors	1 gal.	Perennial
GRASSES					
66	RT	Panicum virgatum 'Shenandoah'	Red Swirch Grass	1 gal.	Perennial

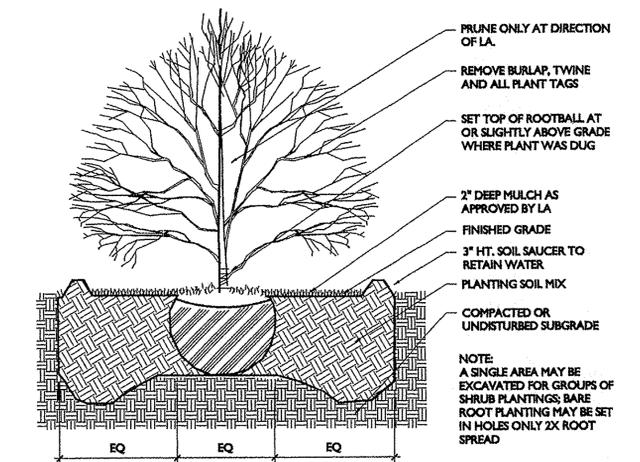
MEADOW MIX SHALL BE WOODLAND SEED MIX BY PRAIRIE MOON NURSERY, WISCONSIN (866-417-8156) OR APPROVED EQUAL AT A RATE OF 1/4 LB. PER 600 SF.



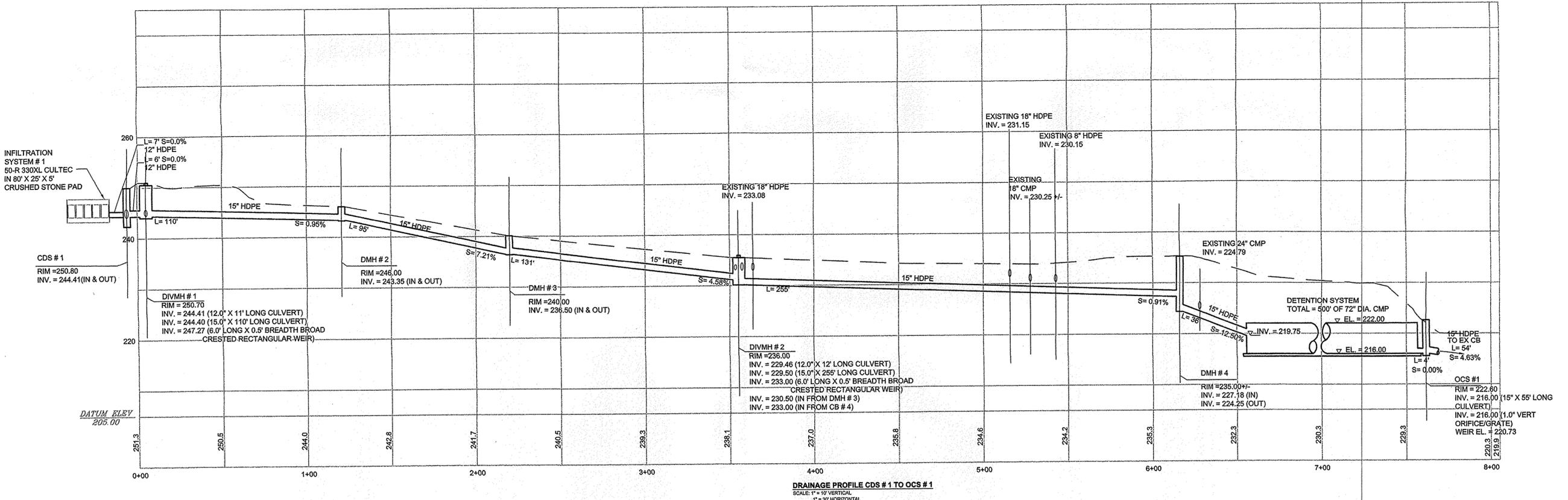
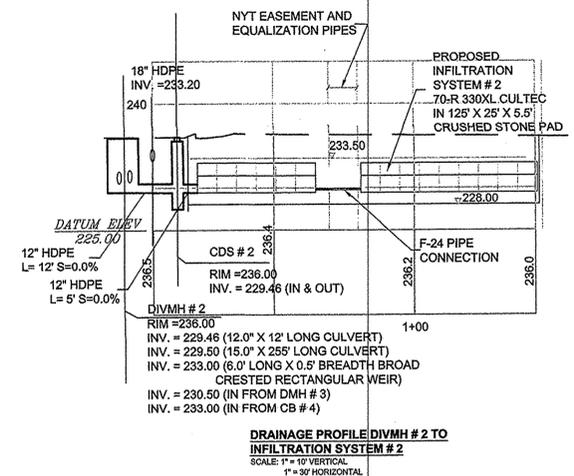
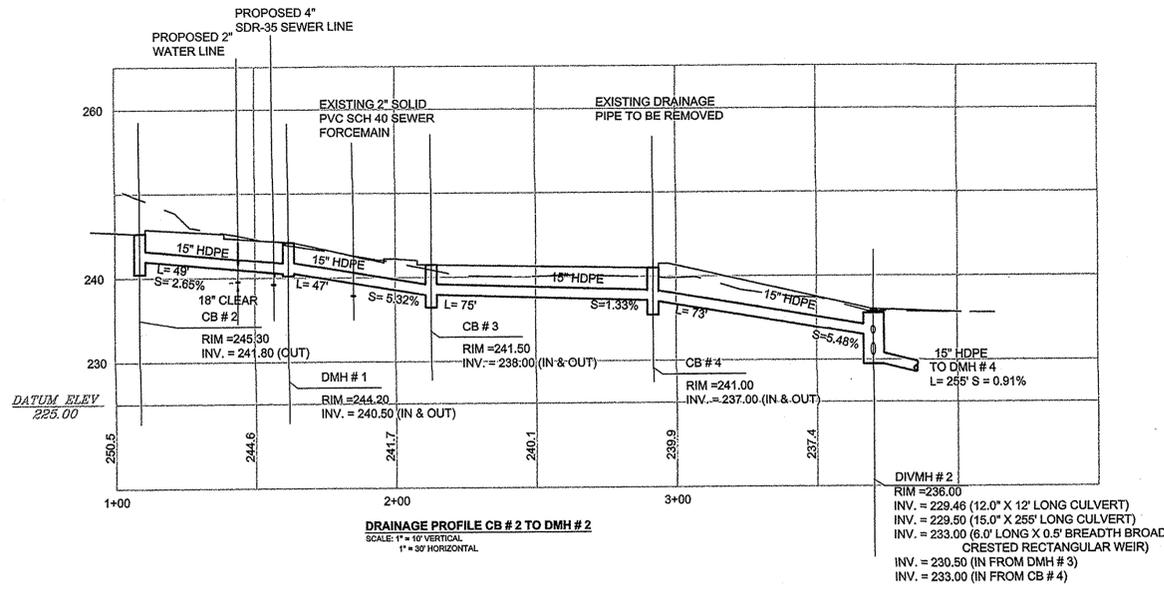
1 DECIDUOUS TREE PLANTING



2 EVERGREEN TREE



3 SHRUB PLANTING



APPROVED FOR FILING:

OWNER _____ DATE _____

APPROVED BY RESOLUTION OF THE LEWISBORO TOWN PLANNING BOARD:

PLANNING BOARD CHAIRMAN _____ DATE _____

PLANNING BOARD SECRETARY _____ DATE _____

REVISIONS	DATE	DESCRIPTION	BY/CK	DATE	DESCRIPTION	BY/CK
1	6/12/15	TOWN COMMENTS	DK/SB	6/30/15	TOWN & DEP COMMENTS	DK/SB

SABRI BARISSER P.E.

DRAINAGE PROFILES

NORTH COUNTY SHOPPING CENTER EXPANSION

NYS RTE 22 & NYS RTE 138
TOWN OF LEWISBORO, WESTCHESTER COUNTY, NY

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DWG NO. _____

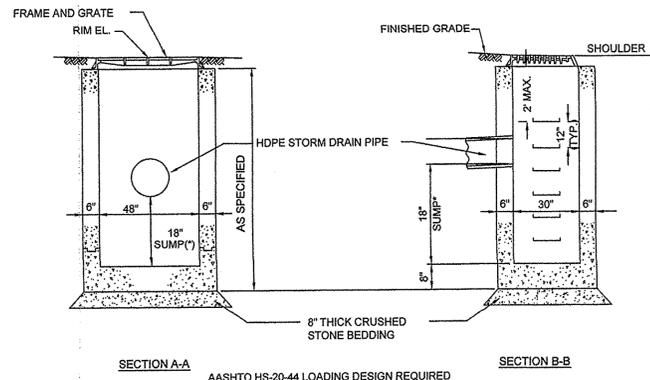
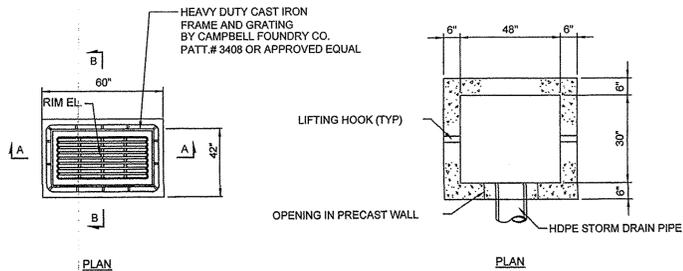
BIBBO ASSOCIATES, LLP
293 ROUTE 100 SUITE 203
SOMERS, NEW YORK 10589
TEL. 914 277 6805

P-1

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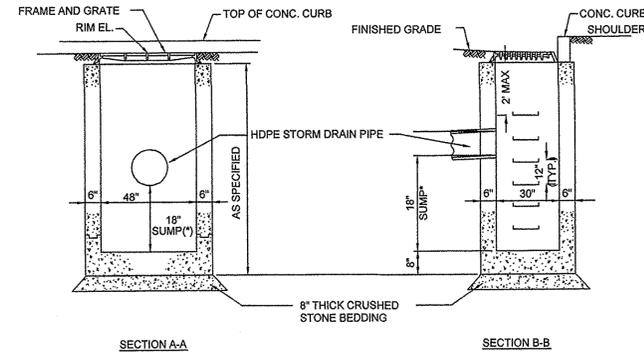
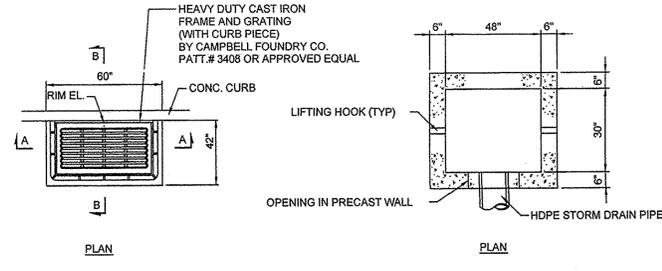
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AASHTO HS-20-44 LOADING DESIGN REQUIRED

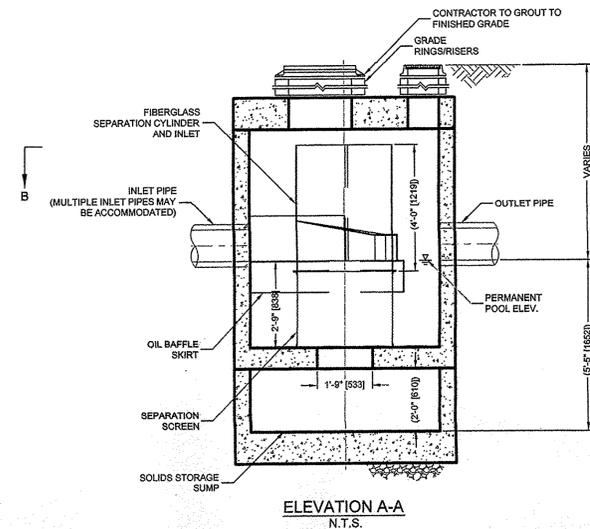
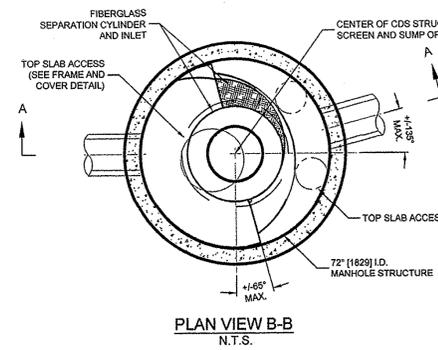
1. BASE & RISE SECTIONS SHALL BE PRECAST & MONOLITHICALLY POURED.
2. CONCRETE SHALL BE 4,000 PSI AT TIME OF DELIVERY.
3. ALL BASINS SHALL HAVE 18" MINIMUM SUMPS.
4. PROVIDE PROPER LIP AND / OR ANCHORING IN CASES OF HIGH GROUND WATER TO PREVENT FLOATATION.
5. LADDER RUNGS CONFORMING TO N.Y.S.D.O.T. SPEC. NO.725-02.01
6. ALL PIPES SHALL BE LAID OR CUT FLUSH WITH THE INSIDE OF THE BASIN WALL & SHALL BE FIRMLY PARGED IN PLACE, BOTH INSIDE AND OUTSIDE.
7. BRICK FRAME & GRATE TO GRADE TO MATCH BOTH CROWN OF ROAD & SLOPE OF ROAD. A MAX. OF TWO (2) CONCRETE BRICKS OR ONE (1) 6" SOLID BLOCK WILL BE PERMITTED, PARGED INSIDE & OUTSIDE.

TYPICAL CATCH BASIN CL TYPE
N.T.S.

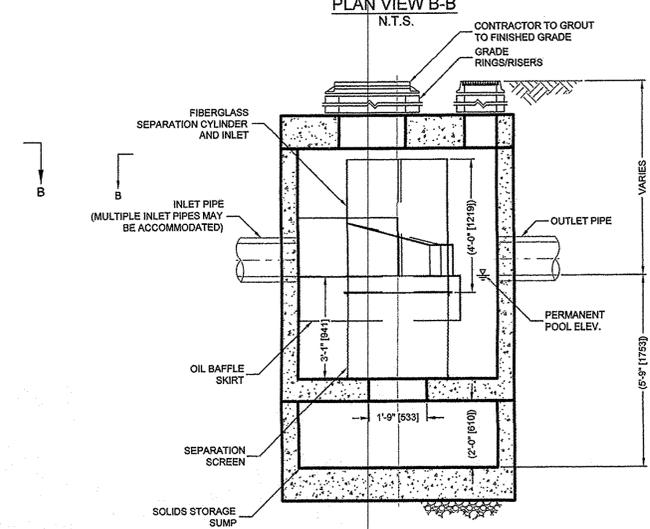
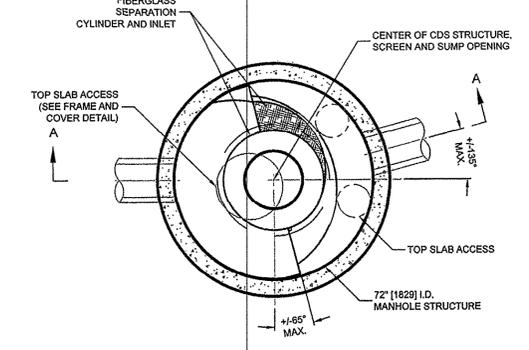


AASHTO HS-20-44 LOADING DESIGN REQUIRED

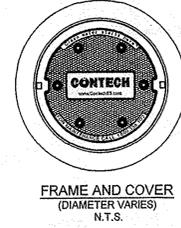
TYPICAL CATCH BASIN C TYPE
N.T.S.



CONTECH WATER QUALITY STRUCTURE
CDS 3020-6-C
N.T.S.
REFER TO CDS #1 ON SITE PLAN

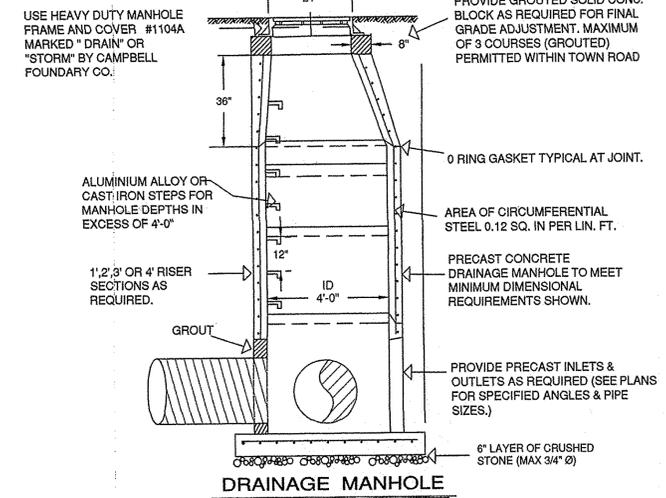


CONTECH WATER QUALITY STRUCTURE
CDS 3025-6-C
N.T.S.
REFER TO CDS #2 ON SITE PLAN

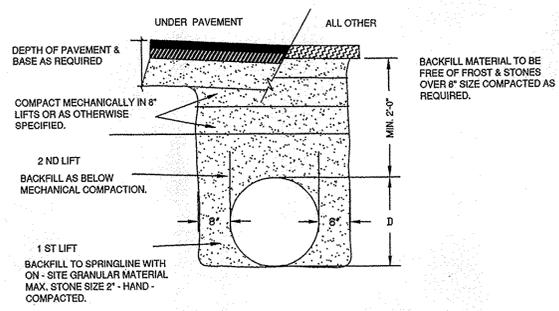


FRAME AND COVER
(DIAMETER VARIES)
N.T.S.

- GENERAL NOTES**
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
 2. DIMENSIONS MARKED WITH () ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
 3. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH CONSTRUCTION PRODUCTS REPRESENTATIVE. www.contech-cpi.com
 4. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
 5. STRUCTURE SHALL MEET AASHTO HS20 AND CASTINGS SHALL MEET HS20 (AASHTO M 306) LOAD RATING, ASSUMING GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION.
 6. PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.
- INSTALLATION NOTES**
1. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
 2. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE (LIFTING CLUTCHES PROVIDED).
 3. CONTRACTOR TO ADD JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS, AND ASSEMBLE STRUCTURE.
 4. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN.
 5. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.



DRAINAGE MANHOLE
N.T.S.
HS-20-44 LOADING DESIGN REQUIRED



DRAINAGE PIPE INSTALLATION
N.T.S.

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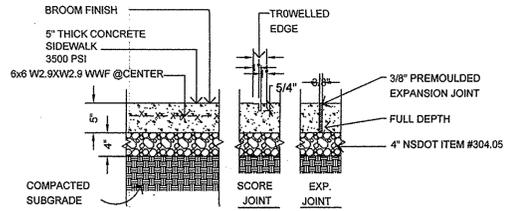
APPROVED FOR FILING:	DATE
OWNER	DATE
APPROVED BY RESOLUTION OF THE LEWISBORO TOWN PLANNING BOARD:	
PLANNING BOARD CHAIRMAN	DATE
PLANNING BOARD SECRETARY	DATE

REVISIONS	DATE	DESCRIPTION	DATE	DESCRIPTION	DATE	DESCRIPTION
8/12/15	TOWN COMMENTS	DK/SB	6/30/15	TOWN & DEP COMMENTS	DK/SB	
		BY/CK			BY/CK	

DRAINAGE DETAILS		DATE:	12-22-14
NORTH COUNTY SHOPPING CENTER EXPANSION		SCALE:	AS SHOWN
NYS RTE 22 & NYS RTE 138 TOWN OF LEWISBORO, WESTCHESTER COUNTY, NY		DSGN / CHK:	SB
		DRN. BY:	DK
		SHT NO.:	12 OF 13
		DWG NO.:	DD-2

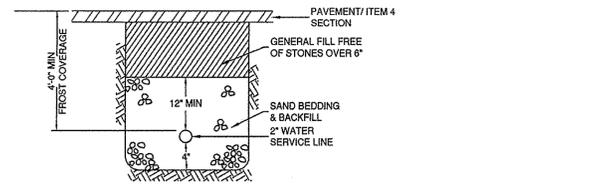
	BIBBO ASSOCIATES, LLP 293 ROUTE 100 SUITE 203 SOMERS, NEW YORK 10589 TEL. 914.277.5805
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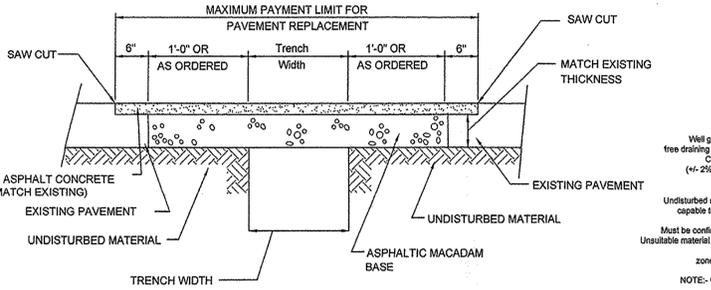


- NOTES:**
1. SIDEWALK TO BE CONSTRUCTED WITH SLOPE OF 2%.
 2. BITUMINOUS EXPANSION JOINTS @ 20' O.C.
 3. CONTRACTION JOINTS @ 5'-0" O.C.

CONCRETE SIDEWALK DETAIL
N.T.S.

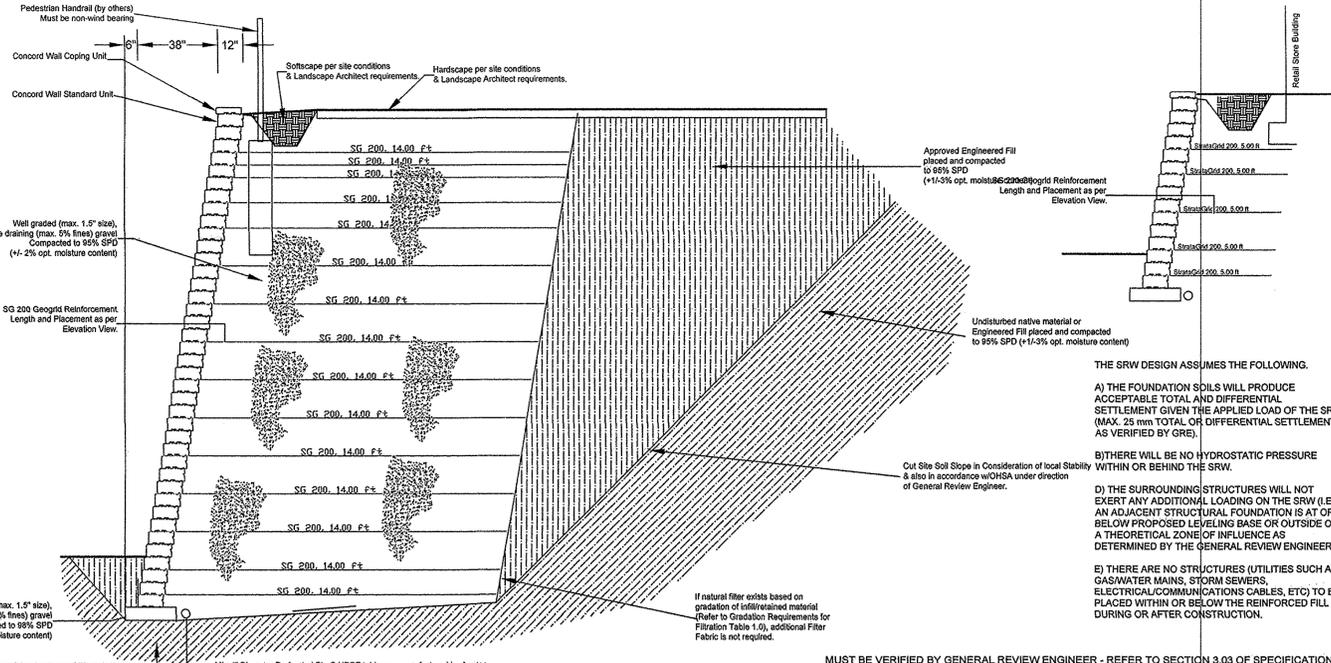


WATER SERVICE INSTALLATION DETAIL
N.T.S.



NYSDOT PAVEMENT REPLACEMENT DETAIL
N.T.S.

PVC SEWER TRENCH DETAIL
N.T.S.



MUST BE VERIFIED BY GENERAL REVIEW ENGINEER - REFER TO SECTION 3.03 OF SPECIFICATION

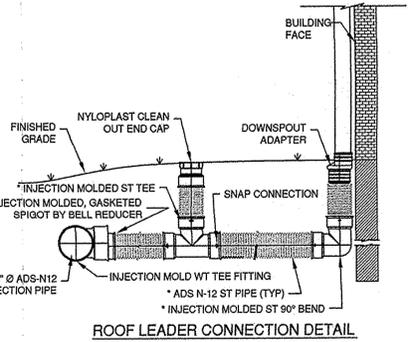
TABLE 1.0 - SOIL ZONES AND ASSUMED PROPERTIES

Soil Region	Reinforced Fill	Retained FillSoil**	Foundation Soil**	Base	Drainage Fill (as req. - ref to section)
Description (by USCS)	GW Well graded gravel Max. 5% fines	ML-CL Lean Silty Clay Low Plasticity	ML-CL Lean Silty Clay Low Plasticity	GW Well graded gravel Max. 8% fines	GP Gap graded, rapid draining gravel
Effective Internal Friction Angle (Deg.)	35°	28°	28°	35°	NA
Compaction Requirement (Eng. Fills Only)	95% SPD (+/- 2% opt. moist.)	95% SPD (+/- 3% opt. moist.)	98% SPD (+/- 3% opt. moist.)	98% SPD (+/- 2% opt. moist.)	Dense State
Moist Unit Weight (lb/cu.ft)	140	127	127	140	115
Effective Cohesion (psf)	NA	NA	100	NA	NA
Soil Notes	Max. 6"-8" Compaction Lifts	Max. 6"-8" Compaction Lifts	Refer to section for ALLOWABLE Bearing Capacity	Max. 6"-8" Compaction Lifts	Max. 6"-8" Compaction Lifts
Geotextile at Interface	Interface: Reinforced/Retained Geotextile Not Req. if gradations listed below are met. Otherwise: TBD		NA	NA	NA
Assumed Gradation for Filtration Req.*	D(15) <0.3mm D(50) <1.18mm MAX 5% FINES	D(85) >0.075mm D(15) <0.002mm D(60) >0.05mm		NA	NA

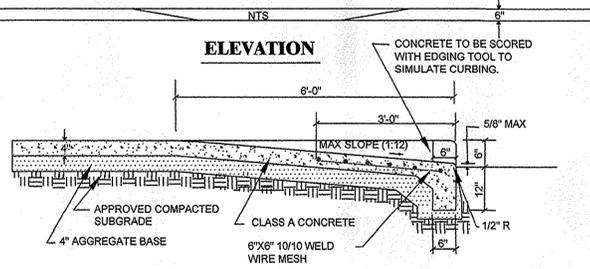
* If the above gradation requirements are not met, an alternative filter fabric will be required. Contact RSS to discuss alternatives.
** Engineered Fill is defined as Clean earth fill placed and compacted in maximum lift thicknesses of 150mm to at least 98 percent Standard Proctor Density for Foundation Soils and 95 percent Standard Proctor Density for Retained Soils, under the full-time inspection and testing of a geotechnical engineering firm who provides written confirmation and certification of the completed Engineered Fill.

Potential Water Source	Drainage Measures (To be Verified by General Review Engineer)	Add. Notes
Surface Infiltration Above Reinforced Zone and beyond. Rainfall, normal snow melt, run-off, etc. If irrigation systems are used immediately above the reinforced zone of the wall, additional measures will be required in case of leakage/failure of the system.	Grade behind must direct water away from back of wall. If slope toward wall exists, swale system must be implemented to carry water at min. 2% grade to positive drainage area. Dimensions of swale will be based on anticipated water collection requirements as specified by the Civil Engineer as part of the overall site drainage plan. The swale system must be constructed with a low permeability layer (100-150mm) of engineered fill material compacted to 95% SPD to act as a conduit for the surface water and prevent infiltration behind the wall facing and into the reinforced zone.	Other structures and paved surfaces adjacent to Wall. Other structures adjacent to the retaining wall must have independent drainage systems. For example, pavements must have independent collection systems (perimeter drains) to collect water that penetrates cracks in the surface, etc. Building downspouts must not direct water towards the walls and must be connected to independent outlets.
Lateral Underground. Design assumes that groundwater is below bottom of wall. The following drainage measures address other potential sources of lateral groundwater that may be the results of infiltration through the surface (i.e. cracks in asphalt) must be beyond the reinforced zone) or other below grade sources.	The reinforced zone of the wall is specified as a well graded gravel with a maximum of 5% fines with a collection pipe at the bottom. The retained zone (up stream source of potential water) is assumed to be of a lower permeability as compared to the imported fill. The reinforced zone is therefore assumed to allow for the drainage of potential water seepage as discussed in Column 1. The perforated collection pipe (Min. 100mm dia. at 2% grade) must be connected to a positive outlet as determined by the Civil Engineer prior to construction.	Water Management During Construction. At all times the contractor must ensure measures such as temporary swales and drainage ditches are employed to manage surface water and seepage during and after the construction of the wall. If final grading is not part of the contractor's scope of work, the area around the wall must still be properly graded to ensure water does not collect behind or is directed toward the wall.

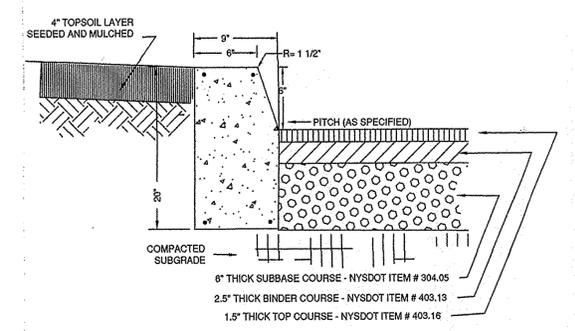
TABLE 3.0 - DRAINAGE PROVISIONS



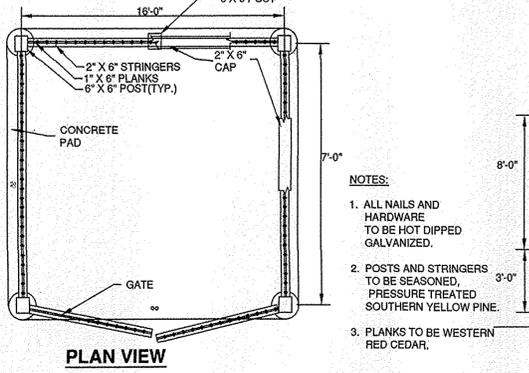
ROOF LEADER CONNECTION DETAIL
N.T.S.



DROP CURB AND RAMP
N.T.S.

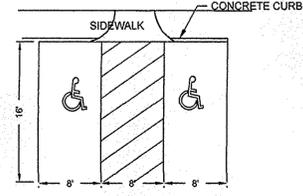


ON-SITE CONCRETE CURB AND PAVEMENT SECTION
N.T.S.



REFUSE CONTAINER ENCLOSURE
N.T.S.

SEGMENTAL RETAINING WALL DETAILS
N.T.S.



HC PARKING DIMENSIONS
N.T.S.

TABLE 2.0 - DESIGN INFORMATION

Retaining Wall System	Concord Wall Manufactured by Unilock	Geogrid Type	SG 200 by Stratagist
Max. Slope Above Wall	none	Min. Geogrid LTDs (lb/ft)	1600
Max. Surcharge Above Wall (psf)	Offset 240	Max. Slope Below Wall	None
Batter of Wall (Degrees)	9.0	Depth of Embedment (in)	Min 18" as per local Engineer requirements
Maximum Height (in)	refer Section	Compacted Base Dimensions (in x in)	6' x 24"

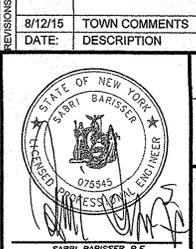
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PLANNING BOARD CHAIRMAN: _____ DATE _____

PLANNING BOARD SECRETARY: _____ DATE _____



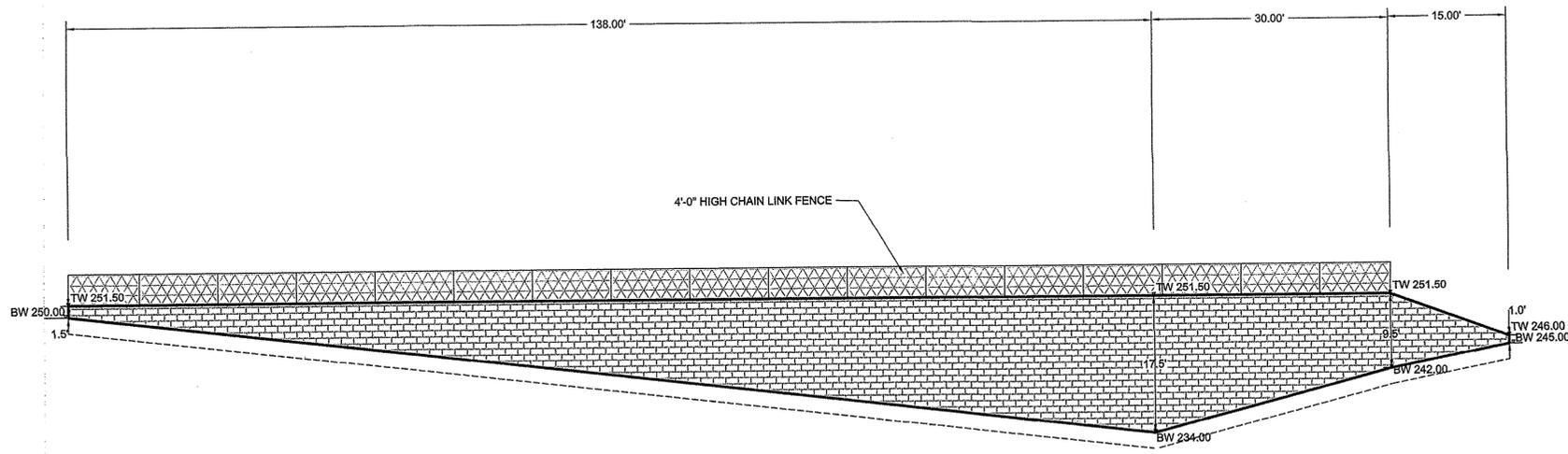
SITE DETAILS

NORTH COUNTY SHOPPING CENTER EXPANSION
NYS. RTE 22 & NYS RTE 138
TOWN OF LEWISBORO, WESTCHESTER COUNTY, NY

BIBBO ASSOCIATES, LLP
293 ROUTE 100 SUITE 203
SOMERS, NEW YORK 10589
TEL. 914 277 5805

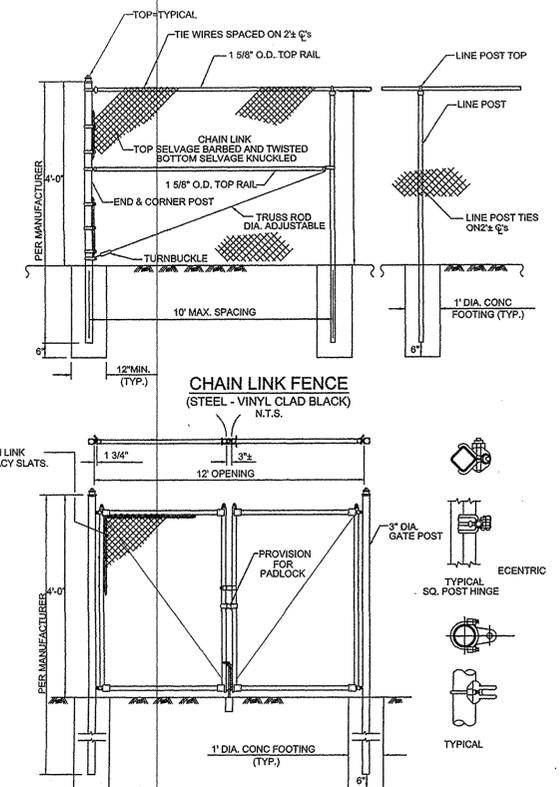
DATE: 12-22-14
SCALE: AS SHOWN
FILE: DSGN / SB
DRN. BY: DK
SHT NO.: 10 OF 13
DWG NO.: SD-1

- GENERAL NOTES**
1. THIS IS A PRELIMINARY DESIGN CONDUCTED BY RISI STONE SYSTEMS (THE SRW LICENSEE) FOR COSTING AND FEASIBILITY PURPOSES ONLY. PRIOR TO CONSTRUCTION, A FINAL DESIGN MUST BE ISSUED BY A PROFESSIONAL ENGINEER, QUALIFIED IN THE DESIGN OF MSE WALLS AND LICENSED IN THE STATE THAT THE WALLS ARE BEING CONSTRUCTED. AS THIS IS A PRELIMINARY DESIGN ONLY, AND NOT THE FINAL DESIGN, THIS DOCUMENT CAN NOT BE USED FOR CONSTRUCTION.
 2. THE FINAL DESIGN IS ISSUED BY THE WALL DESIGN ENGINEER OF RECORD. ALL INQUIRIES REGARDING THE DESIGN BEFORE, DURING OR AFTER THE PROJECT MUST BE MADE DIRECTLY TO THE WALL DESIGN ENGINEER OF RECORD BY THE GENERAL REVIEW ENGINEER.
 3. THE INFORMATION PROVIDED ON THIS SHEET MUST BE USED IN CONJUNCTION WITH THE ATTACHED SPECIFICATIONS.
 4. THIS PRELIMINARY DESIGN IS BASED ON INFORMATION PROVIDED PART DRAWING BY SABRI BARISSER OF BIBBO ASSOCIATES, LLP, NEW YORK DATED DEC 2014. THIS WALL DESIGN DRAWING AND THE FINAL DESIGN ARE NOT INTENDED TO BE "STAND ALONE" DRAWINGS. THE WALL CONTRACTOR AND GENERAL CONTRACTOR ARE REQUIRED TO HAVE A COMPLETE UNDERSTANDING OF ANY AND ALL OTHER STRUCTURES THAT MAY INTERACT WITH THIS SEGMENTAL RETAINING WALL. THE WALL CONTRACTOR AND GENERAL CONTRACTOR MUST REFER TO A FULL SET OF CIVIL, STRUCTURAL AND ARCHITECTURAL DRAWINGS (AS APPLICABLE) FOR THE PROJECT TO ENSURE SUCCESSFUL CONSTRUCTION AND PERFORMANCE OF THE WALL SYSTEM. THE WALL DESIGN DRAWING SHOULD NOT BE REFERRED TO FOR HOLE LOCATIONS, ELEVATIONS, OR ANY OTHER CIVIL OR SITE INFRASTRUCTURE INFORMATION BECAUSE DATA MAY HAVE BEEN SELECTIVELY REMOVED FROM THIS DRAWING FOR CLARITY OF WALL ILLUSTRATION.
 5. DESIGN ASSUMPTIONS: (PL REFER NEAR X-SECTION)
 6. THE DESIGN IS IN ACCORDANCE WITH THE NATIONAL CONCRETE AND MASONRY ASSOCIATION DESIGN MANUAL FOR SEGMENTAL RETAINING WALL. SECOND EDITION. ANALYSIS OF OVERALL GLOBAL AND/OR COMPOUND STABILITY HAS NOT BEEN CONDUCTED. IT IS REQUIRED THAT THE GENERAL REVIEW ENGINEER RETAINED TO REVIEW THE DESIGN AND INSPECT CONSTRUCTION ASSESS THE NEED FOR A GLOBAL STABILITY ANALYSIS AND PROVIDE THIS, IF NECESSARY, REFER TO SPECIFICATION FOR FULL DETAILS. THIS PRELIMINARY DESIGN DOES NOT INCLUDE A SEISMIC ANALYSIS. THIS MUST BE ADDRESSED BY THE WALL DESIGNER PRIOR TO ISSUANCE OF THE FINAL DESIGN.
 7. NO SEISMIC ANALYSIS HAS BEEN CONDUCTED. THE WALL DESIGN ENGINEER OF RECORD MUST ANALYZE THE WALL(S) FOR SEISMIC STABILITY IN ACCORDANCE WITH LOCAL CODES AND REGIONAL SEISMIC DESIGN PARAMETERS.
 8. AT THIS STAGE IN THE DESIGN, RISI STONE SYSTEMS HAS NOT RECEIVED SITE SPECIFIC GEOTECHNICAL INFORMATION / GEOTECHNICAL REPORT. FOR DESIGN PURPOSES, WE HAVE ASSUMED A SET OF GEOTECHNICAL PARAMETERS. FOR THE FINAL DESIGN, UPON EXCAVATION OR FURTHER EXPLORATION IN THE WALL LOCATION(S), THESE DESIGN PARAMETERS MUST BE VERIFIED AS BEING ACCEPTABLE BY THE GENERAL REVIEW ENGINEER (REFER TO NOTE 6) OR REVISED PARAMETERS MUST BE PROVIDED FOR A REDESIGN. BOTH THE CONTRACTOR AND THE PRIME CONSULTANT MUST VERIFY THAT THE FINAL DESIGN MAY HAVE TO BE ALTERED BASED ON ACTUAL CONDITIONS FOUND ON SITE. ALTERATION OF THE DESIGN MAY RESULT IN ADDITIONAL CONSTRUCTION COSTS AND PROJECT DELAYS. IT IS RECOMMENDED THAT CONTINGENCIES BE ADDRESSED IN THE CONTRACT TO UNDERTAKE THE WALL CONSTRUCTION FOR DEALING WITH THE DISCOVERY OF UNFAVORABLE SOIL CONDITIONS.
 9. THE PRELIMINARY AND FINAL DESIGN MUST BE CHECKED WITH THE FINAL GRADING PLAN TO VERIFY ACCURACY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THE WALL LAYOUT(S) PROVIDED MATCH THE FINAL SITE GRADING. CONTRACTOR MUST VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO BUILDING / CONSTRUCTION. RISI STONE SYSTEMS MAKES EVERY EFFORT TO ENSURE ACCURACY OF THE DESIGN, HOWEVER, AS INFORMATION PROVIDED MAY HAVE BEEN UNKNOWNLY OUT OF DATE, UNCLEAR IN AREAS, OR INCORRECT, IT IS ULTIMATELY THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE DIMENSIONS AND ELEVATIONS (QUANTITIES) OF THE WALL(S) WITH THE MOST RECENT GRADING PLAN AND ACTUAL SITE CONDITIONS.
 10. THE FINAL DESIGN WILL REQUIRE THAT THE CONSTRUCTION BE REVIEWED FOR GENERAL CONFORMANCE TO THE APPROVED FINAL DESIGN BY A QUALIFIED GENERAL REVIEW ENGINEER. RISI STONE SYSTEMS AND/OR THEIR LICENSEE DOES NOT PROVIDE THIS SERVICE. THE CONTRACTOR MUST RETAIN A THIRD PARTY ENGINEER TO PROVIDE GENERAL REVIEW OF THE DESIGN AND CONSTRUCTION IN ACCORDANCE WITH SECTION 3.03 OF THE SPECIFICATIONS.
 11. THE LOCATION OF EXISTING OR PROPOSED UTILITIES MUST BE VERIFIED PRIOR TO CONSTRUCTION. GENERALLY IT IS RECOMMENDED THAT UTILITIES BE OFFSET FROM THE WALL TO A) PREVENT ADDITIONAL LOADING ON THE CONDUIT (I.E. A 14:1 LINE OF INFLUENCE FROM THE BASE OF THE WALL SHOULD BE ASSUMED) UNLESS ACCOUNTED FOR IN DESIGN OF THE UTILITY B) TO ENSURE FUTURE ACCESS TO THE UTILITY WITHOUT UNDERMINING THE WALL. THE ENGINEERED FILL ABOVE THESE UTILITIES MUST BE COMPACTED TO 98% SPD. THE CIVIL ENGINEER MUST REVIEW THE DESIGN TO VERIFY TO REFERENCE TO NOTE 10 AND SPECIFICATION FOR FURTHER DETAILS.
 12. THE RETAINING WALL DRAWINGS AND SPECIFICATIONS MUST BE REVIEWED BY THE CIVIL ENGINEER, LANDSCAPE ARCHITECT/ARCHITECT, AND GENERAL REVIEW ENGINEER PRIOR TO THE GENERAL REVIEW ENGINEER AUTHORIZING THE DRAWINGS TO BE USED FOR CONSTRUCTION IN ACCORDANCE WITH SECTION 3.02, SEGMENTAL RETAINING WALL DESIGN REVIEW, OF THE SPECIFICATIONS.



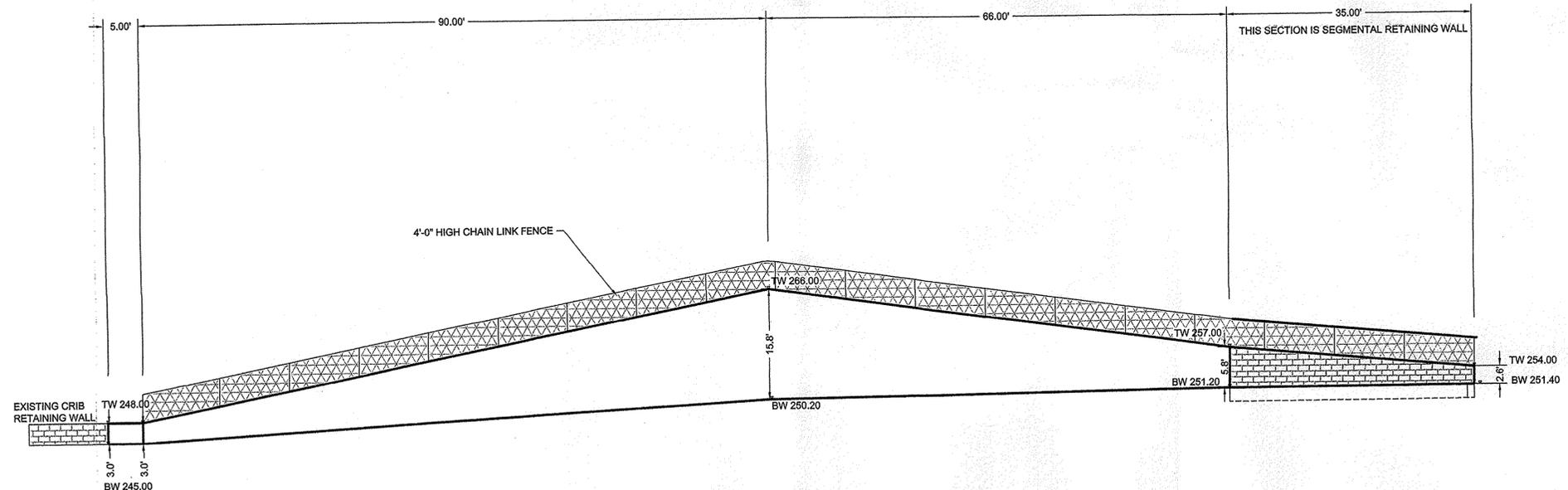
SEGMENTAL RETAINING WALL - ELEVATION

SCALE: 1" = 10' VERTICAL
1" = 10' HORIZONTAL



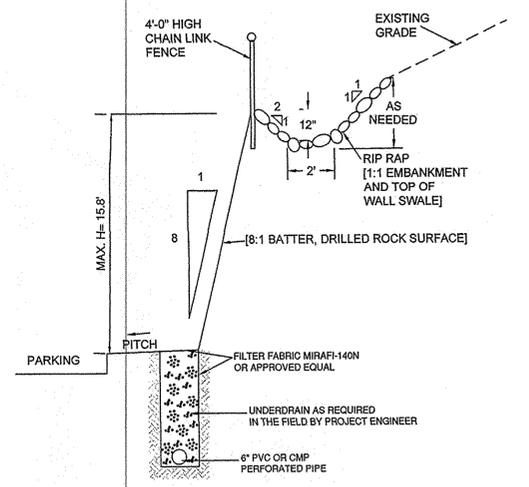
TWIN 6' SWING GATE

(STEEL - VINYL CLAD BLACK CHAIN LINK INCLUDING BLACK VINYL PRIVACY SLATS)
N.T.S.



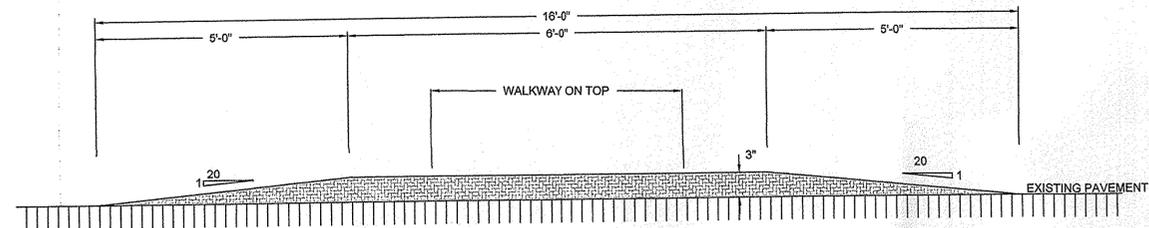
EXPOSED ROCK CUT - ELEVATION

SCALE: 1" = 10' VERTICAL
1" = 10' HORIZONTAL



ROCK CUT DETAIL SECTION

NTS



SPEED TABLE

NTS

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PLANNING BOARD SECRETARY _____ DATE _____

REVISIONS	DATE	TOWN COMMENTS	DESCRIPTION	DATE	TOWN & DEP COMMENTS	DESCRIPTION	DATE	BY/CK
	8/12/15			6/30/15			3-26-15	
							AS SHOWN	

RETAINING WALL ELEVATIONS & DETAILS

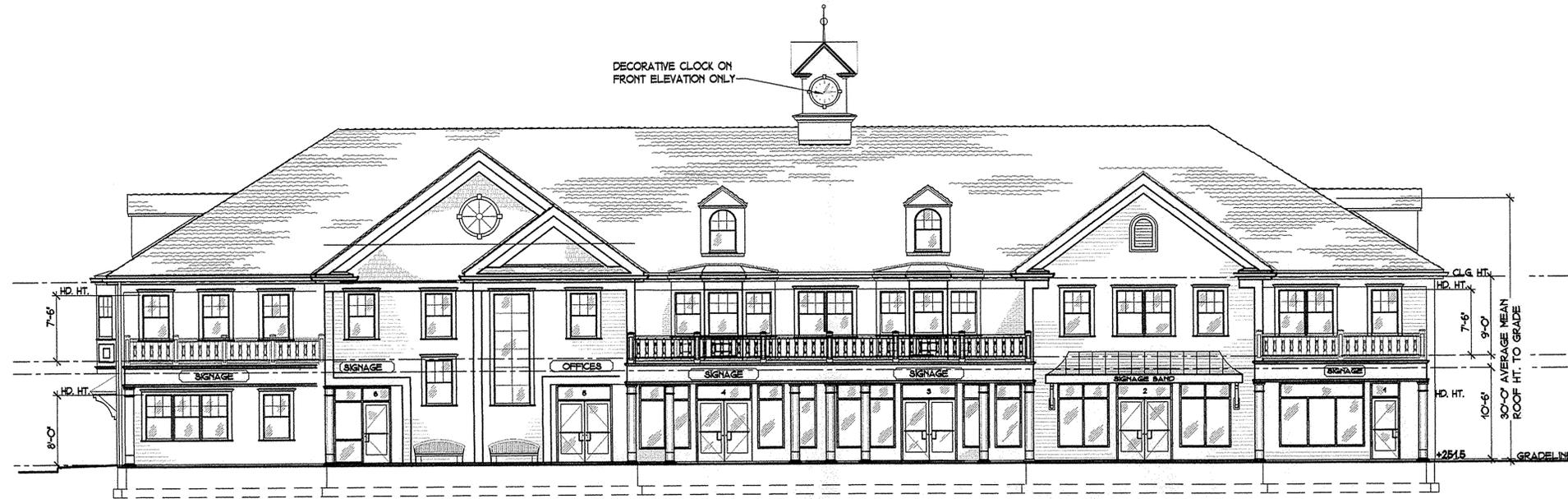
NORTH COUNTY SHOPPING CENTER EXPANSION

NYS RTE 22 & NYS RTE 138
TOWN OF LEWISBORO, WESTCHESTER COUNTY, NY

DATE: 3-26-15
SCALE: AS SHOWN
FILE: _____
DSGN / CHK: SB
DRN. BY: DK
SHT NO.: 13 OF 13
DWG NO.: **W-1**

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TEL. 914 277 8805

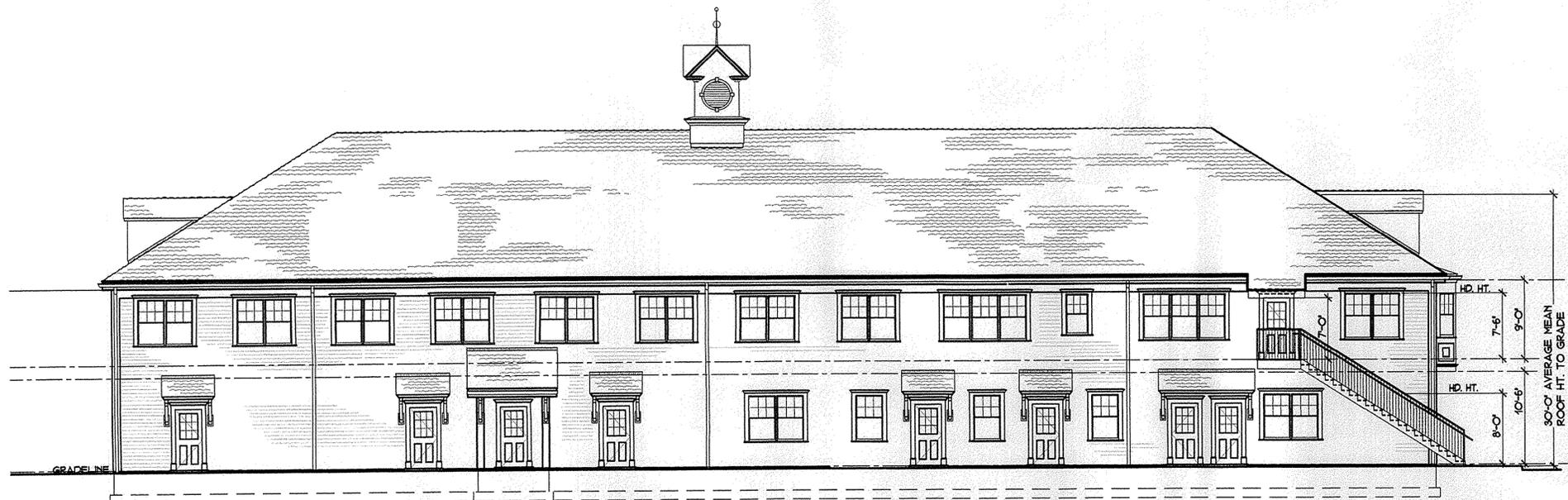
SABRI BARISSER P.E.



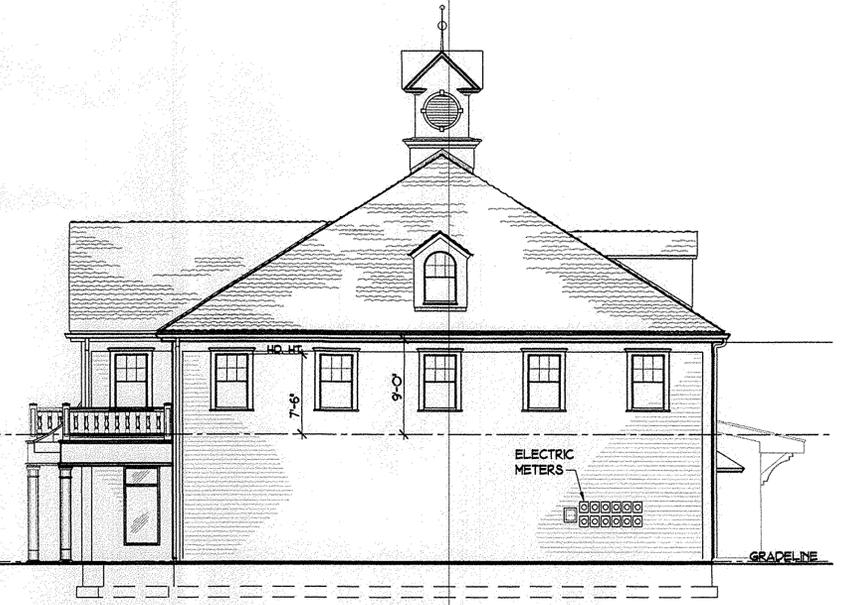
PROPOSED FRONT (WEST) ELEVATION
SCALE: 1/8"=1'-0"



PROPOSED LEFT SIDE (NORTH) ELEVATION
SCALE: 1/8"=1'-0"



PROPOSED REAR (EAST) ELEVATION
SCALE: 1/8"=1'-0"



PROPOSED RIGHT SIDE (SOUTH) ELEVATION
SCALE: 1/8"=1'-0"

ISSUE DATES: 08/06/15 12/22/14 PLANNING BOARD	NEW MIXED-USE BUILDING FOR: GOLDENS BRIDGE VILLAGE CENTRE NYS ROUTE 22 ROUTE 138 GOLDENS BRIDGE-TOWN OF LEWISBORO, N.Y.		DRAWN BY: TRH
	PROPOSED EXTERIOR ELEVATIONS FOR PHASE I DEVELOPMENT SCALE: 1/8"=1'-0"		CHECKED BY: PUH
	 THE HELMES GROUP, LLP ARCHITECTURE • ENGINEERING PROJECT MANAGEMENT 184 KATONAH AVENUE, KATONAH, NY 10536 TEL: (914) 232-4633 FAX: (914) 232-0768 EMAIL: thg@thehelmesgroup.com		DRAWING NO.: A-4

P-2 Planting Plan

North County Shopping Center Expansion
NYS Rt. 22 + Rt. 138
Lewisboro, NY

August 26, 2015

Diane Dreier Designs

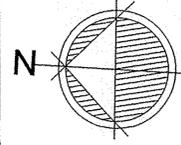
Landscape Architecture/Site Planning
2979 Hyatt Street
Yorktown Heights, New York 10598

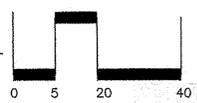
t: 914.907.4816

LEGEND

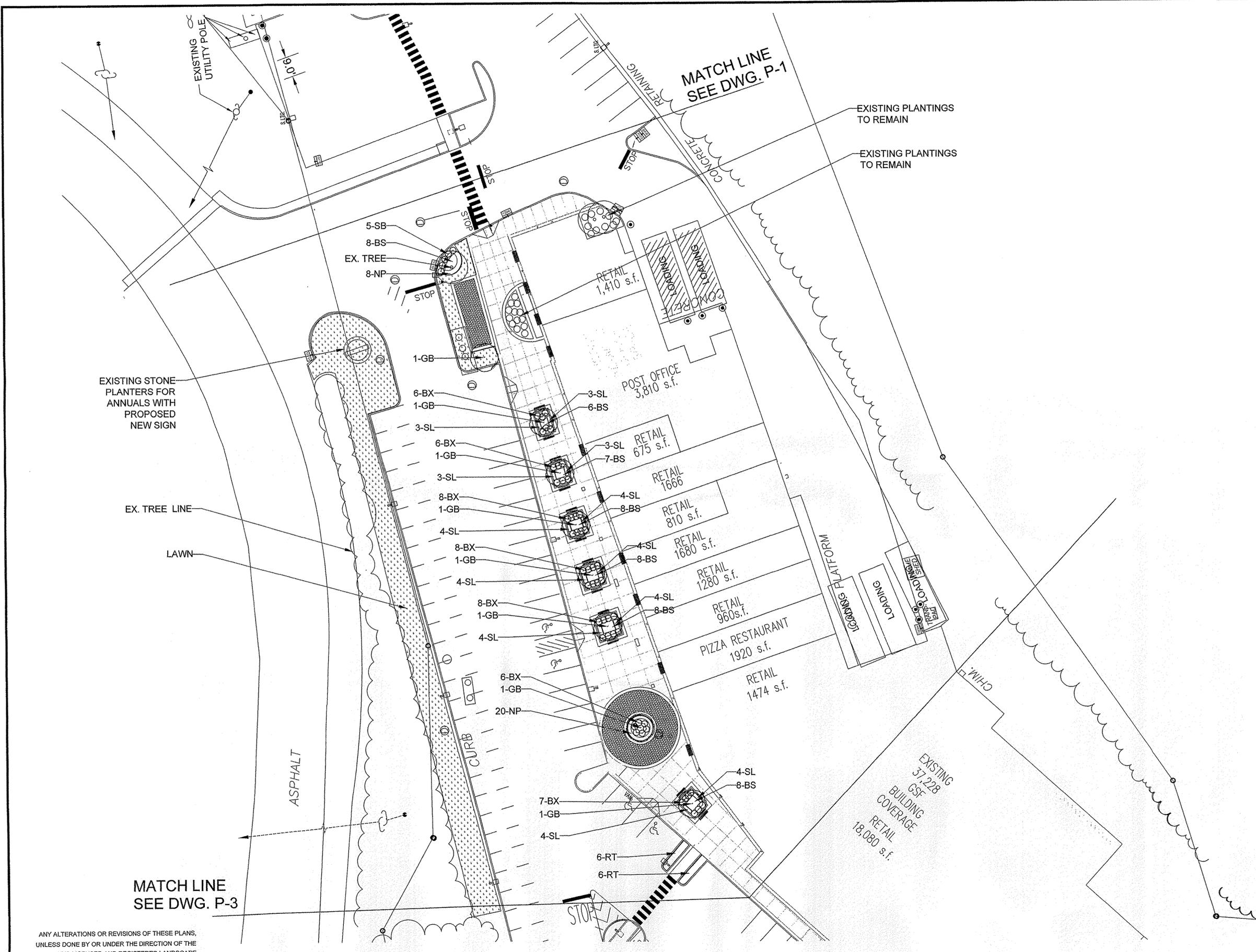
-  Existing Tree to Remain
-  Proposed Deciduous Tree
-  Proposed Evergreen Tree
-  Proposed Deciduous Shrub
-  Proposed Evergreen Shrub
- 3-SB — Plant Quantity/Plant Symbol
-  New Lawn
-  Existing Tree Line

	Date	Issue





Scale: 1"=20'



ANY ALTERATIONS OR REVISIONS OF THESE PLANS, UNLESS DONE BY OR UNDER THE DIRECTION OF THE NYS LICENSED AND REGISTERED LANDSCAPE ARCHITECT THAT PREPARED THEM IS A VIOLATION OF THE NYS EDUCATION LAW.

Base Map Source: Bibbo Associates, LLP.
293 Route 100 Suite 203, Somers, NY 10589 (914) 277-5805



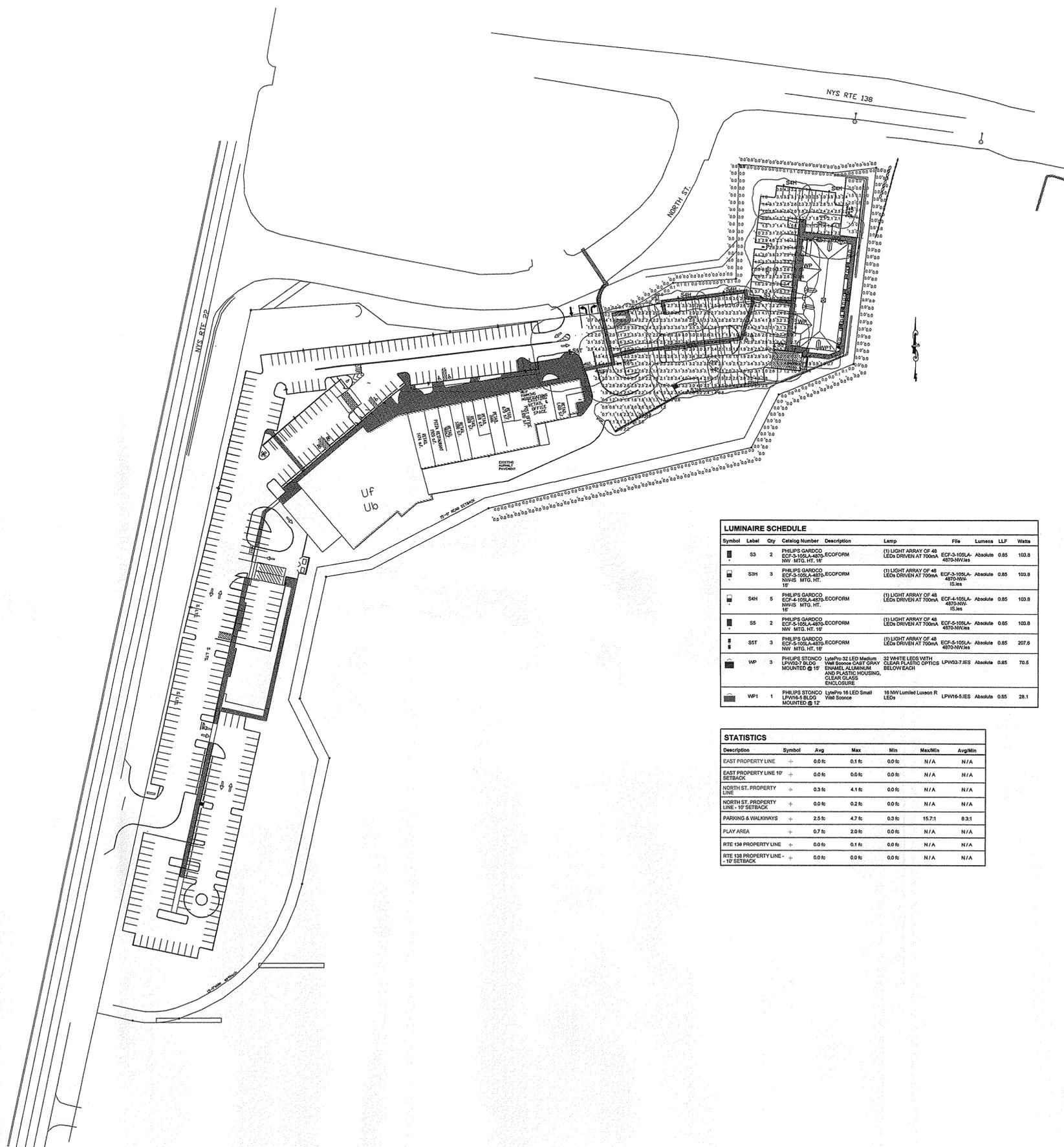
TYPE "S" LUMINAIRES



TYPE "WP"



TYPE "WP1"



Symbol	Label	Qty	Catalog Number	Description	Lamp	File	Lumens	LLF	Watts
S3		2	PHILIPS GARDCO ECF-3-105LA-4870 ECOFORM NV MFG. HT. 16"	(1) LIGHT ARRAY OF 48 LEDs DRIVEN AT 700mA	ECF-3-105LA-4870-NV/ies	Absolute	0.85	103.8	
S3H		3	PHILIPS GARDCO ECF-3-105LA-4870 ECOFORM NV/IS MFG. HT. 16"	(1) LIGHT ARRAY OF 48 LEDs DRIVEN AT 700mA	ECF-3-105LA-4870-NV/IS/ies	Absolute	0.85	103.8	
S4H		5	PHILIPS GARDCO ECF-4-105LA-4870 ECOFORM NV/IS MFG. HT. 16"	(1) LIGHT ARRAY OF 48 LEDs DRIVEN AT 700mA	ECF-4-105LA-4870-NV/IS/ies	Absolute	0.85	103.8	
S5		2	PHILIPS GARDCO ECF-5-105LA-4870 ECOFORM NV MFG. HT. 16"	(1) LIGHT ARRAY OF 48 LEDs DRIVEN AT 700mA	ECF-5-105LA-4870-NV/ies	Absolute	0.85	103.8	
S5T		3	PHILIPS GARDCO ECF-5-105LA-4870 ECOFORM NV MFG. HT. 16"	(1) LIGHT ARRAY OF 48 LEDs DRIVEN AT 700mA	ECF-5-105LA-4870-NV/ies	Absolute	0.85	207.6	
WP		3	PHILIPS STONCO LPW32 LED Medium Mount 32 LED	32 WHITE LED WITH CLEAR PLASTIC OPTICS	LPW32-7/IES	Absolute	0.85	70.5	
WP1		1	PHILIPS STONCO LPW16 LED Small Mount 16 LED	16 NV Lumiled Luxeon R LED	LPW16-5/IES	Absolute	0.85	28.1	

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
EAST PROPERTY LINE	+	0.0 fc	0.1 fc	0.0 fc	N/A	N/A
EAST PROPERTY LINE 10' SETBACK	+	0.0 fc	0.0 fc	0.0 fc	N/A	N/A
NORTH ST. PROPERTY LINE	+	0.3 fc	4.1 fc	0.0 fc	N/A	N/A
NORTH ST. PROPERTY LINE - 10' SETBACK	+	0.0 fc	0.2 fc	0.0 fc	N/A	N/A
PARKING & WALKWAYS	+	2.5 fc	4.7 fc	0.3 fc	15.7:1	8.3:1
PLAY AREA	+	0.7 fc	2.0 fc	0.0 fc	N/A	N/A
RTE 138 PROPERTY LINE	+	0.0 fc	0.1 fc	0.0 fc	N/A	N/A
RTE 138 PROPERTY LINE - 10' SETBACK	+	0.0 fc	0.0 fc	0.0 fc	N/A	N/A

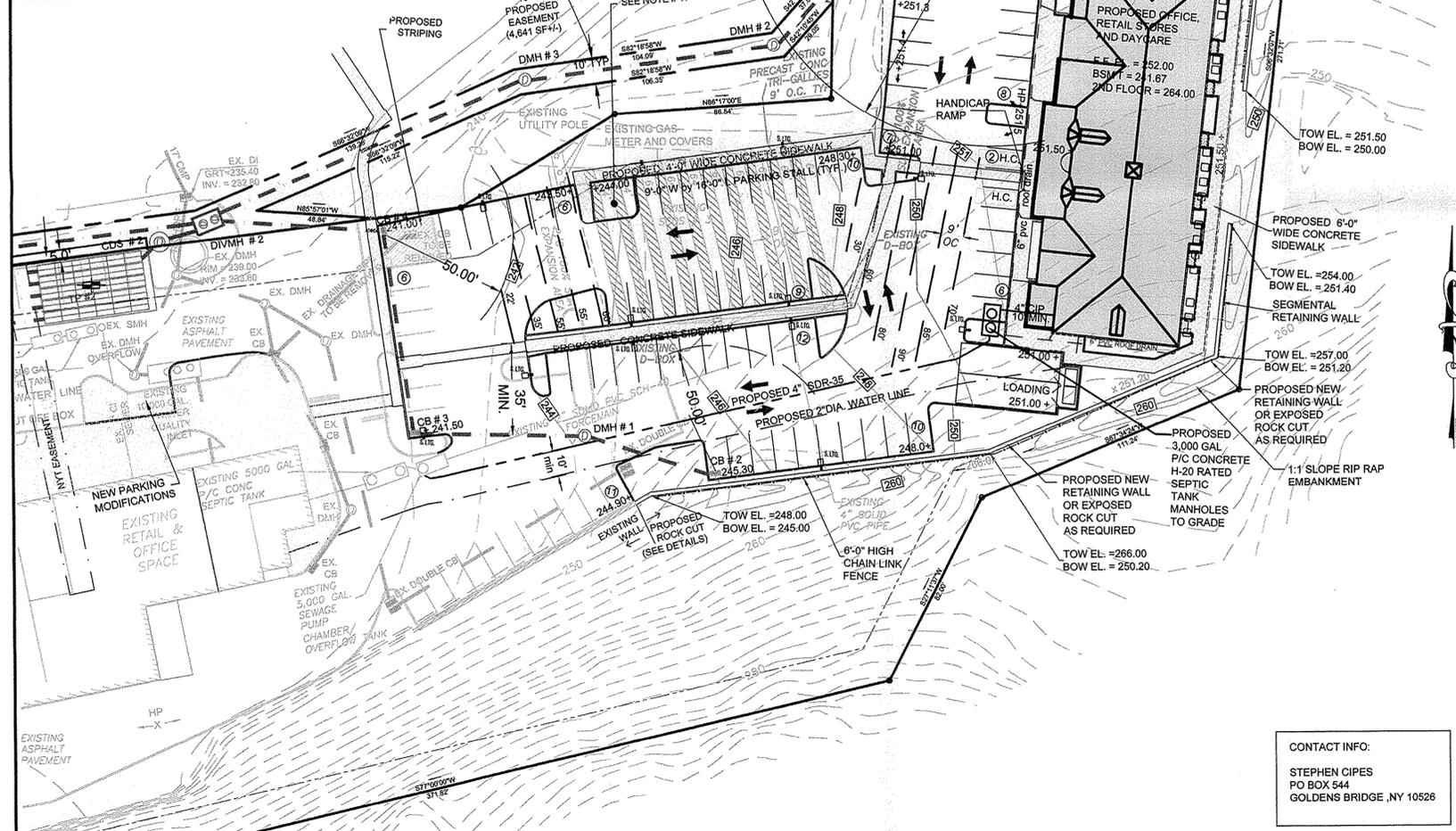
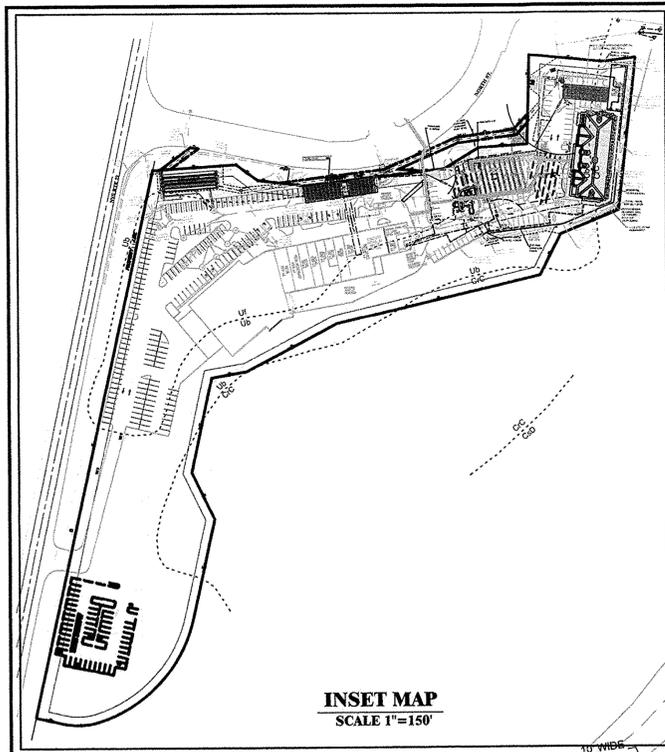
Plan View
Scale 1" = 20'

Designer

Date
May 25 2015

Scale

Drawing No.



CONTACT INFO:
STEPHEN CIPES
PO BOX 544
GOLDENS BRIDGE, NY 10526

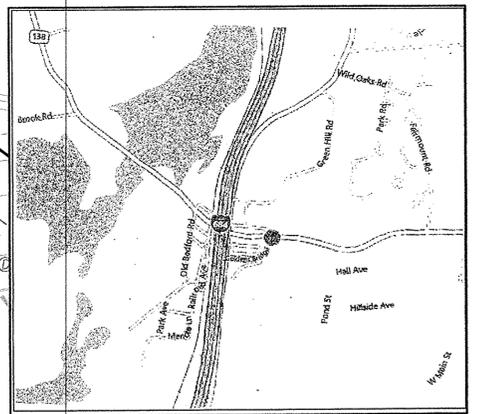
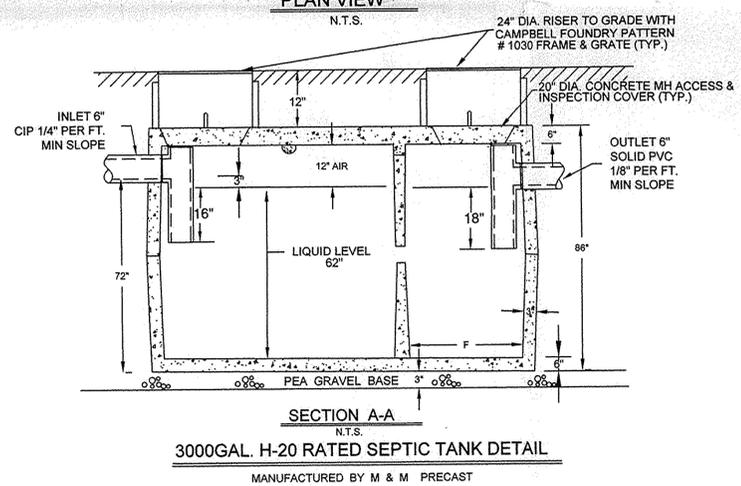
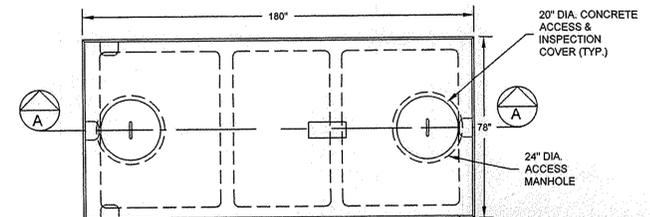
- LEGEND :**
- EXISTING ABSORPTION TRENCH
 - EXISTING D-BOX
 - EXISTING CONTOUR
 - PROPOSED CONTOUR
 - PROPOSED ABSORPTION TRENCH

NYS RTE 138

NORTH ST.

NYS RTE 22

INSET MAP OF DETENTION SYSTEM
SCALE 1"=30'



NOTES

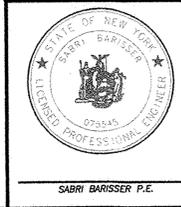
1. THERE SHALL BE NO TREES WITHIN 10 FEET OF THE OWTS.
2. THERE ARE NO WELLS WITHIN 200' OF OWTS UNLESS OTHERWISE SHOWN ON PLAN.
3. THERE ARE NO OWTS WITHIN 200' OF WELL UNLESS OTHERWISE SHOWN ON PLAN.
4. THE PROPOSED OWTS AREA SHALL BE ISOLATED AND PROTECTED AGAINST DAMAGE BY EROSION, STORAGE OF EARTH OR MATERIALS DISPLACEMENT, COMPACTION OR OTHER ADVERSE PHYSICAL CHANGE IN THE CHARACTERISTICS OF THE SOIL OR IN THE DRAINAGE OF THE AREA.
5. IF FOR ANY REASON THE APPROVED CONSTRUCTION PLAN CANNOT BE FOLLOWED A REVISED PLAN MUST BE PREPARED, SUBMITTED, AND APPROVED BY WCHD.
6. THE DESIGN PROFESSIONAL SHALL SUPERVISE THE CONSTRUCTION OF THE OWTS AND MAKE AN OPEN WORKS INSPECTION.
7. WITHIN 24-HOURS OF THE COMPLETION OF THE OWTS THE DESIGN PROFESSIONAL MUST NOTIFY THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH (WCHD) THAT THE OWTS IS READY FOR INSPECTION BY SUBMITTING A COMPLETED REQUEST FOR AN OPEN WORKS INSPECTION ON THE APPROPRIATE FORM TO WCHD.
8. NO BACKFILLING OF A COMPLETED OWTS CAN OCCUR UNTIL AFTER IT HAS BEEN INSPECTED AND ACCEPTED BY THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH.
9. THE INSTALLATION OF THE OWTS SHALL BE IN ACCORDANCE WITH THE RULES AND REGULATIONS FOR THE DESIGN AND CONSTRUCTION OF RESIDENTIAL SUBSURFACE SEWAGE TREATMENT SYSTEMS AND DRILLED WELLS IN WESTCHESTER COUNTY, NY.
10. ALL PIPES CONNECTING TO TANK AND BOXES SHALL BE CUT FLUSH WITH THE INSIDE WALL OF BOX.
11. THE PROPOSED OWTS SHALL BE INSTALLED BY A WESTCHESTER COUNTY LICENSED SEPTIC CONTRACTOR.
12. PRIOR TO ANY EXCAVATION ALL UNDERGROUND UTILITIES MUST BE LOCATED. CALL 1-800-962-7962.
13. THE WESTCHESTER COUNTY HEALTH DEPARTMENT APPROVAL EXPIRES ONE YEAR FROM THE DATE ON THE APPROVAL STAMP AND IS REQUIRED TO BE RENEWED ON OR BEFORE THE EXPIRATION DATE. THE APPROVAL IS REVOCABLE FOR CAUSE OR MAY BE AMENDED OR MODIFIED WHEN CONSIDERED NECESSARY BY THE DEPARTMENT.
14. THERE ARE NO RESERVOIRS, RESERVOIR STEMS OR CONTROLLED LAKE WITHIN 500 FEET OF THE PROPOSED OWTS UNLESS OTHERWISE SHOWN ON PLAN.
15. THERE ARE NO NYSDDEC WETLANDS OR WATERCOURSES WITH 200 FEET OF THE PROPOSED OWTS UNLESS OTHERWISE SHOWN ON PLAN.
16. NYDCEP MUST BE CONTACTED AT LEAST TWO DAYS PRIOR TO START OF CONSTRUCTION OF THE OWTS SO THAT THE NYDCEP MAY INSPECT AND MONITOR THE INSTALLATION.
17. ANY PROPOSED PLANTINGS IN THE AREA OF THE SEWAGE TREATMENT AREAS WILL NOT CONSIST OF ANY TREES OR DEEP ROOTED SHRUBS WITHIN 10' OF THIS AREA.

**NOTE: RETAIL SPACES ARE FOR DRY RETAIL USE ONLY
NO FOOD ESTABLISHMENTS PERMITTED
NO PUBLIC RESTROOMS PERMITTED**

ENGINEERS REPORT:

- CONNECT NEW DAY CARE BUILDING & OFFICE/RETAIL SPACE TO NEW 5,000 GALLON SEPTIC TANK AND CONNECT TO EXISTING SSDS #3
- EXISTING SSDS # 3 APPROVED BY WCHD 4 / 5 / 1993
- APPROVED CAPACITY OF 2800 GPD
- SPDES PERMIT NY - 0248291
- EXISTING USAGE = 975 GPD
- PROPOSED USAGE: 145 STUDENTS & TEACHERS & 3,906 SF RETAIL 4,144 OFFICE = 1,669 GPD
- TOTAL NEW & EXISTING = 2,645 GPD < 2,800 GPD

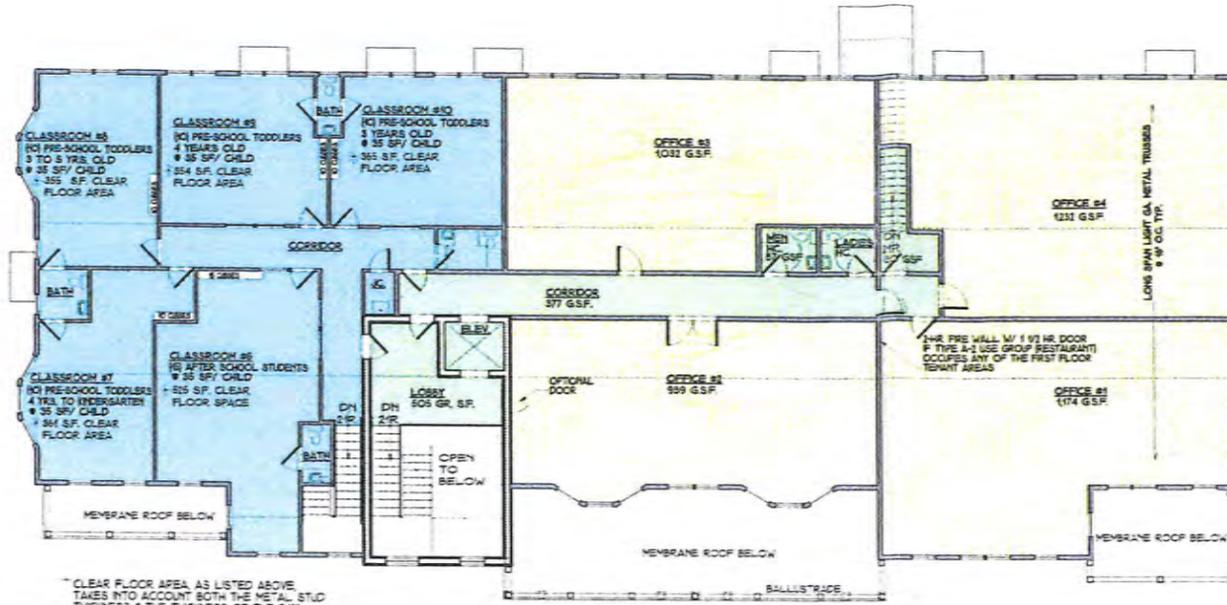
REVISIONS:	DATE	DESCRIPTION	BY/CK	DATE	DESCRIPTION	BY/CK
3-04-15	WCHD COMMENTS		DK/ED	4-7-15	NOTE	DK/ED
11-18-13	WCHD COMMENTS		NT	2-18-15	BUILDING CHANGE	DK/ED
10-22-13	ADD 100% EXPANSION AREA		NT	11-11-13	WCHD COMMENTS	NT
2-26-13	DEP COMMENTS		NT	9-24-13	ADDED OFFICE SPACE	NT
11-6-12	WCHD COMMENTS		NT	11-30-12	WCHD & DEP COMMENTS	NT



ON SITE WASTEWATER TREATMENT SYSTEM PLAN
NORTH COUNTY SHOPPING CENTER EXPANSION
NYS. RTE 22 & NYS RTE 138
TOWN OF LEWISBORO, WESTCHESTER COUNTY, NY

DATE:	8-15-12
SCALE:	1" = 30'
FILE:	3291
DSGN / CHK:	TSA
DRN. BY:	NT/DK
SHT NO.	1 OF 1
DWG NO.	SDS

BIBBO ASSOCIATES, LLP
293 ROUTE 100 SUITE 203
SOMERS, NEW YORK 10589
TEL. 914 277 5805



PROPOSED SECOND FLOOR PLAN
SCALE: 1/8"=1'-0"

COLOR CHART FLOOR AREA TABULATIONS

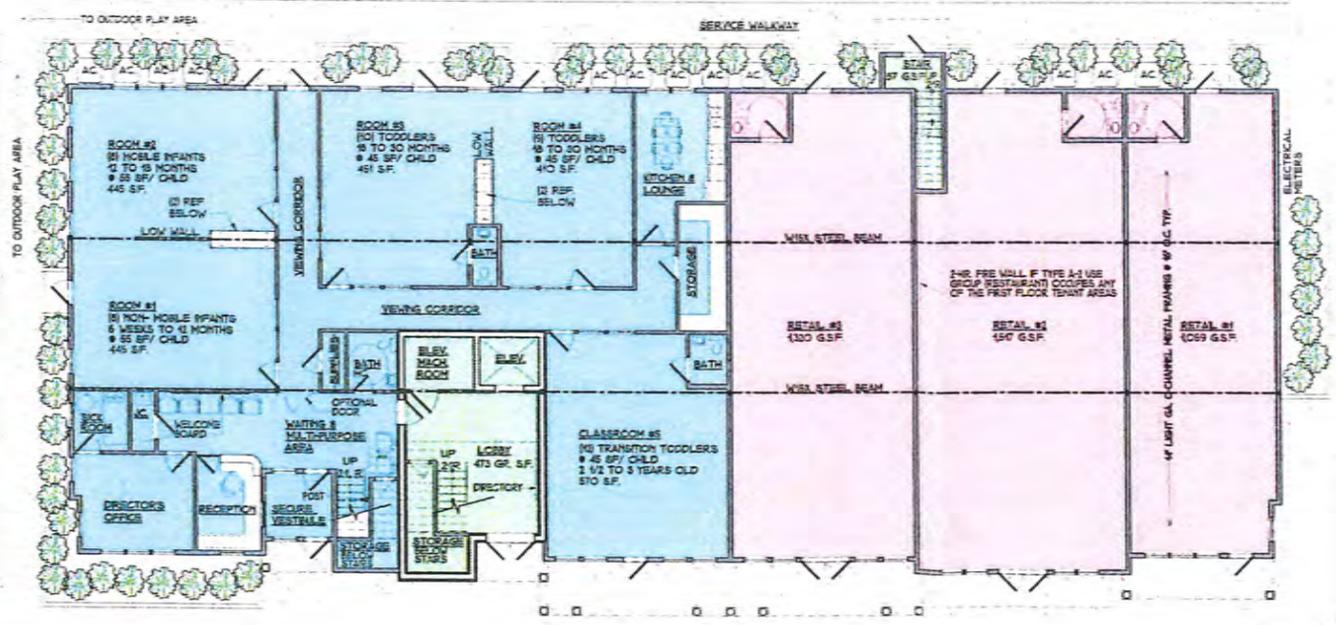
USE OF SPACE	FIRST FLOOR	SECOND FLOOR	TOTAL
LITTLE FEET CHILDCARE	4,186 GSF	2,703 GSF	6,889 GSF
COMMON AREAS (LOBBY, STAIRS, ELEVATOR, MACHINE ROOM & BATHROOMS)	568 GSF	1,067 GSF	1,635 GSF
RETAIL TENANT #1	1,099 GSF		
RETAIL TENANT #2	1,517 GSF		
RETAIL TENANT #3	1,320 GSF		
OFFICE TENANT #1		1,174 GSF	
OFFICE TENANT #2		990 GSF	
OFFICE TENANT #3		1,032 GSF	
OFFICE TENANT #4		1,228 GSF	
TOTAL	8,560 GSF	8,184 GSF	16,744 GSF

EFFICIENCY RATIO = 1635/1751 = 93.6% COMMON AREAS & 81.5% RENTABLE AREAS
 NOTE: SINCE 2ND FLOOR CHILDCARE SPACE REQUIRES ELEVATOR ACCESS & ACCESS TO COMMON HALLWAY FOR EGRESS PURPOSES, & SINCE CHILDCARE STAFF ARE PERMITTED TO USE THE PUBLIC RESTROOMS, THE APPLICABLE PERCENTAGE OF 2ND FLOOR AREAS USED FOR CHILDCARE WILL SHARE A PRO-RATED PORTION OF THE COMMON CHARGES. HOWEVER, THE 1ST FLOOR CHILDCARE AREAS WILL NOT SHARE ANY OF THE COMMON CHARGES.

CHILDCARE CAPACITY

	FIRST FLOOR	SECOND FLOOR	TOTAL
INFANTS 6 WEEKS - 12 MONTHS	16	0	16
TODDLERS 18 - 30 MONTHS	19	0	19
TODDLERS 2 1/2 - 3 YEARS	12	0	12
TODDLERS 3-4 YEARS	0	10	10
TODDLERS 4-5 YEARS	0	10	10
TODDLERS 5-6 YEARS	0	10	10
TODDLERS 6-7 YEARS	0	10	10
AFTER SCHOOL	0	15	15
TOTAL	47	55	102

NOTE:- RETAIL SPACES ARE FOR "DRY" RETAIL USE ONLY
 - NO FOOD ESTABLISHMENTS PERMITTED
 - NO PUBLIC RESTROOM PERMITTED



PROPOSED FIRST FLOOR PLAN
SCALE: 1/8"=1'-0"

RECEIVED
AUG 28 2015
KELLARD SESSIONS

Rev 4/7/2015 - Bobbo Assoc.

NEW MIXED-USE BUILDING FOR
GOLDENS BRIDGE VILLAGE CENTRE
 GOLDENS BRIDGE, TOWN OF LEWISBURG, N.Y.

PROPOSED FLOOR PLANS & FLOOR AREA TABULATIONS
 SCALE: 1/8"=1'-0"

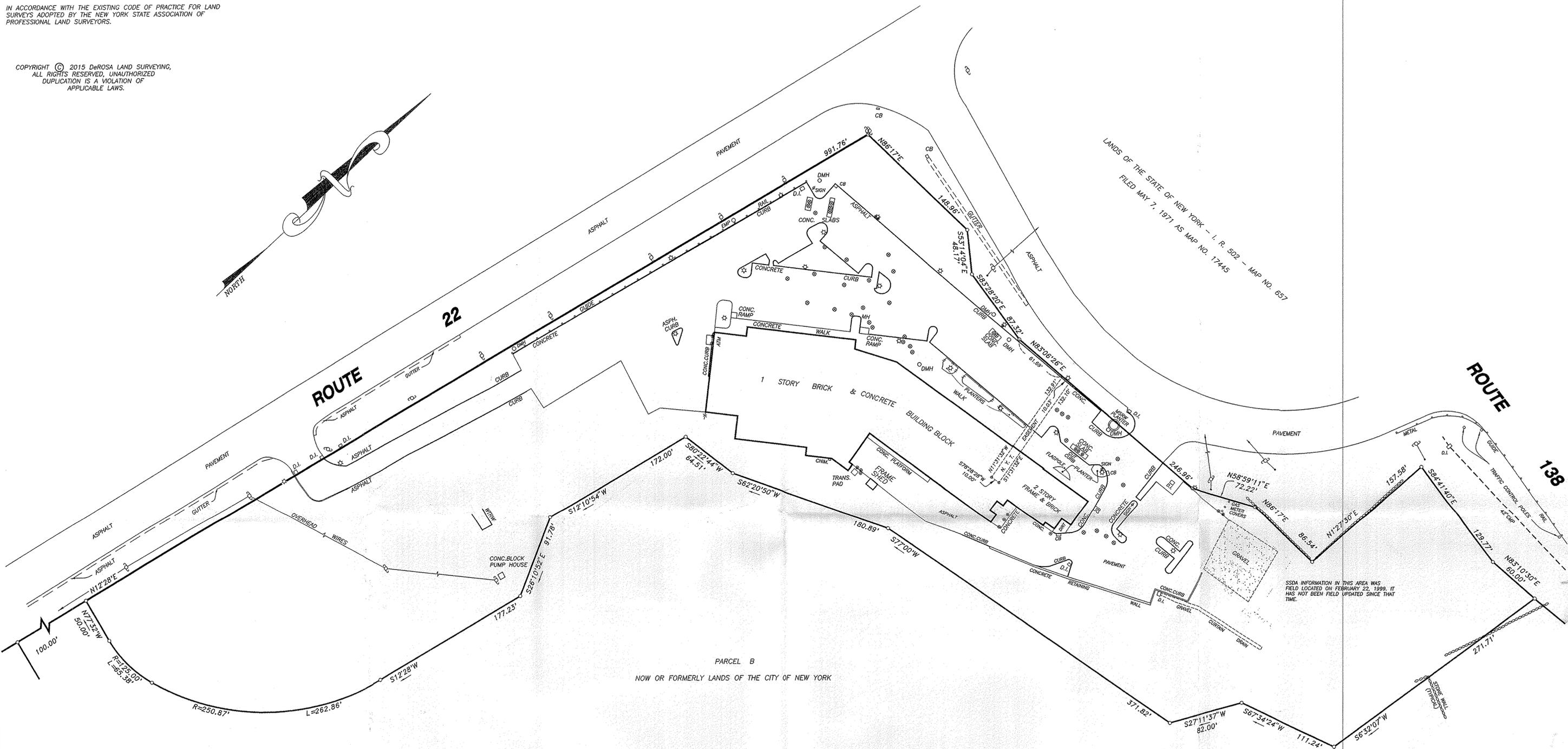
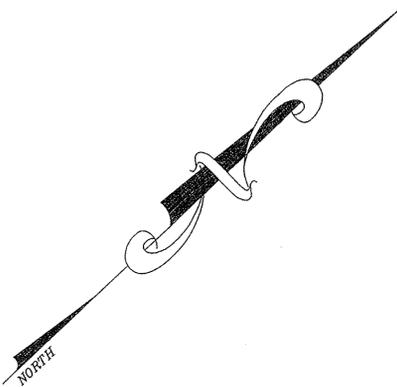
THE HELMES GROUP, LLP
 ARCHITECTURE • ENGINEERING
 PROJECT MANAGEMENT
 84 KATONAH AVENUE, KATONAH, NY 12538
 TEL: (914) 232-4833 FAX: (914) 232-4788
 www.helmesgroup.com

DATE: _____
 DRAWN BY: _____
 CHECKED BY: _____
 DRAWING NO: _____

3 of 4

IN ACCORDANCE WITH THE EXISTING CODE OF PRACTICE FOR LAND SURVEYS ADOPTED BY THE NEW YORK STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS.

COPYRIGHT © 2015 DeROSA LAND SURVEYING, ALL RIGHTS RESERVED. UNAUTHORIZED DUPLICATION IS A VIOLATION OF APPLICABLE LAWS.



LANDS OF THE STATE OF NEW YORK - L. R. 502 - MAP NO. 657
FILED MAY 7, 1971 AS MAP NO. 17445

SSDA INFORMATION IN THIS AREA WAS FIELD LOCATED ON FEBRUARY 22, 1999. IT HAS NOT BEEN FIELD UPDATED SINCE THAT TIME.

DUE TO EXCESSIVE SNOW COVER SOME SURFACE DETAIL MAY BE MISSING.

IF UNDERGROUND IMPROVEMENTS, EASEMENTS, OR ENCROACHMENTS EXIST AND ARE NEITHER VISIBLE DURING NORMAL FIELD SURVEY OPERATIONS NOR DESCRIBED IN INSTRUMENTS PROVIDED TO THIS SURVEYOR, THEY MAY NOT BE SHOWN ON THIS MAP AND ARE NOT CERTIFIED.

THIS PROPERTY MAY BE AFFECTED BY INSTRUMENTS WHICH HAVE NOT BEEN PROVIDED TO THIS SURVEYOR. USERS OF THIS MAP SHOULD VERIFY TITLE WITH THEIR ATTORNEY OR A QUALIFIED TITLE EXAMINER.

UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW.

THIS MAP IS NOT CONSIDERED TO BE VALID UNLESS IT IS MARKED WITH BOTH THE EMBOSSED SEAL AND ORIGINAL SIGNATURE IN BLUE INK OF THE SURVEYOR WHOSE SIGNATURE APPEARS HEREON.

PREPARED BY:
DEROSA
LAND SURVEYING
301 FIELDS LANE
BREWSTER, NY 10509
(845) 277-3404
(845) 277-4117 FX
contact@derosalandsurveying.com

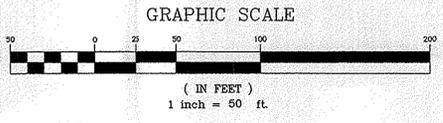
JEFFREY DeROSA, LS
NYS LIC. No. 50749

LEGEND

- BOLLARD
- CB □ CATCH BASIN
- D.B. □ DISTRIBUTION BOX
- D.I. □ DROP INLET
- DMH ○ DRAINAGE MANHOLE
- EMP ○ ELECTRIC METER POST
- MANHOLE (TYPE UNKNOWN)
- ☆ LIGHT POLE
- UTILITY POLE W/ ANCHOR WIRE
- x— POST & RAIL FENCE
- x-x- CHAIN LINK FENCE
- WTRW WOOD TIE RETAINING WALL

PARCEL A
AREA = 8.961 AC.

PREMISES SHOWN HEREON BEING PARCEL "A" AS SHOWN ON A MAP ENTITLED "SUBDIVISION MAP PREPARED FOR STEPHEN CIPES" SAID MAP FILED IN THE WESTCHESTER COUNTY CLERK'S OFFICE ON DECEMBER 29, 1987 AS MAP NO. 23072



SURVEY OF PROPERTY
PREPARED FOR
GOLDENS BRIDGE SHOPPING CENTER
SITUATE IN THE
TOWN OF LEWISBORO
WESTCHESTER COUNTY
NEW YORK

SCALE: 1"=50' DATE: FEBRUARY 10, 2015

MEMORANDUM

TO: Chairman Jerome Kerner, AIA and
Members of Lewisboro Planning Board

CC: Judson Siebert, Esq.

FROM: Jan K. Johannessen, AICP
Joseph M. Cermele, P.E., CFM
David J. Sessions, RLA, AICP
Town Consulting Professionals

DATE: September 23, 2015

RE: Wild Oaks Test Wells (Well 6)
Nash Road
Sheet 8, Block 11137, Lot 123

The subject property consists of ±1.8 acres of land, is located off of Nash Road within the R-4A Zoning District, and contains an existing pump house and a series of wells operated by New York American Water and servicing the Wild Oaks water system. In September of 2014, following review and referral by the Planning Board, an Administrative Wetland Permit (Wetland Permit #51-14 W.P.) was issued for the installation of two (2) bedrock test wells (Test Wells #4 and #5). These test wells were later approved by the Planning Board to be converted to active bedrock supply wells, with a condition that the applicant obtain approval from the Westchester County Department of Health (WCDH) and perform and report on the mandatory 72-hour pump test (see Resolution dated June 16, 2015 - Cal. #4-15 P.B. and #6-15 W.P.). Following the pump test, it was determined that Well #4 produced 80 gpm, Well #5 produced 28 gpm, and that the accumulation of wells and associated output did not comply with Westchester County Department of Health (WCDH) permitting requirements.

The applicant has applied for a new test well (Test Well #6) which is proposed proximate to Test Well #4 and proximate to the wetland boundary. This office has no objections to the drilling of Test Well #6 so long as the same protocols and procedures for access, dewatering, erosion control, and site restoration that were required for the Test Wells #4 and #5 are adopted in the case.

Chairman Jerome Kerner, AIA
September 23, 2015
Page 2 of 2

Plans Reviewed, prepared by Leggette, Brashears & Graham, Inc.:

- Proposed Bedrock Test Well Location (Plate 1), dated August 26, 2015
- Blow-Up of Proposed Bedrock Test Well Location (Plate 2), dated August 26, 2015
- May 2015 Pumping Test Program, dated June 16, 2015 (Plate 1)
- Site Location Map, dated August 20, 2015 (Figure 1)

Documents Reviewed:

- Letter, prepared by Leggette, Brashears & Graham, Inc., dated August 28, 2015
- Wetland Permit Application
- Short Environmental Assessment Form, dated August 24, 2015
- Description of Activities – Bedrock Test Well Drilling
- Site Photographs
- *Wetland Delineation Report*, prepared by Hazen and Sawyer, dated July 2014
- *Application for Well Site Permit Report*, prepared by LBG, dated August 13, 2015
- *72-Hour Pumping Test Program Conducted on Wells 4 and 5, May 18 through May 30, 2015 Report*, prepared by LBG, dated July 31, 2015

JKJ/JMC/DJS/dc

LEGGETTE, BRASHEARS & GRAHAM, INC.

PROFESSIONAL GROUNDWATER AND ENVIRONMENTAL ENGINEERING SERVICES

COPY

4 RESEARCH DRIVE, SUITE 204
SHELTON, CT 06484
(203) 929-8555
FAX (203) 926-9140
www.lbgweb.com

August 28, 2015

Planning Board Secretary
Town of Lewisboro
20 North Salem Road
PO Box 725
Cross River, NY 10518

RE: Application for Wetland Activity Permit
New York American Water
Wild Oaks Water System
Nash Road
(T) Lewisboro, New York

Dear Planning Board Secretary:

Leggette, Brashears & Graham, Inc. (LBG) has prepared this request for a Wetland Activity Permit to allow the drilling and construction of one bedrock test well in a wetland buffer area on New York American Water's Wild Oaks Well Field parcel in the Town of Lewisboro, New York (figure 1) for potential future use as public water-supply well. If sufficient yield and water quality are obtained from the proposed bedrock test well (Well 6), the new well would be used in conjunction with the other bedrock wells recently drilled and yield tested at the well field to supply the Wild Oaks Water System. The bedrock wells would be used to replace the existing sand and gravel Wells 1 and 2 which currently supply Wild Oaks to improve the raw water quality of the water system.

Proposed Well Locations

The existing wells located on the well field parcel and the location of proposed Well 6 are shown on the attached Plate 1. The Wild Oaks Water System also has an existing bedrock Well 3 which is located on a nearby parcel. Well 3 is not currently in service because of low yield. A Well Site Approval Permit Application has also been submitted to the Westchester County Department of Health (WCDH) requesting approval to drill bedrock Test Well 6. Receipt of that approval is pending. A copy of the permit application to WCDH is attached in Exhibit VI. Proposed bedrock Test Well 6 is located within the 150-foot wetland buffer area of a Town of Lewisboro regulated wetland; therefore, this activity permit request has been prepared.

The location for Well 6 was selected based on a hydrogeologic assessment completed for the Wild Oaks property by LBG and the results from the recent drilling of bedrock Wells 4 and 5 on the property. Well 6 was selected near Well 4 which was the more successful of the two bedrock wells drilled to date. The yield of Well 4 demonstrated during the 72-hour pumping test was 80 gpm (gallons per minute) and for Well 5 was 28 gpm. The New York State Department of Health (NYSDOH) requires that all public water systems have a supply sufficient to meet the peak water demand of the system with the best well out of service. The yields of Wells 4 and 5 can meet the system's peak demand but a third well is needed to meet the "best well out of service" requirement and allow Wells 1 and 2 to be taken out of service.

Well 6 will be drilled in accordance the NYSDOH and Westchester County Health Department (WCDH) regulations for public water-supply wells. The well will be constructed using 8-inch diameter casing and an 8-inch diameter borehole will be drilled into the underlying bedrock. A minimum of 100 feet of 8-inch diameter casing will be installed in the well. The total depth of the well will be determined based on the geologic conditions encountered during drilling, particularly the depth and yield of the water-bearing fractures encountered in the bedrock. A water-tight cap will be placed on the well following the completion of drilling.

If sufficient yield is obtained from Well 6, a 72-hour pumping test will be conducted. The well will be tested to demonstrate a minimum of six hours of stabilized yield and water-level drawdown and samples will be collected for analysis for all parameters listed in the NYSDOH Sanitary Code Part 5, Subpart 5-1 for community public water-supply wells and for microscopic particulate analysis (MPA). Discharge water from the well during the test will be directed away from the well to prevent recharge of the aquifer during the test period. The water will be released in a controlled manner using tarps and hay bales to prevent erosion at the end of the discharge hose.

At the conclusion of the 72-hour pumping test and water-quality sampling event, if the well is determine to be suitable for use to supply the existing water system, a follow-up activities permit application will be submitted to the Town of Lewisboro detailing the design of the connection of the well to the existing water system and requesting approval to complete any activities within the wetland buffer area.

If the well is drilled and determined to have insufficient yield, the well will either be maintained as a water-level monitor well equipped with a water-tight cap or be abandoned in accordance with NYSDOH and WCDH protocols.

Below is a list of forms and exhibits attached to this activity permit application.

- Application Fee Check \$255;
- Escrow Check \$2,000 (per LBG's conversation with Kellard Sessions);
- Affidavit of Ownership;
- Wetland Permit Application;
- Tax Payment Affidavit Requirement;
- Short Environmental Assessment Form;

- Exhibit I - Leggette, Brashears & Graham, Inc. "Site Location Map", Figure 1, August 2015;
- Exhibit II - Leggette, Brashears & Graham, Inc. "Proposed Bedrock Test Well Location", Plate 1, August 2015 (contains property survey and wetland flagging); Leggette, Brashears & Graham, Inc. "Blow-up of Proposed Bedrock Test Well Location", Plate 2, August 2015;
- Exhibit III - Description of Activities – Bedrock Test Well Drilling;
- Exhibit IV - Project Site Photographs;
- Exhibit V - Hazen & Sawyer Environmental Engineers & Scientists, "Wetland Delineation Report for New York American Water's Wild Oaks Water System", July 2014 (contains delineation of onsite soil types also);
- Exhibit VI - Copy of August 12, 2015 Application for Well Site Permit submission to the Westchester County Department of Health;
- Exhibit VII - Copy of 1981 Subdivision Map;
- Exhibit VIII – Leggette, Brashears & Graham, Inc. "72-Hour Pumping Test Program Conducted on Wells 4 and 5, May 18 through May 30, 2015; and
- Exhibit IX – Short Environmental Assessment Form Section 2 and 3, Completed.

If you have any question concerning this application or require additional information please contact LBG.

Very truly yours,

LEGGETTE, BRASHEARS & GRAHAM, INC.



Stacy Stieber, CPG
Associate/Hydrogeologist

Reviewed by:



Thomas P. Cusack, CPG
Senior Vice President

SS:cmm

Enclosures

cc: Richard Ruge
Kristen Barrett

H:\Wild Oaks\2015\Wetland Application\wetland permit cov ltr_Aug 2015.doc

AFFIDAVIT OF OWNERSHIP

STATE OF New York)
COUNTY OF Westchester) SS:

Brian Bruce, being duly sworn, deposes and says that
she/he resides at 60 Brooklyn Ave, Merrick, NY 11566

in the County of: Nassau

State of: New York

And that she/he is (check one) (1) the owners, or (2) the President
Title

of New York American Water
name of corporation, partnership or other legal entity

which is the owner, in fee of all that certain lot, piece or parcel of land situated, lying
and being in the Town of Lewisboro, New York, aforesaid and known and designated
on the Tax Map in the Town of Lewisboro as Lot Number 39

Block 1 on sheet 31.1

For (check one):

- SKETCH PLAN REVIEW PRELIMINARY SUBDIVISION PLAT FINAL SUBDIVISION PLAT
- SITE DEVELOPMENT PLAN SPECIAL USE PERMIT WAIVER OF SITE PLAN PROCEDURES
- WETLAND PERMIT STORMWATER PERMIT FILING WITH WESTCHESTER COUNTY CLERK

Brian X Bruce
Signed

Sworn to before me this
19th day of August, 2005

Rose M Simpson
Notary public (affix stamp)

ROSE M. SIMPSON
Notary Public, State of New York
No. 01SI5031048
Qualified in Nassau County
Commission Expires July 25, 20 18

Application No.: _____
Fee: _____ Date: _____

TOWN OF LEWISBORO WETLAND PERMIT APPLICATION

Town Offices @ Orchard Square, Suite L (Lower Level), 20 North Salem Road, Cross River, NY 10518
Phone: (914) 763-3060
Fax: (914) 533-0097

Project Information

Project Address: Nash Road

Sheet: 31.1 Block: 1 Lot(s): 39 (aka 11137-123-0008)

Project Description (identify the improvements proposed within the wetland/wetland buffer and the approximate amount of wetland/wetland buffer disturbance): Drill one bedrock test well location in wetland buffer area. Estimated disturbance at the well location during drilling operations is 900 sq.ft.

Owner's Information

Owner's Name: New York American Water Phone: (516) 596-4860
Owner's Address: 260 Harrison Avenue, Harrison, NY 10528 Email: Richard.Ruge@amwater.com

Applicant's Information (if different)

Applicant's Name: Owner Representative: Richard Ruge Phone: (516) 596-4860
Applicant's Address: 260 Harrison Avenue, Harrison, NY 10528 Email: Richard.Ruge@amwater.com

Authorized Agent's Information (if applicable)

Agent's Name: Stacy Stieber, CPG Phone: (203) 929-8555 ext 269
Leggette, Brashears & Graham, Inc.
Agent's Address: 4 Research Drive, Suite 204, Shelton, CT 06484 Email: sstieber@lbgct.com

To Be Completed By Owner/Applicant

1. What type of Wetland Permit is required? (see §217-5C and §217-5D of the Town Code)
 Administrative Planning Board
2. Is the project located within the NYCDEP Watershed? Yes No
3. Total area of proposed disturbance: < 5,000 s.f. 5,000 s.f. - < 1 acre ≥ 1 acre
4. Does the proposed action require any other permits/approvals from other agencies/departments? (Planning Board, Town Board, Zoning Board of Appeals, Building Department, Town Highway, ACARC, NYSDEC, NYCDEP, WCDOH, NYSDOT, etc): Identify all other permits/approvals required: WCDOH - Well Site Approval

Note: Initially, all applications shall be submitted with a plan that illustrates the existing conditions and proposed improvements. Said plan must include a line which encircles the total area of proposed land disturbance and the approximate area of disturbance must be calculated (square feet). The Planning Board and/or Town Wetland Inspector may require additional materials, information, reports and plans, as determined necessary, to review and evaluate the proposed action. If the proposed action requires a Planning Board Wetland Permit, the application materials outlined under §217-7 of the Town Code must be submitted, unless waived by the Planning Board. The Planning Board may establish an initial escrow deposit to cover the cost of application/plan review and inspections conducted by the Town's consultants.

For administrative wetland permits, see attached Administrative Wetland Permit Fee Schedule.

~~Applicant~~ Applicant Signature: Richard Ruge, Mayor Date: 8/25/15
Feldgs

TAX PAYMENT AFFIDAVIT REQUIREMENT

Under regulations adopted by the Town of Lewisboro, the Planning Board may not accept any application unless an affidavit from the Town of Lewisboro Receiver of Taxes is on file in the Planning Board Office. The affidavit must show that all amounts due to the Town of Lewisboro as real estate taxes and special assessments on the total area encompassed by the application, together with all penalties and interest thereon, have been paid.

Under New York State Law, the Westchester County Clerk may not accept any subdivision map for filing unless the same type of affidavit from the Town of Lewisboro Receiver of Taxes is submitted by the applicant at the time of filing.

INSTRUCTIONS

The applicant is to complete the information box below and return to: **Receiver of Taxes, Town of Lewisboro, 11 Main Street, South Salem, New York 10590.**

For Planning Board applications, the Receiver of Taxes will return this form and the affidavit to the Planning Board Office. For filing actions with the Westchester County Clerk, Division of Land Records, the Receiver of Taxes will return this form and the affidavit to the applicant by mail if a stamped and self-addressed envelope is submitted with this form.

IF ANY TAXES ARE FOUND TO BE DUE ON THE PROPERTY RELATING TO THE APPLICATION, THEN THAT APPLICATION CAN NOT BE ACCEPTED BY THE PLANNING BOARD UNTIL THE TAXES ARE PAID.

TO BE COMPLETED BY APPLICANT

(PLEASE TYPE OF PRINT)

New York American Water	Wild Oaks Water System	
<i>name of applicant</i>	<i>project name</i>	
<i>property description:</i>	<i>property assessed to:</i>	
tax sheet 31.1	name New York American Water	
block 1	address 260 Harrison Avenue	
lot 39	Harrison, NY 10528	
<i>application type (check one)</i>		
<input type="checkbox"/> Sketch Plan Review	<input type="checkbox"/> Preliminary Subdivision Plat	<input type="checkbox"/> final Subdivision Plat
<input type="checkbox"/> Site Development Plan	<input type="checkbox"/> Special Permit Use	<input type="checkbox"/> Waiver of site Plan Procedures
<input checked="" type="checkbox"/> Wetlands Permit	<input type="checkbox"/> Filing with The Westchester County Clerk	

NO OUTSTANDING TAXES ARE DUE: _____
 Receiver of Taxes Date

Sworn before me this
 day of _____, 20____

617.20
Appendix B
Short Environmental Assessment Form

Instructions for Completing

Part 1 - Project Information. The applicant or project sponsor is responsible for the completion of Part 1. 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.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

Part 1 - Project and Sponsor Information				
Name of Action or Project: New York American Water - Wild Oaks Water System				
Project Location (describe, and attach a location map): Nash Road, Lewisboro, New York				
Brief Description of Proposed Action: Drill one, 8-inch diameter bedrock test well location in a Town of Lewisboro regulated wetland buffer area.				
Name of Applicant or Sponsor: New York American Water		Telephone: (516) 596-4860 E-Mail: Richard.Ruge@amwater.com		
Address: 260 Harrison Avenue				
City/PO: Harrison		State: NY	Zip Code: 10528	
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.			NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>
2. Does the proposed action require a permit, approval or funding from any other governmental Agency? If Yes, list agency(s) name and permit or approval: Town of Lewisboro Wetland Permit Westchester County Department of Health Well Site Permit			NO <input type="checkbox"/>	YES <input checked="" type="checkbox"/>
3.a. Total acreage of the site of the proposed action?		1.88 acres		
b. Total acreage to be physically disturbed?		<1 acres		
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor?		1.88 acres		
4. Check all land uses that occur on, adjoining and near the proposed action. <input type="checkbox"/> Urban <input type="checkbox"/> Rural (non-agriculture) <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential (suburban) <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Agriculture <input checked="" type="checkbox"/> Aquatic <input type="checkbox"/> Other (specify): _____ <input type="checkbox"/> Parkland				

18. Does the proposed action include construction or other activities that result in the impoundment of water or other liquids (e.g. retention pond, waste lagoon, dam)? If Yes, explain purpose and size: _____ <u>A small 5 ft x 5 ft collection pit will be dug next to the test well to collect rock cuttings during drilling and prevent erosion. Pits will be backfilled once drilling is complete.</u>	NO	YES
	<input type="checkbox"/>	<input checked="" type="checkbox"/>
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility? If Yes, describe: _____	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste? If Yes, describe: _____	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
I AFFIRM THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE		
Applicant/sponsor name: <u>Richard Ruge</u>	Date: <u>8/24/15</u>	
Signature: <u>Richard C. Ruge, manager - Field ops</u>		

Part 2 - Impact Assessment. The Lead Agency is responsible for the completion of Part 2. Answer all of the following questions in Part 2 using the information contained in Part 1 and other materials submitted by the project sponsor or otherwise available to the reviewer. When answering the questions the reviewer should be guided by the concept "Have my responses been reasonable considering the scale and context of the proposed action?"

	No, or small impact may occur	Moderate to large impact may occur
1. Will the proposed action create a material conflict with an adopted land use plan or zoning regulations?	<input type="checkbox"/>	<input type="checkbox"/>
2. Will the proposed action result in a change in the use or intensity of use of land?	<input type="checkbox"/>	<input type="checkbox"/>
3. Will the proposed action impair the character or quality of the existing community?	<input type="checkbox"/>	<input type="checkbox"/>
4. Will the proposed action have an impact on the environmental characteristics that caused the establishment of a Critical Environmental Area (CEA)?	<input type="checkbox"/>	<input type="checkbox"/>
5. Will the proposed action result in an adverse change in the existing level of traffic or affect existing infrastructure for mass transit, biking or walkway?	<input type="checkbox"/>	<input type="checkbox"/>
6. Will the proposed action cause an increase in the use of energy and it fails to incorporate reasonably available energy conservation or renewable energy opportunities?	<input type="checkbox"/>	<input type="checkbox"/>
7. Will the proposed action impact existing:	<input type="checkbox"/>	<input type="checkbox"/>
a. public / private water supplies?	<input type="checkbox"/>	<input type="checkbox"/>
b. public / private wastewater treatment utilities?	<input type="checkbox"/>	<input type="checkbox"/>
8. Will the proposed action impair the character or quality of important historic, archaeological, architectural or aesthetic resources?	<input type="checkbox"/>	<input type="checkbox"/>
9. Will the proposed action result in an adverse change to natural resources (e.g., wetlands, waterbodies, groundwater, air quality, flora and fauna)?	<input type="checkbox"/>	<input type="checkbox"/>

	No, or small impact may occur	Moderate to large impact may occur
10. Will the proposed action result in an increase in the potential for erosion, flooding or drainage problems?	<input type="checkbox"/>	<input type="checkbox"/>
11. Will the proposed action create a hazard to environmental resources or human health?	<input type="checkbox"/>	<input type="checkbox"/>

Part 3 - Determination of significance. The Lead Agency is responsible for the completion of Part 3. For every question in Part 2 that was answered "moderate to large impact may occur", or if there is a need to explain why a particular element of the proposed action may or will not result in a significant adverse environmental impact, please complete Part 3. Part 3 should, in sufficient detail, identify the impact, including any measures or design elements that have been included by the project sponsor to avoid or reduce impacts. Part 3 should also explain how the lead agency determined that the impact may or will not be significant. Each potential impact should be assessed considering its setting, probability of occurring, duration, irreversibility, geographic scope and magnitude. Also consider the potential for short-term, long-term and cumulative impacts.

<input type="checkbox"/>	Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action may result in one or more potentially large or significant adverse impacts and an environmental impact statement is required.
<input type="checkbox"/>	Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action will not result in any significant adverse environmental impacts.
_____	_____
Name of Lead Agency	Date
_____	_____
Print or Type Name of Responsible Officer in Lead Agency	Title of Responsible Officer
_____	_____
Signature of Responsible Officer in Lead Agency	Signature of Preparer (if different from Responsible Officer)

PRINT

**NEW YORK AMERICAN WATER
WILD OAKS WATER SYSTEM
TOWN OF LEWISBORO, NEW YORK**

Description of Activities - Bedrock Test Well Drilling

The project proposes the drilling of one bedrock test well (Well 6) in the 150-foot wetland buffer area near a Town of Lewisboro regulated wetland. The purpose of the proposed test well drilling program is to develop additional water-supply wells at the well field to replace the existing sand and gravel Wells 1 and 2 which currently supply the Wild Oaks Water System to improve the raw water quality of the water system.

The proposed bedrock test well location was selected based on a hydrogeologic assessment completed for the Wild Oaks property by LBG, as well as the results from the recent drilling of bedrock Wells 4 and 5 on the property. Well 4 was the higher yielding of the two bedrock wells drilled at the well field; therefore, the location for Well 6 was select closer to this well. The yield of Well 4 demonstrated during the 72-hour pumping test was 80 gpm (gallons per minute) and the yield of Well 5 was 28 gpm. A summary report of the 72-hour pumping tests conducted on Well 4 and 5 is included in Exhibit VII.

The New York State Department of Health (NYSDOH) requires that all public water systems have a supply sufficient to meet the peak water demand with the best well out of service. The yields of Wells 4 and 5 can meet the system's peak demand but a third well is needed to meet the "best well out of service" requirement and allow Wells 1 and 2 to be taken out of service.

The parcel on which the drilling will occur is the existing Wild Oaks Well Field property. A copy of the subdivision map dated 1981 for Louis Marx Jr. & Nash Road Land Corporation, which includes the lands for the Wild Oaks Water Company, has been included in Exhibit VII. Access to the property and the proposed well location will be completed using the existing gravel driveway and grass path on the site. The wetland boundary on the site near the proposed well location was flagged by Hazen & Sawyer Environmental Engineers & Scientists in July 2014. The wetland fringe boundaries near the proposed location of Well 6 are shown on LBG's plates in Exhibit II. During the on-site wetlands delineation by Hazen & Sawyer, no wetlands fringe was observed along the pond, lake or stream edges in the vicinity of the proposed work area except for those depicted on the plates. A copy of Hazen & Sawyers Wetland Delineation Report is included in Exhibit V of this application.

Proposed Well 6 will be accessed using the existing grass path between the two ponds at the well field. The access route to the proposed well location is shown on the plates in Exhibit II. To avoid unnecessary clearing of vegetation in the wetland buffer area that borders

the grass trail and minimize disturbance, the applicant is proposing to use this existing trail even though the wetland boundary does encroach on portions of the trail. Care will be exercised when moving the drill rig and other equipment along this route. Photographs from a recent site visit to the property are also attached to this application in Exhibit IV. The photographs show the paths to the proposed well location is accessible using the existing gravel driveway and grass paths. Should wet conditions occur during the drilling program, mats or plywood will be laid down to assist in the movement of the drill rig to minimize disturbance and prevent damage to the buffer area.

The bedrock test well is proposed to be drilled using an air-rotary drill rig. A collection pit will be dug next to the proposed well locations to collect drill cuttings and provide sediment control by moderating the water discharging from the well as it is drilled. Silt fencing and straw bales will be set up between the drilling activities and the wetland areas as a precaution to prevent silt/sand laden runoff from flow into the wetland. The detail for the silt fencing and straw bales are shown on the attached plates in Exhibit II. When drilling at the well site has been completed, the collection pits will be backfilled and the area around the wells regraded.

The final total depth of the Well 6 will be determine during drilling based on the bedrock geology encountered and the location and yield of the fractures in the bedrock. The total depths of Wells 4 and 5 were 425 feet and 465 feet, respectively, so the depth of Well 6 is expected to be similar. For a 500 foot deep, 8-inch diameter well, the volume of the hole is 174 cubic feet (ft³). Based on the volume of the borehole, the dimensions of the collection pit will be 7 feet (length) by 5 feet (wide) by 6 feet (depth) for a total capacity of 210 ft³. The collection pit dimensions provide some surplus capacity for the drill cuttings as a precaution. The details for the sediment controls and collection pit location are shown on a blow-up of the proposed well location shown on the attached Plate 2 in Exhibit II. In the event the basin reaches capacity during drilling operations, drilling will be temporarily suspended and the cuttings excavated from the collection pit and disposed of offsite. Once the collection pit has been cleared, drilling will resume.

The water generated during the drilling process will be directed into the collection pit next to the well location. The collection pit allows drill cuttings to settle out of the water and then the water is pumped to a pre-selected discharge location. Because of the concern regarding potential wetland impacts, the discharge location for the excess drilling water has been selected near the stream channel north of the pump house shown on the plates in Exhibit II. Erosion control (the same as proposed around the wellhead disturbance area) will be set up around the discharge location to dampen the velocity of the water being discharged to prevent erosion of the soil. In addition, a tarp will be placed under the end of the discharge hose to provide additional soil erosion prevention.

The Town Engineer shall be notified 48 hours prior to construction. Following completion of work, the site will be restored in an appropriate manner. All disturbed areas will be raked, seeded with the seed mix specified on attached plates and mulched following construction.

Well 6 will be drilled in accordance the NYSDOH and Westchester County Health Department (WCDH) regulations for public water-supply wells. The well will be constructed using 8-inch diameter casing and an 8-inch diameter borehole will be drilled into the underlying bedrock. A minimum of 100 feet of 8-inch diameter casing will be installed in the well. The casing length of 100 feet (which was requested by the WCDH) is in excess of the normally required length of 50 feet for public water-supply wells. This additional construction measure typically decreases the likelihood of impact to shallow groundwater in nearby surface-water features by sealing off the shallow water-bearing fractures in the bedrock. The total depth of the well will be determined based on the geologic conditions encountered during drilling, particularly the depth and yield of the water-bearing fractures encountered in the bedrock. A water-tight cap will be placed on the well following the completion of drilling. NYSDOH requires water-tight, vermin proof caps be placed on all supply wells. Therefore, no additional structures are needed to protect the well. If the well is successful, it will be connected to the existing water system through underground waterlines. Plans and details for these connections will be submitted as a separate Wetland Permit Application to the Town of Lewisboro should the well be determined to be suitable for development as a public water-supply source based on the results of the 72-hour pumping test program.

Following the completion of drilling, if Well 6 is successful, a 72-hour pumping test will be conducted. The well will be tested to demonstrate a minimum of 6 hours of stabilized yield. Discharge from the well during the test will be directed away from the well to prevent recharge of the aquifer during the test period. The water will be released in a controlled manner using tarps, plywood, and/or straw bales to prevent erosion and sedimentation by dampening the velocity and dispersing the discharge water at the end of the discharge hose.

Water-level and stream-flow measurements will be collected from the onsite wetland features and watercourses that are located near the pumping well as part of the pumping test program. The data collected during the pumping test will be used to determine whether there is any hydrologic connection between the well and the nearby surface-water features and the potential short and/or long term impacts, if any. The outcome of the surface-water monitoring conducted during the 72-hour pumping test and any impacts to hydrology would be addressed in the follow up Wetland Permit Application which would be submitted for connection of the well to the existing water system if the well is successful.

Water-level measurements were collected from two locations in the onsite pond, two locations in the onsite lake and two locations in the onsite stream during the pumping test program conducted on Wells 4 and 5. The background water-level data collected prior to the start of pumping in the bedrock wells showed that the existing sand and gravel production wells cause water-level drawdown in the shallow the groundwater underlying the pond and lake at three of the piezometer locations (one location in the pond and two locations in the lake). However, no direct drawdown impact was measured in the surface water in the pond and lake or in the groundwater or surface water in the onsite stream.

During the pumping test conducted on Wells 4 and 5, water-level drawdown effects were measured in the groundwater at one piezometer location in the lake during the test. No water-level drawdown effects were discernible the in the groundwater at the five other piezometer locations and no direct drawdown impact was measured in any surface water locations in the pond, lake or stream. A full summary of the pumping test program on Wells 4 and 5 is included in the report in Exhibit VIII.

H:\Wild Oaks\2015\Wetland Application\Exhibit III - Activity Description_Aug 2015.doc



Staked well site location for Well 6, facing west.



Existing grass path to proposed Well 6 location, facing east.



Existing grass path to proposed Well 6 location, facing west. Proposed Well 6 staked in shaded area at end of grass path.

H:\Wild Oaks\2015\Wetland Application\Exhibit IV_photos.docx

WETLAND DELINEATION REPORT
FOR
NEW YORK AMERICAN WATER'S
WILD OAKS WATER SYSTEM

July 2014

Prepared by:

HAZEN AND SAWYER
Environmental Engineers & Scientists

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**FIGURE 1. UNITED STATES GEOLOGIC SURVEY (USGS) CROTON
 FALLS QUADRANT**

FIGURE 2. SITE LOCATION DIAGRAM

FIGURE 3. USFWS NATIONAL WETLANDS INVENTORY

FIGURE 4. NYSDEC FRESHWATER WETLANDS

FIGURE 5. USDA NRCS SOIL SERIES

FIGURE 6. WETLAND DELINEATION RESULTS

8.0 APPENDICES..... 7

**APPENDIX A. NATIONAL WETLAND INVENTORY
 CLASSIFICATIONS**

APPENDIX B. NYSDEC ENVIRONMENTAL RESOURCES MAPPER

**APPENDIX C. HYDROLOGIC SOIL GROUPS FOR WESTCHESTER
 COUNTY, NEW YORK**

APPENDIX D. SOIL SERIES DESCRIPTIONS

APPENDIX E. USACE WETLAND DETERMINATION DATA FORMS

APPENDIX F. PHOTOGRAPH LOG

1.0 INTRODUCTION

New York American Water (NYAW) is proposing the expansion of the Wild Oaks Water System, an existing water-supply area located on Nash Road in The Town of Lewisboro, Westchester County, NY (**Figure 1**). NYAW requested that Hazen and Sawyer (H&S) perform a wetland delineation and inventory for a study area within the Wild Oaks Water System (**Figure 2**).

2.0 METHODOLOGY

A desktop review of the study area was conducted to assess the potential presence of wetlands using the United States Fish and Wildlife Service (USFWS) National Wetland Inventory maps (**Figure 3** and **Appendix A**) and New York State Department of Environmental Conservation (NYSDEC) freshwater wetlands maps (**Figure 4** and **Appendix B**). The United States Department of Agriculture Natural Resources Conservation Service (USDA NRCS) Web Soil Survey was consulted for a list of soils in the local area (**Figure 5**) and cross referenced with the list of Hydrologic Soil Groups: Westchester County, New York (**Appendix C**) (USDA NRCS, 2012). Descriptions of all soil series in the vicinity of the study area were generated from the USDA NRCS Web Soil Survey, Soil Report tool (**Appendix D**).

Following the desktop review, an on-site wetland delineation was performed in accordance with the three-parameter approach (vegetation, soils, and hydrology) outlined in the 1987 United States Army Corps of Engineers (USACE) "Wetlands Delineation Manual" (USACE, 1987) and the "Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region" (USACE, 2011). Wetland and upland data were recorded on USACE Northcentral and Northeast Region Wetland Determination Data Forms (**Appendix E**) (USACE, 2011) and the wetland/upland boundary and additional data point geographic locations were recorded in a Trimble Global Positioning Unit (GPS) model GEO XH with sub-meter accuracy.

3.0 STUDY AREA

The study area contains a mowed strip of land that abuts two freshwater ponds. To the south of these ponds are ascending slopes and to the north of the ponds is an unnamed stream and floodplain forest. An existing well pump house is located at the northern end of the mowed strip and is accessible from Nash Road via an unpaved access road. Photographs of the study area are provided in **Appendix F**.

4.0 RESULTS

The desktop analysis shows that the potential for wetlands in the study area are high. The study area is low-lying and several areas 200 to 300 feet vertically higher drain towards the study area. There is an approximately 6-foot wide perennial unnamed stream running through the study area that feeds into the western pond. This stream was close to bank-full conditions at the time of the delineation. In the vicinity of the existing pump house, the stream passes underneath the existing access road via four, 24-inch corrugated metal culverts. The unnamed tributary is a NYCRR Part 701 Class C fresh surface water body with fishing best usage (NYSDEC, 1991). The surface water

shall be suitable for fish, shellfish, and wildlife propagation and survival. The water quality shall be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes. The NYSDEC freshwater wetlands check-zone encompasses the entire study area between the two freshwater ponds. The freshwater wetlands check-zone is an area around mapped freshwater wetlands that should be checked for actual wetlands. This is required because mapped wetlands boundaries are not always accurate. Additionally, several of the USDA NRCS soil series in the general vicinity of the study area are on the National List of Hydric Soils.

A wetland delineation was conducted on May 8th, 2014 within the study area. Weather conditions were cloudy with intermittent light to moderate rain. There was also rain during several days preceding the site-visit. Three distinct vegetative communities were identified: one on the upland, rocky hillside south of the study area, one along the pond fringe and one forested floodplain area north of the unnamed tributary. The grassy area along the pond fringe was subject to disturbance in the form of mowing/maintenance and light vehicle access. The forested floodplain area was identified in the northern portion of the study area and extended east, upstream to the unnamed tributary and outside of the study area boundary. The westernmost boundary of this wetland community was delineated.

Wetland delineation resulted in one approximately 0.3-acre wetland (Wetland A) located in the study area in the strip of land between the two freshwater ponds. Wetland A is a palustrine emergent wetland along the fringe of the eastern pond. A second, approximately 1+ acre wetland (Wetland B), located primarily outside of the study area, is a palustrine forested floodplain wetland north of the unnamed tributary. Both of these areas show signs of current or historical disturbance by human activities including clearing, mowing, vehicle operation, and the presence of existing infrastructure.

4.1 Wetland A

Wetland A is an approximately 0.3-acre palustrine emergent wetland located on the fringe of the eastern pond in the study area (**Figure 6**). Wetland A also has a scrub-shrub component and a few trees at the southwestern corner of the pond outside of the mowed access area. A drainage channel from the slope in the southern portion of the study area meets the pond in a mucky area immediately south of the eastern pond. The un-mowed perimeter of the pond is dominated by rice cutgrass (*Leersia oryzoides*) and tussock sedge (*Carex stricta*) with small amounts of Japanese barberry (*Berberis thunbergii*) and multiflora rose (*Rosa multiflora*). One red maple (*Acer rubrum*) was also present in the sampling plot. The upper 8 inches of the soil profile was dominated by low chroma colors and a depleted soil matrix, which are indicative of hydric soils and periodic inundation. Redoximorphic features, or areas where the saturation of water has caused the iron and manganese present in the soil to migrate, concentrate, and then oxidize, are present within the soil profile below 8-inches in depth. Hydrologically, this area had a high water table, surface water, and soil saturation at the time of the delineation. Due to the rain preceding the delineation, some of these indicators have the potential to be atypical under normal weather circumstances, however given the geographic position, obligate wetland vegetation and hydric soil indicators, the observed hydrologic indicators are likely to be present throughout the growing season.

4.2 Wetland B

Wetland B is a palustrine floodplain forest to the north of the unnamed tributary and extends beyond the study area boundaries. The western-most boundary of Wetland B was delineated and is depicted on **Figure 6**. Skunk cabbage (*Symplocarpus foetidus*) and purple pitcher plant (*Sarracenia purpurea*) are the dominant herbaceous vegetation and red maple (*Acer rubrum*) and slippery elm (*Ulmus rubra*) are the dominant trees. The upper 6 inches of the soil profile was made up of soils with a low chroma matrix and signs of depletion, which are indicative of hydric soils. Hydrologically, microtopographic relief was present as a result of tussock forming grasses/sedges and mosses. Water-stained leaves, or leaves whose colors have been stripped and whose biodegradation has been slowed as a result of saturation, were present within depressions in the topography. Surface water, high ground-water table, and soil saturation were also present.

5.0 CONCLUSION

A wetland field delineation was conducted on May 8th, 2014, in accordance with methods outlined in the USACE 1987 "Wetlands Delineation Manual". Wetlands and waterways in the project area were identified, flagged, and recorded via GPS. Two separate wetlands, one approximately .3-acre and one 1+ acre wetlands were identified. Wetland vegetation, soils and hydrology were inventoried for these two wetlands and have been outlined within this report and its appendices.

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7.0 FIGURES

FIGURE 1. UNITED STATES GEOLOGIC SURVEY (USGS) CROTON FALLS QUADRANT

FIGURE 2. SITE LOCATION DIAGRAM

FIGURE 3. USFWS NATIONAL WETLANDS INVENTORY

FIGURE 4. NYSDEC FRESHWATER WETLANDS

FIGURE 5. USDA NRCS SOIL SERIES

FIGURE 6. WETLAND DELINEATION RESULTS

8.0 APPENDICES

APPENDIX A. NATIONAL WETLAND INVENTORY CLASSIFICATIONS

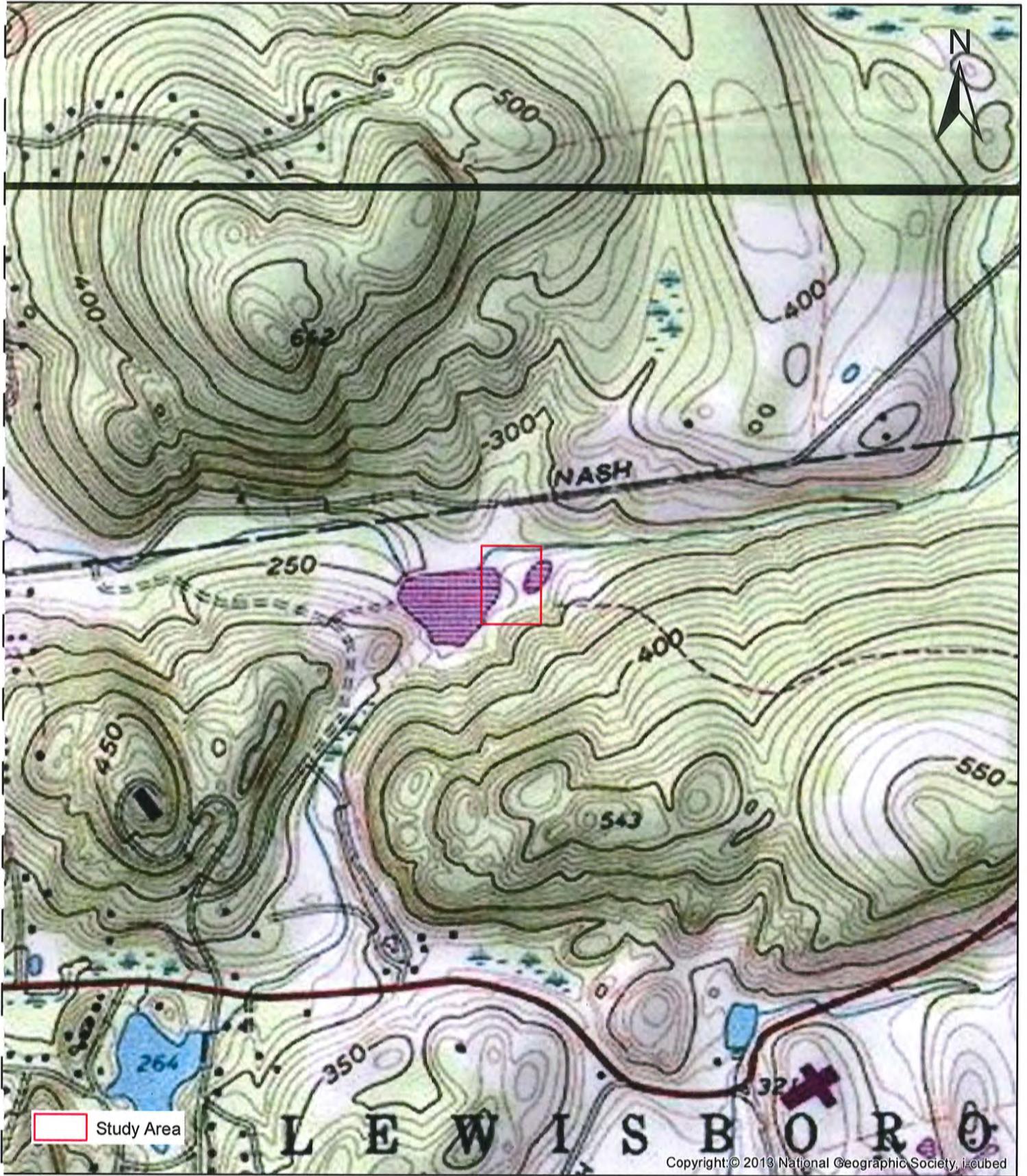
APPENDIX B. NYSDEC ENVIRONMENTAL RESOURCES MAPPER

APPENDIX C. HYDROLOGIC SOIL GROUPS FOR WESTCHESTER COUNTY, NEW YORK

APPENDIX D. SOIL SERIES DESCRIPTIONS

APPENDIX E. USACE WETLAND DETERMINATION DATA FORMS

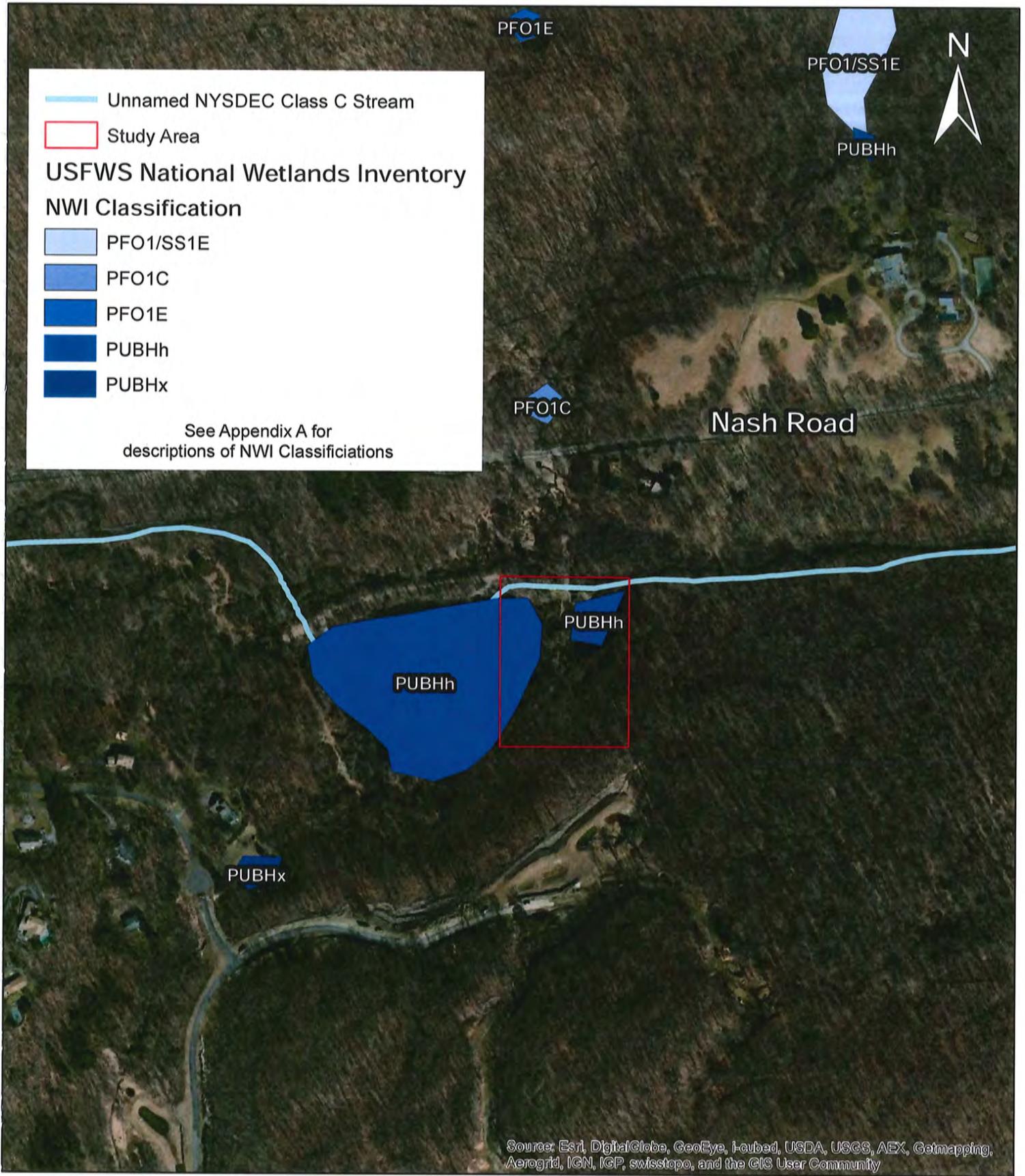
APPENDIX F. PHOTOGRAPH LOG



USGS Croton Falls
Figure 1



Site Location
Figure 2



USFWS National Wetlands Inventory
Figure 3



Nash Road

-  Unnamed NYSDEC Class C Stream
-  NYSDEC Freshwater Wetlands Checkzone
-  Study Area

Source: Esri, DigitalGlobe, GeoEye, I-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

SCALE

0 180 360 540 720 Feet

NYSDEC Freshwater Wetlands
Figure 4



USDA NRCS Soil Survey
Figure 5



- Data Points
- Delineated Wetlands
- Delineated Wetland Boundary
- Study Area

Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



Wetland Delineation
Figure 6

8.0 APPENDICES

APPENDIX A. NATIONAL WETLAND INVENTORY CLASSIFICATIONS

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APPENDIX F. PHOTOGRAPH LOG

Appendix A
National Wetlands Inventory Classification Descriptions

PFO1/SS1E

- P** System PALUSTRINE: The Palustrine System includes all nontidal wetlands dominated by trees, shrubs, emergents, mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean derived salts is below 0.5 ppt. Wetlands lacking such vegetation are also included if they exhibit all of the following characteristics: 1. are less than 8 hectares (20 acres); 2. do not have an active wave-formed or bedrock shoreline feature; 3. have at low water a depth less than 2 meters (6.6 feet) in the deepest part of the basin; 4. have a salinity due to ocean-derived salts of less than 0.5 ppt.

Subsystem :

- FO** Class FORESTED: Characterized by woody vegetation that is 6 m tall or taller.
- 1** Subclass Broad-Leaved Deciduous: Woody angiosperms (trees or shrubs) with relatively wide, flat leaves that are shed during the cold or dry season; e.g., black ash (*Fraxinus nigra*).

-
- P** System PALUSTRINE: The Palustrine System includes all nontidal wetlands dominated by trees, shrubs, emergents, mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean derived salts is below 0.5 ppt. Wetlands lacking such vegetation are also included if they exhibit all of the following characteristics: 1. are less than 8 hectares (20 acres); 2. do not have an active wave-formed or bedrock shoreline feature; 3. have at low water a depth less than 2 meters (6.6 feet) in the deepest part of the basin; 4. have a salinity due to ocean-derived salts of less than 0.5 ppt.

Subsystem :

- SS** Class SCRUB-SHRUB: Includes areas dominated by woody vegetation less than 6 m (20 feet) tall. The species include true shrubs, young trees (saplings), and trees or shrubs that are small or stunted because of environmental conditions.
- 1** Subclass Broad-Leaved Deciduous: Woody angiosperms (trees or shrubs) with relatively wide, flat leaves that are shed during the cold or dry season; e.g., black ash (*Fraxinus nigra*).

Modifier(s):

- E** WATER REGIME Seasonally Flooded/Saturated: Surface water is present for extended periods especially early in the growing season and when surface water is absent, substrate remains saturated near the surface for much of the growing season.

PFO1C

- P** System PALUSTRINE: The Palustrine System includes all nontidal wetlands dominated by trees, shrubs, emergents, mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean derived salts is below 0.5 ppt. Wetlands lacking such vegetation are also included if they exhibit all of the following characteristics: 1. are less than 8 hectares (20 acres); 2. do not have an active wave-formed or bedrock shoreline feature; 3. have at low water a depth less than 2 meters (6.6 feet) in the deepest part of the basin; 4. have a salinity due to ocean-derived salts of less than 0.5 ppt.

Subsystem :

- FO** Class FORESTED: Characterized by woody vegetation that is 6 m tall or taller.
- 1** Subclass Broad-Leaved Deciduous: Woody angiosperms (trees or shrubs) with relatively wide, flat leaves that are shed during the cold or dry season; e.g., black ash (*Fraxinus nigra*).

Modifier(s):

- C** WATER REGIME Seasonally Flooded: Surface water is present for extended periods especially early in the growing season, but is absent by the end of the growing season in most years. The water table after flooding ceases is variable, extending from saturated to the surface to a water table well below the ground surface.

PFO1E

- P** System PALUSTRINE: The Palustrine System includes all nontidal wetlands dominated by trees, shrubs, emergents, mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean derived salts is below 0.5 ppt. Wetlands lacking such vegetation are also included if they exhibit all of the following characteristics: 1. are less than 8 hectares (20 acres); 2. do not have an active wave-formed or bedrock shoreline feature; 3. have at low water a depth less than 2 meters (6.6 feet) in the deepest part of the basin; 4. have a salinity due to ocean-derived salts of less than 0.5 ppt.

Subsystem :

- FO** Class FORESTED: Characterized by woody vegetation that is 6 m tall or taller.
- 1** Subclass Broad-Leaved Deciduous: Woody angiosperms (trees or shrubs) with relatively wide, flat leaves that are shed during the cold or dry season; e.g., black ash (*Fraxinus nigra*).

Modifier(s):

- E** WATER REGIME Seasonally Flooded/Saturated: Surface water is present for extended periods especially early in the growing season and when surface water is absent, substrate remains saturated near the surface for much of the growing season.

PUBHh

- P** System PALUSTRINE: The Palustrine System includes all nontidal wetlands dominated by trees, shrubs, emergents, mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean derived salts is below 0.5 ppt. Wetlands lacking such vegetation are also included if they exhibit all of the following characteristics: 1. are less than 8 hectares (20 acres); 2. do not have an active wave-formed or bedrock shoreline feature; 3. have at low water a depth less than 2 meters (6.6 feet) in the deepest part of the basin; 4. have a salinity due to ocean-derived salts of less than 0.5 ppt.

Subsystem :

- UB** Class UNCONSOLIDATED BOTTOM: Includes all wetlands and deep-water habitats with at least 25% cover of particles smaller than stones (less than 6-7 cm), and a vegetative cover less than 30%.

Subclass :

Modifier(s):

- H** WATER REGIME Permanently Flooded: Water covers the land surface throughout the year in all years.
- h** SPECIAL MODIFIER Diked/Impounded: These wetlands have been created or modified by a man-made barrier or dam which obstructs the inflow or outflow of water. The descriptors 'diked' and 'impounded' have been combined into a single modifier since the observed effect on wetlands is similar. They have been combined here due to image interpretation limitations. For clarification of the extent of impoundment see discussion of Lacustrine System limits.

PUBHx

- P** System PALUSTRINE: The Palustrine System includes all nontidal wetlands dominated by trees, shrubs, emergents, mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean derived salts is below 0.5 ppt. Wetlands lacking such vegetation are also included if they exhibit all of the following characteristics: 1. are less than 8 hectares (20 acres); 2. do not have an active wave-formed or bedrock shoreline feature; 3. have at low water a depth less than 2 meters (6.6 feet) in the deepest part of the basin; 4. have a salinity due to ocean-derived salts of less than 0.5 ppt.

Subsystem :

- UB** Class UNCONSOLIDATED BOTTOM: Includes all wetlands and deepwater habitats with at least 25% cover of particles smaller than stones (less than 6-7 cm), and a vegetative cover less than 30%.

Subclass :

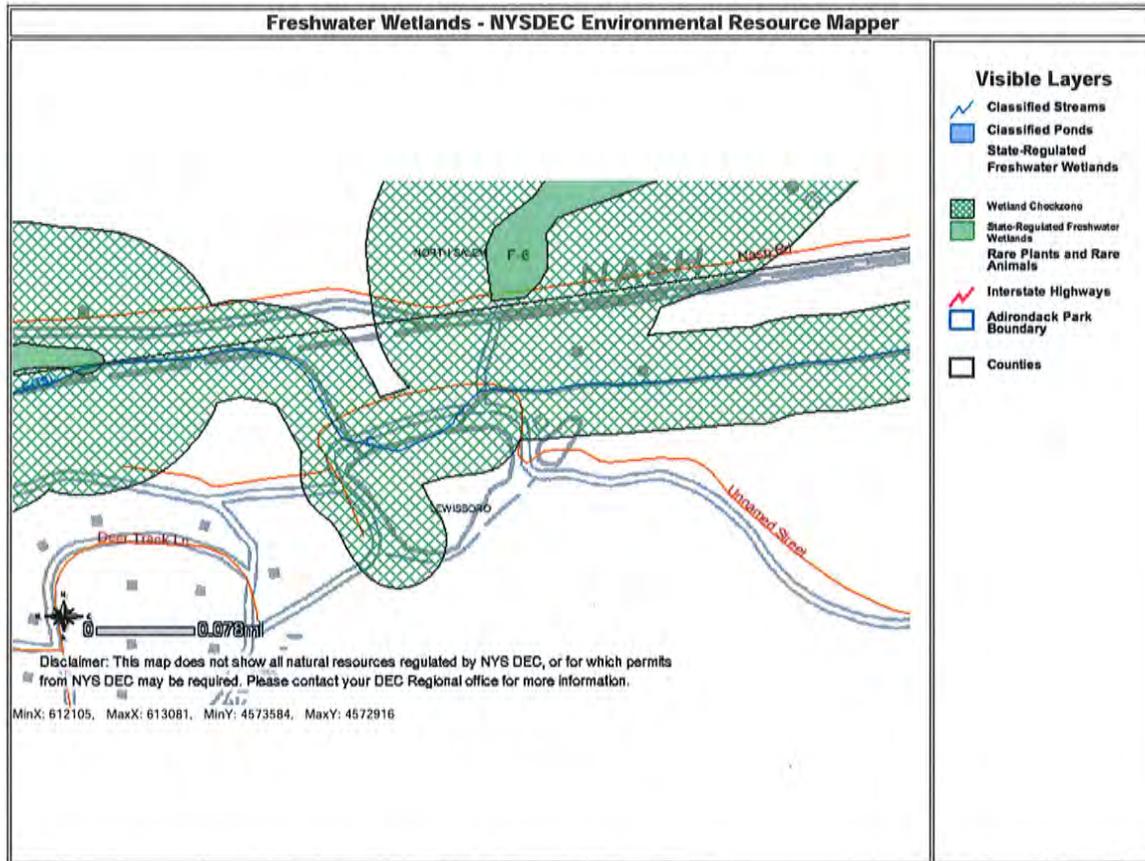
Modifier(s):

- H** WATER REGIME Permanently Flooded: Water covers the land surface throughout the year in all years.
- x** SPECIAL MODIFIER Excavated: Lies within a basin or channel that have been dug, gouged, blasted or suctioned through artificial means by man.

Appendix B
NYSDEC Environmental Resource Mapper

[print page] [close window]

Please set your printer orientation to "Landscape".



Disclaimer: This map was prepared by the New York State Department of Environmental Conservation using the most current data available. It is deemed accurate but is not guaranteed. NYS DEC is not responsible for any inaccuracies in the data and does not necessarily endorse any interpretations or products derived from the data.

Appendix C
Hydrologic Soil Groups for Westchester County, New York

Hydrologic Soil Groups
Westchester County, New York

December 2012

[This table of hydrologic soil group data will be updated on eFOTG as needed, in order to maintain consistency with the official SSURGO soil survey data.]

Map Unit Symbol	Map Unit Name	Component Name	Hydrologic Soil Group
Ce	Carlisle muck	Carlisle	A/D
ChB	Charlton loam, 2 to 8 percent slopes	Charlton	B
ChC	Charlton loam, 8 to 15 percent slopes	Charlton	B
ChD	Charlton loam, 15 to 25 percent slopes	Charlton	B
ChE	Charlton loam, 25 to 35 percent slopes	Charlton	B
CiB	Charlton loam, 2 to 8 percent slopes, very stony	Charlton	B
CiC	Charlton loam, 8 to 15 percent slopes, very stony	Charlton	B
CiD	Charlton loam, 15 to 25 percent slopes, very stony	Charlton	B
CiE	Charlton loam, 25 to 35 percent slopes, very stony	Charlton	B
CiF	Charlton loam, 35 to 45 percent slopes, very stony	Charlton	B
CrC	Charlton-Chatfield complex, rolling, very rocky	Charlton	B
CrC	Charlton-Chatfield complex, rolling, very rocky	Chatfield	B
CsD	Chatfield-Charlton complex, hilly, very rocky	Chatfield	B
CsD	Chatfield-Charlton complex, hilly, very rocky	Charlton	B
CtC	Chatfield-Hollis-Rock outcrop complex, rolling	Chatfield	B
CtC	Chatfield-Hollis-Rock outcrop complex, rolling	Hollis	D
CtC	Chatfield-Hollis-Rock outcrop complex, rolling	Rock outcrop	
CuD	Chatfield-Hollis-Rock outcrop complex, hilly	Chatfield	B
CuD	Chatfield-Hollis-Rock outcrop complex, hilly	Hollis	D
CuD	Chatfield-Hollis-Rock outcrop complex, hilly	Rock outcrop	
DAM	Dam	Dam	
Ff	Fluvaquents-Udifuvents complex, frequently flooded	Fluvaquents	A/D
Ff	Fluvaquents-Udifuvents complex, frequently flooded	Udifuvents	A
Fr	Fredon silt loam	Fredon	B/D
Fr	Fredon silt loam	Fredon	B/D
HnB	Hinckley gravelly loamy sand, 3 to 8 percent slopes	Hinckley	A
HnC	Hinckley gravelly loamy sand, 8 to 15 percent slopes	Hinckley	A
HnD	Hinckley gravelly loamy sand, 15 to 25 percent slopes	Hinckley	A
HrF	Hollis-Rock outcrop complex, very steep	Hollis	D
HrF	Hollis-Rock outcrop complex, very steep	Rock outcrop	
Ip	Ipswich mucky peat	Ipswich	A/D
KnB	Knickerbocker fine sandy loam, 2 to 8 percent slopes	Knickerbocker	A
KnC	Knickerbocker fine sandy loam, 8 to 15 percent slopes	Knickerbocker	A
LcA	Leicester loam, 0 to 3 percent slopes, stony	Leicester	A/D

Highlighted Soil Series indicate soil series present in the vicinity of the proposed project and are on the National List of Hydric Soils

Map Unit Symbol	Map Unit Name	Component Name	Hydrologic Soil Group
LcA	Leicester loam, 0 to 3 percent slopes, stony	Leicester	A/D
LcB	Leicester loam, 3 to 8 percent slopes, stony	Leicester	A/D
LcB	Leicester loam, 3 to 8 percent slopes, stony	Leicester	A/D
LeB	Leicester loam, 2 to 8 percent slopes, very stony	Leicester	A/D
LeB	Leicester loam, 2 to 8 percent slopes, very stony	Leicester	A/D
Pa	Palms muck	Palms	A/D
Pc	Palms and Carlisle soils, ponded	Palms	A/D
Pc	Palms and Carlisle soils, ponded	Carlisle	A/D
PnB	Paxton fine sandy loam, 2 to 8 percent slopes	Paxton	C
PnC	Paxton fine sandy loam, 8 to 15 percent slopes	Paxton	C
PnD	Paxton fine sandy loam, 15 to 25 percent slopes	Paxton	C
PoB	Paxton fine sandy loam, 2 to 8 percent slopes, very stony	Paxton	C
PoC	Paxton fine sandy loam, 8 to 15 percent slopes, very stony	Paxton	C
PoD	Paxton fine sandy loam, 15 to 25 percent slopes, very stony	Paxton	C
Pt	Pits, gravel	Pits, gravel	
Pv	Pits, quarry	Pits, quarry	
Pw	Pompton silt loam, loamy substratum	Pompton	B/D
Ra	Raynham silt loam	Raynham	C/D
RdA	Ridgebury loam, 0 to 3 percent slopes	Ridgebury	B/D
RdA	Ridgebury loam, 0 to 3 percent slopes	Ridgebury	B/D
RdB	Ridgebury loam, 3 to 8 percent slopes	Ridgebury	B/D
RdB	Ridgebury loam, 3 to 8 percent slopes	Ridgebury	B/D
RgB	Ridgebury loam, 2 to 8 percent slopes, very stony	Ridgebury	B/D
RgB	Ridgebury loam, 2 to 8 percent slopes, very stony	Ridgebury	B/D
RhA	Riverhead loam, 0 to 3 percent slopes	Riverhead	A
RhB	Riverhead loam, 3 to 8 percent slopes	Riverhead	A
RhC	Riverhead loam, 8 to 15 percent slopes	Riverhead	A
RhD	Riverhead loam, 15 to 25 percent slopes	Riverhead	A
RhE	Riverhead loam, 25 to 50 percent slopes	Riverhead	A
SbB	Stockbridge silt loam, 2 to 8 percent slopes	Stockbridge	C
Sh	Sun loam	Sun	C/D
Sm	Sun loam, extremely stony	Sun	C/D
SuA	Sutton loam, 0 to 3 percent slopes	Sutton	B
SuB	Sutton loam, 3 to 8 percent slopes	Sutton	B
Ub	Udorthents, smoothed	Udorthents	B
Uc	Udorthents, wet substratum	Udorthents	A/D
UdB	Unadilla silt loam, 2 to 6 percent slopes	Unadilla	B
Uf	Urban land	Urban land	
UhB	Urban land-Charlton complex, 2 to 8 percent slopes	Urban land	
UhB	Urban land-Charlton complex, 2 to 8 percent slopes	Charlton	B

Highlighted Soil Series indicate soil series present in the vicinity of the proposed project and are on the National List of Hydric Soils

Map Unit Symbol	Map Unit Name	Component Name	Hydrologic Soil Group
UhC	Urban land-Charlton complex, 8 to 15 percent slopes	Urban land	
UhC	Urban land-Charlton complex, 8 to 15 percent slopes	Charlton	B
UhD	Urban land-Charlton complex, 15 to 25 percent slopes	Urban land	
UhD	Urban land-Charlton complex, 15 to 25 percent slopes	Charlton	B
UIC	Urban land-Charlton-Chatfield complex, rolling, very rocky	Urban land	
UIC	Urban land-Charlton-Chatfield complex, rolling, very rocky	Charlton	B
UIC	Urban land-Charlton-Chatfield complex, rolling, very rocky	Chatfield	B
UID	Urban land-Charlton-Chatfield complex, hilly, very rocky	Urban land	
UID	Urban land-Charlton-Chatfield complex, hilly, very rocky	Charlton	B
UID	Urban land-Charlton-Chatfield complex, hilly, very rocky	Chatfield	B
UmC	Urban land-Chatfield-Rock outcrop complex, rolling	Urban land	
UmC	Urban land-Chatfield-Rock outcrop complex, rolling	Chatfield	B
UmC	Urban land-Chatfield-Rock outcrop complex, rolling	Rock outcrop	
UpB	Urban land-Paxton complex, 2 to 8 percent slopes	Urban land	
UpB	Urban land-Paxton complex, 2 to 8 percent slopes	Paxton	C
UpC	Urban land-Paxton complex, 8 to 15 percent slopes	Urban land	
UpC	Urban land-Paxton complex, 8 to 15 percent slopes	Paxton	C
UpD	Urban land-Paxton complex, 15 to 25 percent slopes	Urban land	
UpD	Urban land-Paxton complex, 15 to 25 percent slopes	Paxton	C
UrB	Urban land-Ridgebury complex, 1 to 8 percent slopes	Urban land	
UrB	Urban land-Ridgebury complex, 1 to 8 percent slopes	Ridgebury	B/D
UrB	Urban land-Ridgebury complex, 1 to 8 percent slopes	Ridgebury	B/D
UvB	Urban land-Riverhead complex, 2 to 8 percent slopes	Urban land	
UvB	Urban land-Riverhead complex, 2 to 8 percent slopes	Riverhead	A
UvC	Urban land-Riverhead complex, 8 to 15 percent slopes	Urban land	
UvC	Urban land-Riverhead complex, 8 to 15 percent slopes	Riverhead	A
UwB	Urban land-Woodbridge complex, 2 to 8 percent slopes	Urban land	
UwB	Urban land-Woodbridge complex, 2 to 8 percent slopes	Woodbridge	C
W	Water	Water	
WdA	Woodbridge loam, 0 to 3 percent slopes	Woodbridge	C
WdB	Woodbridge loam, 3 to 8 percent slopes	Woodbridge	C
WdC	Woodbridge loam, 8 to 15 percent slopes	Woodbridge	C

Highlighted Soil Series indicate soil series present in the vicinity of the proposed project and are on the National List of Hydric Soils

Appendix D
Soil Series Descriptions

United States Department of Agriculture (USDA), Natural Resource Conservation Service
(NRCS)

Web Soil Survey

Detailed Soil Map Units Report

The USDA NRCS Web Soil Survey is a digitized collection of soil surveys completed by the National Cooperative Soil Survey (NCSS). The NCSS is a nation-wide partnership of federal, state, and local agencies and institutions that conduct soil surveys for the purposes of understanding, managing, and conserving the nation's soil resources. This report was generated by inputting the project area into the Web Soil Survey and downloading one of the subsequent reports. This report, "Map Unit Description", is a brief description of the characteristics of the soil series present in the project area.

Detailed Soil Map Units

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

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

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

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

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

Soils that have profiles that are almost alike make up a *soil series*. All the soils of a series have major horizons that are similar in composition, thickness, and arrangement. Soils of a given series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

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

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

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

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

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

Additional information about the map units described in this report is available in other soil reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the soil reports define some of the properties included in the map unit descriptions.

Minor map unit components are excluded from this report.

Westchester County, New York

Map Unit: ChD—Charlton loam, 15 to 25 percent slopes

Component: Charlton (80%)

The Charlton component makes up 80 percent of the map unit. Slopes are 15 to 25 percent. This component is on hills, ridges, till plains. The parent material consists of acid loamy till derived mainly from schist, gneiss, or granite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria.

Component: Paxton (5%)

Generated brief soil descriptions are created for major components. The Paxton soil is a minor component.

Component: Chatfield (5%)

Generated brief soil descriptions are created for major components. The Chatfield soil is a minor component.

Component: Sutton (4%)

Generated brief soil descriptions are created for major components. The Sutton soil is a minor component.

Component: Knickerbocker (2%)

Generated brief soil descriptions are created for major components. The Knickerbocker soil is a minor component.

Component: Riverhead (2%)

Generated brief soil descriptions are created for major components. The Riverhead soil is a minor component.

Component: Charlton, very stony (1%)

Generated brief soil descriptions are created for major components. The Charlton soil is a minor component.

Component: Hollis (1%)

Generated brief soil descriptions are created for major components. The Hollis soil is a minor component.

Map Unit: C1C—Charlton loam, 8 to 15 percent slopes, very stony

Component: Charlton (80%)

The Charlton component makes up 80 percent of the map unit. Slopes are 8 to 15 percent. This component is on till plains, ridges, hills. The parent material consists of acid loamy till derived mainly from schist, gneiss, or granite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 6s. This soil does not meet hydric criteria.

Component: Chatfield (5%)

Generated brief soil descriptions are created for major components. The Chatfield soil is a minor component.

Component: Paxton (5%)

Generated brief soil descriptions are created for major components. The Paxton soil is a minor component.

Component: Sutton (5%)

Generated brief soil descriptions are created for major components. The Sutton soil is a minor component.

Component: Riverhead (2%)

Generated brief soil descriptions are created for major components. The Riverhead soil is a minor component.

Component: Knickerbocker (2%)

Generated brief soil descriptions are created for major components. The Knickerbocker soil is a minor component.

Component: Charlton, extremely stony (1%)

Generated brief soil descriptions are created for major components. The Charlton soil is a minor component.

Map Unit: CID—Charlton loam, 15 to 25 percent slopes, very stony

Component: Charlton (80%)

The Charlton component makes up 80 percent of the map unit. Slopes are 15 to 25 percent. This component is on hills, ridges, till plains. The parent material consists of acid loamy till derived mainly from schist, gneiss, or granite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 6s. This soil does not meet hydric criteria.

Component: Paxton (5%)

Generated brief soil descriptions are created for major components. The Paxton soil is a minor component.

Component: Sutton (5%)

Generated brief soil descriptions are created for major components. The Sutton soil is a minor component.

Component: Chatfield (5%)

Generated brief soil descriptions are created for major components. The Chatfield soil is a minor component.

Component: Knickerbocker (2%)

Generated brief soil descriptions are created for major components. The Knickerbocker soil is a minor component.

Component: Riverhead (2%)

Generated brief soil descriptions are created for major components. The Riverhead soil is a minor component.

Component: Charlton, extremely stony (1%)

Generated brief soil descriptions are created for major components. The Charlton soil is a minor component.

Map Unit: Ff—Fluvaquents-Udifluvents complex, frequently flooded

Component: Fluvaquents (50%)

The Fluvaquents component makes up 50 percent of the map unit. Slopes are 0 to 3 percent. This component is on flood plains. The parent material consists of alluvium with highly variable texture. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately low. Available water

to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is frequently flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, April, May, June, October, November, December. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria.

Component: Udifluvents (35%)

The Udifluvents component makes up 35 percent of the map unit. Slopes are 0 to 3 percent. This component is on flood plains. The parent material consists of alluvium with a wide range of texture. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is frequently flooded. It is not ponded. A seasonal zone of water saturation is at 48 inches during January, February, March, April, May, November, December. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 5w. This soil does not meet hydric criteria.

Component: Sun (3%)

Generated brief soil descriptions are created for major components. The Sun soil is a minor component.

Component: Riverhead (2%)

Generated brief soil descriptions are created for major components. The Riverhead soil is a minor component.

Component: Ridgebury (2%)

Generated brief soil descriptions are created for major components. The Ridgebury soil is a minor component.

Component: Hinckley (2%)

Generated brief soil descriptions are created for major components. The Hinckley soil is a minor component.

Component: Leicester (2%)

Generated brief soil descriptions are created for major components. The Leicester soil is a minor component.

Component: Knickerbocker (2%)

Generated brief soil descriptions are created for major components. The Knickerbocker soil is a minor component.

Component: Carlisle (1%)

Generated brief soil descriptions are created for major components. The Carlisle soil is a minor component.

Component: Palms (1%)

Generated brief soil descriptions are created for major components. The Palms soil is a minor component.

Map Unit: LcA—Leicester loam, 0 to 3 percent slopes, stony

Component: Leicester, poorly drained (50%)

The Leicester, poorly drained component makes up 50 percent of the map unit. Slopes are 0 to 3 percent. This component is on depressions. The parent material consists of loamy acid till derived mostly from schist and gneiss. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 6 inches during January, February, March, April, May, November, December. Organic matter content in the surface horizon is about 5 percent. Nonirrigated land capability classification is 6s. This soil meets hydric criteria.

Component: Leicester, somewhat poorly drained (35%)

The Leicester, somewhat poorly drained component makes up 35 percent of the map unit. Slopes are 0 to 3 percent. This component is on depressions. The parent material consists of loamy acid till derived mostly from schist and gneiss. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during January, February, March, April, May, November, December. Organic matter content in the surface horizon is about 5 percent. Nonirrigated land capability classification is 6s. This soil does not meet hydric criteria.

Component: Sun (7%)

Generated brief soil descriptions are created for major components. The Sun soil is a minor component.

Component: Sutton (5%)

Generated brief soil descriptions are created for major components. The Sutton soil is a minor component.

Component: Leicester, very stony (3%)

Generated brief soil descriptions are created for major components. The Leicester soil is a minor component.

Map Unit: PnD—Paxton fine sandy loam, 15 to 25 percent slopes

Component: Paxton (85%)

The Paxton component makes up 85 percent of the map unit. Slopes are 15 to 25 percent. This component is on till plains, drumlinoid ridges, hills. The parent material consists of acid loamy till derived mainly from crystalline rock. Depth to a root restrictive layer, densic material, is 18 to 40 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 24 inches during February, March, April. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria.

Component: Charlton (5%)

Generated brief soil descriptions are created for major components. The Charlton soil is a minor component.

Component: Woodbridge (5%)

Generated brief soil descriptions are created for major components. The Woodbridge soil is a minor component.

Component: Ridgebury (3%)

Generated brief soil descriptions are created for major components. The Ridgebury soil is a minor component.

Component: Paxton, very stony (2%)

Generated brief soil descriptions are created for major components. The Paxton soil is a minor component.

Map Unit: PoD—Paxton fine sandy loam, 15 to 25 percent slopes, very stony

Component: Paxton (85%)

The Paxton component makes up 85 percent of the map unit. Slopes are 15 to 25 percent. This component is on hills, drumlinoid ridges, till plains. The parent material consists of acid loamy till derived mainly from crystalline rock. Depth to a root restrictive layer, densic material, is 18 to 38 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 24 inches during February, March, April. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 6s. This soil does not meet hydric criteria.

Component: Woodbridge (5%)

Generated brief soil descriptions are created for major components. The Woodbridge soil is a minor component.

Component: Charlton (5%)

Generated brief soil descriptions are created for major components. The Charlton soil is a minor component.

Component: Ridgebury (3%)

Generated brief soil descriptions are created for major components. The Ridgebury soil is a minor component.

Component: Paxton, non-stony (2%)

Generated brief soil descriptions are created for major components. The Paxton soil is a minor component.

Map Unit: RgB—Ridgebury loam, 2 to 8 percent slopes, very stony

Component: Ridgebury, somewhat poorly drained (50%)

The Ridgebury, somewhat poorly drained component makes up 50 percent of the map unit. Slopes are 2 to 8 percent. This component is on hills, drumlinoid ridges, till plains. The parent material consists of loamy till derived mainly from granite, gneiss, and schist. Depth to a root restrictive layer, densic material, is 14 to 30 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during January, February, March, April, May, November, December. Organic matter content in the surface horizon is about 6 percent. Nonirrigated land capability classification is 6s. This soil does not meet hydric criteria.

Component: Ridgebury, poorly drained (35%)

The Ridgebury, poorly drained component makes up 35 percent of the map unit. Slopes are 2 to 8 percent. This component is on drumlinoid ridges, hills, till plains. The parent material consists of loamy till derived mainly from granite, gneiss, and schist. Depth to a root restrictive layer, densic material, is 14 to 30 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 6 inches during January, February, March, April, May, November, December. Organic matter content in the surface horizon is about 6 percent. Nonirrigated land capability classification is 6s. This soil meets hydric criteria.

Component: Woodbridge (7%)

Generated brief soil descriptions are created for major components. The Woodbridge soil is a minor component.

Component: Sun (5%)

Generated brief soil descriptions are created for major components. The Sun soil is a minor component.

Component: Ridgebury, bouldery (3%)

Generated brief soil descriptions are created for major components. The Ridgebury soil is a minor component.

Map Unit: RhD—Riverhead loam, 15 to 25 percent slopes

Component: Riverhead (85%)

The Riverhead component makes up 85 percent of the map unit. Slopes are 15 to 25 percent. This component is on terraces, deltas. The parent material consists of loamy glaciofluvial deposits overlying stratified sand and gravel. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria.

Component: Pompton (5%)

Generated brief soil descriptions are created for major components. The Pompton soil is a minor component.

Component: Charlton (4%)

Generated brief soil descriptions are created for major components. The Charlton soil is a minor component.

Component: Hinckley (3%)

Generated brief soil descriptions are created for major components. The Hinckley soil is a minor component.

Component: Knickerbocker (3%)

Generated brief soil descriptions are created for major components. The Knickerbocker soil is a minor component.

Map Unit: SuA—Sutton loam, 0 to 3 percent slopes

Component: Sutton (85%)

The Sutton component makes up 85 percent of the map unit. Slopes are 0 to 3 percent. This component is on hills, till plains, ridges. The parent material consists of loamy till derived mainly from crystalline rock. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is

moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 24 inches during January, February, March, April, November, December. Organic matter content in the surface horizon is about 5 percent. Nonirrigated land capability classification is 2w. This soil does not meet hydric criteria.

Component: Leicester (5%)

Generated brief soil descriptions are created for major components. The Leicester soil is a minor component.

Component: Charlton (5%)

Generated brief soil descriptions are created for major components. The Charlton soil is a minor component.

Component: Woodbridge (3%)

Generated brief soil descriptions are created for major components. The Woodbridge soil is a minor component.

Component: Sutton, very stony (2%)

Generated brief soil descriptions are created for major components. The Sutton soil is a minor component.

Map Unit: W—Water

Component: Water (100%)

Generated brief soil descriptions are created for major soil components. The Water is a miscellaneous area.

Map Unit: WdC—Woodbridge loam, 8 to 15 percent slopes

Component: Woodbridge (80%)

The Woodbridge component makes up 80 percent of the map unit. Slopes are 8 to 15 percent. This component is on till plains, hills, drumlinoid ridges. The parent material consists of loamy acid till derived mainly from crystalline rock. Depth to a root restrictive layer, densic material, is 18 to 38 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 24 inches during January, February, March, April, May, November, December. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria.

Component: Paxton (8%)

Generated brief soil descriptions are created for major components. The Paxton soil is a minor component.

Component: Ridgebury (5%)

Generated brief soil descriptions are created for major components. The Ridgebury soil is a minor component.

Component: Woodbridge, very stony (2%)

Generated brief soil descriptions are created for major components. The Woodbridge soil is a minor component.

Component: Sun (2%)

Generated brief soil descriptions are created for major components. The Sun soil is a minor component.

Component: Sutton (2%)

Generated brief soil descriptions are created for major components. The Sutton soil is a minor component.

Component: Urban land (1%)

Generated brief soil descriptions are created for major components. The Urban land soil is a minor component.

Appendix E
USACE Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 20ks Water System City/County: Lewisburg/Westlake Sampling Date: 5/8/2014
 Applicant/Owner: Newark American State: OH Sampling Point: DP1
 Investigator(s): Joe Bonaly, Ross Damm, D Section, Township, Range: Town of Lewisburg
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Convex Slope (%): 5
 Subregion (LRR or MLRA): LRR R Lat: 41°18'7.911" N Long: 73°39'12.811" W Datum: NAD83
 Soil Map Unit Name: Parish F, Gr. loam, 15-20% sp. (PnD) NWI classification: L1DL
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 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 <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><i>Significant precipitation was observed during and prior to the delineation.</i></p>	

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: <p align="center"><i>Due to rain in field of days and on the day of delineation, ephemeral drainage patterns were present on the hillside adjacent to DP1.</i></p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP1

Tree Stratum (Plot size: 30 ft²)

	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Fraxinus pennsylvanica</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FACW</u>
2. <u>Ulmus rubra</u>	<u>50</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
3.			
4.			
5.			
6.			
7.			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Sapling/Shrub Stratum (Plot size: 15 ft²)

	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Lindera benzoin</u>	<u>15</u>		<u>FACW</u>
2. <u>Carpinus caroliniana</u>	<u>10</u>		<u>FAC</u>
3. <u>Berberis thunbergii</u>	<u>60</u>	<input checked="" type="checkbox"/>	<u>FACW</u>
4.			
5.			
6.			
7.			

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>5</u>	x 1 = <u>5</u>
FACW species <u>40</u>	x 2 = <u>80</u>
FAC species <u>40</u>	x 3 = <u>120</u>
FACU species <u>110</u>	x 4 = <u>440</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>195</u>	(A) <u>645</u> (B)

Prevalence Index = B/A = 3.31

Herb Stratum (Plot size: 1 ft²)

	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Polystichum acrostichoides</u>	<u>1</u>	<input checked="" type="checkbox"/>	<u>FACW</u>
2. <u>Symplocarpus foetidus</u>	<u>1</u>		<u>OBL</u>
3. <u>Alliaria petiolata</u>	<u>2</u>	<input checked="" type="checkbox"/>	<u>FACW</u>
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
 - 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 - Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Woody Vine Stratum (Plot size: 30 ft²)

	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Vitis aestivalis</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FACU</u>
2.			
3.			
4.			

10 = Total Cover

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 No

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: W.D. Oaks Water Supply City/County: Lewisboro/Washington Sampling Date: 5/18/14
 Applicant/Owner: Washington Water State: NY Sampling Point: DP2
 Investigator(s): Eric B. ... Section, Township, Range: Town of Lewisboro
 Landform (hillslope, terrace, etc.): Maintained Access Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR or MLRA): LRR R Lat: 41°18'10.545"N Long: 73°39'14.861"W Datum: NAD83
 Soil Map Unit Name: (SUA) Silt loam, c-s, sc NWI classification: PEM
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	If yes, optional Wetland Site ID: <u>Wetland A</u>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

Remarks: (Explain alternative procedures here or in a separate report.)

Significant precipitation was observed prior to and during the delineation. The data point is within a mowed/maintained area with mostly herbaceous vegetation. Wetland is along the fringe of the pond.

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes No Depth (inches): 1-2"
 Water Table Present? Yes No Depth (inches): 0"
 Saturation Present? (includes capillary fringe) Yes No Depth (inches): 0"

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: DP2

Tree Stratum (Plot size: 3 ft²)

	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Acer rubrum</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			

Sapling/Shrub Stratum (Plot size: 1 ft²)

	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Peribaris thuyobagii</u>	<u>1</u>	<input checked="" type="checkbox"/>	<u>FACW</u>
2. <u>Rosa multiflora</u>	<u>5</u>		<u>FACW</u>
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			

Herb Stratum (Plot size: 5 ft²)

	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Leersia oryzoides</u>	<u>20</u>		<u>OBL</u>
2. <u>Carex stricta</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>OBL</u>
3. <u>Mentha arvensis</u>	<u>10</u>		<u>FACW</u>
4. <u>Carex alopecuroides</u>			<u>FACW</u>
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			

Woody Vine Stratum (Plot size: 30 ft²)

	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
	<u>0</u>		

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
 Total Number of Dominant Species Across All Strata: 4 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>4</u>	x 1 = <u>40</u>
FACW species <u>15</u>	x 2 = <u>30</u>
FAC species <u>10</u>	x 3 = <u>30</u>
FACU species <u>15</u>	x 4 = <u>60</u>
UPL species _____	x 5 = _____
Column Totals: <u>80</u> (A)	<u>180</u> (B)

Prevalence Index = B/A = 2.25

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is $\leq 3.0^1$
- 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators 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 No

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Water Supply City/County: Lewisboro/Westchester Sampling Date: 18/14
 Applicant/Owner: NY S State: NY Sampling Point: DP 3
 Investigator(s): X H. Ross Diamond Section, Township, Range: Town of Lewisboro
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): CONVEX Slope (%): 2-5
 Subregion (LRR or MLRA): LRR R Lat: 41°18'19.524"N Long: 73°39'14.909"W Datum: NAD83
 Soil Map Unit Name: PD: e sandy loam / (RgB) E g sandy loam, 2-8 NWI classification: UPL
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 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 <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center" style="font-size: 1.2em;">Significant precipitation was observed during and prior to the delineation. The data point was taken in a mowed/maintained area with mostly herbaceous vegetation.</p>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (Inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (Inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (Inches): _____ (Includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: _____ _____	
Remarks: _____ _____	

VEGETATION – Use scientific names of plants.

Sampling Point: DP3

Tree Stratum (Plot size: <u>30 ft²</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Sapling/Shrub Stratum (Plot size: <u>15 ft²</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Barberis thunbergii</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>NL</u>
2.			
3.			
4.			
5.			
6.			
7.			

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>5</u>	x 2 = <u>10</u>
FAC species <u>40</u>	x 3 = <u>120</u>
FACU species <u>10</u>	x 4 = <u>40</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>55</u> (A)	<u>170</u> (B)

Prevalence Index = B/A = 3.1

Herb Stratum (Plot size: <u>5 ft²</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Microstegium vimineum</u>	<u>40</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
2. <u>Onoclea sensibilis</u>	<u>5</u>		<u>FACW</u>
3. <u>Mentha requienii</u>	<u>40</u>	<input checked="" type="checkbox"/>	<u>NL</u>
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
 - 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 - Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators 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.

Woody Vine Stratum (Plot size: <u>30 ft²</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 1110 Pa, Water Supply City/County: Lewisboro/Westchester Sampling Date: 5/8/2014
 Applicant/Owner: Westchester County Water State: NY Sampling Point: DP4
 Investigator(s): Mr. Rucaly, Ross Dieman? Section, Township, Range: Town of Lewisboro
 Landform (hillslope, terrace, etc.): Floodplain terrace Local relief (concave, convex, none): None Slope (%): ---
 Subregion (LRR or MLRA): LRR R Lat: 41°15'13.657"N Long: 73°39'14.196"W Datum: NAD83
 Soil Map Unit Name: (FF) Fluvaquents-Udifluvents / (LUA) Leicostel team 0-5 NWI classification: PFO
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: <u>Wetland B</u>
Remarks: (Explain alternative procedures here or in a separate report.) <p align="center"><i>Significant precipitation was observed prior to and during the delineation.</i></p>	

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0-2"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>6"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>3-4"</u> (Includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: <p align="center"><i>Minor surface water ponding may have been due to precipitation.</i></p>	

VEGETATION – Use scientific names of plants.

Sampling Point: DP4

Tree Stratum (Plot size: 30ft²)

	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Ulmus rubra</u>		✓	FAC
2. <u>Acer rubrum</u>	<u>60</u>	✓	FAC
3. <u>Ailanthus altissima</u>	<u>10</u>		UPL
4.			
5.			
6.			
7.			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Sapling/Shrub Stratum (Plot size: 15ft²)

	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Elaeagnus umbellata</u>	<u>20</u>	✓	N
2.			
3.			
4.			
5.			
6.			
7.			

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>55</u>	x 1 = <u>110</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>90</u>	x 3 = <u>270</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>145</u> (A)	<u>380</u> (B)

Prevalence Index = B/A = 2.62

Herb Stratum (Plot size: 5ft²)

	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Synedra foetida</u>	<u>50</u>	✓	OBL
2. <u>Saracenia purpurina</u>	<u>5</u>		OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
 - 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

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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.

Woody Vine Stratum (Plot size: 30ft²)

	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			

0 = Total Cover

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)

Appendix F
Photograph Log



Photograph Key



Photo 1

Southern facing, standing at pump house. Strip of land between two freshwater ponds.



Photo 2

Southern end of Wetland A. Facing east. Drainage channel in center and vehicle ruts in foreground.



Photo 3

Facing south. Drainage channel on uphill, northerly facing slope. South of study area.



Photo 4

Facing north, uphill slope. Confluence of drainage channel with disturbed access path and beginning of fringe in foreground. Purple wetland flags showing southerly boundary of Wetland A.



Photo 5
Facing east, upstream of unnamed stream.



Photo 6
Facing west, downstream of unnamed stream. Culverted section just north of pump house.



Photo 7

Facing east on smaller pond, from mowed strip. Fringe vegetation.



Photo 8

Facing east. Wetland B. Power line and dumping evident.



Photo 9

Facing north. Wetland B. Microtopographic relief evident. Depressions showing surface water and in drier conditions, water-stained leaves.

2005 2/1/04

LBG ENGINEERING SERVICES, P.C.

PROFESSIONAL ENVIRONMENTAL & CIVIL ENGINEERS



4 RESEARCH DRIVE, SUITE 204
SHELTON, CT 06484
203-929-8555
203-926-9140 (FAX)

August 13, 2015

Program Administrator
Westchester County Department of Health
25 Moore Avenue
Mount Kisco, NY 10549

RE: Application for Well Site Permit
New York American Water
Wild Oaks Water System
Nash Road
(T) Lewisboro, New York

Dear Program Administrator:

LBG Engineering Services, PC (LBGES) has prepared this request for approval to drill and construct one bedrock test well for potential future use as a public water-supply well on New York American Water's Wild Oaks Well Field parcel in the Town of Lewisboro, New York (figure 1). Bedrock Wells 4 and 5 were drilled and tested in 2015 to replace the existing sand and gravel Wells 1 and 2 which currently supply the existing Wild Oaks Water System to improve the raw water quality of the water system. During a 72-hour pumping test, Well 4 and Well 5 demonstrated a constant yield of 80 gpm (gallons per minute) and 28 gpm, respectively. In order for Wild Oaks Water System to stop using the sand and gravel wells (Wells 1 and 2), sufficient supply from the bedrock aquifer (peak water demand with the best well out of service) is required. Based on the yields from bedrock Wells 4 and 5, another bedrock well (proposed Test Well 6) must be drilled as a redundant source in order to meet the New York State Department of Health (NYSDOH) requirements.

Well Site Approval

The existing sand and gravel Wells 1 and 2, existing bedrock Wells 4 and 5 and the proposed bedrock Test Well 6 are shown on the attached Plate 1. The Wild Oak Water System also has an existing bedrock Well 3 which is located on a nearby parcel. Well 3 is not currently in service because of low yield.

A Subsidiary of Leggette, Brashears & Graham, Inc.

The 100-radius of ownership and 200-foot radius of sanitary control for the proposed bedrock well location is shown on Plate 1. New York American Water owns a small parcel around the sand and gravel supply wells and has an existing easement for a larger radius (250 feet) around the wells. There are no known potential sources of pollution as listed in the NYDOH Sanitary Code Part 5 Appendix 5-D within 200 feet of the proposed well location. Wetlands have been flagged near the proposed test well site. The wetlands are regulated by the Town of Lewisboro and a wetland permit application was previously submitted to the Town requesting wetland permits for drilling and testing of Wells 4 and 5. A new wetland permit application for the proposed Test Well 6 will be submitted to the Town. The wetlands are not regulated by the New York State Department of Environmental Conservation (NYSDEC) based on the NYSDEC database, therefore, no permit application has been prepared for that agency.

The bedrock test well (proposed Test Well 6) will be drilled in accordance the NYSDOH and Westchester County Health Department (WCDH) regulations for public water-supply wells. The well will be constructed using 8-inch diameter casing and an 8-inch borehole will be drilled into the underlying bedrock. A minimum of 100 feet of 8-inch casing will be installed in the well. The total depth of the well will be determined based on the geologic conditions encountered during drilling, particularly the depth and yield of the water-bearing fractures encountered in the bedrock. A water-tight cap will be placed on the well following the completion of drilling. A preliminary well profile/construction detail is shown on figure 2.

If sufficient yield is obtained from the well for potential use as a public water-supply source, a 72-hour pumping test will be completed. The well will be tested to demonstrate a minimum of six hours of stabilized yield and water-level drawdown and a sample will be collected for analysis for all parameters listed in the NYSDOH Sanitary Code Part 5, Subpart 5-1 for community public water-supply wells. In addition, microscopic particulate analysis samples will be collected as part of an assessment for potential groundwater under the influence of surface water (GWUDI) because of the presence of nearby surface-water features.

If the well is determined to have insufficient yield, the well will either be maintained as a water-level monitor well equipped with a water-tight cap or be abandoned in accordance with NYSDOH and WCDH protocols.

Below is a list of forms and attachments for this application:

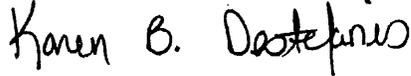
- Letter of Authorization;
- Certificate of Resolution for Authorization;
- DOH-348; Application for Approval of Plans for Public Water Supply Improvement;
- LBG Engineering Services, PC "Proposed Bedrock Well Location", Plate 1, June 2015 (3 sets);
- LBG Engineering Services, PC "Site Location Map", Figure 1, June 2015;

- LBG Engineering Services, PC "Well Construction Detail", Figure 2, June 2015; and
- Application Fee Check \$700.

If you have any question concerning this application or require additional information please contact LBG.

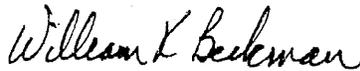
Very truly yours,

LBG ENGINEERING SERVICES, P.C.



Karen Destefanis, CPG
Associate

Reviewed by:



William K. Beckman, P.E.
President

KD:cmm

Enclosures

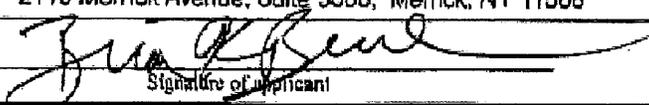
cc: Richard Ruge

Kristen Barrett

H:\American Water Co\Wild Oaks\2015\Well site approval cov ltr.doc

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Water Supply Protection

**Application for Approval of Plans for
Public Water Supply Improvement**

Applicant New York American Water		Location of works (C,V,T) Town of Lewisboro		County Westchester		Water District (specific area served) Wild Oaks	
Type of ownership <input type="checkbox"/> Municipal <input type="checkbox"/> Commercial <input type="checkbox"/> Private - Other <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Water Works Corp. <input type="checkbox"/> Private - Institutional		<input type="checkbox"/> Authority <input type="checkbox"/> Federal <input type="checkbox"/> State		<input type="checkbox"/> Interstate <input type="checkbox"/> International <input type="checkbox"/> Native American Reservation			
<input checked="" type="checkbox"/> Modifications to existing system. If checked, provide PWS ID # NY NY5903479							
New System. If checked, provide capacity development (viability) analysis*							
If this project involves a new system, new water district, or a district extension provide boundary description location details in digital format on CD or Floppy Disk. If digital boundary location details are not available provide a text description. <input type="checkbox"/> Digital GIS Data Provided <input type="checkbox"/> Digital CAD Data Provided <input type="checkbox"/> Other Digital Data Provided <input type="checkbox"/> Text Description Provided <input checked="" type="checkbox"/> N/A							
Funding Source <input checked="" type="checkbox"/> Private <input type="checkbox"/> DWSRF** <input type="checkbox"/> Federal <input type="checkbox"/> Other _____ If DWSRF is checked, provide DWSRF # _____							
Estimated Project Cost Source \$ <u>20,000</u>		Treatment \$ <u>TBD</u>		Storage \$ <u>TBD</u>		Distribution \$ <u>TBD</u>	
Purping \$ <u>40,600</u>		Engineering \$ <u>TBD</u>		Legal/Permitting \$ <u>TBD</u>		Total \$ _____	
Type of Project <input checked="" type="checkbox"/> Source <input type="checkbox"/> Transmission		<input type="checkbox"/> Corrosion Control <input type="checkbox"/> Pumping Unit <input type="checkbox"/> Chlorination		<input type="checkbox"/> U.V. Light Disinfection <input type="checkbox"/> Fluoridation <input type="checkbox"/> Other Treatment		<input type="checkbox"/> Distribution <input type="checkbox"/> Storage <input type="checkbox"/> Other	
Project Description: <u>Drill new bedrock test well to supplement and/or replace existing sand and gravel wells if sufficient yield and water quality is obtained.</u>							
Population Total population of Service area <u>610</u>		% population actually served <u>100</u>		% population served affected by project <u>100</u>			
Latest total consumption data (in MGD) Avg. day <u>0.053/0.044*</u> Year <u>2013/2014</u> Max. day <u>0.1251</u> Year <u>2014</u> Peak hr. _____ Year _____				14. NYS Professional Licensed Engineer Stamp & Signature **** 			
Name of design engineer <u>William K. Beckman, P.E.</u>							
Address <u>4 Research Drive, Suite 204, Shelton, CT 06484</u>				Telephone No. <u>(203) 929-8555</u>			
E-Mail <u>wbeckman@lbqct.com</u>				Fax No. <u>(203) 926-9140</u>			
Name and title of applicant or designated representative <u>Brian Bruce</u>							
Address <u>2116 Merrick Avenue, Suite 3008; Merrick, NY 11566</u>							
						<u>8.12.15</u> Date	
NOTE: All applications must be accompanied by 3 sets of plans, 3 sets of specifications and an engineer's report describing the project in detail. The project must first be discussed with the appropriate city, county, district or regional public health engineer. Signature by a designated representative must be accompanied by a letter of authorization * Additional information regarding capacity development may be found at: http://www.health.state.ny.us/nysdoh/water/main.htm **Current DWSRF project listings may be found at: http://www.health.state.ny.us/nysdoh/water/main.htm ***By affixing the stamp and signature the Design Engineer agrees that the plans and specifications have been prepared in accordance with the most recent version of the recommended standards for water works and in accordance with the NYS Sanitary Code.							

DOH-346 (02/05)

DATE:

TO: Westchester County Department of Health
Bureau of Environmental Quality
Mount Kisco Office
25 Moore Avenue
Mount Kisco, NY 10549

Re: Public Water-Supply
Test Well Siting

Property of New York American Water
Located at Wild Oaks Water Co. Inc.
Nash Road

Section 31.1 Block 1 Lot 39

Gentlemen:

aka 11137-123-0008

This letter is to authorize William K. Beckman, P.E. a duly licensed professional engineer/~~registered architect~~ to apply for a Construction Permit/Construction Compliance for a separate sewage treatment system; private water supply; to serve the above-noted property in accordance with the standards, rules or regulations as promulgated by the Commissioner of the Westchester County Department of Health, and to prepare application and plans on my behalf in connection with the matter and to supervise the construction of said system or systems in conformity with the provisions of Article 145 or 147 of the State Education Law, the Public Health Law, and the Westchester County Sanitary Code.

Very

truly yours,

Signed
(Owner)



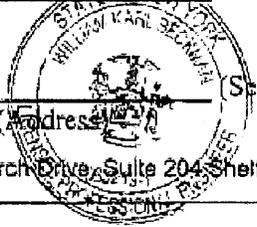
Brian Bruce

of Property)

(Print Name)

Countersigned:

William K. Beckman, P.E., R.A.# 63219



(Seal)

(Address)

4 Research Drive, Suite 204, Shelton, CT 06484

260 Harrison Avenue
Harrison, NY 10528

(Address)

(516) 596-4860

(Telephone)

Revised 10/12

**CERTIFICATE OF RESOLUTION
FOR AUTHORIZATION**

The undersigned, Brian Bruce of _____

Name of Corporation New York American Water, a corporation

Duly organized and validly existing under the laws of (State) New York

Hereby certifies that the following resolution was duly adopted by the Board of Directors, of said Corporation at a meeting duly called and held on the 23 day of JULY 2015

Be it resolved that the Board of Directors, or President, if there is no Board of Directors, of (Name of Corporation) New York American Water

With Offices at: 260 Harrison Ave., Harrison, NY 10528

Hereby authorized (Name if person authorized): Brian Bruce

To execute and deliver to the Westchester County Department of Health, for and on behalf of said Corporation, and application for a permit to operate (type of operation): test well construction

To execute and deliver any and all additional documents which may be appropriate or desirable in Connection therewith.

The undersigned further certifies that said resolution has not been revoked, rescinded or modified and remains in full force and effect on the date hereof.

In WITNESS WHEREOF, the undersigned has duly executed this certificate on this 24 day of JUN, 2015.

OFFICER'S SIGNATURE: Brian Bruce

TITLE: PRESIDENT

ACKNOWLEDGEMENT

STATE OF New York

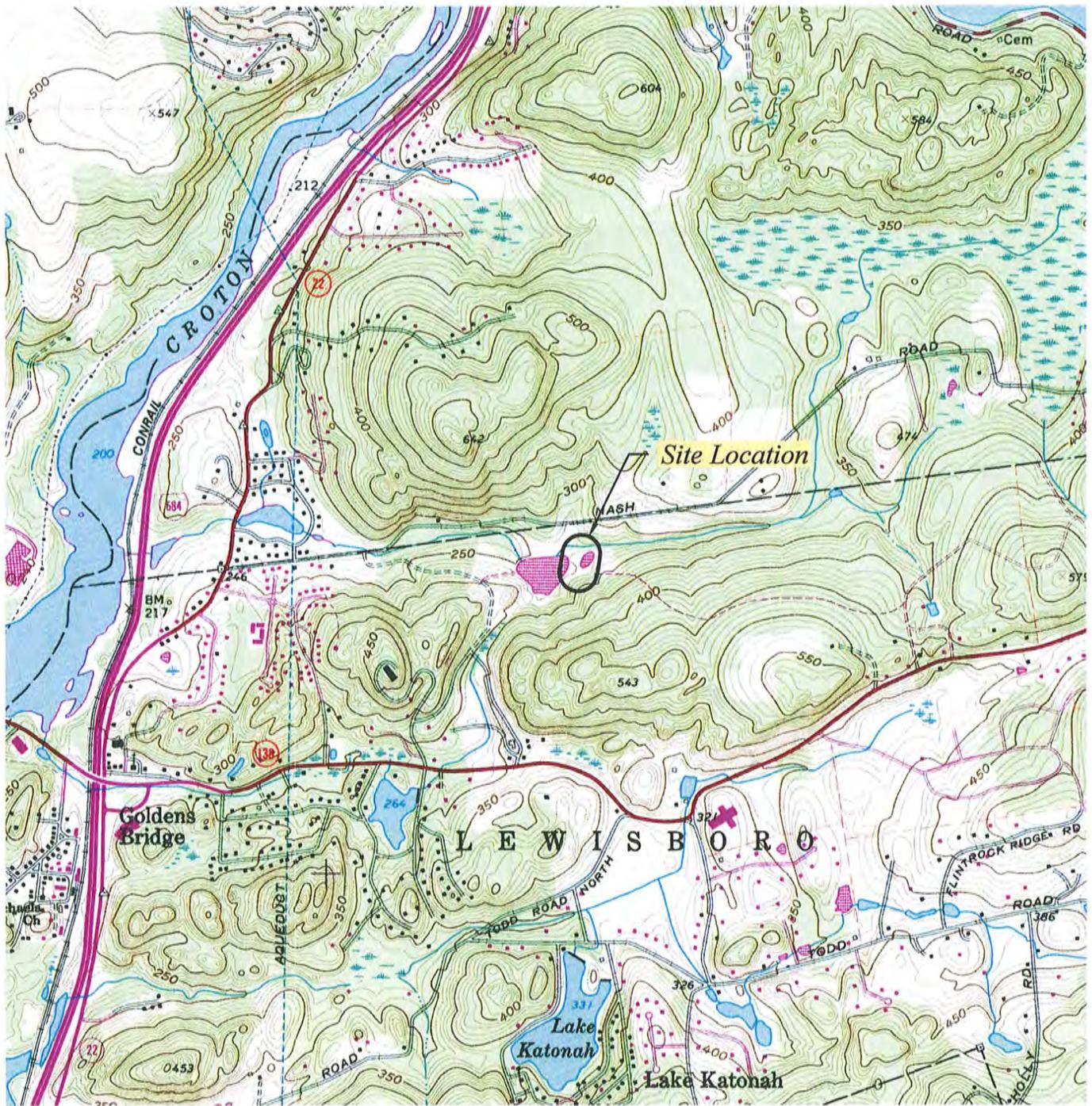
COUNTY OF NASSAU): ss:

Affix Corporate Seal

One this 24 day of JULY, 2015, before me personally came Brian Bruce of New York American Water the corporation referred to in the within Certificate of Resolution, who being by duly sworn did depose and say that (s)he is Manager Field Services of said corporation and that (s)he signed his/her name thereto.

ROSE M. SIMPSON
Notary Public, State of New York
No. 01S15031048
Qualified in Nassau County
Commission Expires July 25, 2018

Rose Simpson
Rose Simpson
Notary Public
State of NY
NASSAU County
County



SOURCE: USGS TOPOGRAPHIC QUADRANGLE CROTON FALLS, NEW YORK (PHOTOREVISED 1981).

LEGEND

— LOCATION OF EXISTING WELL FIELD EASEMENT



NEW YORK
QUADRANGLE LOCATION



**WILD OAKS WATER SYSTEM
NEW YORK AMERICAN WATER
LEWISBORO, NEW YORK**

SITE LOCATION MAP

DATE	REVISED	PREPARED BY:	LBG ENGINEERING SERVICES, P.C. Professional Environmental and Civil Engineers 4 Research Drive Suite 204 Shelton, Connecticut 06484 (203) 929-8555							
			DRAWN:	RAC	CHECKED:	SS	DATE:	06/30/15	FIGURE:	1

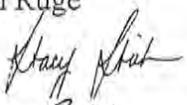
LEGGETTE, BRASHEARS & GRAHAM, INC.

4 RESEARCH DRIVE, SUITE 204
SHELTON, CT 06484
PHONE (203) 929-8555 / FAX (203) 926-9140
www.lbgweb.com



MEMORANDUM

TO: Kristen Barrett, Rich Ruge

FROM: Stacy Stieber, CPG 
Thomas P. Cusack 

DATE: July 31, 2015

SUBJECT: 72-Hour Pumping Test Program Conducted on Wells 4 and 5, May 18 through May 30, 2015

Via Electronic Transmission

Leggette, Brashears & Graham, Inc. (LBG) conducted a 72-hour pumping test program on the newly drilled bedrock Wells 4 and 5 at the New York American Water Company's Wild Oaks Well Field on Nash Road in Lewisboro, NY (figure 1). The pumping test program was conducted between May 18 and May 30, 2015 to determine the stabilized yields of the new bedrock test Wells 4 and 5, to assess potential water-level impact to existing wells and surface-water features, and to assess water quality. The locations of the onsite wells and surface-water monitoring points measured during the pumping tests are shown on the Plate 1 and the locations of the offsite wells monitored are shown on figure 1.

Well logs for bedrock Wells 4 and 5 are included in Appendix I. Bedrock was encountered in Well 4 at a depth of 54 ft bg (feet below grade). The well was completed with a 12-inch outer diameter casing set to 54 feet and an 8-inch inner diameter casing set to 104 feet. The well was drilled to a total depth of 425 feet with an 8-inch diameter borehole. Bedrock was encountered in Well 5 at a depth of 70 ft bg. The well was completed with a 12-inch diameter casing set to 55 feet, 8-inch diameter casing set to 70 feet, and a 6-inch diameter casing set to 84 feet. The well was drilled to a total depth of 465 feet with a 6-inch diameter borehole. Following the completion of the 72-hour pumping test program, the borehole of Well 5 was deepened to a depth of 625 feet to potentially increase the yield of the well. However, no additional water-bearing fractures were encountered during the well deepening.

PUMPING TEST PROGRAM

Well 4

The 72-hour pumping test on Well 4 was started on May 26, 2015 and ended on May 30, 2015. The water level in Well 4 prior to the start of pumping was at the top of the casing and the well was flowing artesian. The well pump was started at 10:08 on May 26. The initial pumping rate in the well was 47 gpm (gallons per minute) and incrementally increased to a rate of 110 gpm by 12:50 on May 26. Following the last rate increase to 110 gpm, the well was allowed to pump with no further rate adjustments. As the water level in the well declined, the pumping rate slowed as a result of the loss of pressure head over the top of the pump. At 6:30 on the morning of May 27, the pumping rate in Well 4 reached 80 gpm where it stabilized.

At approximately 20:00 on May 27, the generator at Well 4 was struck by lightning. The lightning strike damaged the pump motor, so the pump was pulled from the well for repair. On the morning of May 28, the pump was reinstalled in Well 4 and pumping was resumed at 7:26. Similar to the previous day before the lightning strike, the pumping rate in Well 4 stabilized at 80 gpm and remained at that rate for the duration of the test.

Following the restart of the well after the lightning strike, LBG contact James Garry at the New York State Department of Environmental Conservation (NYSDEC) Division of Water to discuss the effect of the shut down on the test duration. Because Well 4 demonstrated stabilization prior to the lightning strike, it was decided that 48 hours of additional pumping and demonstration of the required 6 hours of stabilized yield and drawdown at the end of the test would be sufficient. Therefore, the test on Well 4 was shut down at 8:02 on May 30. The pumping water level in Well 4 just prior to the end of the test was 321.74 ft btoc (feet below top of casing). Following shut down of the test, the water level in the well recovered rapidly. The well achieved 90% water-level recovery to the pre-test static level approximately 13 hours after shut down of the pump and the well was flowing over the top of casing by the following morning on May 31.

Well 4 was pumped for total of 84 hours and 37 minutes (not including the period of time the test was shut down for repair of the pump after the lightning strike). The stabilized pumping rate in Well 4 at the end of the test was 80 gpm and the water-level drawdown in the well was stable for the last 6+ hours of the test period. A hydrograph and table of the water-level measurements collected from Well 4 during the pumping test program are included in Appendix II.

Well 5

The 72-hour pumping test on Well 5 was started on May 18, 2015 and ended on May 21, 2015. The water level in Well 5 prior to the start of pumping was 3.10 ft btoc. The pump in the well was started at 11:38 on May 18. The pumping rate in the well at the start of the test was set at 84 gpm. However, rapid drawdown was observed at this initial pumping rate. The pumping rate was reduced until reaching 28 gpm at 12:09 on May 18. The pumping rate in Well 5 remained at 28 gpm for the duration of the test period.

The test on Well 5 was shut down at 12:14 on May 21. The pumping water level in Well 5 just prior to the end of the test was 300.39 ft btoc, which is total drawdown of 297.29 feet. Following shut down of the test, the water level in the well recovered rapidly. The well achieved 90% water-level recovery to the pre-test static level approximately one hour after shut down of the pump and the well reached 100% recovery at approximately 23:00 on May 21.

Well 5 was pumped for total of 72 hours and 36 minutes. The stabilized pumping rate at the end of the test in Well 5 was 28 gpm and the water-level drawdown in the well was stable for the last 6+ hours of the test period. A hydrograph and table of the water-level measurements collected from Well 5 during the pumping test program are included in Appendix III.

Bedrock Monitoring Wells

Water-level measurements were collected from four existing bedrock wells located near the well field during the pumping test program. Three of the wells monitored were residential supply wells located on neighboring properties that are not part of the Wild Oaks Water District service area. The fourth well is the Wild Oaks Well 3, which is a supply well for the Water District which is currently not in use due to low yield. The locations of the bedrock wells measured during the test are shown on the attached figure 1. Wells 4 and 5 were also used as bedrock monitoring well locations when they were not actively being pumped. Hydrographs and water-level measurements tables for Wells 4 and 5 are included in Appendices II and II, and hydrographs and a table of water-level measurements collected from the bedrock monitoring wells are included in Appendix IV.

During the pumping test program, water-level drawdown was measured in the well at 73 Nash Road (the closest offsite well to the Wild Oaks well field) as a result of pumping in both Wells 4 and 5. No discernible water-level drawdown was measured in any of the other offsite bedrock wells monitored during the pumping test program. During the test on Well 4, approximately 3 feet of drawdown was measured in the well at 73 Nash Road that is attributed to pumping at the well field, and during the test on Well 5 approximately 7 feet of drawdown was measured. Based on the hydrograph for the well at 73 Nash Road, the drawdown measured during the pumping tests did not appear to have a significant impact on the well and future use of Wells 4 and 5 to supply the District will not likely impact the use of this residential supply well.

In the onsite bedrock test wells, approximately 60 feet of drawdown was measured in Well 5 during the pumping test on Well 4, and 8 feet of drawdown was measured in Well 4 during the test on Well 5. The table below is a summary of the drawdown observed in the bedrock monitoring wells.

Well ID	Drawdown Observed During Pumping Test of Well 4 (feet)	Drawdown Observed During the Pumping Test of Well 5 (feet)
Onsite Wells		
Well 4	--	8
Well 5	60	--

Well ID	Drawdown Observed During Pumping Test of Well 4 (feet)	Drawdown Observed During the Pumping Test of Well 5 (feet)
Offsite Wells		
73 Nash Road	3	7
79 Nash Road	ND	ND
195 Waccabuc Road	ND	ND
Well 3	ND	ND

ND None discernible

Existing Sand and Gravel Production Wells

Manual water-level measurements were collected from the Wild Oaks Production Wells 1 and 2 at the well field during the test period. Hydrographs and a table of water-level measurements collected from Wells 1 and 2 is included in Appendix V. The locations of the existing sand and gravel production wells are shown on the attached Plate 1. Well 2 remained in-service pumping in the range of 50 gpm to 54 gpm during the test period to supply water to the District. The pumping cycle in Well 2 can be seen in a patterned cycling in the water levels in Production Wells 1 and 2, in the onsite 2½-inch diameter overburden monitoring wells, in the groundwater level in piezometer locations PZ-B, PZ-C and PZ-E, and in the water level in bedrock Well 5.

During the pumping tests conducted on Wells 4 and 5, no discernible water-level drawdown was measured in the existing Production Wells 1 and 2 as a result of pumping in the new bedrock wells.

Overburden Monitoring Wells

Three existing 2½-inch diameter monitoring wells are located at the Wild Oaks well field which were installed during a previous groundwater exploration program conducted at the site. The monitoring wells are screened in the overburden material at the well field. The locations of the monitoring wells are shown on the attached Plate 1, and hydrographs and a table of water-level measurements collected from the monitoring wells are included in Appendix VI.

During the background period prior to the start of the pumping tests, water-level fluctuation can be seen in the measurements collected from these overburden monitoring wells that correspond with the pumping cycles in the existing Wild Oaks production Well 2. During the pumping test conducted on Well 4, additional water-level drawdown of about 2 feet was measured in MW-3, which is the closest monitoring well location to Well 4. No drawdown was measured in MW-1 or MW-2 during this test.

During the pumping test on Well 5, water-level drawdown was measured in all three of the monitoring wells. The drawdown in the MW-1 was 0.2 foot, in MW-2 was 0.1 foot, and in MW-3 was 0.5 foot. The table below is a summary of the drawdown observed in the overburden monitoring wells at the well field during the pumping tests.

Well ID	Drawdown Observed During Pumping Test of Well 4 (feet)	Drawdown Observed During the Pumping Test of Well 5 (feet)
MW-1	ND	0.2
MW-2	ND	0.1
MW-3	2.0	0.5

ND None discernible

Piezometers

Surface-water and shallow groundwater measurements were collected from six piezometer locations during the pumping tests. The locations of the piezometers (PZ-A, B, C, D, E and F) are shown on Plate 1. Surface-water measurements were collected from the outside of the piezometer casing and shallow groundwater measurements from the interior of the piezometers. The piezometers were constructed of a 5-foot length of galvanized steel pipe attached to a 1-foot long, 10-slot drive point that was installed in the overburden material. Hydrographs and a table of water-level measurements collected from the piezometers during the pumping tests are included in Appendix VII.

Two piezometer locations, PZ-A and PZ-F, were installed in the stream channel which flows through the well field from east to west. PZ-A was placed in the channel close to Well 5 and PZ-F was installed approximately 200 feet upstream. During the background data collection period, no water-level fluctuations in the surface water or shallow groundwater were observed from pumping in the existing Production Well 2 at the well field. In addition, no water-level drawdown was measured in either PZ-A or PZ-F during the tests on Wells 4 and 5 that is attributed to pumping in the bedrock wells.

Two piezometer locations, PZ-B and PZ-D, were installed in the small pond at the well field. PZ-B was installed near Well 5 and PZ-D was installed near Well 4. The original location of PZ-D (original) was submerged during a rain storm that occurred prior to the start of the pumping tests, so a second piezometer, named PZ-D (new), was installed to replace it. During the background monitoring period, water-level fluctuation in the shallow groundwater in PZ-B was observed which correlates to the pumping in the existing Production Well 2, but no corresponding water-level fluctuation was discernible in the surface water at PZ-B. No water-level change was measured in the surface water or groundwater in PZ-D from pumping in Well 2. During the 72-hour pumping tests, no water-level drawdown was measured in the surface water or groundwater in PZ-B or PZ-D that correspond to pumping in the bedrock wells.

Two piezometer locations, PZ-C and PZ-E were installed in the lake at the well field. PZ-C was installed near Well 5 and PZ-E was installed near Well 4. During the background monitoring period, water-level fluctuation was measured in the groundwater in both PZ-C and PZ-E that correlates to pumping in Production Well 2, but no corresponding water-level fluctuation was discernible in the surface water at either PZ-C or PZ-E.

Drawdown in the groundwater level in PZ-E was also measured during the pumping tests on both bedrock Wells 4 and 5. During the test on Well 4, there was potentially 0.25 foot of drawdown measured in the groundwater at PZ-E and during the test on Well 5 potentially 0.1 foot of drawdown was measured in PZ-E. No corresponding drawdown in the surface-water

level was measured on the exterior of PZ-E during either pumping test. There was no water-level drawdown measured in the surface water or groundwater at PZ-C during either of the pumping tests on Wells 4 and 5.

The table below is a summary of the drawdown observed in the piezometers at the well field during the pumping tests.

Piezometer ID	Approximate Drawdown Observed During Pumping Test of Well 4 (feet) (Surface Water/Groundwater)	Approximate Drawdown Observed During the Pumping Test of Well 5 (feet) (Surface Water/Groundwater)
PZ-A	ND/ND	ND/ND
PZ-B	ND/ND	ND/ND
PZ-C	ND/ND	ND/ND
PZ-D	ND/ND	ND/ND
PZ-E	ND/0.25	ND/0.1
PZ-F	ND/ND	ND/ND

ND None discernible

The data collected from the piezometers indicates that that there will be no significant impact to the onsite wetlands and surface-water features. The minimal drawdown measured in the groundwater during the bedrock well pumping tests was limited to the area near PZ-E in the lake and no surface-water impacts were measured at any of the monitoring locations.

Stream Gaging

Streamflow measurements were collected from the stream channel that flows through the well field near Well 5 during the pumping test program. Stream gaging location SG-1 was positioned in the channel downstream of Well 5 and SG-2 was located about 200 feet upstream of Well 5. The stream gaging locations are shown on Plate 1, and a graph and table of the stream flow measurements are included in Appendix VIII. No discernible change in flow was measured in the stream at the well field that is attributed to pumping in Wells 4 and 5.

A staff gage was also installed in the stream channel at the location of SG-1 to measure the water-level height during the test period. The measurements from the staff gage (Staff-1) showed no change in water-level height that is attributed to pumping in the bedrock wells during the test period. A graph and table of measurements for Staff-1 is included in Appendix VIII.

Water-Quality

Water samples were collected from Wells 4 and 5 during the 72-hour pumping tests. The water samples were submitted to Envirotest Laboratories, Inc. in Newburgh, NY for analysis for all parameters listed in the New York State Department of Health (NYSDOH) Sanitary Code Part 5, Subpart 5-1 and for microscopic particulate analysis (MPA) and giardia and cryptosporidium analyses. Copies of the laboratory reports for Wells 4 and 5 are included in Appendix IX.

The Part 5 sample results for Well 4 met all NYSDOH drinking water standards with the exception of the presence of total coliform. The well will need to be disinfected and resample for total coliform prior to being placed into service. Additionally, the total dissolved solids (TDS) concentration in Well 4 was elevated at 974 mg/L (milligrams per liter).

The Part 5 sample results for Well 5 also met all NYSDOH drinking water standards with the exception of the presence of total coliform. The well will need to be disinfected and resample for total coliform prior to being placed into service.

Wells 4 and 5 were both negative for giardia and cryptosporidium. The MPA results for Well 4 reported the presence of pollen, but no primary indicator organisms (i.e. diatoms, algae, etc.) were detected. The sample from Well 4 indicates a low potential risk for GWUDI (groundwater under the direct influence of surface water). The MPA for Well 5 reported the presence of green algae exhibiting chlorophyll fluorescence, pollen and plant debris. This sample from Well 5 indicates a moderate to high potential risk for GWUDI.

Physical parameters of temperature, pH, conductivity and TDS were also measured in Wells 4 and 5 and the nearby surface water during their respective test periods. Graphs and tables of measurements collected are included in Appendix X. The temperature readings from Wells 4 and 5 showed no significant changes during the test period compared to the nearby surface water which showed daily fluctuation. The conductivity and TDS values measured in Well 4 were less than the concentrations from the nearby pond, but similar to the concentrations in the adjacent lake. No significant changes in TDS or conductivity occurred during the test period to assess whether Well 4 and lake surface water would show a corresponding change. The conductivity and TDS values measured in Well 5 did not show a similarity in concentrations with any of the adjacent water bodies. The pH values measured in the wells and surface-water bodies showed minor fluctuations during the test period. This was likely the result of the changing ambient air temperature affecting the accuracy of the hand-held water-quality meter.

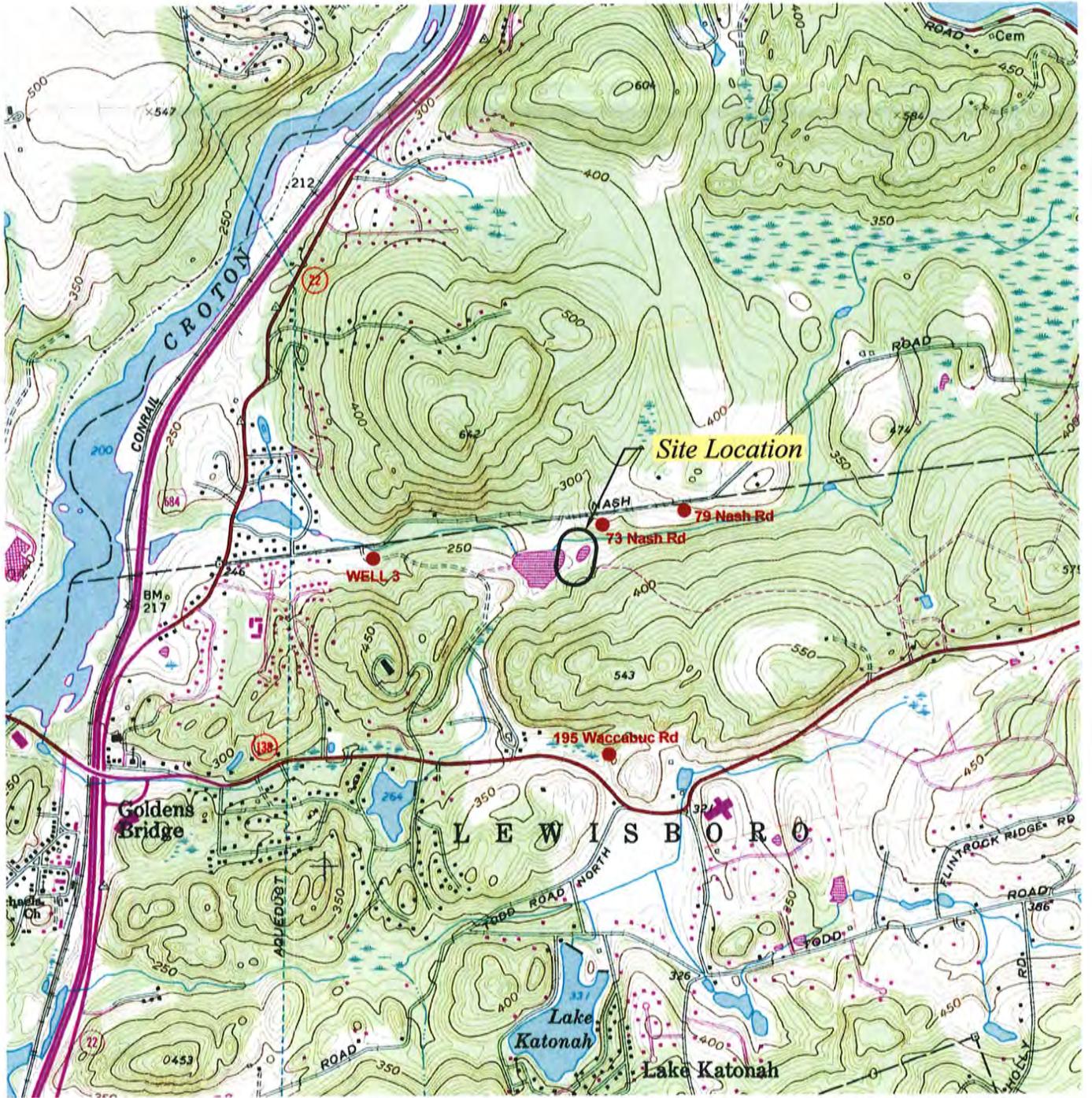
Conclusions

- Well 4 demonstrated stabilized yield and water-level drawdown at a rate of 80 gpm during the 72-hour pumping test and Well 5 demonstrated a stabilized yield and water-level drawdown at a rate of 28 gpm.
- The pre-test water-level data collected from the monitoring locations showed that the existing Production Well 2 caused water-level fluctuation in the groundwater level in the onsite overburden monitoring wells, in the piezometer in the pond closest to Well 2 (PZ-B) and the two piezometers in the lake (PZ-C and PZ-E), and in bedrock Well 5.
- Water-level drawdown was measured in one of the four offsite bedrock monitoring well locations. Approximately 3 feet of drawdown was measured in the well at 73 Nash Road during the test on Well 4 and approximately 7 feet during the test on Well 5. Based on the hydrograph for the well at 73 Nash Road, the drawdown measured during the pumping tests did not appear to have a significant impact on the well and future use of

Wells 4 and 5 to supply the District will not likely impact the use of this residential supply well.

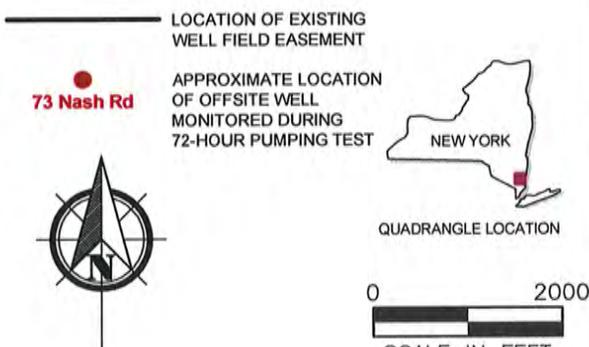
- No discernible water-level drawdown was measured in either Production Well 1 or 2 at the well field during the pumping tests that is attributed to pumping in bedrock Wells 4 and 5.
- During the pumping test on Well 4, approximately 2.0 feet of water-level drawdown was measured in overburden monitoring well MW-3. No drawdown was measured in the other two onsite overburden monitoring wells during the test on Well 4. During the test on Well 5, water-level drawdown was measured in all three of the overburden monitoring wells which ranged from 0.1 foot to 0.5 foot.
- Water-level drawdown which is attributed to pumping in the bedrock wells was measured in the groundwater at one piezometer location, PZ-E, during the pumping tests on Wells 4 and 5. PZ-E was installed in the lake near Well 4. During the test on Well 4, potentially 0.25 foot of drawdown as measured in the groundwater at PZ-E and during the test on Well 5, potentially 0.1 foot of drawdown was measured in the groundwater. No water-level drawdown was measured in the groundwater at any of the other piezometers during the pumping tests, and no surface-water level changes from pumping in Wells 4 and 5 were measured at any of the piezometer locations. The data collected from the piezometers indicates that there will be no significant impact to the onsite wetlands and surface-water features. The minimal drawdown measured in the groundwater during the bedrock well pumping tests was limited to the area near PZ-E in the lake and no surface-water impacts were measured at any of the monitoring locations.
- Stream gaging was conducted the stream channel next to Well 5 during the pumping tests. The data shows no discernible effect on stream flow from pumping of the bedrock wells.
- The water-quality results from the samples collected from Wells 4 and 5 during the pumping tests met all NYSDOH drinking water standards with the exception of the presence of total coliform in both samples. The wells will need to be disinfected and resampled to demonstrate the absence of total coliform prior to being placed into service.
- The giardia and cryptosporidium samples results for both Wells 4 and 5 were negative. The MPA for Well 4 reported no primary indicator organisms which indicate a low potential risk of GWUDI. The MPA for Well 5 reported the presence of green algae exhibiting chlorophyll fluorescence, pollen and plant debris. The MPA sample from Well 5 indicates a moderate to high potential risk for GWUDI.

FIGURE



SOURCE: USGS TOPOGRAPHIC QUADRANGLE CROTON FALLS, NEW YORK (PHOTOREVISED 1981).

LEGEND



**WILD OAKS WATER SYSTEM
NEW YORK AMERICAN WATER
LEWISBORO, NEW YORK**

SITE LOCATION MAP

DATE	REVISED	PREPARED BY:
		LBG ENGINEERING SERVICES, P.C. Professional Environmental and Civil Engineers 4 Research Drive Suite 204 Shelton, Connecticut 06484 (203) 929-8555
DRAWN:	RAC	CHECKED: SS
		DATE: 06/16/15
		FIGURE: 1

PLATE

APPENDIX I

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION



(1) COUNTY WESTCHESTER

(3) DEC Well Number

(2) TOWN _____

WATER WELL COMPLETION REPORT

(4) OWNER <u>NY AMERICAN WATER</u>			(45) WELL LOG		
(5) ADDRESS <u>60 BROOKLYN AVE. MERRICK, NY</u>			Depth to Bedrock <u>54'</u> (ft. below land surface)		
(6) LOCATION OF WELL (See Instructions On Reverse) (Check here <input type="checkbox"/> if address is same as above) <u>NASH RD LEWISBORO, NY</u>			Ground Elevation _____ (ft. above sea level)		
(7) LATITUDE/LONGITUDE AND METHOD USED <input type="checkbox"/> GPS <input type="checkbox"/> Map		(8) TAX MAP NO.	Top of Casing <u>18"</u> (ft. above (+) or below (-) land surface)		
(9) DEPTH OF WELL BELOW LAND SURFACE (feet) <u>425'</u>	(10) DEPTH TO GROUNDWATER BELOW LAND SURFACE (feet) <u>0</u>	DATE MEASURED <u>1/21/15</u>	TOP OF WELL		
CASINGS			0'		
(11) DIAMETER <u>12"</u> in. <u>8"</u> in. _____ in. _____ in.			BED ROCK AT <u>54'</u>		
(12) LENGTH <u>54'</u> ft. <u>104'</u> ft. _____ ft. _____ ft.			DRILL & DRIVE <u>12" TOP SHOE GROUT & BOUNDER</u>		
(13) GROUT TYPE / SEALING <u>BEWSEK</u>	(14) GROUT / SEALING INTERVAL (feet) FROM <u>0</u> TO <u>104'</u>		12" DRIVE SHOE SET <u>12" at 54'</u>		
SCREENS			DRILLED DOWN TO <u>104'</u> & SET <u>8"</u> CASING & GROUTED BACK TO TOP OF WELL		
(15) MAKE & MATERIAL	(16) OPENINGS		8" DRIVE SHOE		
(17) DIAMETER _____ in. _____ in. _____ in. _____ in.			FRACTURE 100 GPM		
(18) LENGTH _____ ft. _____ ft. _____ ft. _____ ft.			385'		
(19) DEPTH TO TOP OF SCREEN, FROM TOP OF CASING (Feet)			387'		
YIELD TEST					
(20) DATE <u>1/21/15</u>		(21) DURATION OF TEST <u>6 HRS</u>			
(22) LIFT METHOD <input type="checkbox"/> Pump <input checked="" type="checkbox"/> Air Lift <input type="checkbox"/> Bailor	(23) STABILIZED DISCHARGE (GPM) <u>100+</u>				
(24) STATIC LEVEL PRIOR TO TEST (feet/inches below top of casing)	(25) MAXIMUM DRAWDOWN (Stabilized) (feet/inches below top of casing)				
(26) RECOVERY (Time in hours/minutes)	(27) Was the water produced during the test discharged away from immediate area? Yes _____ No _____				
PUMP INSTALLATION					
(28) PUMP INSTALLED? YES _____ NO _____	(29) DATE	(30) CERTIFIED PUMP INSTALLER			
(31) TYPE	(32) MAKE	(33) MODEL			
(34) MAXIMUM CAPACITY (GPM)	(35) PUMP INSTALLATION LEVEL FROM TOP OF CASING (Feet)				
DRILLER INFORMATION					
(36) METHOD OF DRILLING <input type="checkbox"/> Rotary <input type="checkbox"/> Cable Tool <input checked="" type="checkbox"/> Other <u>Hammer</u>		(37) USE OF WATER (See instructions for choices)			
(38) DATE DRILLING WORK STARTED <u>1/5/15</u>		(39) DATE DRILLING WORK COMPLETED <u>1/20/15</u>			
(40) DATE REPORT FILED <u>1/5/15</u>	(41) REGISTERED COMPANY <u>NORTHERN DRILLING INC</u>	(42) DEC REGISTRATION NO. <u>NYRD 10177</u>			
(43) CERTIFIED DRILLER (Print name) <u>MARK TURNOVIL</u>		(44) CERTIFIED DRILLER SIGNATURE <u>Mark Turnovil</u>			
* By signing this document I hereby affirm that: (1) I am certified to supervise water well drilling activities as defined by Environmental Conservation Law 15-1502; (2) this water well was constructed in accordance with water well standards promulgated by the New York State Department of Health; (3) under the penalty of perjury the information provided in this Well Completion Report is true, accurate and complete, and I understand that any false statement made herein is punishable as a Class A Misdemeanor under Penal Law §210.45.			BOTTOM OF HOLE		
			NYSDEC		

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION



(1) COUNTY _____

(3) DEC Well Number

(2) TOWN _____

WATER WELL COMPLETION REPORT

(4) OWNER
NY AMERICAN WATER

(5) ADDRESS
60 BROOKLYN AVE. MERRICK, NY

(6) LOCATION OF WELL (See Instructions On Reverse) (Check here if address is same as above)
WILD OAKS WELL 5

(7) LATITUDE/LONGITUDE AND METHOD USED (8) TAX MAP NO.
 GPS Map 41.18-258'N 073-39-284'W

(9) DEPTH OF WELL BELOW LAND SURFACE (feet) 465' (10) DEPTH TO GROUNDWATER BELOW LAND SURFACE (feet) 10' DATE MEASURED 5-7-15

CASINGS

(11) DIAMETER 12" in. | 8" in. | 6" in. | in.

(12) LENGTH 55' ft. | 70' ft. | 84' ft. | ft.

(13) GROUT TYPE / SEALING (14) GROUT / SEALING INTERVAL (feet) FROM 0' TO 84'
BEW SEAL

SCREENS

(15) MAKE & MATERIAL (16) OPENINGS

(17) DIAMETER in. | in. | in. | in.

(18) LENGTH ft. | ft. | ft. | ft.

(19) DEPTH TO TOP OF SCREEN, FROM TOP OF CASING (Feet)

YIELD TEST

(20) DATE 5-5-15 (21) DURATION OF TEST 5 HR

(22) LIFT METHOD Pump Air Lift Baller (23) STABILIZED DISCHARGE (GPM) 50 to 70

(24) STATIC LEVEL PRIOR TO TEST (feet/inches below top of casing) (25) MAXIMUM DRAWDOWN (Stabilized) (feet/inches below top of casing)

(26) RECOVERY (Time in hours/minutes) (27) Was the water produced during the test discharged away from immediate area? Yes _____ No _____

PUMP INSTALLATION

(28) PUMP INSTALLED? YES _____ NO _____ (29) DATE (30) CERTIFIED PUMP INSTALLER

(31) TYPE (32) MAKE (33) MODEL

(34) MAXIMUM CAPACITY (GPM) (35) PUMP INSTALLATION LEVEL FROM TOP OF CASING (Feet)

DRILLER INFORMATION

(36) METHOD OF DRILLING Rotary Cable Tool Other Hammer (37) USE OF WATER (See instructions for choices)

(38) DATE DRILLING WORK STARTED (39) DATE DRILLING WORK COMPLETED 5-5-15

(40) DATE REPORT FILED (41) REGISTERED COMPANY NORTH AERU DRILLING INC (42) DEC REGISTRATION NO NYRD 10177

(43) CERTIFIED DRILLER (Print name) MARK TURNBULL (44) CERTIFIED DRILLER SIGNATURE Mark Turnbull

(45) WELL LOG
Depth to Bedrock 70' (ft. below land surface)
Ground Elevation 321' (ft. above sea level)
Top of Casing 18' (ft. above (+) or below (-) land surface)

TOP OF WELL
0 | 12" casing
PP VERT
BAND DRILL &
DRIVE 12"
55'

12" DRIVE SHAFT
DRILL & DRIVE 8" TO 70'
GROUT BETWEEN VERT SHAFT 2' AT A TIME

8" DRIVE SHAFT
DRILL OUT BOTTOM OF 8" BENT CASING DRIVE 6" TO 54'

6" DRIVE SHAFT
GROUT UP BETWEEN 6" & 8" CASING

350' 5' 70' P.U.
FRacture
Rising
around

350' 5' 70' P.U.
BUT CUT
BACK OFF
A WHILE

465'

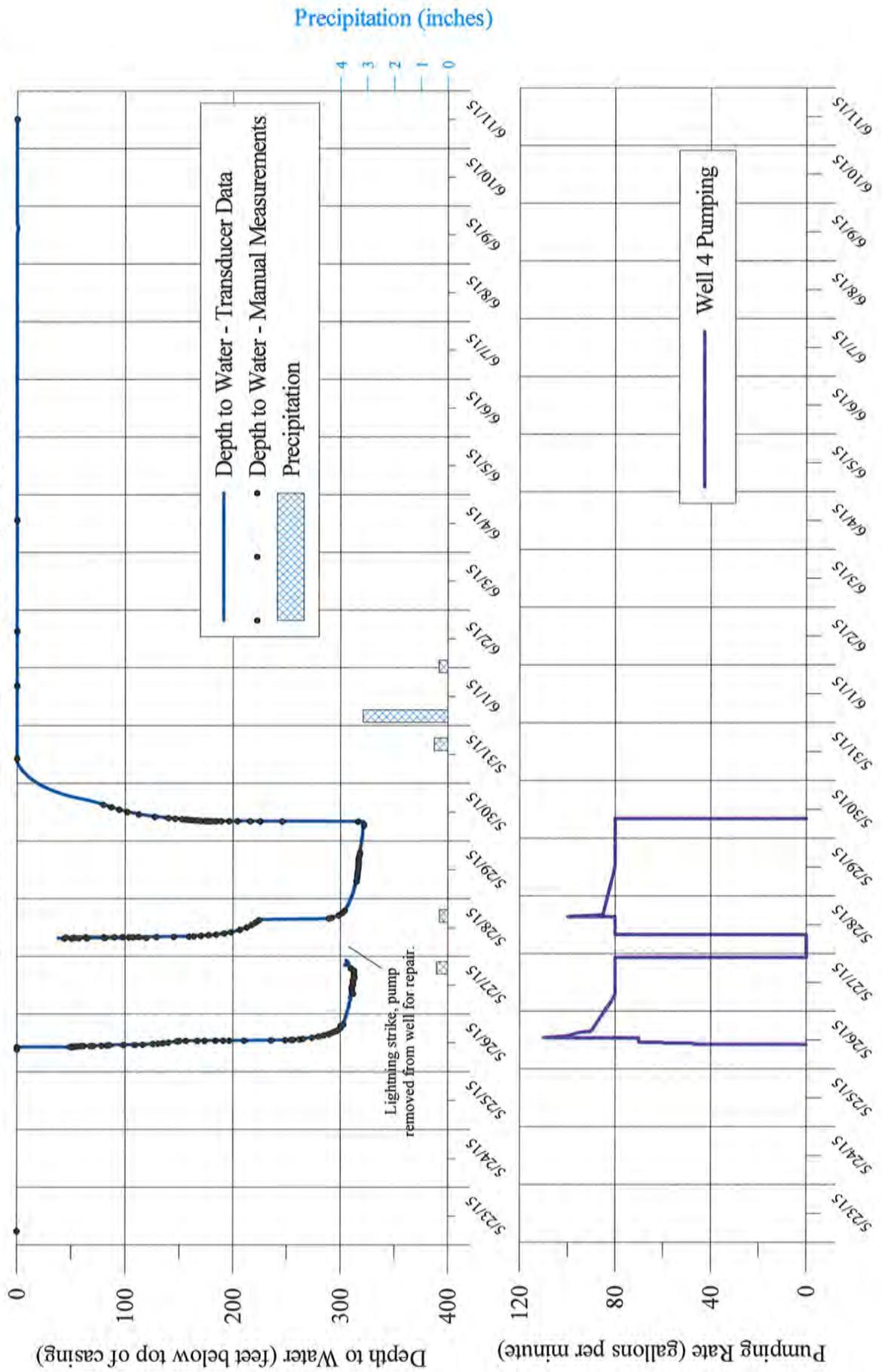
BOTTOM OF HOLE

* By signing this document I hereby affirm that: (1) I am certified to supervise water well drilling activities as defined by Environmental Conservation Law 15-1502; (2) this water well was constructed in accordance with water well standards promulgated by the New York State Department of Health; (3) under the penalty of perjury the information provided in this Well Completion Report is true, accurate and complete, and I understand that any false statement made herein is punishable as a Class A Misdemeanor under Penal Law §210.45.

APPENDIX II

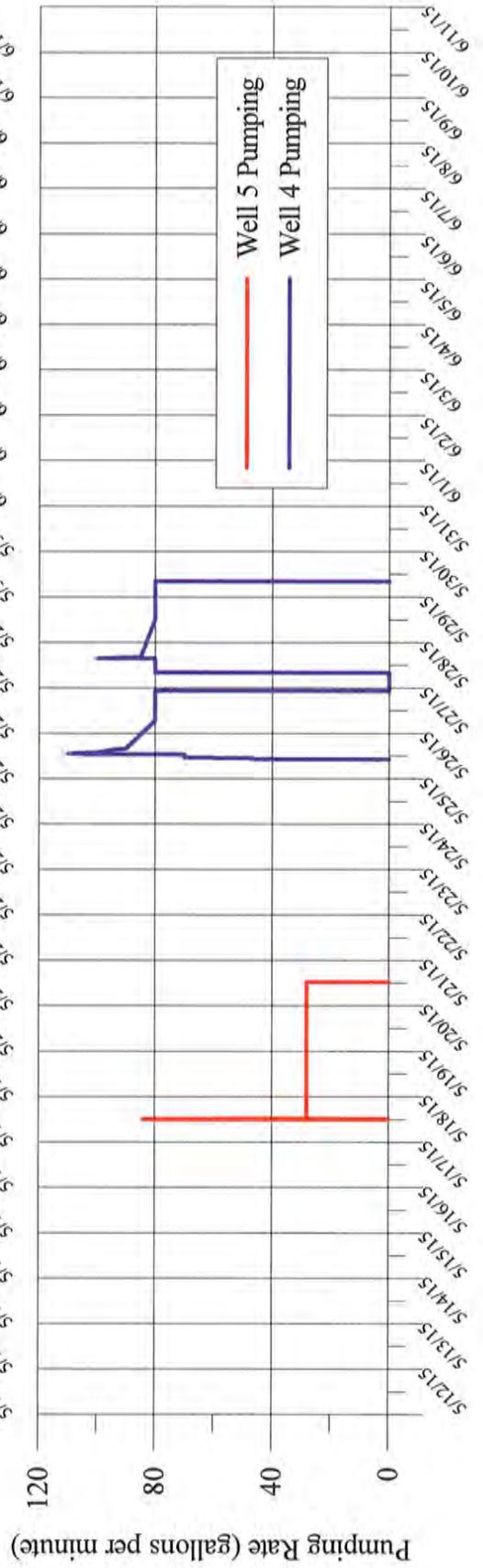
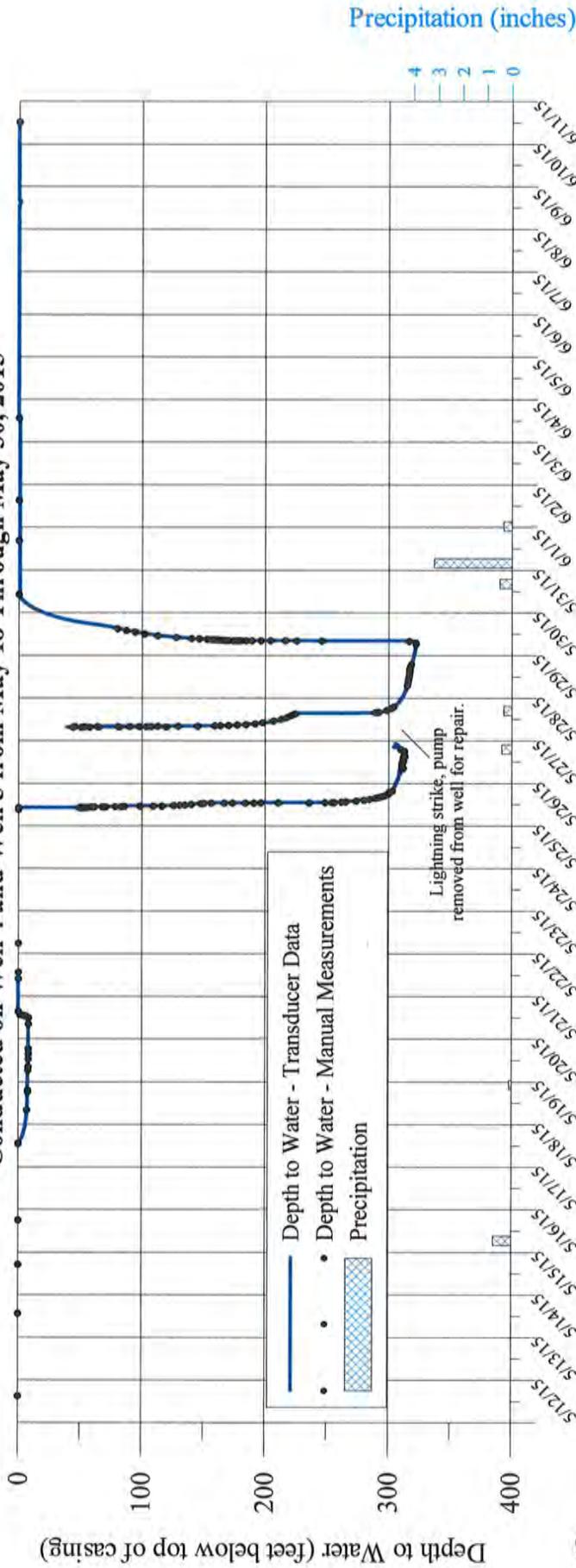
NEW YORK AMERICAN WATER COMPANY
 WILD OAKS WATER SYSTEM
 LEWISBORO, NEW YORK

Hydrograph of Water-Level Measurements Collected from Well 4 During 72-Hour Pumping Test
 Conducted on Well 4 from May 26 Through May 30, 2015



NEW YORK AMERICAN WATER COMPANY
 WILD OAKS WATER SYSTEM
 LEWISBORO, NEW YORK

Hydrograph of Water-Level Measurements Collected from Well 4 During 72-Hour Pumping Test Program
 Conducted on Well 4 and Well 5 from May 18 Through May 30, 2015



**NEW YORK AMERICAN WATER COMPANY
WILD OAKS WATER SYSTEM
LEWISBORO, NEW YORK**

Summary of Water-Level Measurements Collected from Well 4 During
72-Hour Pumping Tests Conducted on Wells 4 and 5, May 18 Through May 30, 2015

Date	Time	Depth to Water (ft btoc)	Elapsed Time (min)	Drawdown (feet)	Comments
5/12/2015	15:00	0.00	--	0.00	Prior to start of pumping in Well 5, Well 4 was flowing artesian.
5/14/2015	13:27	0.00	--	0.00	
5/15/2015	17:14	0.00	--	0.00	
5/16/2015	18:07	0.00	--	0.00	
5/18/2015	13:06	0.00	--	0.00	Pumping in Well 5 started at 11:38.
5/18/2015	13:17	0.16	--	0.16	Well 4 no longer flowing, pressure transducer installed in well.
5/18/2015	14:00	0.87	--	0.87	
5/18/2015	15:00	1.78	--	1.78	
5/18/2015	16:00	2.51	--	2.51	
5/18/2015	17:00	3.10	--	3.10	
5/18/2015	18:00	3.60	--	3.60	
5/18/2015	19:00	4.03	--	4.03	
5/18/2015	20:00	4.44	--	4.44	
5/18/2015	21:00	4.81	--	4.81	
5/18/2015	22:00	5.18	--	5.18	
5/18/2015	23:00	5.47	--	5.47	
5/19/2015	0:00	5.73	--	5.73	
5/19/2015	1:00	5.93	--	5.93	
5/19/2015	2:00	6.12	--	6.12	
5/19/2015	3:00	6.22	--	6.22	
5/19/2015	4:00	6.34	--	6.34	
5/19/2015	5:00	6.41	--	6.41	
5/19/2015	6:00	6.49	--	6.49	
5/19/2015	7:00	6.62	--	6.62	
5/19/2015	8:00	6.73	--	6.73	
5/19/2015	9:00	6.85	--	6.85	
5/19/2015	10:00	6.95	--	6.95	
5/19/2015	11:00	7.08	--	7.08	
5/19/2015	12:00	7.15	--	7.15	
5/19/2015	13:00	7.23	--	7.23	
5/19/2015	14:00	7.26	--	7.26	
5/19/2015	15:00	7.23	--	7.23	
5/19/2015	16:00	7.21	--	7.21	
5/19/2015	17:00	7.19	--	7.19	
5/19/2015	18:00	7.16	--	7.16	
5/19/2015	19:00	7.15	--	7.15	
5/19/2015	20:00	7.15	--	7.15	
5/19/2015	21:00	7.18	--	7.18	
5/19/2015	22:00	7.26	--	7.26	
5/19/2015	23:00	7.30	--	7.30	
5/20/2015	0:00	7.37	--	7.37	
5/20/2015	1:00	7.40	--	7.40	
5/20/2015	2:00	7.47	--	7.47	
5/20/2015	3:00	7.45	--	7.45	
5/20/2015	4:00	7.45	--	7.45	
5/20/2015	5:00	7.43	--	7.43	
5/20/2015	6:00	7.44	--	7.44	
5/20/2015	7:00	7.45	--	7.45	
5/20/2015	8:00	7.51	--	7.51	
5/20/2015	9:00	7.58	--	7.58	
5/20/2015	10:00	7.65	--	7.65	
5/20/2015	11:00	7.72	--	7.72	
5/20/2015	12:00	7.74	--	7.74	
5/20/2015	13:00	7.80	--	7.80	
5/20/2015	14:00	7.84	--	7.84	
5/20/2015	15:00	7.79	--	7.79	
5/20/2015	16:00	7.78	--	7.78	

**NEW YORK AMERICAN WATER COMPANY
WILD OAKS WATER SYSTEM
LEWISBORO, NEW YORK**

Summary of Water-Level Measurements Collected from Well 4 During
72-Hour Pumping Tests Conducted on Wells 4 and 5, May 18 Through May 30, 2015

Date	Time	Depth to Water (ft btoc)	Elapsed Time (min)	Drawdown (feet)	Comments
5/20/2015	17:00	7.75	--	7.75	
5/20/2015	18:00	7.71	--	7.71	
5/20/2015	19:00	7.68	--	7.68	
5/20/2015	20:00	7.68	--	7.68	
5/20/2015	21:00	7.69	--	7.69	
5/20/2015	22:00	7.73	--	7.73	
5/20/2015	23:00	7.76	--	7.76	
5/21/2015	0:00	7.82	--	7.82	
5/21/2015	1:00	7.85	--	7.85	
5/21/2015	2:00	7.89	--	7.89	
5/21/2015	3:00	7.88	--	7.88	
5/21/2015	4:00	7.88	--	7.88	
5/21/2015	5:00	7.88	--	7.88	
5/21/2015	6:00	7.87	--	7.87	
5/21/2015	7:00	7.85	--	7.85	
5/21/2015	8:00	7.86	--	7.86	
5/21/2015	9:00	7.88	--	7.88	
5/21/2015	10:00	7.91	--	7.91	
5/21/2015	11:00	7.95	--	7.95	
5/21/2015	12:00	8.03	--	8.03	Pump in Well 5 shut down at 12:14.
5/21/2015	13:00	4.67	--	4.67	
5/21/2015	14:00	0.00	--	0.00	
5/21/2015	15:00	0.00	--	0.00	
5/21/2015	16:00	0.00	--	0.00	
5/21/2015	17:00	0.00	--	0.00	
5/21/2015	18:00	0.00	--	0.00	
5/21/2015	19:00	0.00	--	0.00	
5/21/2015	20:00	0.00	--	0.00	
5/21/2015	21:00	0.00	--	0.00	
5/21/2015	22:00	0.00	--	0.00	
5/21/2015	23:00	0.00	--	0.00	
5/22/2015	0:00	0.00	--	0.00	
5/22/2015	1:00	0.00	--	0.00	
5/22/2015	2:00	0.00	--	0.00	
5/22/2015	3:00	0.00	--	0.00	
5/22/2015	4:00	0.00	--	0.00	
5/22/2015	5:00	0.00	--	0.00	
5/22/2015	6:00	0.00	--	0.00	
5/22/2015	7:00	0.00	--	0.00	
5/22/2015	8:00	0.00	--	0.00	
5/22/2015	9:00	0.00	--	0.00	Transducer removed from Well 4.
5/26/2015	9:13	0.00	--	0.00	Transducer reinstalled in Well 4.
5/26/2015	10:00	0.00	--	0.00	
5/26/2015	10:05	0.00	--	0.00	
5/26/2015	10:06	0.00	--	0.00	
5/26/2015	10:07	0.00	--	0.00	
5/26/2015	10:08	1.90	1	1.90	Pump in Well 4 started.
5/26/2015	10:09	45.46	2	45.46	Pumping rate 47 gpm.
5/26/2015	10:10	49.30	3	49.30	
5/26/2015	10:11	48.40	4	48.40	
5/26/2015	10:12	48.36	5	48.36	
5/26/2015	10:13	48.38	6	48.38	
5/26/2015	10:14	48.93	7	48.93	
5/26/2015	10:15	49.53	8	49.53	
5/26/2015	10:16	50.09	9	50.09	Pumping rate 47 gpm.
5/26/2015	10:17	50.76	10	50.76	Pumping rate 47 gpm.
5/26/2015	10:18	51.29	11	51.29	

**NEW YORK AMERICAN WATER COMPANY
WILD OAKS WATER SYSTEM
LEWISBORO, NEW YORK**

Summary of Water-Level Measurements Collected from Well 4 During
72-Hour Pumping Tests Conducted on Wells 4 and 5, May 18 Through May 30, 2015

Date	Time	Depth to Water (ft btoc)	Elapsed Time (min)	Drawdown (feet)	Comments
5/26/2015	10:19	52.05	12	52.05	
5/26/2015	10:20	52.58	13	52.58	
5/26/2015	10:21	53.25	14	53.25	
5/26/2015	10:22	53.52	15	53.52	
5/26/2015	10:23	54.26	16	54.26	
5/26/2015	10:24	54.87	17	54.87	
5/26/2015	10:25	55.55	18	55.55	
5/26/2015	10:30	57.54	23	57.54	Pumping rate 47 gpm.
5/26/2015	10:35	59.84	28	59.84	Pumping rate increased to 60 gpm.
5/26/2015	10:40	72.28	33	72.28	
5/26/2015	10:45	79.73	38	79.73	
5/26/2015	10:50	83.74	43	83.74	
5/26/2015	10:55	86.70	48	86.70	Pumping rate increased to 70 gpm.
5/26/2015	11:00	101.55	53	101.55	
5/26/2015	11:10	116.77	63	116.77	Pumping rate 70 gpm.
5/26/2015	11:20	123.57	73	123.57	Pumping rate 70 gpm.
5/26/2015	11:30	128.26	83	128.26	Pumping rate 70 gpm.
5/26/2015	11:40	132.34	93	132.34	Pumping rate 70 gpm.
5/26/2015	11:50	135.90	103	135.90	Pumping rate 70 gpm.
5/26/2015	12:00	139.02	113	139.02	Pumping rate increased to 105 gpm at 12:42.
5/26/2015	13:00	244.20	173	244.20	Pumping rate increased to 110 gpm at 12:50.
5/26/2015	14:00	272.37	233	272.37	Pumping rate 100 gpm.
5/26/2015	15:00	283.21	293	283.21	Pumping rate 95 gpm.
5/26/2015	16:00	290.80	353	290.80	Pumping rate 90 gpm.
5/26/2015	17:00	295.85	413	295.85	Pumping rate 90 gpm.
5/26/2015	18:00	299.33	473	299.33	Pumping rate 90 gpm.
5/26/2015	19:00	300.77	533	300.77	Pumping rate 90 gpm.
5/26/2015	20:00	302.24	593	302.24	Pumping rate 90 gpm.
5/26/2015	21:00	303.87	653	303.87	Pumping rate 90 gpm.
5/26/2015	22:00	304.73	713	304.73	Pumping rate 85 gpm.
5/26/2015	23:00	305.44	773	305.44	Pumping rate 85 gpm.
5/27/2015	0:00	306.19	833	306.19	Pumping rate 85 gpm.
5/27/2015	1:00	306.51	893	306.51	Pumping rate 85 gpm.
5/27/2015	2:00	307.60	953	307.60	Pumping rate 85 gpm.
5/27/2015	3:00	307.99	1013	307.99	Pumping rate 85 gpm.
5/27/2015	4:00	308.25	1073	308.25	Pumping rate 85 gpm.
5/27/2015	5:00	308.58	1133	308.58	Pumping rate 85 gpm.
5/27/2015	6:00	309.65	1193	309.65	Pumping rate 85 gpm.
5/27/2015	7:00	309.48	1253	309.48	Pumping rate 80 gpm.
5/27/2015	8:29	312.17	1342	312.17	Pumping rate 80 gpm.
5/27/2015	9:00	310.84	1373	310.84	Pumping rate 80 gpm.
5/27/2015	10:00	311.33	1433	311.33	Pumping rate 80 gpm.
5/27/2015	11:00	311.25	1493	311.25	Pumping rate 80 gpm.
5/27/2015	12:00	312.31	1553	312.31	Pumping rate 80 gpm.
5/27/2015	13:00	312.29	1613	312.29	Pumping rate 80 gpm.
5/27/2015	14:00	312.31	1673	312.31	Pumping rate 80 gpm.
5/27/2015	15:00	313.30	1733	313.30	Pumping rate 80 gpm.
5/27/2015	16:00	313.17	1793	313.17	Pumping rate 80 gpm.
5/27/2015	17:00	313.21	1853	313.21	Pumping rate 80 gpm.
5/27/2015	18:00	313.31	1913	313.31	Pumping rate 80 gpm.
5/27/2015	19:00	310.74	1973	310.74	Pumping rate 80 gpm.
5/27/2015	20:00	307.07	2033	307.07	Lightning strike, pump motor damaged.
5/27/2015	21:00	308.12	2093	308.12	
5/27/2015	22:00	306.03	2153	306.03	
5/27/2015	22:15	-	2168	-	Generator shut down, pump pulled from well.
5/28/2015	7:25	38.31	2878	38.31	Pump motor replaced, pump and transducer reinstalled.
5/28/2015	7:26	38.26	2879	38.26	Pump in Well 4 restarted.

**NEW YORK AMERICAN WATER COMPANY
WILD OAKS WATER SYSTEM
LEWISBORO, NEW YORK**

Summary of Water-Level Measurements Collected from Well 4 During
72-Hour Pumping Tests Conducted on Wells 4 and 5, May 18 Through May 30, 2015

Date	Time	Depth to Water (ft btoc)	Elapsed Time (min)	Drawdown (feet)	Comments
5/28/2015	7:27	45.35	2880	45.35	Pumping rate 80 gpm.
5/28/2015	7:28	54.38	2881	54.38	Pumping rate 80 gpm.
5/28/2015	7:29	60.30	2882	60.30	Pumping rate 80 gpm.
5/28/2015	7:30	64.14	2883	64.14	Pumping rate 80 gpm.
5/28/2015	8:00	121.19	2913	121.19	Pumping rate 80 gpm.
5/28/2015	9:00	183.65	2973	183.65	Pumping rate 80 gpm.
5/28/2015	10:00	198.46	3033	198.46	Pumping rate 80 gpm.
5/28/2015	11:00	206.93	3093	206.93	Pumping rate 80 gpm.
5/28/2015	12:00	213.16	3153	213.16	Pumping rate 80 gpm.
5/28/2015	13:00	217.78	3213	217.78	Pumping rate 80 gpm.
5/28/2015	14:00	221.37	3273	221.37	Pumping rate 70 gpm.
5/28/2015	15:00	223.88	3333	223.88	Manual rate increase completed.
5/28/2015	16:00	292.18	3393	292.18	Pumping rate 90 gpm.
5/28/2015	17:00	298.24	3453	298.24	Pumping rate 85 gpm.
5/28/2015	18:00	301.76	3513	301.76	Pumping rate 85 gpm.
5/28/2015	19:00	303.70	3573	303.70	Pumping rate 85 gpm.
5/28/2015	20:00	305.41	3633	305.41	Pumping rate 85 gpm.
5/28/2015	21:00	306.89	3693	306.89	Pumping rate 85 gpm.
5/28/2015	22:00	308.00	3753	308.00	Pumping rate 85 gpm.
5/28/2015	23:00	309.09	3813	309.09	Pumping rate 85 gpm.
5/29/2015	0:00	309.84	3873	309.84	Pumping rate 85 gpm.
5/29/2015	1:00	311.04	3933	311.04	Pumping rate 85 gpm.
5/29/2015	2:00	311.73	3993	311.73	Pumping rate 85 gpm.
5/29/2015	3:00	312.44	4053	312.44	Pumping rate 85 gpm.
5/29/2015	4:00	313.07	4113	313.07	Pumping rate 85 gpm.
5/29/2015	5:00	313.59	4173	313.59	Pumping rate 85 gpm.
5/29/2015	6:00	314.17	4233	314.17	Pumping rate 85 gpm.
5/29/2015	7:00	314.77	4293	314.77	Pumping rate 85 gpm.
5/29/2015	8:00	315.13	4353	315.13	Pumping rate 85 gpm.
5/29/2015	9:00	315.50	4413	315.50	Pumping rate 85 gpm.
5/29/2015	10:00	315.75	4473	315.75	Pumping rate 85 gpm.
5/29/2015	11:00	315.96	4533	315.96	Pumping rate 85 gpm.
5/29/2015	12:00	316.38	4593	316.38	Pumping rate 80 gpm.
5/29/2015	13:00	316.58	4653	316.58	Pumping rate 80 gpm.
5/29/2015	14:00	316.79	4713	316.79	Pumping rate 80 gpm.
5/29/2015	15:00	316.97	4773	316.97	Pumping rate 80 gpm.
5/29/2015	16:00	316.50	4833	316.50	Pumping rate 80 gpm.
5/29/2015	17:00	317.18	4893	317.18	Pumping rate 80 gpm.
5/29/2015	18:00	317.76	4953	317.76	Pumping rate 80 gpm.
5/29/2015	19:00	318.38	5013	318.38	Pumping rate 80 gpm.
5/29/2015	20:00	318.38	5073	318.38	Pumping rate 80 gpm.
5/29/2015	21:00	318.75	5133	318.75	Pumping rate 80 gpm.
5/29/2015	22:00	319.33	5193	319.33	Pumping rate 80 gpm.
5/29/2015	23:00	319.41	5253	319.41	Pumping rate 80 gpm.
5/30/2015	0:00	319.73	5313	319.73	Pumping rate 80 gpm.
5/30/2015	1:00	320.10	5373	320.10	Pumping rate 80 gpm.
5/30/2015	2:00	320.61	5433	320.61	Pumping rate 80 gpm.
5/30/2015	3:00	320.73	5493	320.73	Pumping rate 80 gpm.
5/30/2015	4:00	320.97	5553	320.97	Pumping rate 80 gpm.
5/30/2015	5:00	321.11	5613	321.11	Pumping rate 80 gpm.
5/30/2015	6:00	321.67	5673	321.67	Pumping rate 80 gpm.
5/30/2015	7:00	321.75	5733	321.75	Pumping rate 80 gpm.
5/30/2015	8:00	321.93	5793	321.93	Pumping rate 80 gpm.
5/30/2015	8:01	321.74	5794	321.74	Pumping rate 80 gpm.
5/30/2015	8:02	316.73	--	316.73	Pump in Well 4 shut down.
5/30/2015	8:03	296.50	--	296.50	
5/30/2015	8:04	277.34	--	277.34	

NEW YORK AMERICAN WATER COMPANY
WILD OAKS WATER SYSTEM
LEWISBORO, NEW YORK

Summary of Water-Level Measurements Collected from Well 4 During
72-Hour Pumping Tests Conducted on Wells 4 and 5, May 18 Through May 30, 2015

Date	Time	Depth to Water (ft btoc)	Elapsed Time (min)	Drawdown (feet)	Comments
5/30/2015	8:05	259.32	--	259.32	
5/30/2015	8:06	242.72	--	242.72	
5/30/2015	8:07	227.97	--	227.97	
5/30/2015	8:08	215.27	--	215.27	
5/30/2015	8:09	204.74	--	204.74	
5/30/2015	8:10	196.09	--	196.09	
5/30/2015	8:11	189.31	--	189.31	
5/30/2015	8:12	184.22	--	184.22	
5/30/2015	8:13	180.54	--	180.54	
5/30/2015	8:14	177.98	--	177.98	
5/30/2015	8:15	176.23	--	176.23	
5/30/2015	8:16	174.89	--	174.89	
5/30/2015	8:17	173.86	--	173.86	
5/30/2015	8:18	172.90	--	172.90	
5/30/2015	8:19	172.08	--	172.08	
5/30/2015	8:20	171.44	--	171.44	
5/30/2015	8:25	168.55	--	168.55	
5/30/2015	8:30	166.04	--	166.04	
5/30/2015	8:35	163.82	--	163.82	
5/30/2015	8:40	161.62	--	161.62	
5/30/2015	8:45	159.59	--	159.59	
5/30/2015	8:50	157.55	--	157.55	
5/30/2015	8:55	155.51	--	155.51	
5/30/2015	9:00	153.46	--	153.46	
5/30/2015	9:10	149.13	--	149.13	
5/30/2015	9:20	144.48	--	144.48	
5/30/2015	9:30	139.86	--	139.86	
5/30/2015	9:40	135.68	--	135.68	
5/30/2015	9:50	131.84	--	131.84	
5/30/2015	10:00	128.43	--	128.43	
5/30/2015	11:00	113.17	--	113.17	
5/30/2015	12:00	102.77	--	102.77	
5/30/2015	13:00	94.42	--	94.42	
5/30/2015	14:00	87.02	--	87.02	
5/30/2015	15:00	80.10	--	80.10	
5/30/2015	16:00	72.51	--	72.51	
5/30/2015	17:00	63.61	--	63.61	
5/30/2015	18:00	53.20	--	53.20	
5/30/2015	19:00	44.56	--	44.56	
5/30/2015	20:00	37.62	--	37.62	
5/30/2015	21:00	31.87	--	31.87	90% water-level recovery
5/30/2015	22:00	26.89	--	26.89	
5/30/2015	23:00	22.58	--	22.58	
5/31/2015	0:00	18.70	--	18.70	
5/31/2015	1:00	15.25	--	15.25	
5/31/2015	2:00	12.22	--	12.22	
5/31/2015	3:00	9.62	--	9.62	
5/31/2015	4:00	7.42	--	7.42	
5/31/2015	5:00	5.37	--	5.37	
5/31/2015	6:00	3.64	--	3.64	
5/31/2015	7:00	2.17	--	2.17	
5/31/2015	8:00	0.86	--	0.86	
5/31/2015	9:00	0.10	--	0.10	
5/31/2015	10:00	0.00	--	0.00	
5/31/2015	11:00	0.00	--	0.00	
5/31/2015	12:00	0.00	--	0.00	
5/31/2015	13:00	0.00	--	0.00	

**NEW YORK AMERICAN WATER COMPANY
WILD OAKS WATER SYSTEM
LEWISBORO, NEW YORK**

Summary of Water-Level Measurements Collected from Well 4 During
72-Hour Pumping Tests Conducted on Wells 4 and 5, May 18 Through May 30, 2015

Date	Time	Depth to Water (ft btoc)	Elapsed Time (min)	Drawdown (feet)	Comments
5/31/2015	14:00	0.00	--	0.00	
5/31/2015	15:00	0.00	--	0.00	
5/31/2015	16:00	0.00	--	0.00	
5/31/2015	17:00	0.00	--	0.00	
5/31/2015	18:00	0.00	--	0.00	
5/31/2015	19:00	0.00	--	0.00	
5/31/2015	20:00	0.00	--	0.00	
5/31/2015	21:00	0.00	--	0.00	
5/31/2015	22:00	0.00	--	0.00	
5/31/2015	23:00	0.00	--	0.00	
6/1/2015	0:00	0.00	--	0.00	
6/1/2015	1:00	0.00	--	0.00	
6/1/2015	2:00	0.00	--	0.00	
6/1/2015	3:00	0.00	--	0.00	
6/1/2015	4:00	0.00	--	0.00	
6/1/2015	5:00	0.00	--	0.00	
6/1/2015	6:00	0.00	--	0.00	
6/1/2015	7:00	0.00	--	0.00	
6/1/2015	8:00	0.00	--	0.00	
6/1/2015	9:00	0.00	--	0.00	
6/1/2015	10:00	0.00	--	0.00	
6/1/2015	11:00	0.00	--	0.00	
6/1/2015	12:00	0.00	--	0.00	
6/1/2015	13:00	0.00	--	0.00	
6/1/2015	14:00	0.00	--	0.00	
6/1/2015	15:00	0.00	--	0.00	
6/1/2015	16:00	0.00	--	0.00	
6/1/2015	17:00	0.00	--	0.00	
6/1/2015	18:00	0.00	--	0.00	
6/1/2015	19:00	0.00	--	0.00	
6/1/2015	20:00	0.00	--	0.00	
6/1/2015	21:00	0.00	--	0.00	
6/1/2015	22:00	0.00	--	0.00	
6/1/2015	23:00	0.00	--	0.00	
6/2/2015	0:00	0.00	--	0.00	
6/2/2015	1:00	0.00	--	0.00	
6/2/2015	2:00	0.00	--	0.00	
6/2/2015	3:00	0.00	--	0.00	
6/2/2015	4:00	0.00	--	0.00	
6/2/2015	5:00	0.00	--	0.00	
6/2/2015	6:00	0.00	--	0.00	
6/2/2015	7:00	0.00	--	0.00	
6/2/2015	8:00	0.00	--	0.00	
6/2/2015	9:00	0.00	--	0.00	
6/2/2015	10:00	0.00	--	0.00	
6/2/2015	11:00	0.00	--	0.00	
6/2/2015	12:00	0.00	--	0.00	
6/2/2015	13:00	0.00	--	0.00	
6/2/2015	14:00	0.00	--	0.00	
6/2/2015	15:00	0.00	--	0.00	
6/2/2015	16:00	0.00	--	0.00	
6/2/2015	17:00	0.00	--	0.00	
6/2/2015	18:00	0.00	--	0.00	
6/2/2015	19:00	0.00	--	0.00	
6/2/2015	20:00	0.00	--	0.00	
6/2/2015	21:00	0.00	--	0.00	
6/2/2015	22:00	0.00	--	0.00	

**NEW YORK AMERICAN WATER COMPANY
WILD OAKS WATER SYSTEM
LEWISBORO, NEW YORK**

Summary of Water-Level Measurements Collected from Well 4 During
72-Hour Pumping Tests Conducted on Wells 4 and 5, May 18 Through May 30, 2015

Date	Time	Depth to Water (ft btoc)	Elapsed Time (min)	Drawdown (feet)	Comments
6/2/2015	23:00	0.00	--	0.00	
6/3/2015	0:00	0.00	--	0.00	
6/3/2015	1:00	0.00	--	0.00	
6/3/2015	2:00	0.00	--	0.00	
6/3/2015	3:00	0.00	--	0.00	
6/3/2015	4:00	0.00	--	0.00	
6/3/2015	5:00	0.00	--	0.00	
6/3/2015	6:00	0.00	--	0.00	
6/3/2015	7:00	0.00	--	0.00	
6/3/2015	8:00	0.00	--	0.00	
6/3/2015	9:00	0.00	--	0.00	
6/3/2015	10:00	0.00	--	0.00	
6/3/2015	11:00	0.00	--	0.00	
6/3/2015	12:00	0.00	--	0.00	
6/3/2015	13:00	0.00	--	0.00	
6/3/2015	14:00	0.00	--	0.00	
6/3/2015	15:00	0.00	--	0.00	
6/3/2015	16:00	0.00	--	0.00	
6/3/2015	17:00	0.00	--	0.00	
6/3/2015	18:00	0.00	--	0.00	
6/3/2015	19:00	0.00	--	0.00	
6/3/2015	20:00	0.00	--	0.00	
6/3/2015	21:00	0.00	--	0.00	
6/3/2015	22:00	0.00	--	0.00	
6/3/2015	23:00	0.00	--	0.00	
6/4/2015	0:00	0.00	--	0.00	
6/4/2015	1:00	0.00	--	0.00	
6/4/2015	2:00	0.00	--	0.00	
6/4/2015	3:00	0.00	--	0.00	
6/4/2015	4:00	0.00	--	0.00	
6/4/2015	5:00	0.00	--	0.00	
6/4/2015	6:00	0.00	--	0.00	
6/4/2015	7:00	0.00	--	0.00	
6/4/2015	8:00	0.00	--	0.00	
6/4/2015	9:00	0.00	--	0.00	
6/4/2015	10:00	0.00	--	0.00	
6/4/2015	11:00	0.00	--	0.00	
6/4/2015	12:00	0.00	--	0.00	
6/4/2015	13:00	0.00	--	0.00	
6/4/2015	14:00	0.00	--	0.00	
6/4/2015	15:00	0.00	--	0.00	
6/4/2015	16:00	0.00	--	0.00	
6/4/2015	17:00	0.00	--	0.00	
6/4/2015	18:00	0.00	--	0.00	
6/4/2015	19:00	0.00	--	0.00	
6/4/2015	20:00	0.00	--	0.00	
6/4/2015	21:00	0.00	--	0.00	
6/4/2015	22:00	0.00	--	0.00	
6/4/2015	23:00	0.00	--	0.00	
6/5/2015	0:00	0.00	--	0.00	
6/5/2015	1:00	0.00	--	0.00	
6/5/2015	2:00	0.00	--	0.00	
6/5/2015	3:00	0.00	--	0.00	
6/5/2015	4:00	0.00	--	0.00	
6/5/2015	5:00	0.00	--	0.00	
6/5/2015	6:00	0.00	--	0.00	
6/5/2015	7:00	0.00	--	0.00	

**NEW YORK AMERICAN WATER COMPANY
WILD OAKS WATER SYSTEM
LEWISBORO, NEW YORK**

Summary of Water-Level Measurements Collected from Well 4 During
72-Hour Pumping Tests Conducted on Wells 4 and 5, May 18 Through May 30, 2015

Date	Time	Depth to Water (ft btoc)	Elapsed Time (min)	Drawdown (feet)	Comments
6/5/2015	8:00	0.00	--	0.00	
6/5/2015	9:00	0.00	--	0.00	
6/5/2015	10:00	0.00	--	0.00	
6/5/2015	11:00	0.00	--	0.00	
6/5/2015	12:00	0.00	--	0.00	
6/5/2015	13:00	0.00	--	0.00	
6/5/2015	14:00	0.00	--	0.00	
6/5/2015	15:00	0.00	--	0.00	
6/5/2015	16:00	0.00	--	0.00	
6/5/2015	17:00	0.00	--	0.00	
6/5/2015	18:00	0.00	--	0.00	
6/5/2015	19:00	0.00	--	0.00	
6/5/2015	20:00	0.00	--	0.00	
6/5/2015	21:00	0.00	--	0.00	
6/5/2015	22:00	0.00	--	0.00	
6/5/2015	23:00	0.00	--	0.00	
6/6/2015	0:00	0.00	--	0.00	
6/6/2015	1:00	0.00	--	0.00	
6/6/2015	2:00	0.00	--	0.00	
6/6/2015	3:00	0.00	--	0.00	
6/6/2015	4:00	0.00	--	0.00	
6/6/2015	5:00	0.00	--	0.00	
6/6/2015	6:00	0.00	--	0.00	
6/6/2015	7:00	0.00	--	0.00	
6/6/2015	8:00	0.00	--	0.00	
6/6/2015	9:00	0.00	--	0.00	
6/6/2015	10:00	0.00	--	0.00	
6/6/2015	11:00	0.00	--	0.00	
6/6/2015	12:00	0.00	--	0.00	
6/6/2015	13:00	0.00	--	0.00	
6/6/2015	14:00	0.00	--	0.00	
6/6/2015	15:00	0.00	--	0.00	
6/6/2015	16:00	0.00	--	0.00	
6/6/2015	17:00	0.00	--	0.00	
6/6/2015	18:00	0.00	--	0.00	
6/6/2015	19:00	0.00	--	0.00	
6/6/2015	20:00	0.00	--	0.00	
6/6/2015	21:00	0.00	--	0.00	
6/6/2015	22:00	0.00	--	0.00	
6/6/2015	23:00	0.00	--	0.00	
6/7/2015	0:00	0.00	--	0.00	
6/7/2015	1:00	0.00	--	0.00	
6/7/2015	2:00	0.00	--	0.00	
6/7/2015	3:00	0.00	--	0.00	
6/7/2015	4:00	0.00	--	0.00	
6/7/2015	5:00	0.00	--	0.00	
6/7/2015	6:00	0.00	--	0.00	
6/7/2015	7:00	0.00	--	0.00	
6/7/2015	8:00	0.00	--	0.00	
6/7/2015	9:00	0.00	--	0.00	
6/7/2015	10:00	0.00	--	0.00	
6/7/2015	11:00	0.00	--	0.00	
6/7/2015	12:00	0.00	--	0.00	
6/7/2015	13:00	0.00	--	0.00	
6/7/2015	14:00	0.00	--	0.00	
6/7/2015	15:00	0.00	--	0.00	
6/7/2015	16:00	0.00	--	0.00	

**NEW YORK AMERICAN WATER COMPANY
WILD OAKS WATER SYSTEM
LEWISBORO, NEW YORK**

Summary of Water-Level Measurements Collected from Well 4 During
72-Hour Pumping Tests Conducted on Wells 4 and 5, May 18 Through May 30, 2015

Date	Time	Depth to Water (ft btoc)	Elapsed Time (min)	Drawdown (feet)	Comments
6/7/2015	17:00	0.00	--	0.00	
6/7/2015	18:00	0.00	--	0.00	
6/7/2015	19:00	0.00	--	0.00	
6/7/2015	20:00	0.00	--	0.00	
6/7/2015	21:00	0.00	--	0.00	
6/7/2015	22:00	0.00	--	0.00	
6/7/2015	23:00	0.00	--	0.00	
6/8/2015	0:00	0.00	--	0.00	
6/8/2015	1:00	0.00	--	0.00	
6/8/2015	2:00	0.00	--	0.00	
6/8/2015	3:00	0.00	--	0.00	
6/8/2015	4:00	0.00	--	0.00	
6/8/2015	5:00	0.00	--	0.00	
6/8/2015	6:00	0.00	--	0.00	
6/8/2015	7:00	0.00	--	0.00	
6/8/2015	8:00	0.00	--	0.00	
6/8/2015	9:00	0.00	--	0.00	
6/8/2015	10:00	0.00	--	0.00	
6/8/2015	11:00	0.00	--	0.00	
6/8/2015	12:00	0.00	--	0.00	
6/8/2015	13:00	0.00	--	0.00	
6/8/2015	14:00	0.00	--	0.00	
6/8/2015	15:00	0.00	--	0.00	
6/8/2015	16:00	0.00	--	0.00	
6/8/2015	17:00	0.00	--	0.00	
6/8/2015	18:00	0.00	--	0.00	
6/8/2015	19:00	0.00	--	0.00	
6/8/2015	20:00	0.00	--	0.00	
6/8/2015	21:00	0.00	--	0.00	
6/8/2015	22:00	0.00	--	0.00	
6/8/2015	23:00	0.00	--	0.00	
6/9/2015	0:00	0.00	--	0.00	
6/9/2015	1:00	0.00	--	0.00	
6/9/2015	2:00	0.00	--	0.00	
6/9/2015	3:00	0.00	--	0.00	
6/9/2015	4:00	0.00	--	0.00	
6/9/2015	5:00	0.00	--	0.00	
6/9/2015	6:00	0.00	--	0.00	
6/9/2015	7:00	0.00	--	0.00	
6/9/2015	8:00	0.00	--	0.00	
6/9/2015	9:00	0.00	--	0.00	
6/9/2015	10:00	0.00	--	0.00	
6/9/2015	11:00	0.00	--	0.00	
6/9/2015	12:00	0.00	--	0.00	
6/9/2015	13:00	0.00	--	0.00	
6/9/2015	14:00	0.00	--	0.00	
6/9/2015	15:00	0.00	--	0.00	
6/9/2015	16:00	0.00	--	0.00	
6/9/2015	17:00	0.00	--	0.00	
6/9/2015	18:00	0.00	--	0.00	
6/9/2015	19:00	0.00	--	0.00	
6/9/2015	20:00	0.00	--	0.00	
6/9/2015	21:00	0.00	--	0.00	
6/9/2015	22:00	0.00	--	0.00	
6/9/2015	23:00	0.00	--	0.00	
6/10/2015	0:00	0.00	--	0.00	
6/10/2015	1:00	0.00	--	0.00	

**NEW YORK AMERICAN WATER COMPANY
WILD OAKS WATER SYSTEM
LEWISBORO, NEW YORK**

Summary of Water-Level Measurements Collected from Well 4 During
72-Hour Pumping Tests Conducted on Wells 4 and 5, May 18 Through May 30, 2015

Date	Time	Depth to Water (ft btoc)	Elapsed Time (min)	Drawdown (feet)	Comments
6/10/2015	2:00	0.00	--	0.00	
6/10/2015	3:00	0.00	--	0.00	
6/10/2015	4:00	0.00	--	0.00	
6/10/2015	5:00	0.00	--	0.00	
6/10/2015	6:00	0.00	--	0.00	
6/10/2015	7:00	0.00	--	0.00	
6/10/2015	8:00	0.00	--	0.00	
6/10/2015	9:00	0.00	--	0.00	
6/10/2015	10:00	0.00	--	0.00	
6/10/2015	11:00	0.00	--	0.00	
6/10/2015	12:00	0.00	--	0.00	
6/10/2015	13:00	0.00	--	0.00	
6/10/2015	14:00	0.00	--	0.00	
6/10/2015	15:00	0.00	--	0.00	
6/10/2015	16:00	0.00	--	0.00	
6/10/2015	17:00	0.00	--	0.00	
6/10/2015	18:00	0.00	--	0.00	
6/10/2015	19:00	0.00	--	0.00	
6/10/2015	20:00	0.00	--	0.00	
6/10/2015	21:00	0.00	--	0.00	
6/10/2015	22:00	0.00	--	0.00	
6/10/2015	23:00	0.00	--	0.00	
6/11/2015	0:00	0.00	--	0.00	
6/11/2015	1:00	0.00	--	0.00	
6/11/2015	2:00	0.00	--	0.00	
6/11/2015	3:00	0.00	--	0.00	
6/11/2015	4:00	0.00	--	0.00	
6/11/2015	5:00	0.00	--	0.00	
6/11/2015	6:00	0.00	--	0.00	
6/11/2015	7:00	0.00	--	0.00	
6/11/2015	8:00	0.00	--	0.00	
6/11/2015	9:00	0.00	--	0.00	
6/11/2015	10:00	0.00	--	0.00	
6/11/2015	11:00	0.00	--	0.00	
6/11/2015	12:00	0.00	--	0.00	Pressure transducer removed from Well 4.

ft btoc feet below top of casing

gpm gallons per minute

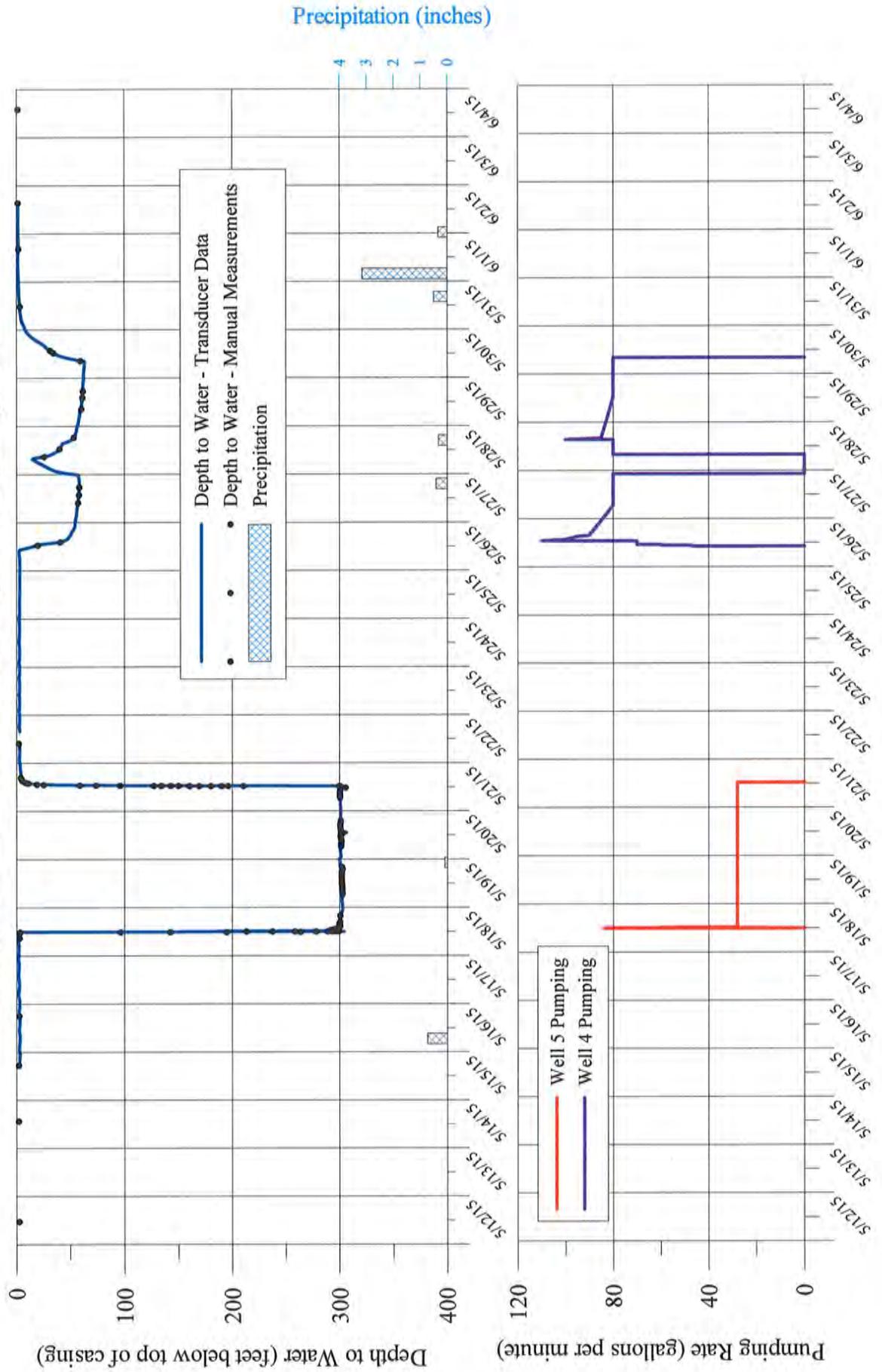
min minutes

K:\Jobs\American Water Co\Wild Oaks\72-Hour Pumping Test (May 2015)\Tables\Well 4 table.doc

APPENDIX III

NEW YORK AMERICAN WATER COMPANY
 WILD OAKS WATER SYSTEM
 LEWISBORO, NEW YORK

Hydrograph of Water-Level Measurements Collected from Well 5 During 72-Hour Pumping Test Program
 Conducted on Well 4 and Well 5 from May 18 Through May 30, 2015



**NEW YORK AMERICAN WATER COMPANY
WILD OAKS WATER SYSTEM
LEWISBORO, NEW YORK**

Summary of Water-Level Measurements Collected from Well 5 During
72-Hour Pumping Tests Conducted on Wells 4 and 5, May 18 Through May 30, 2015

Date	Time	Depth to Water (ft btoc)	Elapsed Time (min)	Drawdown (feet)	Comments
5/15/2015	18:00	2.52	--	--	Pressure transducers installed in Well 5.
5/15/2015	19:00	2.71	--	--	
5/15/2015	20:00	2.78	--	--	
5/15/2015	21:00	2.87	--	--	
5/15/2015	22:00	2.92	--	--	
5/15/2015	23:00	2.94	--	--	
5/16/2015	0:00	2.56	--	--	
5/16/2015	1:00	2.41	--	--	
5/16/2015	2:00	2.29	--	--	
5/16/2015	3:00	2.68	--	--	
5/16/2015	4:00	2.80	--	--	
5/16/2015	5:00	2.90	--	--	
5/16/2015	6:00	2.92	--	--	
5/16/2015	7:00	3.00	--	--	
5/16/2015	8:00	3.03	--	--	
5/16/2015	9:00	2.66	--	--	
5/16/2015	10:00	2.45	--	--	
5/16/2015	11:00	2.36	--	--	
5/16/2015	12:00	2.65	--	--	
5/16/2015	13:00	2.79	--	--	
5/16/2015	14:00	2.83	--	--	
5/16/2015	15:00	2.85	--	--	
5/16/2015	16:00	2.76	--	--	
5/16/2015	17:00	2.83	--	--	
5/16/2015	18:00	2.47	--	--	
5/16/2015	19:00	2.19	--	--	
5/16/2015	20:00	2.12	--	--	
5/16/2015	21:00	2.48	--	--	
5/16/2015	22:00	2.57	--	--	
5/16/2015	23:00	2.64	--	--	
5/17/2015	0:00	2.62	--	--	
5/17/2015	1:00	2.57	--	--	
5/17/2015	2:00	2.55	--	--	
5/17/2015	3:00	2.12	--	--	
5/17/2015	4:00	1.91	--	--	
5/17/2015	5:00	1.72	--	--	
5/17/2015	6:00	2.07	--	--	
5/17/2015	7:00	2.19	--	--	
5/17/2015	8:00	2.22	--	--	
5/17/2015	9:00	2.31	--	--	
5/17/2015	10:00	2.35	--	--	
5/17/2015	11:00	2.34	--	--	
5/17/2015	12:00	1.94	--	--	
5/17/2015	13:00	1.74	--	--	
5/17/2015	14:00	1.59	--	--	
5/17/2015	15:00	1.92	--	--	
5/17/2015	16:00	2.00	--	--	
5/17/2015	17:00	2.05	--	--	
5/17/2015	18:00	2.10	--	--	
5/17/2015	19:00	2.12	--	--	
5/17/2015	20:00	2.14	--	--	
5/17/2015	21:00	1.77	--	--	
5/17/2015	22:00	1.58	--	--	
5/17/2015	23:00	1.53	--	--	
5/18/2015	0:00	1.82	--	--	
5/18/2015	1:00	1.98	--	--	
5/18/2015	2:00	2.03	--	--	

**NEW YORK AMERICAN WATER COMPANY
WILD OAKS WATER SYSTEM
LEWISBORO, NEW YORK**

Summary of Water-Level Measurements Collected from Well 5 During
72-Hour Pumping Tests Conducted on Wells 4 and 5, May 18 Through May 30, 2015

Date	Time	Depth to Water (ft btoc)	Elapsed Time (min)	Drawdown (feet)	Comments
5/18/2015	3:00	2.03	--	--	
5/18/2015	4:00	2.04	--	--	
5/18/2015	5:00	2.01	--	--	
5/18/2015	6:00	1.68	--	--	
5/18/2015	7:00	1.50	--	--	
5/18/2015	8:00	1.40	--	--	
5/18/2015	9:00	1.76	--	--	
5/18/2015	10:00	1.97	--	--	
5/18/2015	11:00	3.12	--	--	
5/18/2015	11:37	3.10	--	--	
5/18/2015	11:38	96.25	1	93.15	Pump in Well 5 started.
5/18/2015	11:39	96.25	2	93.15	Pumping rate 84 gpm.
5/18/2015	11:40	142.32	3	139.22	
5/18/2015	11:41	194.58	4	191.48	
5/18/2015	11:44	263.46	7	260.36	
5/18/2015	11:49	305.37	12	302.27	
5/18/2015	11:50	--	13	--	Pump shut down.
5/18/2015	11:58	288.85	21	285.75	
5/18/2015	11:59	187.63	22	184.53	
5/18/2015	12:00	213.27	23	210.17	Pump restarted.
5/18/2015	12:01	237.36	24	234.26	
5/18/2015	12:02	258.33	25	255.23	
5/18/2015	12:03	278.19	26	275.09	
5/18/2015	12:04	291.91	27	288.81	
5/18/2015	12:05	293.38	28	290.28	
5/18/2015	12:08	296.65	31	293.55	
5/18/2015	12:09	298.93	32	295.83	Pumping rate 28 gpm.
5/18/2015	12:12	298.05	35	294.95	
5/18/2015	12:13	296.09	36	292.99	
5/18/2015	12:14	295.50	37	292.40	
5/18/2015	12:15	294.50	38	291.40	Pumping rate 28 gpm.
5/18/2015	12:20	291.38	43	288.28	
5/18/2015	12:25	290.90	48	287.80	Pumping rate 28 gpm.
5/18/2015	12:30	290.85	53	287.75	
5/18/2015	12:35	291.58	58	288.48	Pumping rate 28 gpm.
5/18/2015	12:40	292.25	63	289.15	
5/18/2015	12:45	292.95	68	289.85	Pumping rate 28 gpm.
5/18/2015	12:55	294.33	73	291.23	Pumping rate 28 gpm.
5/18/2015	13:00	295.07	78	291.97	
5/18/2015	13:05	295.54	83	292.44	Pumping rate 28 gpm.
5/18/2015	13:10	296.50	88	293.40	
5/18/2015	13:15	297.05	93	293.95	Pumping rate 28 gpm.
5/18/2015	13:25	297.73	103	294.63	
5/18/2015	13:35	298.95	113	295.85	Pumping rate 28 gpm.
5/18/2015	13:45	299.57	123	296.47	Pumping rate 28 gpm.
5/18/2015	13:55	299.42	133	296.32	Pumping rate 28 gpm.
5/18/2015	14:00	300.60	138	297.50	Pumping rate 28 gpm.
5/18/2015	15:00	301.56	198	298.46	Pumping rate 28 gpm.
5/18/2015	16:00	300.93	258	297.83	Pumping rate 28 gpm.
5/18/2015	17:00	301.47	318	298.37	Pumping rate 28 gpm.
5/18/2015	18:00	301.58	378	298.48	Pumping rate 28 gpm.
5/18/2015	19:00	301.81	438	298.71	Pumping rate 28 gpm.
5/18/2015	20:00	300.61	498	297.51	Pumping rate 28 gpm.
5/18/2015	21:00	301.24	558	298.14	Pumping rate 28 gpm.
5/18/2015	22:00	302.51	618	299.41	Pumping rate 28 gpm.
5/18/2015	23:00	302.86	678	299.76	Pumping rate 28 gpm.
5/19/2015	0:00	302.84	738	299.74	Pumping rate 28 gpm.

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Date	Time	Depth to Water (ft btoc)	Elapsed Time (min)	Drawdown (feet)	Comments
5/19/2015	1:00	302.64	798	299.54	Pumping rate 28 gpm.
5/19/2015	2:00	302.62	858	299.52	Pumping rate 28 gpm.
5/19/2015	3:00	302.07	918	298.97	Pumping rate 28 gpm.
5/19/2015	4:00	302.19	978	299.09	Pumping rate 28 gpm.
5/19/2015	5:00	302.20	1038	299.10	Pumping rate 28 gpm.
5/19/2015	6:00	302.14	1098	299.04	Pumping rate 28 gpm.
5/19/2015	7:00	302.28	1158	299.18	Pumping rate 28 gpm.
5/19/2015	8:00	302.17	1218	299.07	Pumping rate 28 gpm.
5/19/2015	9:00	302.13	1278	299.03	Pumping rate 28 gpm.
5/19/2015	10:00	302.18	1338	299.08	Pumping rate 28 gpm.
5/19/2015	11:00	301.98	1398	298.88	Pumping rate 28 gpm.
5/19/2015	12:00	301.78	1458	298.68	Pumping rate 28 gpm.
5/19/2015	13:00	301.74	1518	298.64	Pumping rate 28 gpm.
5/19/2015	14:00	302.00	1578	298.90	Pumping rate 28 gpm.
5/19/2015	15:00	301.72	1638	298.62	Pumping rate 28 gpm.
5/19/2015	16:00	301.68	1698	298.58	Pumping rate 28 gpm.
5/19/2015	17:00	301.70	1758	298.60	Pumping rate 28 gpm.
5/19/2015	18:00	302.02	1818	298.92	Pumping rate 28 gpm.
5/19/2015	19:00	301.81	1878	298.71	Pumping rate 28 gpm.
5/19/2015	20:00	300.97	1938	297.87	Pumping rate 28 gpm.
5/19/2015	21:00	300.25	1998	297.15	Pumping rate 28 gpm.
5/19/2015	22:00	300.48	2058	297.38	Pumping rate 28 gpm.
5/19/2015	23:00	300.14	2118	297.04	Pumping rate 28 gpm.
5/20/2015	0:00	300.01	2178	296.91	Pumping rate 28 gpm.
5/20/2015	1:00	301.28	2238	298.18	Pumping rate 28 gpm.
5/20/2015	2:00	301.34	2298	298.24	Pumping rate 28 gpm.
5/20/2015	3:00	300.98	2358	297.88	Pumping rate 28 gpm.
5/20/2015	4:00	300.72	2418	297.62	Pumping rate 28 gpm.
5/20/2015	5:00	300.65	2478	297.55	Pumping rate 28 gpm.
5/20/2015	6:00	301.47	2538	298.37	Pumping rate 28 gpm.
5/20/2015	7:00	301.43	2598	298.33	Pumping rate 28 gpm.
5/20/2015	8:00	301.29	2658	298.19	Pumping rate 28 gpm.
5/20/2015	9:00	301.50	2718	298.40	Pumping rate 28 gpm.
5/20/2015	10:00	300.96	2778	297.86	Pumping rate 28 gpm.
5/20/2015	11:00	300.61	2838	297.51	Pumping rate 28 gpm.
5/20/2015	12:00	300.67	2898	297.57	Pumping rate 28 gpm.
5/20/2015	13:00	302.94	2958	299.84	Pumping rate 28 gpm.
5/20/2015	14:00	300.84	3018	297.74	Pumping rate 28 gpm.
5/20/2015	15:00	300.64	3078	297.54	Pumping rate 28 gpm.
5/20/2015	16:00	300.71	3138	297.61	Pumping rate 28 gpm.
5/20/2015	17:00	300.37	3198	297.27	Pumping rate 28 gpm.
5/20/2015	18:00	300.77	3258	297.67	Pumping rate 28 gpm.
5/20/2015	19:00	300.98	3318	297.88	Pumping rate 28 gpm.
5/20/2015	20:00	300.93	3378	297.83	Pumping rate 28 gpm.
5/20/2015	21:00	300.91	3438	297.81	Pumping rate 28 gpm.
5/20/2015	22:00	300.95	3498	297.85	Pumping rate 28 gpm.
5/20/2015	23:00	300.94	3558	297.84	Pumping rate 28 gpm.
5/21/2015	0:00	301.23	3618	298.13	Pumping rate 28 gpm.
5/21/2015	1:00	301.11	3678	298.01	Pumping rate 28 gpm.
5/21/2015	2:00	300.87	3738	297.77	Pumping rate 28 gpm.
5/21/2015	3:00	300.64	3798	297.54	Pumping rate 28 gpm.
5/21/2015	4:00	300.72	3858	297.62	Pumping rate 28 gpm.
5/21/2015	5:00	300.62	3918	297.52	Pumping rate 28 gpm.
5/21/2015	6:00	300.51	3978	297.41	Pumping rate 28 gpm.
5/21/2015	7:00	300.14	4038	297.04	Pumping rate 28 gpm.
5/21/2015	8:00	300.08	4098	296.98	Pumping rate 28 gpm.
5/21/2015	9:00	300.03	4158	296.93	Pumping rate 28 gpm.

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Date	Time	Depth to Water (ft btoc)	Elapsed Time (min)	Drawdown (feet)	Comments
5/21/2015	10:00	300.29	4218	297.19	Pumping rate 28 gpm.
5/21/2015	11:00	300.28	4278	297.18	Pumping rate 28 gpm.
5/21/2015	12:00	301.06	4338	297.96	Pumping rate 28 gpm.
5/21/2015	12:12	300.41	4350	297.31	Pumping rate 28 gpm.
5/21/2015	12:13	300.39	4351	297.29	Pumping rate 28 gpm.
5/21/2015	12:14	293.96	--	290.86	Pump in Well 5 shut down.
5/21/2015	12:15	275.64	--	272.54	
5/21/2015	12:16	259.16	--	256.06	
5/21/2015	12:17	243.99	--	240.89	
5/21/2015	12:18	229.86	--	226.76	
5/21/2015	12:19	216.73	--	213.63	
5/21/2015	12:20	205.32	--	202.22	
5/21/2015	12:21	193.86	--	190.76	
5/21/2015	12:22	187.09	--	183.99	
5/21/2015	12:23	176.31	--	173.21	
5/21/2015	12:24	166.37	--	163.27	
5/21/2015	12:25	157.44	--	154.34	
5/21/2015	12:26	148.60	--	145.50	
5/21/2015	12:27	140.16	--	137.06	
5/21/2015	12:28	132.49	--	129.39	
5/21/2015	12:29	125.33	--	122.23	
5/21/2015	12:30	118.87	--	115.77	
5/21/2015	12:35	92.71	--	89.61	
5/21/2015	12:40	72.47	--	69.37	
5/21/2015	12:45	55.64	--	52.54	
5/21/2015	12:50	43.72	--	40.62	
5/21/2015	12:55	35.24	--	32.14	
5/21/2015	13:00	29.11	--	26.01	90% water-level recovery
5/21/2015	13:10	21.21	--	18.11	
5/21/2015	13:20	16.66	--	13.56	
5/21/2015	13:30	13.74	--	10.64	
5/21/2015	13:40	11.68	--	8.58	
5/21/2015	13:50	10.12	--	7.02	
5/21/2015	14:00	8.86	--	5.76	
5/21/2015	15:00	5.83	--	2.73	
5/21/2015	16:00	4.54	--	1.44	
5/21/2015	17:00	3.80	--	0.70	
5/21/2015	18:00	3.80	--	0.70	
5/21/2015	19:00	3.63	--	0.53	
5/21/2015	20:00	3.49	--	0.39	
5/21/2015	21:00	3.33	--	0.23	
5/21/2015	22:00	3.21	--	0.11	
5/21/2015	23:00	3.09	--	-0.01	
5/22/2015	0:00	2.73	--	-0.37	
5/22/2015	1:00	2.44	--	-0.66	
5/22/2015	2:00	2.34	--	-0.77	
5/22/2015	3:00	2.59	--	-0.51	
5/22/2015	4:00	2.62	--	-0.48	
5/22/2015	5:00	2.73	--	-0.37	
5/22/2015	6:00	2.73	--	-0.37	
5/22/2015	7:00	2.73	--	-0.37	
5/22/2015	8:00	2.76	--	-0.34	
5/22/2015	9:00	2.43	--	-0.67	
5/22/2015	16:00	2.80	--	-0.30	
5/22/2015	17:00	2.33	--	-0.77	
5/22/2015	18:00	2.14	--	-0.96	
5/22/2015	19:00	2.43	--	-0.67	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time (min)	Drawdown (feet)	Comments
5/22/2015	20:00	2.58	--	-0.53	
5/22/2015	21:00	2.63	--	-0.48	
5/22/2015	22:00	2.66	--	-0.44	
5/22/2015	23:00	2.68	--	-0.42	
5/23/2015	0:00	2.69	--	-0.41	
5/23/2015	1:00	2.29	--	-0.81	
5/23/2015	2:00	2.10	--	-1.00	
5/23/2015	3:00	2.42	--	-0.68	
5/23/2015	4:00	2.58	--	-0.52	
5/23/2015	5:00	2.62	--	-0.48	
5/23/2015	6:00	2.64	--	-0.46	
5/23/2015	7:00	2.65	--	-0.45	
5/23/2015	8:00	2.66	--	-0.44	
5/23/2015	9:00	2.27	--	-0.83	
5/23/2015	10:00	2.12	--	-0.99	
5/23/2015	11:00	2.44	--	-0.66	
5/23/2015	12:00	2.58	--	-0.52	
5/23/2015	13:00	2.61	--	-0.49	
5/23/2015	14:00	2.66	--	-0.44	
5/23/2015	15:00	2.68	--	-0.42	
5/23/2015	16:00	2.67	--	-0.43	
5/23/2015	17:00	2.26	--	-0.84	
5/23/2015	18:00	2.07	--	-1.03	
5/23/2015	19:00	2.39	--	-0.71	
5/23/2015	20:00	2.51	--	-0.59	
5/23/2015	21:00	2.58	--	-0.52	
5/23/2015	22:00	2.60	--	-0.50	
5/23/2015	23:00	2.62	--	-0.48	
5/24/2015	0:00	2.64	--	-0.46	
5/24/2015	1:00	2.25	--	-0.85	
5/24/2015	2:00	2.07	--	-1.03	
5/24/2015	3:00	2.40	--	-0.70	
5/24/2015	4:00	2.53	--	-0.57	
5/24/2015	5:00	2.58	--	-0.52	
5/24/2015	6:00	2.63	--	-0.48	
5/24/2015	7:00	2.63	--	-0.47	
5/24/2015	8:00	2.65	--	-0.45	
5/24/2015	9:00	2.69	--	-0.41	
5/24/2015	10:00	2.69	--	-0.41	
5/24/2015	11:00	2.29	--	-0.82	
5/24/2015	12:00	2.11	--	-0.99	
5/24/2015	13:00	2.04	--	-1.06	
5/24/2015	14:00	2.39	--	-0.71	
5/24/2015	15:00	2.55	--	-0.55	
5/24/2015	16:00	2.60	--	-0.50	
5/24/2015	17:00	2.64	--	-0.46	
5/24/2015	18:00	2.66	--	-0.44	
5/24/2015	19:00	2.67	--	-0.43	
5/24/2015	20:00	2.68	--	-0.42	
5/24/2015	21:00	2.69	--	-0.41	
5/24/2015	22:00	2.29	--	-0.81	
5/24/2015	23:00	2.12	--	-0.98	
5/25/2015	0:00	2.03	--	-1.07	
5/25/2015	1:00	2.39	--	-0.71	
5/25/2015	2:00	2.54	--	-0.56	
5/25/2015	3:00	2.59	--	-0.51	
5/25/2015	4:00	2.64	--	-0.46	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time (min)	Drawdown (feet)	Comments
5/25/2015	5:00	2.67	--	-0.43	
5/25/2015	6:00	2.68	--	-0.42	
5/25/2015	7:00	2.69	--	-0.41	
5/25/2015	8:00	2.68	--	-0.43	
5/25/2015	9:00	2.67	--	-0.43	
5/25/2015	10:00	2.72	--	-0.38	
5/25/2015	11:00	2.74	--	-0.36	
5/25/2015	12:00	2.74	--	-0.36	
5/25/2015	13:00	2.75	--	-0.35	
5/25/2015	14:00	2.76	--	-0.34	
5/25/2015	15:00	2.77	--	-0.34	
5/25/2015	16:00	2.78	--	-0.32	
5/25/2015	17:00	2.79	--	-0.31	
5/25/2015	18:00	2.79	--	-0.31	
5/25/2015	19:00	2.81	--	-0.29	
5/25/2015	20:00	2.82	--	-0.28	
5/25/2015	21:00	2.81	--	-0.30	
5/25/2015	22:00	2.82	--	-0.29	
5/25/2015	23:00	2.80	--	-0.30	
5/26/2015	0:00	2.83	--	-0.27	
5/26/2015	1:00	2.80	--	-0.30	
5/26/2015	2:00	2.80	--	-0.30	
5/26/2015	3:00	2.81	--	-0.29	
5/26/2015	4:00	2.81	--	-0.29	
5/26/2015	5:00	2.80	--	-0.30	
5/26/2015	6:00	2.81	--	-0.29	
5/26/2015	7:00	2.36	--	-0.74	
5/26/2015	8:00	2.23	--	-0.87	
5/26/2015	9:00	2.16	--	-0.94	
5/26/2015	10:00	2.52	--	-0.58	
5/26/2015	11:00	9.03	--	5.93	Pump in Well 4 started at 10:08.
5/26/2015	12:00	15.86	--	12.76	
5/26/2015	13:00	23.91	--	20.81	
5/26/2015	14:00	38.97	--	35.87	
5/26/2015	15:00	45.44	--	42.34	
5/26/2015	16:00	48.24	--	45.14	
5/26/2015	17:00	49.57	--	46.47	
5/26/2015	18:00	50.69	--	47.59	
5/26/2015	19:00	51.44	--	48.34	
5/26/2015	20:00	52.60	--	49.50	
5/26/2015	21:00	53.66	--	50.56	
5/26/2015	22:00	54.25	--	51.15	
5/26/2015	23:00	54.49	--	51.39	
5/27/2015	0:00	54.51	--	51.41	
5/27/2015	1:00	54.82	--	51.72	
5/27/2015	2:00	55.18	--	52.08	
5/27/2015	3:00	55.65	--	52.55	
5/27/2015	4:00	55.83	--	52.73	
5/27/2015	5:00	55.91	--	52.81	
5/27/2015	6:00	56.22	--	53.12	
5/27/2015	7:00	56.39	--	53.29	
5/27/2015	8:00	56.79	--	53.69	
5/27/2015	9:00	57.12	--	54.02	
5/27/2015	10:00	57.25	--	54.15	
5/27/2015	11:00	57.47	--	54.37	
5/27/2015	12:00	57.71	--	54.61	
5/27/2015	13:00	57.87	--	54.77	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time (min)	Drawdown (feet)	Comments
5/27/2015	14:00	58.06	--	54.96	
5/27/2015	15:00	58.12	--	55.02	
5/27/2015	16:00	58.21	--	55.11	
5/27/2015	17:00	58.17	--	55.07	
5/27/2015	18:00	58.29	--	55.19	
5/27/2015	19:00	58.40	--	55.30	
5/27/2015	20:00	58.35	--	55.25	
5/27/2015	21:00	58.28	--	55.18	
5/27/2015	22:00	58.00	--	54.90	Pump in Well 4 removed 22:15.
5/27/2015	23:00	57.95	--	54.85	
5/28/2015	0:00	51.73	--	48.63	
5/28/2015	1:00	40.15	--	37.05	
5/28/2015	2:00	34.04	--	30.94	
5/28/2015	3:00	29.93	--	26.83	
5/28/2015	4:00	26.50	--	23.40	
5/28/2015	5:00	22.99	--	19.89	
5/28/2015	6:00	19.41	--	16.31	
5/28/2015	7:00	16.10	--	13.00	
5/28/2015	8:00	16.55	--	13.45	Pump in Well 4 reinstalled and restarted at 7:26.
5/28/2015	9:00	27.56	--	24.46	
5/28/2015	10:00	33.29	--	30.19	
5/28/2015	11:00	36.78	--	33.68	
5/28/2015	12:00	38.95	--	35.85	
5/28/2015	13:00	40.57	--	37.47	
5/28/2015	14:00	41.81	--	38.71	
5/28/2015	15:00	42.82	--	39.72	
5/28/2015	16:00	47.08	--	43.98	
5/28/2015	17:00	50.65	--	47.55	
5/28/2015	18:00	52.60	--	49.50	
5/28/2015	19:00	53.85	--	50.75	
5/28/2015	20:00	54.79	--	51.69	
5/28/2015	21:00	55.55	--	52.45	
5/28/2015	22:00	55.88	--	52.78	
5/28/2015	23:00	56.23	--	53.13	
5/29/2015	0:00	56.64	--	53.54	
5/29/2015	1:00	57.36	--	54.26	
5/29/2015	2:00	57.65	--	54.55	
5/29/2015	3:00	58.01	--	54.91	
5/29/2015	4:00	58.31	--	55.21	
5/29/2015	5:00	58.66	--	55.56	
5/29/2015	6:00	58.82	--	55.72	
5/29/2015	7:00	59.16	--	56.06	
5/29/2015	8:00	59.90	--	56.80	
5/29/2015	9:00	60.22	--	57.12	
5/29/2015	10:00	60.48	--	57.38	
5/29/2015	11:00	60.66	--	57.56	
5/29/2015	12:00	60.79	--	57.69	
5/29/2015	13:00	60.97	--	57.87	
5/29/2015	14:00	61.11	--	58.01	
5/29/2015	15:00	61.18	--	58.08	
5/29/2015	16:00	61.24	--	58.14	
5/29/2015	17:00	61.43	--	58.33	
5/29/2015	18:00	61.70	--	58.60	
5/29/2015	19:00	61.81	--	58.71	
5/29/2015	20:00	61.90	--	58.80	
5/29/2015	21:00	61.98	--	58.88	
5/29/2015	22:00	62.13	--	59.03	

NEW YORK AMERICAN WATER COMPANY
WILD OAKS WATER SYSTEM
LEWISBORO, NEW YORK

Summary of Water-Level Measurements Collected from Well 5 During
72-Hour Pumping Tests Conducted on Wells 4 and 5, May 18 Through May 30, 2015

Date	Time	Depth to Water (ft btoc)	Elapsed Time (min)	Drawdown (feet)	Comments
5/29/2015	23:00	62.31	--	59.21	
5/30/2015	0:00	62.29	--	59.19	
5/30/2015	1:00	62.21	--	59.11	
5/30/2015	2:00	62.23	--	59.13	
5/30/2015	3:00	62.53	--	59.43	
5/30/2015	4:00	62.75	--	59.65	
5/30/2015	5:00	62.91	--	59.81	
5/30/2015	6:00	63.06	--	59.96	
5/30/2015	7:00	63.17	--	60.07	
5/30/2015	8:00	63.34	--	60.24	Pump in Well 4 shut down at 8:02.
5/30/2015	9:00	53.64	--	50.54	
5/30/2015	10:00	45.45	--	42.35	
5/30/2015	11:00	39.59	--	36.49	
5/30/2015	12:00	35.63	--	32.53	
5/30/2015	13:00	32.60	--	29.50	
5/30/2015	14:00	30.06	--	26.96	
5/30/2015	15:00	27.80	--	24.70	
5/30/2015	16:00	25.56	--	22.46	
5/30/2015	17:00	23.08	--	19.98	
5/30/2015	18:00	20.04	--	16.94	
5/30/2015	19:00	17.09	--	13.99	
5/30/2015	20:00	14.56	--	11.46	
5/30/2015	21:00	12.44	--	9.34	
5/30/2015	22:00	10.68	--	7.58	
5/30/2015	23:00	9.11	--	6.01	
5/31/2015	0:00	8.08	--	4.98	
5/31/2015	1:00	7.33	--	4.23	
5/31/2015	2:00	6.69	--	3.59	
5/31/2015	3:00	5.68	--	2.58	
5/31/2015	4:00	4.95	--	1.85	
5/31/2015	5:00	4.34	--	1.24	
5/31/2015	6:00	4.17	--	1.07	
5/31/2015	7:00	3.85	--	0.75	
5/31/2015	8:00	3.53	--	0.43	
5/31/2015	9:00	3.25	--	0.15	
5/31/2015	10:00	3.12	--	0.02	
5/31/2015	11:00	3.04	--	-0.06	
5/31/2015	12:00	3.02	--	-0.08	
5/31/2015	13:00	2.95	--	-0.15	
5/31/2015	14:00	2.51	--	-0.59	
5/31/2015	15:00	2.35	--	-0.75	
5/31/2015	16:00	2.20	--	-0.91	
5/31/2015	17:00	2.06	--	-1.04	
5/31/2015	18:00	2.04	--	-1.06	
5/31/2015	19:00	1.99	--	-1.11	
5/31/2015	20:00	1.94	--	-1.16	
5/31/2015	21:00	1.90	--	-1.21	
5/31/2015	22:00	1.82	--	-1.28	
5/31/2015	23:00	1.78	--	-1.32	
6/1/2015	0:00	1.73	--	-1.37	
6/1/2015	1:00	1.64	--	-1.46	
6/1/2015	2:00	1.59	--	-1.51	
6/1/2015	3:00	1.54	--	-1.56	
6/1/2015	4:00	1.52	--	-1.58	
6/1/2015	5:00	1.48	--	-1.62	
6/1/2015	6:00	1.39	--	-1.71	
6/1/2015	7:00	1.40	--	-1.70	

**NEW YORK AMERICAN WATER COMPANY
WILD OAKS WATER SYSTEM
LEWISBORO, NEW YORK**

Summary of Water-Level Measurements Collected from Well 5 During
72-Hour Pumping Tests Conducted on Wells 4 and 5, May 18 Through May 30, 2015

Date	Time	Depth to Water (ft btoc)	Elapsed Time (min)	Drawdown (feet)	Comments
6/1/2015	8:00	1.38	--	-1.72	
6/1/2015	9:00	1.34	--	-1.76	
6/1/2015	10:00	1.32	--	-1.78	
6/1/2015	11:00	1.26	--	-1.84	
6/1/2015	12:00	1.23	--	-1.87	
6/1/2015	13:00	1.17	--	-1.93	
6/1/2015	14:00	1.12	--	-1.98	
6/1/2015	15:00	1.49	--	-1.62	
6/1/2015	16:00	1.55	--	-1.56	
6/1/2015	17:00	1.55	--	-1.56	
6/1/2015	18:00	1.58	--	-1.52	
6/1/2015	19:00	1.55	--	-1.55	
6/1/2015	20:00	1.57	--	-1.54	
6/1/2015	21:00	1.60	--	-1.50	
6/1/2015	22:00	1.53	--	-1.57	
6/1/2015	23:00	1.49	--	-1.61	
6/2/2015	0:00	1.50	--	-1.60	
6/2/2015	1:00	1.51	--	-1.59	
6/2/2015	2:00	1.42	--	-1.68	
6/2/2015	3:00	1.40	--	-1.70	
6/2/2015	4:00	1.39	--	-1.71	
6/2/2015	5:00	1.39	--	-1.71	
6/2/2015	6:00	1.38	--	-1.72	
6/2/2015	7:00	1.37	--	-1.73	
6/2/2015	8:00	1.39	--	-1.71	
6/2/2015	9:00	1.40	--	-1.70	
6/2/2015	10:00	1.41	--	-1.69	
6/2/2015	11:00	1.40	--	-1.70	
6/2/2015	12:00	1.42	--	-1.68	
6/2/2015	13:00	1.38	--	-1.72	
6/2/2015	14:00	1.36	--	-1.74	
6/2/2015	15:00	1.32	--	-1.78	

ft btoc feet below top of casing

gpm gallons per minute

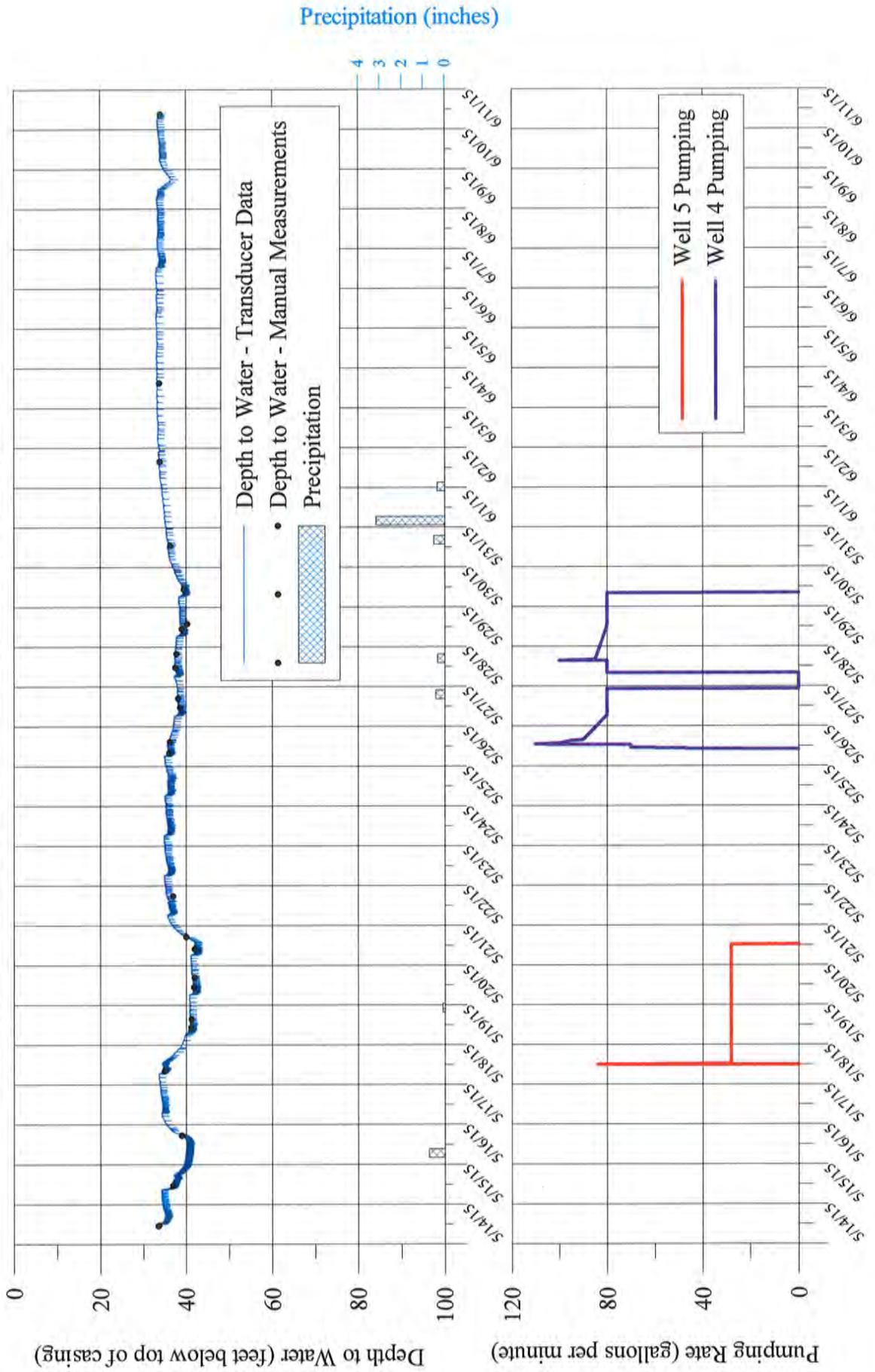
min minute

K:\Jobs\American Water Co\Wild Oaks\72-Hour Pumping Test (May 2015)\Tables\Well 5.doc

APPENDIX IV

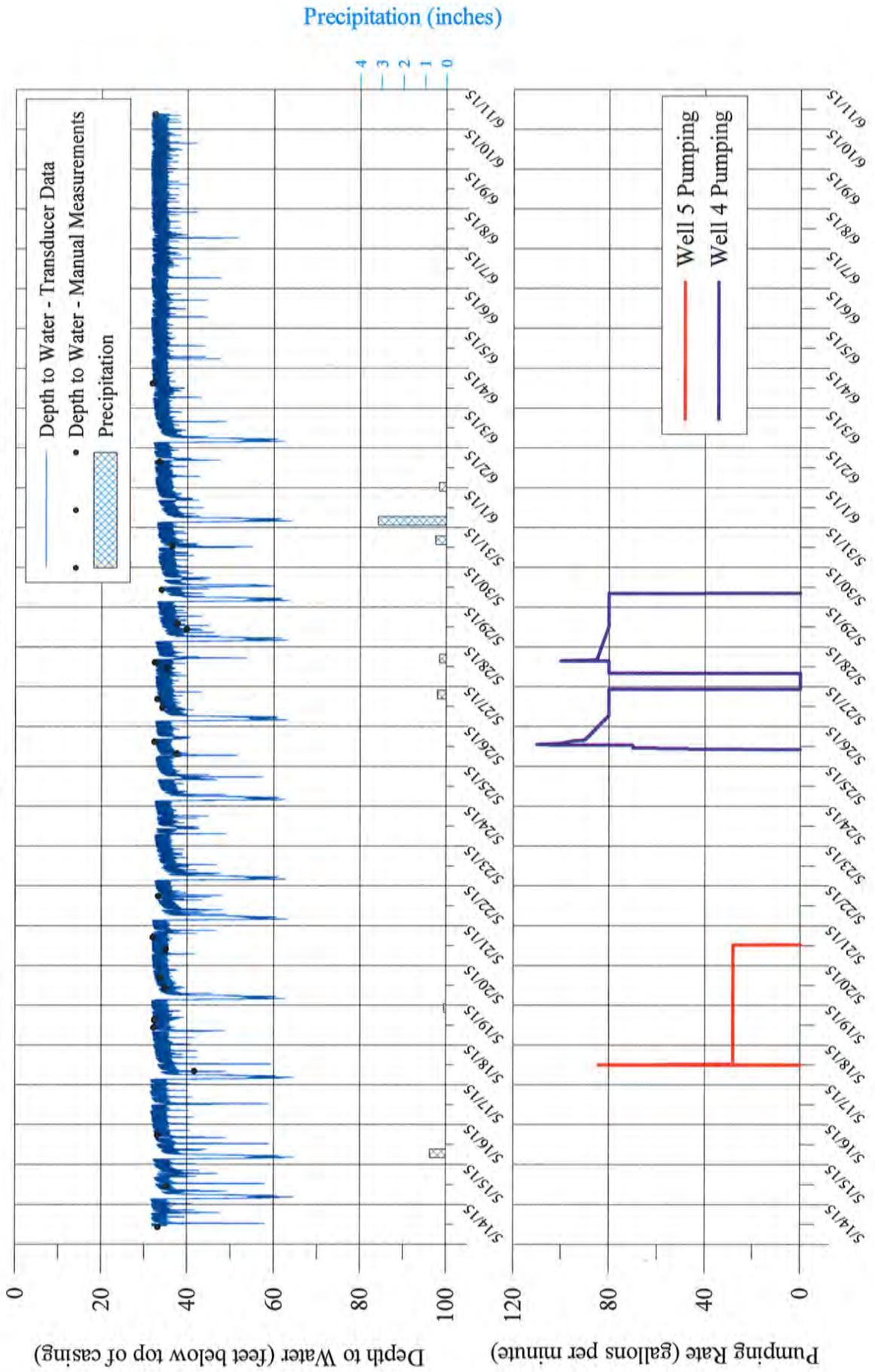
NEW YORK AMERICAN WATER COMPANY
 WILD OAKS WATER SYSTEM
 LEWISBORO, NEW YORK

Hydrograph of Water-Level Measurements Collected from Well at 73 Nash Road During 72-Hour Pumping Test Program Conducted on Well 4 and Well 5 from May 18 Through May 30, 2015



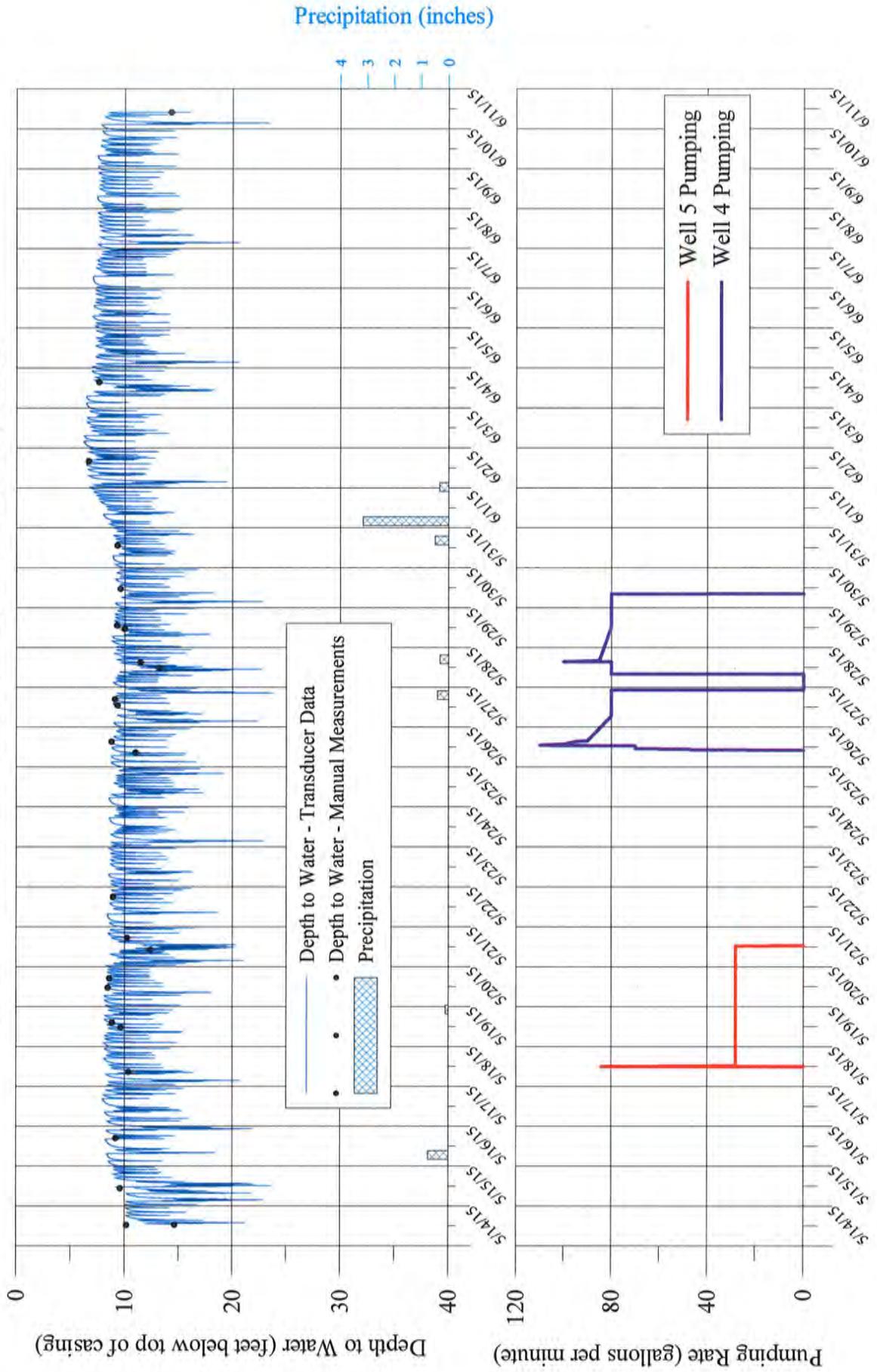
NEW YORK AMERICAN WATER COMPANY
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 LEWISBORO, NEW YORK

Hydrograph of Water-Level Measurements Collected from Well at 79 Nash Road During 72-Hour Pumping Test Program Conducted on Well 4 and Well 5 from May 18 Through May 30, 2015



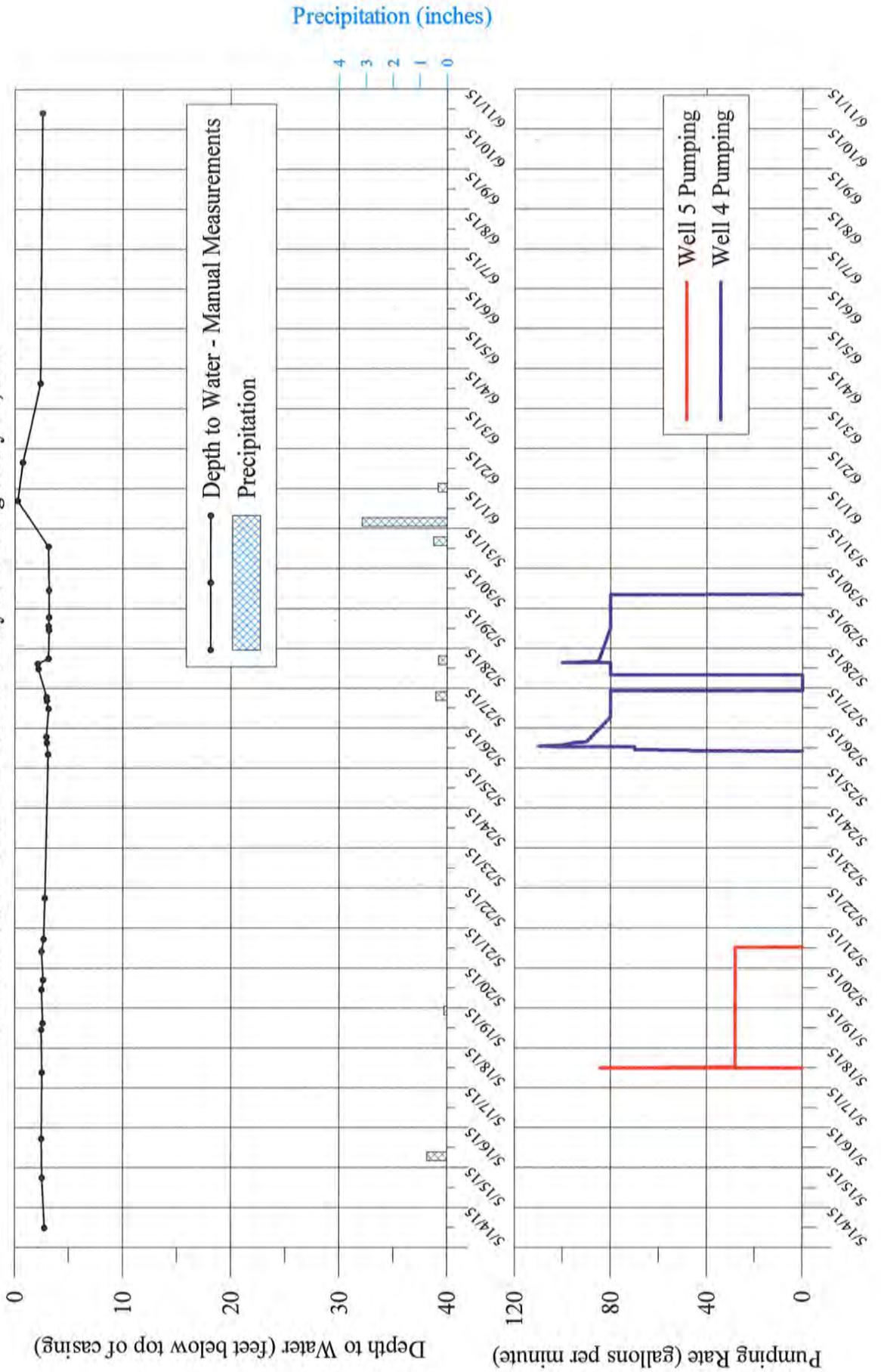
NEW YORK AMERICAN WATER COMPANY
 WILD OAKS WATER SYSTEM
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Hydrograph of Water-Level Measurements Collected from Well at 195 Waccabuc Road During 72-Hour Pumping Test Program
 Conducted on Well 4 and Well 5 from May 18 Through May 30, 2015



NEW YORK AMERICAN WATER COMPANY
 WILD OAKS WATER SYSTEM
 LEWISBORO, NEW YORK

Hydrograph of Water-Level Measurements Collected from Well 3 During 72-Hour Pumping Test Program
 Conducted on Well 4 and Well 5 from May 18 Through May 30, 2015



**NEW YORK AMERICAN WATER COMPANY
WILD OAKS WATER SYSTEM
LEWISBORO, NEW YORK**

Summary of Manual Water-Level Measurements Collected from Offsite Monitoring Wells During 72-Hour Pumping Tests Conducted on Wells 4 and 5, May 18 Through May 30, 2015

Date	Time	Depth to Water (ft btoc)	Date	Time	Depth to Water (ft btoc)
73 Nash Road			79 Nash Road		
5/14/2015	10:54	33.44	5/14/2015	10:22	33.16
5/14/2015	11:15	33.65	5/15/2015	10:53	35.19
5/15/2015	11:04	36.91	5/16/2015	17:33	33.08
5/16/2015	17:24	38.96	5/18/2015	8:10	41.68
5/18/2015	8:34	35.00	5/19/2015	10:25	32.20
5/19/2015	10:33	41.21	5/19/2015	15:11	32.34
5/19/2015	15:19	41.30	5/20/2015	10:34	34.74
5/20/2015	10:43	41.87	5/20/2015	16:36	33.75
5/20/2015	16:43	42.02	5/21/2015	9:41	35.00
5/21/2015	9:45	42.02	5/21/2015	16:59	32.00
5/21/2015	17:07	40.00	5/22/2015	17:41	33.23
5/22/2015	17:48	36.94	5/26/2015	7:54	37.58
5/26/2015	8:02	36.08	5/26/2015	14:48	32.37
5/26/2015	14:53	36.25	5/27/2015	11:19	34.11
5/27/2015	11:29	38.64	5/27/2015	16:27	32.99
5/27/2015	16:57	38.19	5/28/2015	11:24	35.28
5/28/2015	11:31	37.55	5/28/2015	14:32	32.40
5/28/2015	19:47	37.78	5/29/2015	10:37	39.85
5/29/2015	10:46	39.00	5/29/2015	13:49	37.68
5/29/2015	13:52	40.28	5/30/2015	10:22	33.98
5/30/2015	10:37	39.50	5/31/2015	12:47	36.50
5/31/2015	12:54	36.29	6/2/2015	15:38	33.46
6/2/2015	15:44	33.83	6/4/2015	14:51	31.87
6/4/2015	15:02	33.74	6/11/2015	9:06	32.39
6/11/2015	9:20	34.04	-	-	-
195 Waccabuc Road			Well 3		
5/14/2015	12:28	10.18	5/14/2015	11:41	2.77
5/14/2015	12:40	14.64	5/15/2015	17:46	2.54
5/15/2015	10:34	9.60	5/16/2015	17:15	2.50
5/16/2015	16:54	9.19	5/18/2015	9:04	2.53
5/18/2015	8:47	10.38	5/19/2015	10:44	2.48
5/19/2015	11:23	9.65	5/19/2015	14:45	2.60
5/19/2015	14:31	8.85	5/20/2015	10:58	2.50
5/20/2015	11:23	8.44	5/20/2015	16:49	2.65
5/20/2015	16:58	8.58	5/21/2015	9:54	2.50
5/21/2015	10:03	12.39	5/21/2015	17:16	2.70
5/21/2015	17:25	10.23	5/22/2015	17:55	2.80
5/22/2015	18:08	8.94	5/26/2015	8:16	3.10
5/26/2015	8:46	11.02	5/26/2015	15:00	2.98
5/26/2015	15:10	8.79	5/26/2015	18:48	2.95

**NEW YORK AMERICAN WATER COMPANY
WILD OAKS WATER SYSTEM
LEWISBORO, NEW YORK**

Summary of Manual Water-Level Measurements Collected from Offsite Monitoring Wells During 72-Hour Pumping Tests Conducted on Wells 4 and 5, May 18 Through May 30, 2015

Date	Time	Depth to Water (ft btoc)	Date	Time	Depth to Water (ft btoc)
195 Waccabuc Road (continued)			Well 3 (continued)		
5/27/2015	13:06	9.35	5/27/2015	11:43	3.15
5/27/2015	16:46	9.09	5/27/2015	16:35	2.99
5/28/2015	11:51	13.17	5/27/2015	18:45	2.96
5/28/2015	14:58	11.44	5/28/2015	11:40	2.20
5/29/2015	11:06	10.00	5/28/2015	14:46	2.15
5/29/2015	13:17	9.27	5/28/2015	17:54	3.13
5/30/2015	11:14	9.62	5/29/2015	10:59	3.17
5/31/2015	13:13	9.32	5/29/2015	13:28	3.15
6/2/2015	16:00	6.66	5/29/2015	18:45	3.19
6/4/2015	15:28	7.60	5/30/2015	10:55	3.19
6/11/2015	9:50	14.30	5/31/2015	13:05	3.14
--	--	--	6/1/2015	16:40	0.27
--	--	--	6/2/2015	15:50	0.75
--	--	--	6/4/2015	15:15	2.39
--	--	--	6/11/2015	9:37	2.59

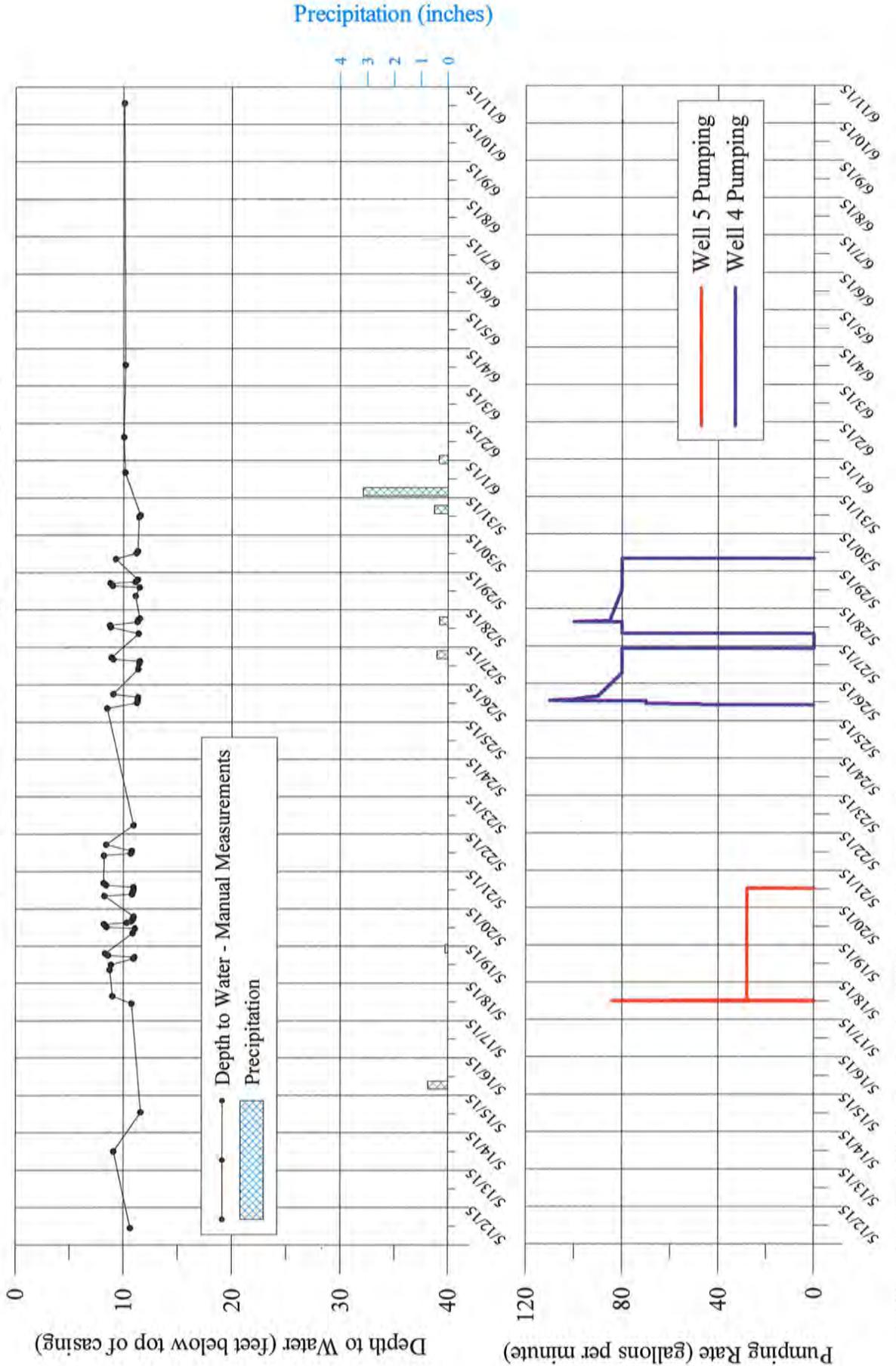
ft btoc feet below top of casing

K:\Jobs\American Water Co\Wild Oaks\72-Hour Pumping Test (May 2015)\Tables\Offsite MW Manual WL table.doc

APPENDIX V

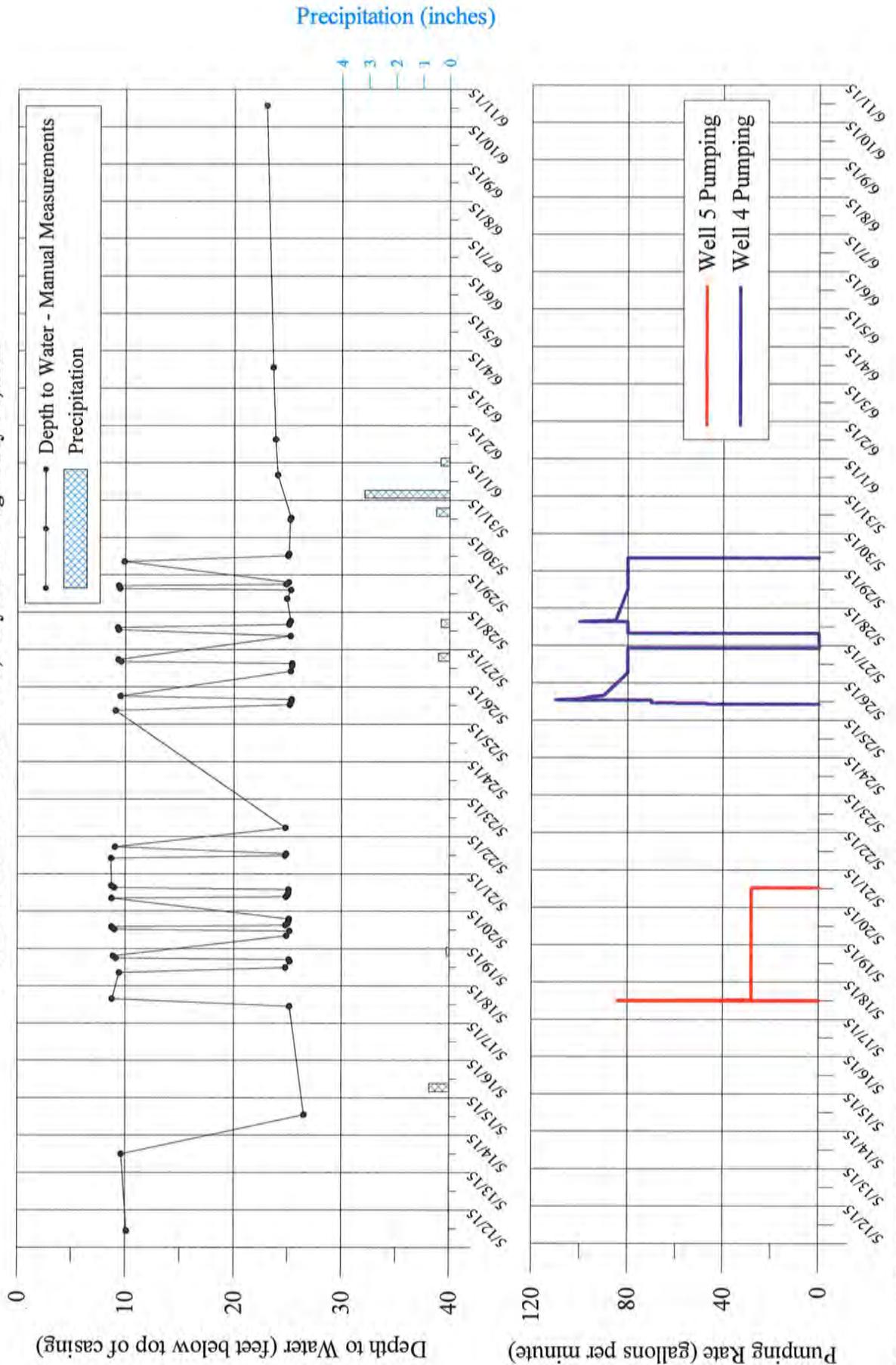
NEW YORK AMERICAN WATER COMPANY
 WILD OAKS WATER SYSTEM
 LEWISBORO, NEW YORK

Hydrograph of Water-Level Measurements Collected from Well 1 During 72-Hour Pumping Test Program
 Conducted on Well 4 and Well 5, May 18 Through May 30, 2015



NEW YORK AMERICAN WATER COMPANY
 WILD OAKS WATER SYSTEM
 LEWISBORO, NEW YORK

Hydrograph of Water-Level Measurements Collected from Well 2 During 72-Hour Pumping Test Program
 Conducted on Well 4 and Well 5, May 18 Through May 30, 2015



K:\Jobs\American Water Co\Wild Oak\72-Hour Pumping Test (May 2015)\Hydrographs\on-site wells\Well 2.grf

**NEW YORK AMERICAN WATER COMPANY
WILD OAKS WATER SYSTEM
LEWISBORO, NEW YORK**

Summary of Manual Water-Level Measurements Collected from Onsite Production Wells 1 and 2 During
72-Hour Pumping Tests Conducted on Wells 4 and 5, May 18 Through May 30, 2015

Date	Time	Depth to Water (ft btoc)	Date	Time	Depth to Water (ft btoc)
Well 1			Well 2		
5/12/2015	10:47	10.66	5/12/2015	10:42	10.15
5/14/2015	11:59	9.10	5/14/2015	11:58	9.64
5/15/2015	13:08	11.60	5/15/2015	13:03	26.54
5/18/2015	10:55	10.76	5/18/2015	10:52	25.18
5/18/2015	15:42	8.98	5/18/2015	15:41	8.79
5/19/2015	8:34	8.75	5/19/2015	8:32	9.45
5/19/2015	11:54	8.85	5/19/2015	11:51	24.82
5/19/2015	15:55	10.91	5/19/2015	15:52	25.20
5/19/2015	16:54	11.03	5/19/2015	16:56	25.12
5/19/2015	17:57	8.59	5/19/2015	17:55	9.15
5/19/2015	19:14	8.32	5/19/2015	19:12	8.89
5/20/2015	8:15	10.85	5/20/2015	8:13	24.89
5/20/2015	11:16	11.08	5/20/2015	11:15	25.19
5/20/2015	12:16	8.45	5/20/2015	12:15	9.00
5/20/2015	13:31	8.28	5/20/2015	13:30	8.80
5/20/2015	13:58	8.22	5/20/2015	13:57	8.75
5/20/2015	14:58	10.32	5/20/2015	14:58	24.82
5/20/2015	15:58	10.75	5/20/2015	15:57	25.00
5/20/2015	17:23	10.90	5/20/2015	17:21	25.08
5/20/2015	17:59	10.87	5/20/2015	17:58	25.09
5/20/2015	18:59	10.96	5/20/2015	18:58	25.15
5/21/2015	8:16	8.25	5/21/2015	8:15	8.75
5/21/2015	9:16	10.80	5/21/2015	9:15	24.85
5/21/2015	10:21	10.85	5/21/2015	10:20	25.00
5/21/2015	11:01	10.88	5/21/2015	11:00	25.04
5/21/2015	12:01	10.96	5/21/2015	12:00	25.08
5/21/2015	13:47	10.95	5/21/2015	13:46	25.10
5/21/2015	15:07	8.41	5/21/2015	15:05	8.98
5/21/2015	16:23	8.18	5/21/2015	16:21	8.72
5/22/2015	10:08	8.22	5/22/2015	10:06	8.69
5/22/2015	11:40	10.70	5/22/2015	11:38	24.76
5/22/2015	13:15	10.79	5/22/2015	13:00	24.88
5/22/2015	17:16	8.40	5/22/2015	17:14	9.05
5/23/2015	5:35	10.94	5/23/2015	5:32	24.81
5/26/2015	8:48	8.49	5/26/2015	8:47	9.10
5/26/2015	12:24	11.26	5/26/2015	12:23	25.18
5/26/2015	14:17	11.32	5/26/2015	14:15	25.30
5/26/2015	15:54	11.34	5/26/2015	15:53	25.36
5/26/2015	17:59	9.05	5/26/2015	17:57	9.56
5/27/2015	10:00	11.36	5/27/2015	9:58	25.26
5/27/2015	13:30	11.44	5/27/2015	13:28	25.38
5/27/2015	14:59	11.51	5/27/2015	14:58	25.40
5/27/2015	16:18	9.05	5/27/2015	16:16	9.62
5/27/2015	17:22	8.89	5/27/2015	17:21	9.35
5/28/2015	8:41	11.40	5/28/2015	8:40	25.24
5/28/2015	12:42	8.83	5/28/2015	12:41	9.37
5/28/2015	14:04	8.75	5/28/2015	14:03	9.29
5/28/2015	16:08	11.30	5/28/2015	16:07	25.11
5/28/2015	17:21	11.33	5/28/2015	17:19	25.19
5/28/2015	18:19	11.52	5/28/2015	18:18	25.24
5/29/2015	8:45	11.11	5/29/2015	8:41	24.90

**NEW YORK AMERICAN WATER COMPANY
WILD OAKS WATER SYSTEM
LEWISBORO, NEW YORK**

Summary of Manual Water-Level Measurements Collected from Onsite Production Wells 1 and 2 During
72-Hour Pumping Tests Conducted on Wells 4 and 5, May 18 Through May 30, 2015

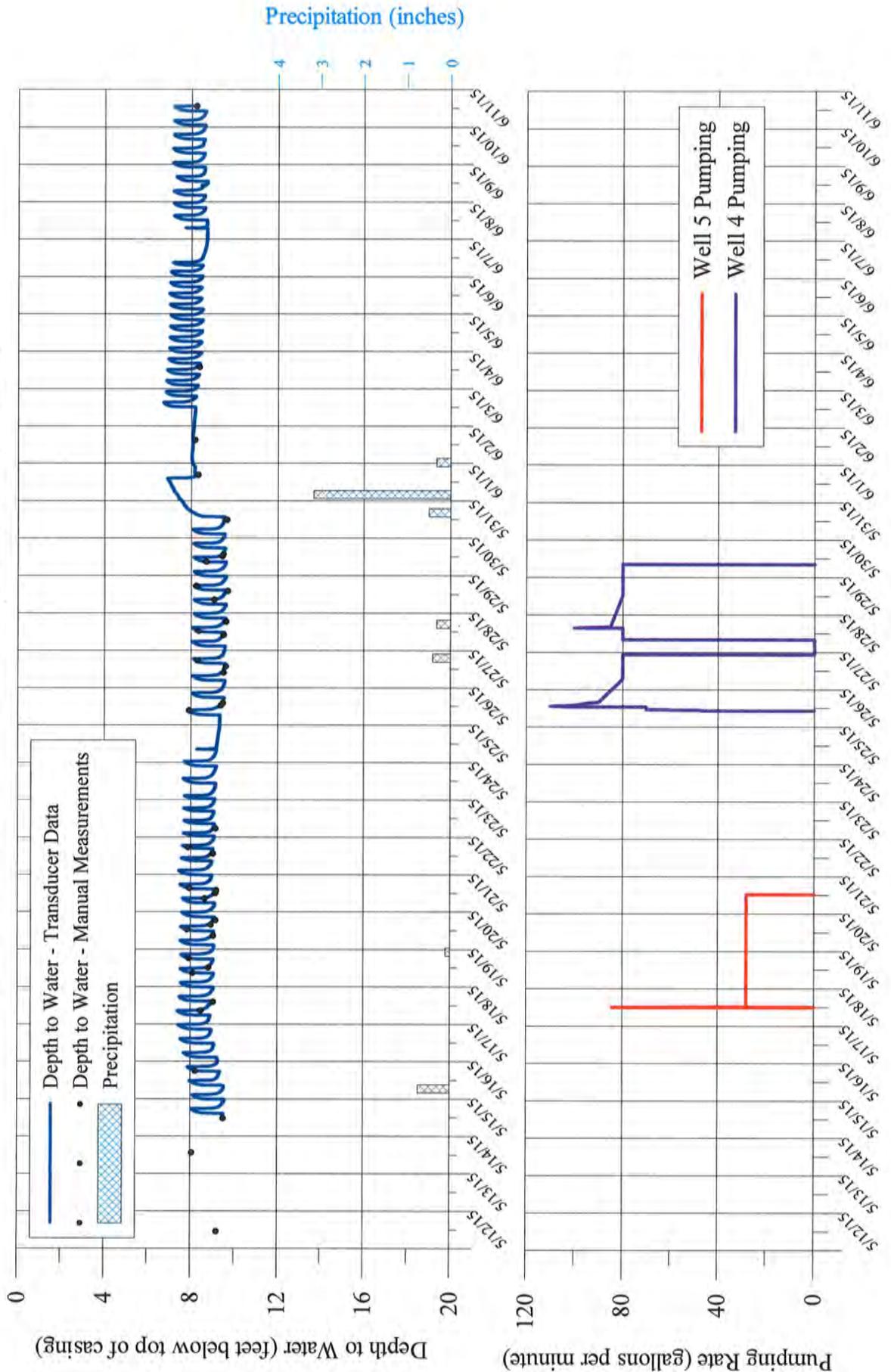
Date	Time	Depth to Water (ft btoc)	Date	Time	Depth to Water (ft btoc)
Well 1 (continued)			Well 2 (continued)		
5/29/2015	14:17	11.50	5/29/2015	14:16	25.27
5/29/2015	15:20	9.02	5/29/2015	15:18	9.50
5/29/2015	17:08	8.77	5/29/2015	17:05	9.38
5/29/2015	17:57	11.11	5/29/2015	17:55	24.85
5/29/2015	19:16	11.35	5/29/2015	19:12	25.06
5/30/2015	8:38	9.30	5/30/2015	8:35	9.90
5/30/2015	12:20	11.22	5/30/2015	12:17	25.00
5/30/2015	13:35	11.33	5/30/2015	13:33	25.10
5/31/2015	11:32	11.46	5/31/2015	11:29	25.20
5/31/2015	12:40	11.57	5/31/2015	12:39	25.26
6/1/2015	16:17	10.16	6/1/2015	16:15	24.04
6/2/2015	15:01	10.05	6/2/2015	15:00	23.86
6/4/2015	13:20	10.19	6/4/2015	13:17	23.63
6/11/2015	13:33	10.09	6/11/2015	13:31	23.00

ft btoc feet below top of casing

APPENDIX VI

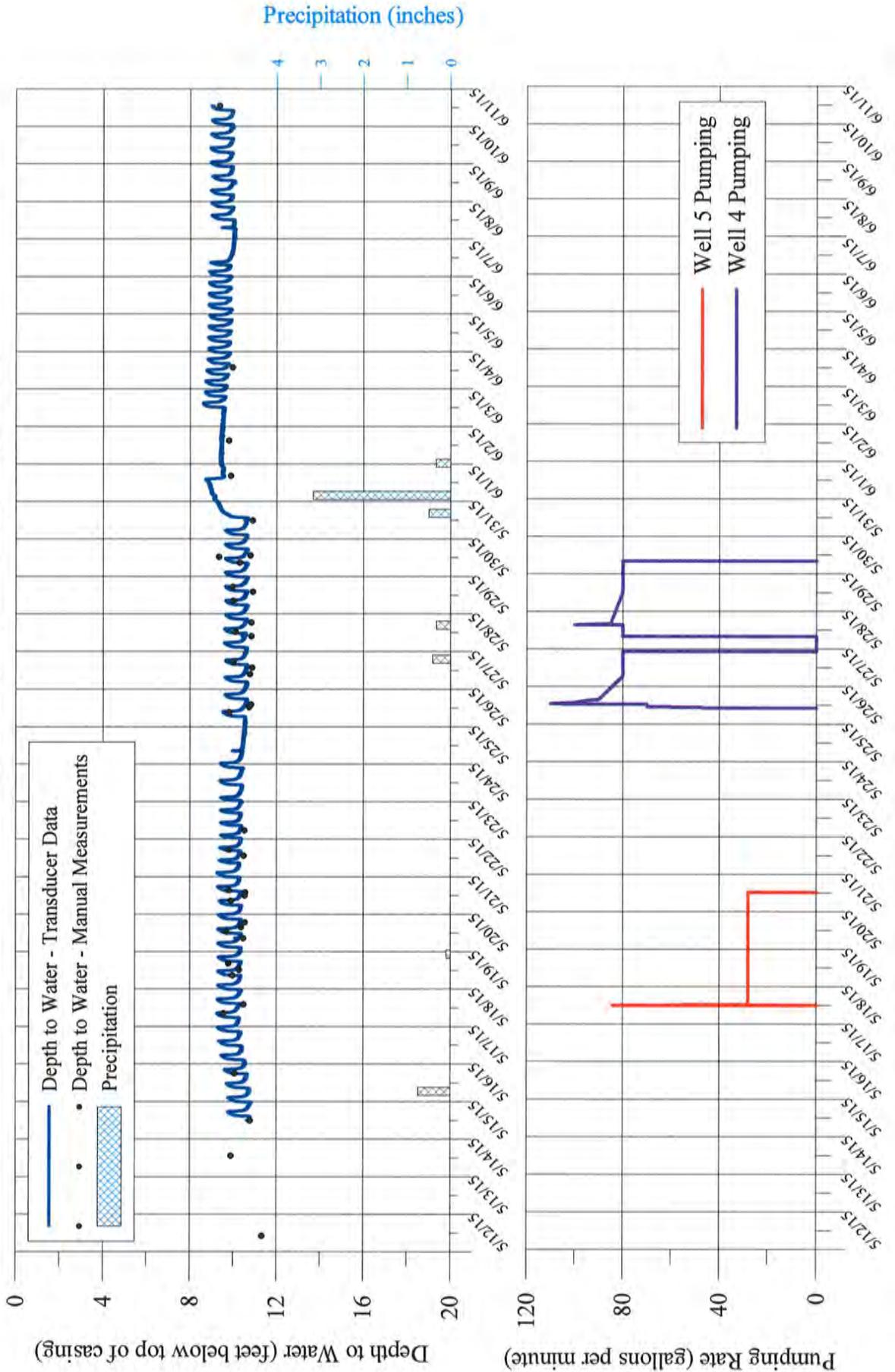
NEW YORK AMERICAN WATER COMPANY
 WILD OAKS WATER SYSTEM
 LEWISBORO, NEW YORK

Hydrograph of Water-Level Measurements Collected from MW-1 During 72-Hour Pumping Test Program
 Conducted on Well 4 and Well 5, May 18 Through May 30, 2015



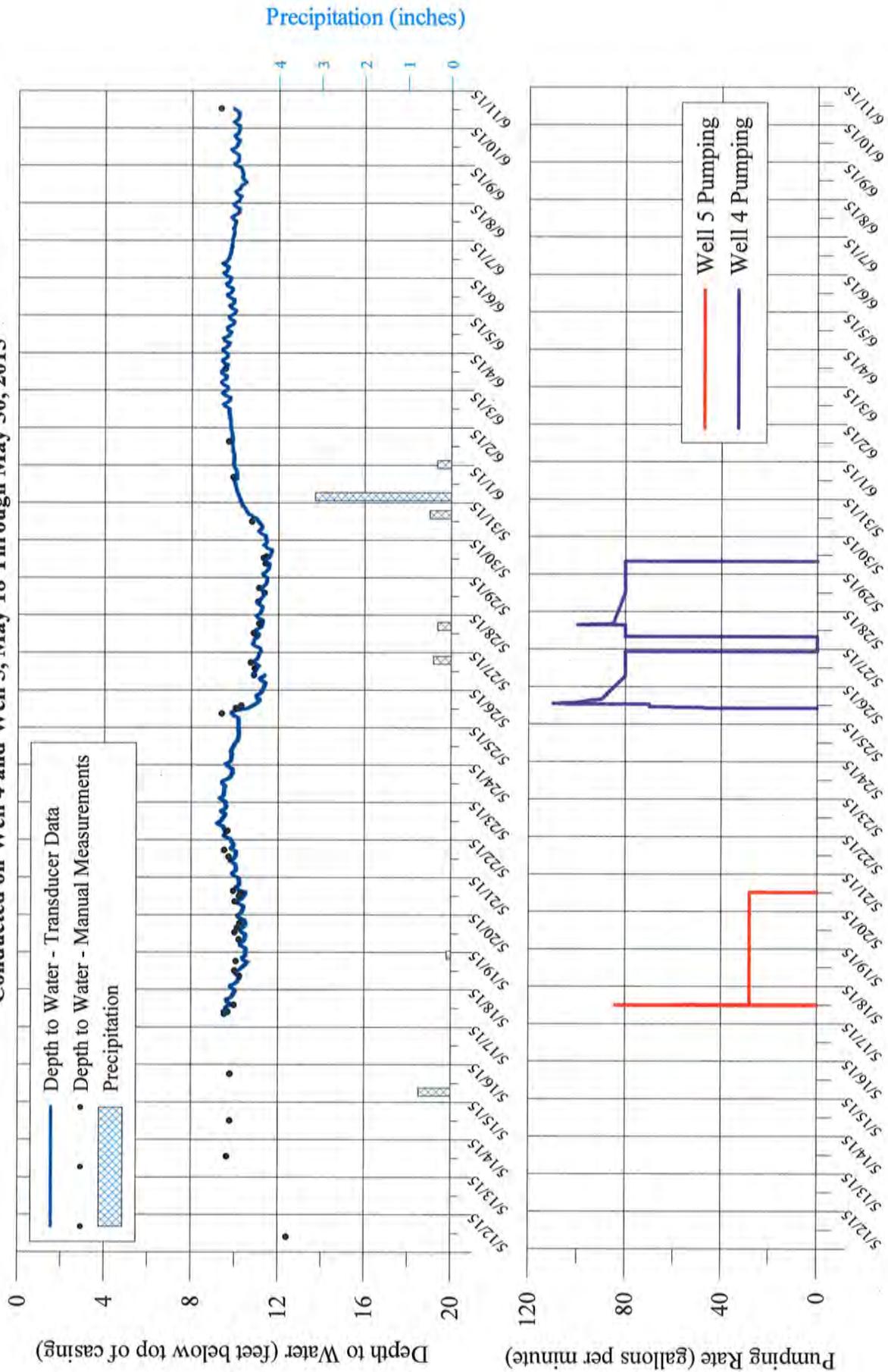
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 WILD OAKS WATER SYSTEM
 LEWISBORO, NEW YORK

Hydrograph of Water-Level Measurements Collected from MW-2 During 72-Hour Pumping Test Program
 Conducted on Well 4 and Well 5, May 18 Through May 30, 2015



NEW YORK AMERICAN WATER COMPANY
 WILD OAKS WATER SYSTEM
 LEWISBORO, NEW YORK

Hydrograph of Water-Level Measurements Collected from MW-3 During 72-Hour Pumping Test Program
 Conducted on Well 4 and Well 5, May 18 Through May 30, 2015



**NEW YORK AMERICAN WATER COMPANY
WILD OAKS WATER SYSTEM
LEWISBORO, NEW YORK**

Summary of Manual Water-Level Measurements Collected from Onsite Overburden Monitoring Wells During
72-Hour Pumping Tests Conducted on Wells 4 and 5, May 18 Through May 30, 2015

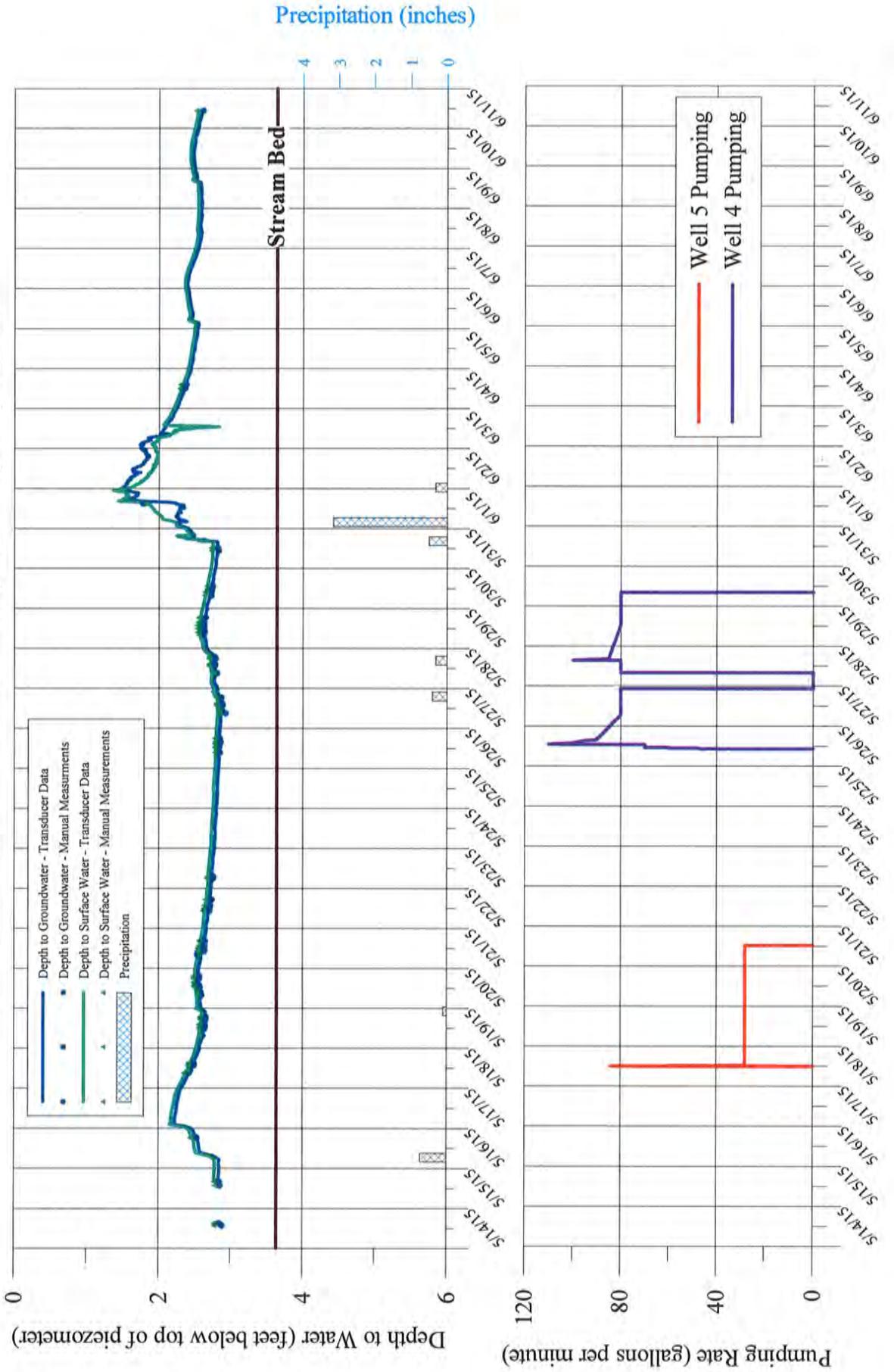
Date	Time	Depth to Water (ft btoc)	Date	Time	Depth to Water (ft btoc)	Date	Time	Depth to Water (ft btoc)
MW-1			MW-2			MW-3		
5/12/2015	11:01	9.20	5/12/2015	10:10	11.34	5/12/2015	9:47	12.40
5/14/2015	13:29	8.07	5/14/2015	13:25	9.91	5/14/2015	13:19	9.64
5/15/2015	11:38	9.51	5/15/2015	11:52	10.79	5/15/2015	12:10	9.78
5/16/2015	18:01	8.22	5/16/2015	17:59	10.07	5/16/2015	17:57	9.78
5/18/2015	8:40	8.47	5/18/2015	8:28	9.56	5/18/2015	8:26	9.53
5/18/2015	14:10	9.05	5/18/2015	14:09	10.49	5/18/2015	9:40	9.69
5/19/2015	8:47	8.09	5/19/2015	8:44	9.97	5/18/2015	14:05	9.97
5/19/2015	12:14	8.82	5/19/2015	12:12	10.28	5/19/2015	8:40	10.22
5/19/2015	18:20	7.91	5/19/2015	16:18	9.78	5/19/2015	12:10	10.00
5/20/2015	8:28	9.05	5/20/2015	8:25	10.48	5/19/2015	18:16	10.05
5/20/2015	12:43	7.83	5/20/2015	12:41	9.70	5/20/2015	8:12	10.18
5/20/2015	15:39	8.93	5/20/2015	15:38	10.37	5/20/2015	12:38	10.00
5/20/2015	18:38	9.14	5/20/2015	18:36	10.55	5/20/2015	15:36	10.11
5/21/2015	8:35	8.65	5/21/2015	8:32	9.90	5/20/2015	18:33	10.22
5/21/2015	11:57	9.14	5/21/2015	11:56	10.55	5/21/2015	8:29	10.00
5/21/2015	13:54	9.18	5/21/2015	13:58	10.57	5/21/2015	11:54	10.20
5/21/2015	15:10	7.95	5/21/2015	15:16	9.81	5/21/2015	13:50	10.26
5/22/2015	13:28	9.03	5/22/2015	13:26	10.49	5/21/2015	15:24	9.93
5/22/2015	17:25	7.88	5/22/2015	17:27	9.79	5/22/2015	13:17	9.72
5/23/2015	5:37	9.14	5/23/2015	5:39	10.52	5/22/2015	17:29	9.52
5/26/2015	9:21	7.91	5/26/2015	9:17	9.80	5/23/2015	5:42	9.66
5/26/2015	12:33	9.38	5/26/2015	12:32	10.74	5/26/2015	8:54	9.40
5/26/2015	14:09	9.47	5/26/2015	14:07	10.82	5/26/2015	12:28	10.03
5/27/2015	9:43	9.50	5/27/2015	9:37	10.77	5/26/2015	14:05	10.28
5/27/2015	13:39	9.60	5/27/2015	13:35	10.87	5/27/2015	9:26	10.86
5/27/2015	17:25	8.30	5/27/2015	17:26	10.00	5/27/2015	13:47	10.90
5/28/2015	9:58	9.50	5/28/2015	9:44	10.84	5/27/2015	17:31	10.72
5/28/2015	12:35	8.33	5/28/2015	12:33	10.10	5/28/2015	10:44	10.99
5/28/2015	18:22	9.61	5/28/2015	18:24	10.84	5/28/2015	12:30	10.85
5/29/2015	8:31	9.07	5/29/2015	8:24	10.00	5/28/2015	18:27	11.10
5/29/2015	14:07	9.69	5/29/2015	14:06	10.91	5/29/2015	8:20	11.05
5/29/2015	17:18	8.24	5/29/2015	17:17	9.96	5/29/2015	14:03	11.34
5/30/2015	8:53	8.69	5/30/2015	8:47	10.31	5/29/2015	17:15	11.10
5/30/2015	12:25	9.43	5/30/2015	12:27	9.34	5/30/2015	8:52	11.39
5/30/2015	13:28	9.48	5/30/2015	13:27	10.79	5/30/2015	12:30	11.29
5/31/2015	11:37	9.64	5/31/2015	11:44	10.89	5/30/2015	13:24	11.43
6/1/2015	16:24	8.32	6/1/2015	16:25	9.88	5/31/2015	11:51	10.76
6/2/2015	15:03	8.17	6/2/2015	15:04	9.79	6/1/2015	16:25	9.90
6/4/2015	13:53	8.36	6/4/2015	13:46	9.96	6/2/2015	15:07	9.70
6/11/2015	13:16	8.22	6/11/2015	13:00	9.35	6/4/2015	13:44	9.53
--	--	--	--	--	--	6/11/2015	12:29	9.32

ft btoc feet below top of casing

APPENDIX VII

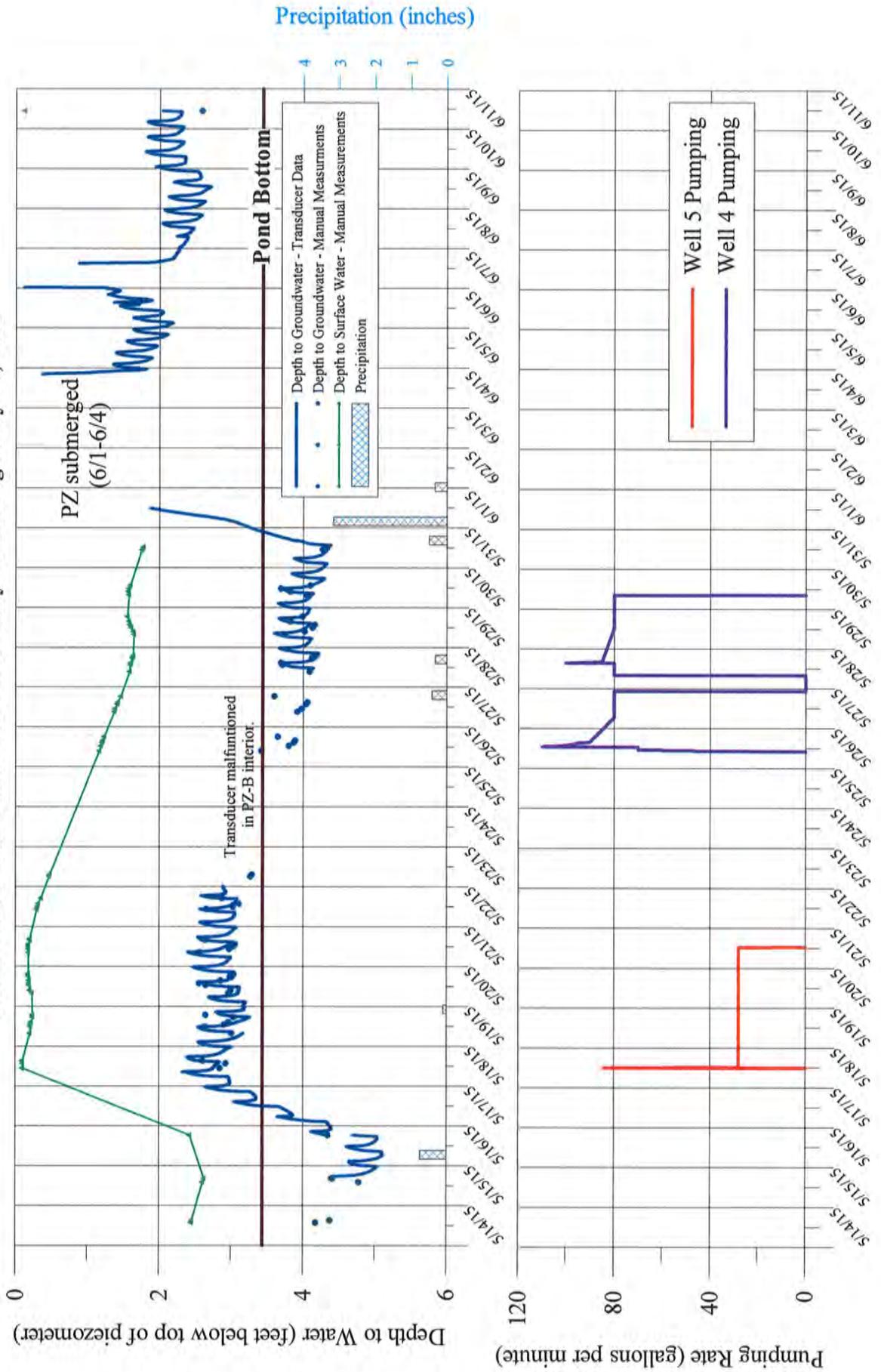
NEW YORK AMERICAN WATER COMPANY
 WILD OAKS WATER SYSTEM
 LEWISBORO, NEW YORK

Hydrograph of Water-Level Measurements Collected from PZ-A During 72-Hour Pumping Test Program
 Conducted on Well 4 and Well 5 from May 18 Through May 30, 2015



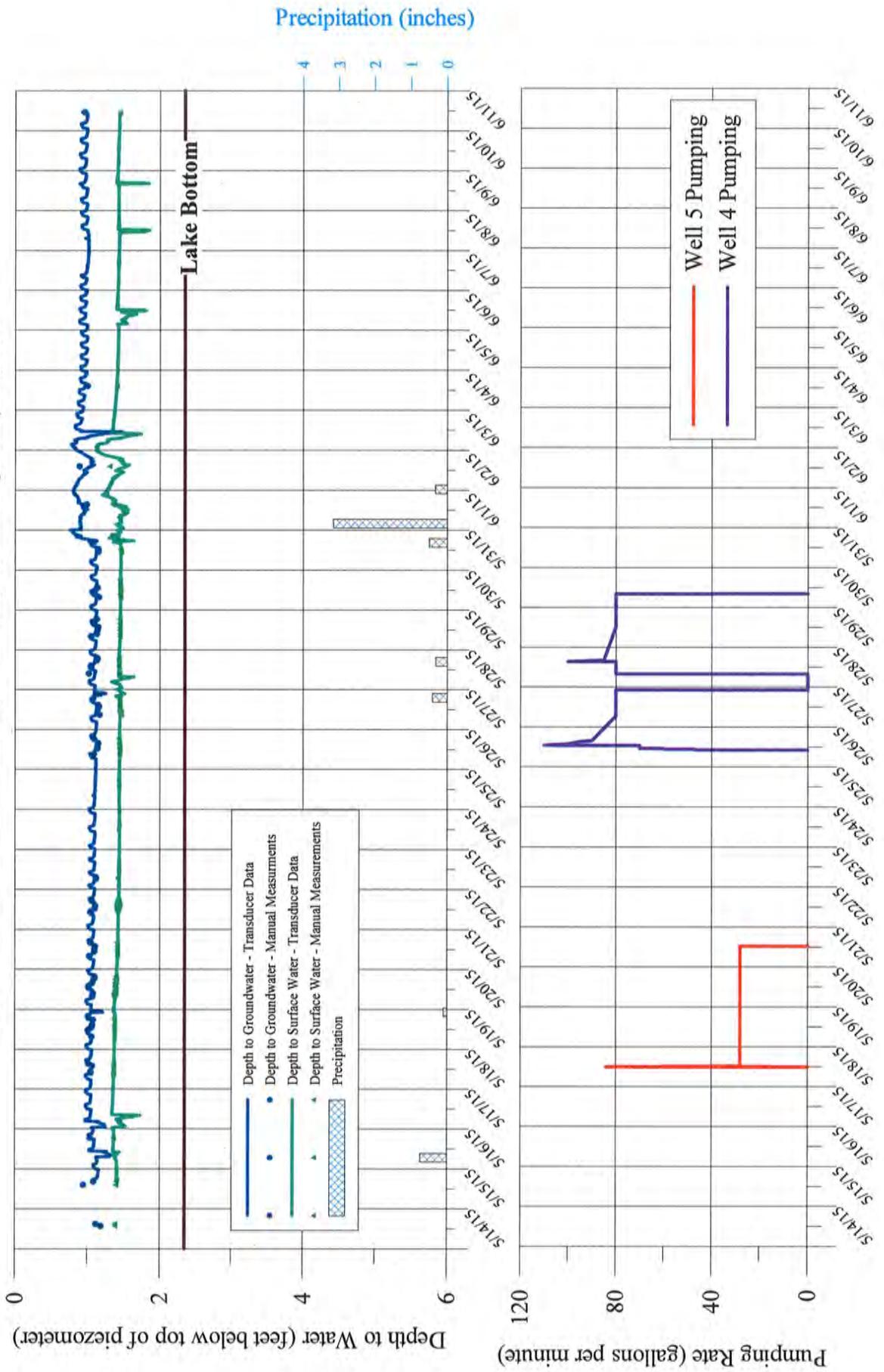
NEW YORK AMERICAN WATER COMPANY
 WILD OAKS WATER SYSTEM
 LEWISBORO, NEW YORK

Hydrograph of Water-Level Measurements Collected from PZ-B During 72-Hour Pumping Test Program
 Conducted on Well 4 and Well 5 from May 18 Through May 30, 2015



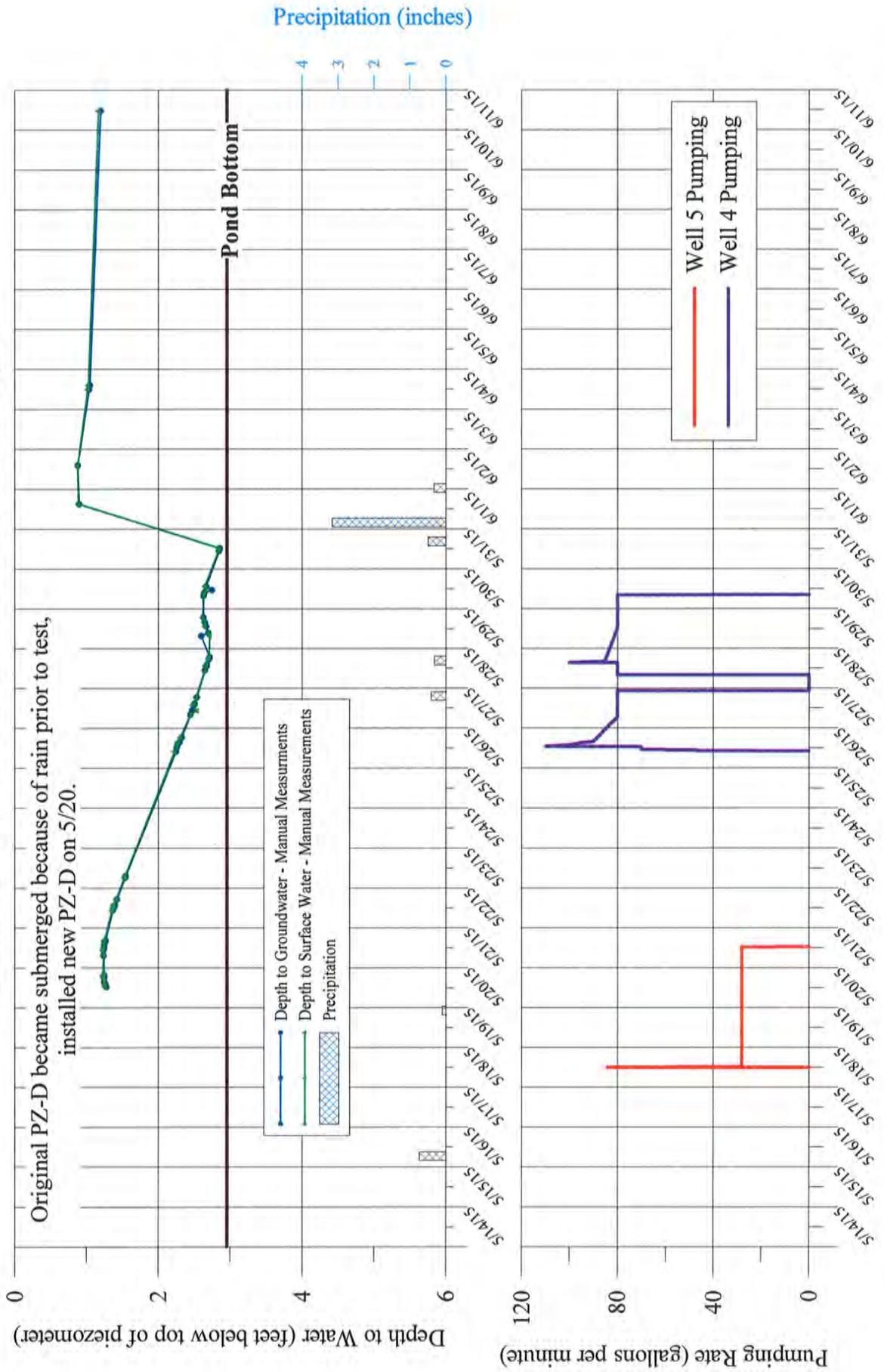
NEW YORK AMERICAN WATER COMPANY
 WILD OAKS WATER SYSTEM
 LEWISBORO, NEW YORK

Hydrograph of Water-Level Measurements Collected from PZ-C During 72-Hour Pumping Test Program
 Conducted on Well 4 and Well 5 from May 18 Through May 30, 2015



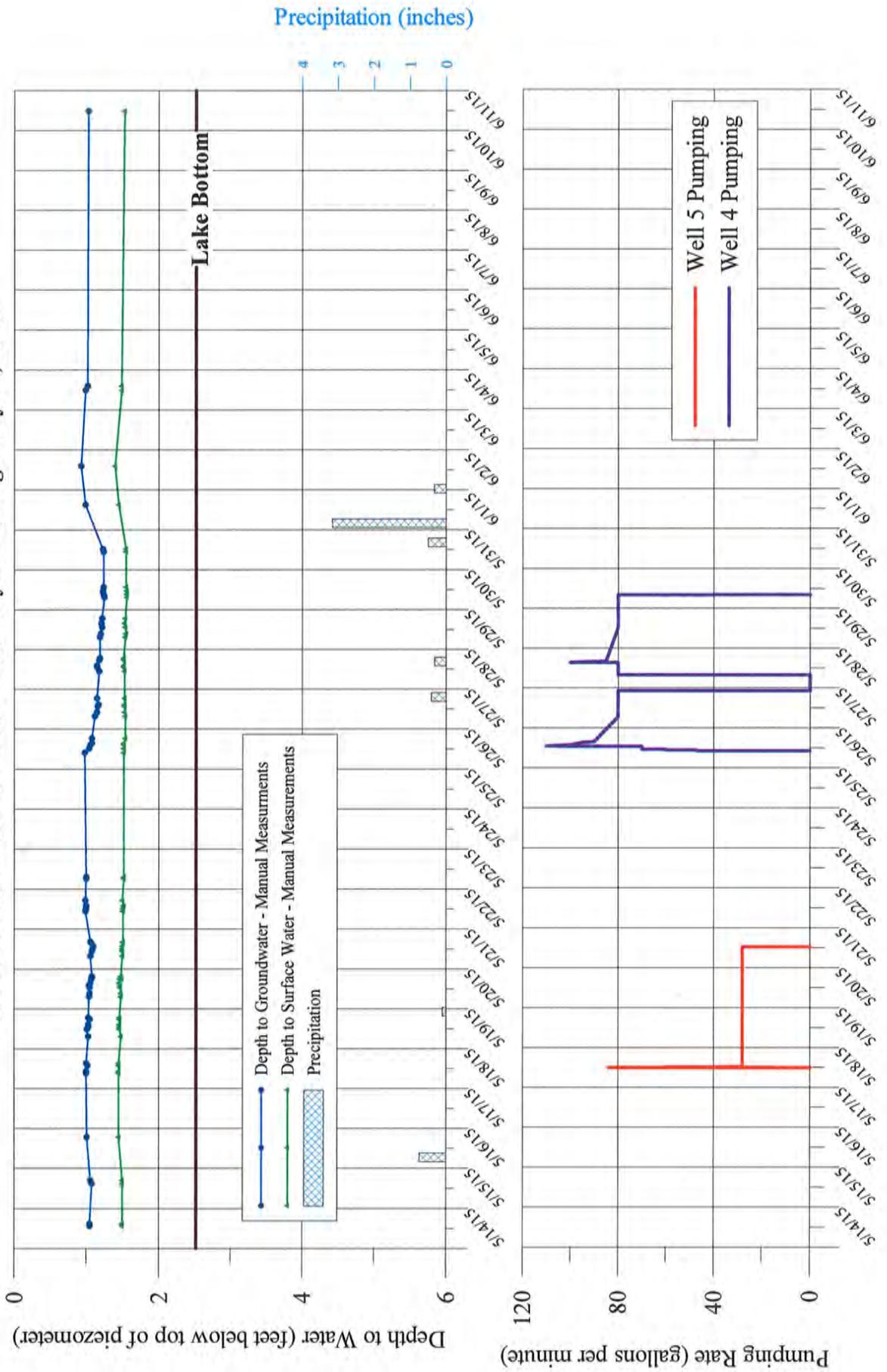
NEW YORK AMERICAN WATER COMPANY
 WILD OAKS WATER SYSTEM
 LEWISBORO, NEW YORK

Hydrograph of Water-Level Measurements Collected from PZ-D During 72-Hour Pumping Test Program
 Conducted on Well 4 and Well 5 from May 18 Through May 30, 2015



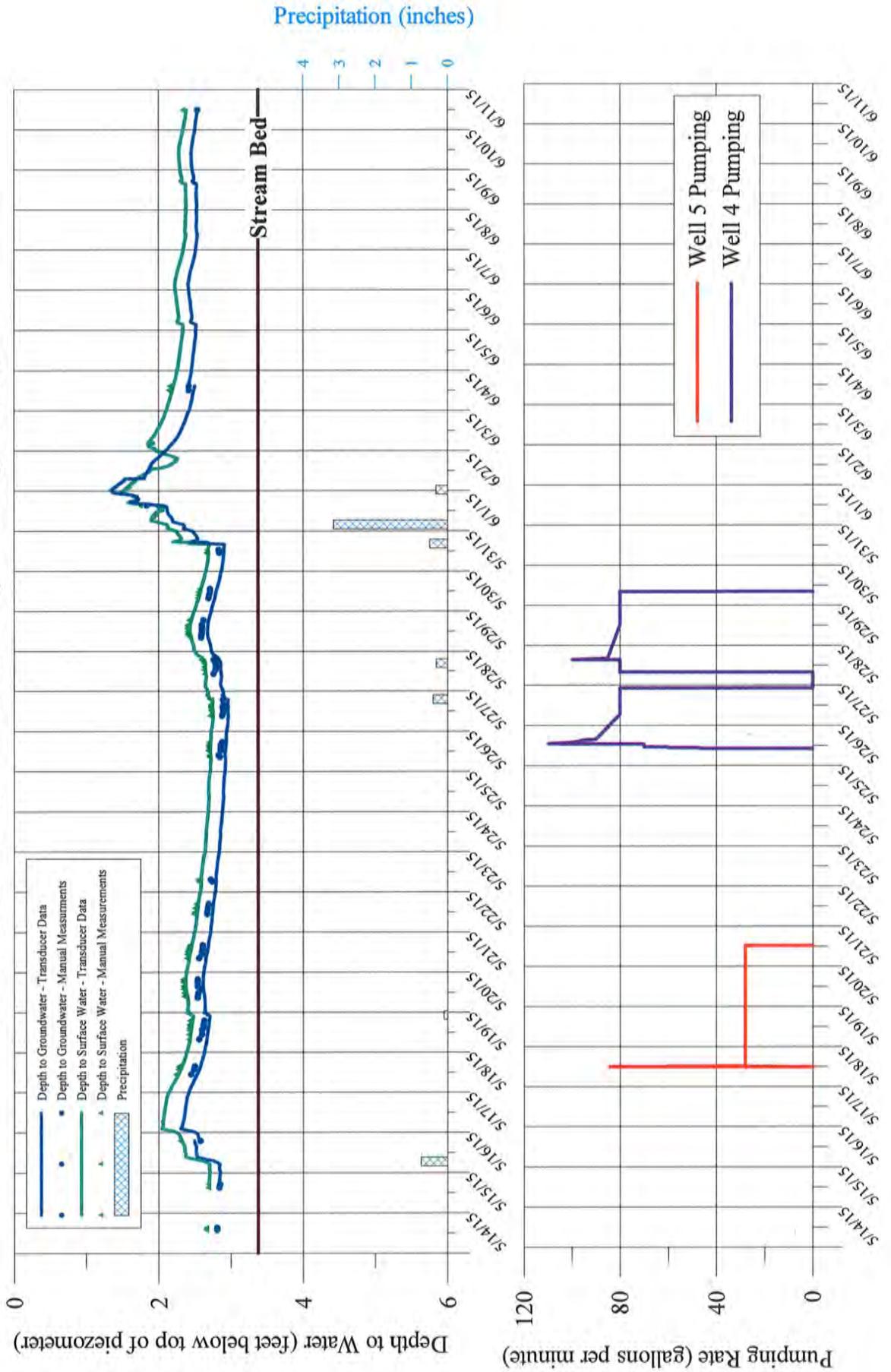
NEW YORK AMERICAN WATER COMPANY
 WILD OAKS WATER SYSTEM
 LEWISBORO, NEW YORK

Hydrograph of Water-Level Measurements Collected from PZ-E During 72-Hour Pumping Test Program
 Conducted on Well 4 and Well 5 from May 18 Through May 30, 2015



NEW YORK AMERICAN WATER COMPANY
 WILD OAKS WATER SYSTEM
 LEWISBORO, NEW YORK

Hydrograph of Water-Level Measurements Collected from PZ-F During 72-Hour Pumping Test Program
 Conducted on Well 4 and Well 5 from May 18 Through May 30, 2015



**NEW YORK AMERICAN WATER COMPANY
WILD OAKS WATER SYSTEM
LEWISBORO, NEW YORK**

Manual Water-Level Measurements Collected from the Onsite Piezometers During 72-Hour Pumping Tests Conducted on Wells
4 and 5, May 18 Through May 30, 2015

Date	Time	Depth to Water – Groundwater (ft btoc)	Depth to Water – Surface Water (ft btoc)	Gradient (surface water – groundwater)	Gradient Direction
PZ-A					
5/14/2015	13:32	2.89	2.79	-0.10	Downward
5/14/2015	14:45	2.85	2.79	-0.06	Downward
5/15/2015	13:22	2.86	2.80	-0.06	Downward
5/15/2015	15:54	2.85	2.79	-0.06	Downward
5/16/2015	18:12	2.54	2.46	-0.08	Downward
5/18/2015	8:52	2.43	2.37	-0.06	Downward
5/18/2015	10:24	2.45	2.42	-0.03	Downward
5/18/2015	13:30	2.50	2.42	-0.08	Downward
5/18/2015	15:02	2.50	2.43	-0.07	Downward
5/19/2015	7:24	2.62	2.59	-0.03	Downward
5/19/2015	11:28	2.64	2.58	-0.06	Downward
5/19/2015	12:47	2.65	2.58	-0.07	Downward
5/19/2015	14:16	2.65	2.58	-0.07	Downward
5/19/2015	17:18	2.66	2.59	-0.07	Downward
5/19/2015	18:31	2.66	2.59	-0.07	Downward
5/20/2015	7:36	2.60	2.55	-0.05	Downward
5/20/2015	9:18	2.59	2.55	-0.04	Downward
5/20/2015	12:32	2.58	2.51	-0.07	Downward
5/20/2015	13:33	2.57	2.50	-0.07	Downward
5/20/2015	15:14	2.55	2.50	-0.05	Downward
5/20/2015	17:34	2.57	2.50	-0.07	Downward
5/20/2015	18:12	2.57	2.50	-0.07	Downward
5/20/2015	19:14	2.57	2.50	-0.07	Downward
5/21/2015	7:53	2.54	2.58	0.04	Upward
5/21/2015	10:15	2.64	2.55	-0.09	Downward
5/21/2015	11:51	2.64	2.56	-0.08	Downward
5/21/2015	13:19	2.64	2.57	-0.07	Downward
5/21/2015	15:58	2.65	2.58	-0.07	Downward
5/21/2015	16:29	2.64	2.58	-0.06	Downward
5/22/2015	10:15	2.71	2.63	-0.08	Downward
5/22/2015	11:45	2.71	2.64	-0.07	Downward
5/22/2015	13:33	2.72	2.65	-0.07	Downward
5/22/2015	16:56	2.74	2.66	-0.08	Downward
5/23/2015	5:57	2.76	2.68	-0.08	Downward
5/23/2015	6:59	2.76	2.69	-0.07	Downward
5/26/2015	9:20	2.85	2.79	-0.06	Downward
5/26/2015	12:29	2.84	2.79	-0.05	Downward
5/26/2015	14:33	2.85	2.79	-0.06	Downward
5/26/2015	15:40	2.86	2.79	-0.07	Downward
5/26/2015	17:53	2.85	2.79	-0.06	Downward
5/27/2015	8:52	2.93	2.86	-0.07	Downward
5/27/2015	10:38	2.88	2.85	-0.03	Downward
5/27/2015	13:33	2.89	2.81	-0.08	Downward
5/27/2015	14:46	2.88	2.81	-0.07	Downward
5/27/2015	18:17	2.87	2.81	-0.06	Downward
5/28/2015	8:55	2.81	2.78	-0.03	Downward

**NEW YORK AMERICAN WATER COMPANY
WILD OAKS WATER SYSTEM
LEWISBORO, NEW YORK**

Manual Water-Level Measurements Collected from the Onsite Piezometers During 72-Hour Pumping Tests Conducted on Wells 4 and 5, May 18 Through May 30, 2015

Date	Time	Depth to Water – Groundwater (ft btoc)	Depth to Water – Surface Water (ft btoc)	Gradient (surface water – groundwater)	Gradient Direction
PZ-A (continued)					
5/28/2015	13:14	2.78	2.71	-0.07	Downward
5/28/2015	14:28	2.78	2.71	-0.07	Downward
5/28/2015	17:24	2.79	2.71	-0.08	Downward
5/28/2015	18:33	2.78	2.71	-0.07	Downward
5/29/2015	7:50	2.62	2.57	-0.05	Downward
5/29/2015	9:26	2.64	2.55	-0.09	Downward
5/29/2015	11:40	2.63	2.55	-0.08	Downward
5/29/2015	13:26	2.63	2.55	-0.08	Downward
5/29/2015	15:22	2.63	2.56	-0.07	Downward
5/29/2015	18:14	2.65	2.57	-0.08	Downward
5/30/2015	7:31	2.73	2.65	-0.08	Downward
5/30/2015	9:19	2.73	2.65	-0.08	Downward
5/30/2015	11:13	2.74	2.68	-0.06	Downward
5/30/2015	13:06	2.75	2.68	-0.07	Downward
5/31/2015	10:30	2.83	2.74	-0.09	Downward
5/31/2015	11:58	2.82	2.74	-0.08	Downward
6/1/2015	14:37	1.78	1.82	0.04	Upward
6/4/2015	11:39	2.36	2.3	-0.06	Downward
6/4/2015	14:02	2.38	2.31	-0.07	Downward
6/11/2015	10:25	2.61	2.53	-0.08	Downward
PZ-B					
5/14/2015	13:34	4.18	2.45	-1.73	Downward
5/14/2015	14:51	4.38	2.46	-1.92	Downward
5/15/2015	13:51	4.78	2.61	-2.17	Downward
5/15/2015	16:03	4.41	2.63	-1.78	Downward
5/16/2015	18:15	4.35	2.43	-1.92	Downward
5/18/2015	10:33	2.85	0.10	-2.75	Downward
5/18/2015	13:32	2.93	0.10	-2.83	Downward
5/18/2015	15:05	2.61	0.10	-2.51	Downward
5/19/2015	7:30	3.01	0.20	-2.81	Downward
5/19/2015	11:31	2.64	0.21	-2.43	Downward
5/19/2015	12:49	2.91	0.21	-2.70	Downward
5/19/2015	14:19	2.97	0.22	-2.75	Downward
5/19/2015	17:20	3.04	0.24	-2.80	Downward
5/19/2015	18:35	2.65	0.24	-2.41	Downward
5/20/2015	7:41	2.97	0.23	-2.74	Downward
5/20/2015	9:21	3.00	0.20	-2.80	Downward
5/20/2015	12:34	2.65	0.19	-2.46	Downward
5/20/2015	13:34	2.56	0.19	-2.37	Downward
5/20/2015	15:18	2.86	0.19	-2.67	Downward
5/20/2015	17:40	2.99	0.18	-2.81	Downward
5/20/2015	18:15	3.00	0.18	-2.82	Downward
5/20/2015	19:16	3.03	0.18	-2.85	Downward
5/21/2015	8:11	2.56	0.18	-2.38	Downward

**NEW YORK AMERICAN WATER COMPANY
WILD OAKS WATER SYSTEM
LEWISBORO, NEW YORK**

Manual Water-Level Measurements Collected from the Onsite Piezometers During 72-Hour Pumping Tests Conducted on Wells 4 and 5, May 18 Through May 30, 2015

Date	Time	Depth to Water – Groundwater (ft btoc)	Depth to Water – Surface Water (ft btoc)	Gradient (surface water – groundwater)	Gradient Direction
PZ-B (continued)					
5/21/2015	10:18	2.98	0.18	-2.80	Downward
5/21/2015	11:53	3.04	0.18	-2.86	Downward
5/21/2015	13:21	3.06	0.18	-2.88	Downward
5/21/2015	15:44	2.64	0.20	-2.44	Downward
5/21/2015	16:25	2.60	0.20	-2.40	Downward
5/22/2015	10:19	2.66	0.30	-2.36	Downward
5/22/2015	11:47	3.03	0.31	-2.72	Downward
5/22/2015	13:36	3.11	0.32	-2.79	Downward
5/22/2015	16:59	2.88	0.36	-2.52	Downward
5/23/2015	5:59	3.27	0.47	-2.80	Downward
5/23/2015	7:00	3.29	0.48	-2.81	Downward
5/26/2015	9:28	3.42	1.17	-2.25	Downward
5/26/2015	12:26	3.80	1.19	-2.61	Downward
5/26/2015	14:25	3.87	1.21	-2.66	Downward
5/26/2015	15:38	3.89	1.22	-2.67	Downward
5/26/2015	17:54	3.65	1.24	-2.41	Downward
5/27/2015	9:00	3.92	1.38	-2.54	Downward
5/27/2015	10:44	3.98	1.39	-2.59	Downward
5/27/2015	13:34	4.04	1.42	-2.62	Downward
5/27/2015	14:42	4.06	1.43	-2.63	Downward
5/27/2015	18:20	3.60	1.47	-2.13	Downward
5/28/2015	9:10	4.09	1.59	-2.50	Downward
5/28/2015	13:16	3.71	1.60	-2.11	Downward
5/28/2015	14:25	3.69	1.61	-2.08	Downward
5/28/2015	17:25	4.12	1.63	-2.49	Downward
5/28/2015	18:34	4.16	1.64	-2.52	Downward
5/29/2015	7:32	3.75	1.65	-2.10	Downward
5/29/2015	9:22	4.02	1.64	-2.38	Downward
5/29/2015	11:42	4.13	1.61	-2.52	Downward
5/29/2015	13:24	4.16	1.59	-2.57	Downward
5/29/2015	15:23	3.82	1.58	-2.24	Downward
5/29/2015	18:15	3.99	1.56	-2.43	Downward
5/30/2015	7:27	4.04	1.58	-2.46	Downward
5/30/2015	9:25	3.82	1.57	-2.25	Downward
5/30/2015	11:10	3.69	1.58	-2.11	Downward
5/30/2015	13:05	4.10	1.60	-2.50	Downward
5/31/2015	10:31	4.27	1.76	-2.51	Downward
5/31/2015	12:02	4.30	1.78	-2.52	Downward
6/11/2015	10:37	2.59	0.12	-2.47	Downward
5/14/2015	13:28	1.19	1.40	0.21	Upward
5/14/2015	14:43	1.12	1.40	0.28	Upward
5/15/2015	14:08	0.95	1.41	0.46	Upward
5/15/2015	16:13	1.09	1.42	0.33	Upward

**NEW YORK AMERICAN WATER COMPANY
WILD OAKS WATER SYSTEM
LEWISBORO, NEW YORK**

Manual Water-Level Measurements Collected from the Onsite Piezometers During 72-Hour Pumping Tests Conducted on Wells 4 and 5, May 18 Through May 30, 2015

Date	Time	Depth to Water – Groundwater (ft btoc)	Depth to Water – Surface Water (ft btoc)	Gradient (surface water – groundwater)	Gradient Direction
PZ-C					
5/16/2015	18:24	1.04	1.38	0.34	Upward
5/18/2015	9:34	1.05	1.38	0.33	Upward
5/18/2015	10:17	1.05	1.38	0.33	Upward
5/18/2015	13:42	1.07	1.38	0.31	Upward
5/18/2015	15:08	1.02	1.38	0.36	Upward
5/19/2015	7:20	1.06	1.39	0.33	Upward
5/19/2015	11:35	1.02	1.39	0.37	Upward
5/19/2015	12:53	1.06	1.39	0.33	Upward
5/19/2015	14:23	1.07	1.39	0.32	Upward
5/19/2015	17:23	1.08	1.39	0.31	Upward
5/19/2015	18:42	1.02	1.39	0.37	Upward
5/20/2015	7:24	1.07	1.39	0.32	Upward
5/20/2015	9:14	1.08	1.39	0.31	Upward
5/20/2015	12:43	1.02	1.40	0.38	Upward
5/20/2015	13:43	1.02	1.40	0.38	Upward
5/20/2015	15:26	1.07	1.40	0.33	Upward
5/20/2015	17:48	1.09	1.40	0.31	Upward
5/20/2015	18:22	1.10	1.42	0.32	Upward
5/20/2015	19:24	1.10	1.41	0.31	Upward
5/21/2015	7:46	1.03	1.43	0.40	Upward
5/21/2015	10:33	1.10	1.43	0.33	Upward
5/21/2015	12:01	1.10	1.43	0.33	Upward
5/21/2015	13:31	1.11	1.43	0.32	Upward
5/21/2015	15:41	1.05	1.43	0.38	Upward
5/21/2015	16:18	1.04	1.43	0.39	Upward
5/22/2015	10:31	1.05	1.43	0.38	Upward
5/22/2015	12:10	1.10	1.44	0.34	Upward
5/22/2015	14:00	1.11	1.44	0.33	Upward
5/22/2015	17:08	1.06	1.44	0.38	Upward
5/23/2015	6:09	1.12	1.44	0.32	Upward
5/23/2015	7:09	1.12	1.44	0.32	Upward
5/26/2015	9:04	1.09	1.46	0.37	Upward
5/26/2015	12:24	1.14	1.46	0.32	Upward
5/26/2015	14:23	1.14	1.46	0.32	Upward
5/26/2015	15:36	1.15	1.45	0.30	Upward
5/26/2015	18:19	1.09	1.45	0.36	Upward
5/27/2015	8:41	1.17	1.48	0.31	Upward
5/27/2015	10:24	1.14	1.48	0.34	Upward
5/27/2015	13:42	1.16	1.46	0.30	Upward
5/27/2015	14:41	1.15	1.46	0.31	Upward
5/27/2015	18:28	1.08	1.46	0.38	Upward
5/28/2015	9:36	1.02	1.46	0.44	Upward
5/28/2015	13:24	1.05	1.45	0.40	Upward

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WILD OAKS WATER SYSTEM
LEWISBORO, NEW YORK**

Manual Water-Level Measurements Collected from the Onsite Piezometers During 72-Hour Pumping Tests Conducted on Wells 4 and 5, May 18 Through May 30, 2015

Date	Time	Depth to Water – Groundwater (ft btoc)	Depth to Water – Surface Water (ft btoc)	Gradient (surface water – groundwater)	Gradient Direction
PZ-C (continued)					
5/28/2015	14:23	1.05	1.45	0.40	Upward
5/28/2015	17:34	1.13	1.45	0.32	Upward
5/28/2015	18:42	1.14	1.45	0.31	Upward
5/29/2015	7:50	1.05	1.46	0.41	Upward
5/29/2015	9:26	1.13	1.46	0.33	Upward
5/29/2015	11:46	1.14	1.46	0.32	Upward
5/29/2015	13:22	1.15	1.46	0.31	Upward
5/29/2015	15:26	1.09	1.46	0.37	Upward
5/29/2015	18:23	1.13	1.46	0.33	Upward
5/30/2015	7:37	1.16	1.47	0.31	Upward
5/30/2015	9:14	1.10	1.46	0.36	Upward
5/30/2015	11:18	1.10	1.47	0.37	Upward
5/30/2015	13:15	1.14	1.47	0.33	Upward
5/31/2015	10:39	1.15	1.48	0.33	Upward
5/31/2015	12:20	1.15	1.47	0.32	Upward
6/1/2015	14:59	0.99	1.36	0.37	Upward
6/2/2015	14:10	0.89	1.32	0.43	Upward
6/4/2015	14:23	1.00	1.42	0.42	Upward
6/11/2015	10:50	0.96	1.46	0.50	Upward
PZ-D					
5/20/2015	12:20	1.28	1.26	-0.02	Downward
5/20/2015	13:37	1.27	1.26	-0.01	Downward
5/20/2015	15:20	1.25	1.25	0.00	Neutral
5/20/2015	17:43	1.25	1.24	-0.01	Downward
5/20/2015	18:17	1.25	1.24	-0.01	Downward
5/20/2015	19:19	1.25	1.23	-0.02	Downward
5/21/2015	7:09	1.24	1.24	0.00	Neutral
5/21/2015	10:26	1.24	1.23	-0.01	Downward
5/21/2015	11:55	1.25	1.24	-0.01	Downward
5/21/2015	13:25	1.25	1.24	-0.01	Downward
5/21/2015	15:35	1.27	1.25	-0.02	Downward
5/21/2015	16:09	1.27	1.25	-0.02	Downward
5/22/2015	10:23	1.37	1.36	-0.01	Downward
5/22/2015	12:05	1.39	1.37	-0.02	Downward
5/22/2015	13:40	1.40	1.38	-0.02	Downward
5/22/2015	17:02	1.43	1.42	-0.01	Downward
5/23/2015	6:02	1.54	1.53	-0.01	Downward
5/23/2015	7:03	1.55	1.54	-0.01	Downward
5/26/2015	9:43	2.25	2.23	-0.02	Downward
5/26/2015	12:19	2.26	2.26	0.00	Neutral
5/26/2015	14:20	2.28	2.27	-0.01	Downward
5/26/2015	15:34	2.30	2.28	-0.02	Downward
5/26/2015	18:17	2.33	2.31	-0.02	Downward

**NEW YORK AMERICAN WATER COMPANY
WILD OAKS WATER SYSTEM
LEWISBORO, NEW YORK**

Manual Water-Level Measurements Collected from the Onsite Piezometers During 72-Hour Pumping Tests Conducted on Wells 4 and 5, May 18 Through May 30, 2015

Date	Time	Depth to Water – Groundwater (ft btoc)	Depth to Water – Surface Water (ft btoc)	Gradient (surface water – groundwater)	Gradient Direction
PZ-D (continued)					
5/27/2015	7:52	2.45	2.45	0.00	Neutral
5/27/2015	10:19	2.47	2.54	0.07	Downward
5/27/2015	13:37	2.50	2.48	-0.02	Downward
5/27/2015	14:38	2.51	2.50	-0.01	Downward
5/27/2015	18:23	2.54	2.53	-0.01	Downward
5/28/2015	10:40	2.65	2.65	0.00	Neutral
5/28/2015	13:11	2.68	2.66	-0.02	Downward
5/28/2015	14:11	2.68	2.67	-0.01	Downward
5/28/2015	17:29	2.71	2.70	-0.01	Downward
5/28/2015	18:37	2.72	2.71	-0.01	Downward
5/29/2015	7:17	2.60	2.72	0.12	Downward
5/29/2015	9:18	2.70	2.70	0.00	Neutral
5/29/2015	13:09	2.67	2.65	-0.02	Downward
5/29/2015	15:33	2.65	2.64	-0.01	Downward
5/29/2015	18:31	2.63	2.62	-0.01	Downward
5/30/2015	7:23	2.63	2.63	0.00	Neutral
5/30/2015	9:07	2.64	2.64	0.00	Neutral
5/30/2015	11:06	2.75	2.66	-0.09	Downward
5/30/2015	13:17	2.67	2.65	-0.02	Downward
5/31/2015	10:34	2.85	2.84	-0.01	Downward
5/31/2015	12:08	2.86	2.85	-0.01	Downward
6/1/2015	14:45	0.90	0.89	-0.01	Downward
6/2/2015	14:04	0.88	0.88	0.00	Neutral
6/4/2015	11:43	1.04	1.02	-0.02	Downward
6/4/2015	14:10	1.05	1.03	-0.02	Downward
6/11/2015	11:08	1.20	1.17	-0.03	Downward
PZ-E					
5/14/2015	13:20	1.05	1.50	0.45	Upward
5/14/2015	14:38	1.05	1.50	0.45	Upward
5/15/2015	14:38	1.08	1.50	0.42	Upward
5/15/2015	16:32	1.06	1.50	0.44	Upward
5/16/2015	18:36	1.01	1.45	0.44	Upward
5/18/2015	9:05	1.00	1.45	0.45	Upward
5/18/2015	10:08	1.00	1.45	0.45	Upward
5/18/2015	13:36	1.02	1.45	0.43	Upward
5/18/2015	15:13	1.00	1.45	0.45	Upward
5/19/2015	7:12	1.03	1.48	0.45	Upward
5/19/2015	11:40	1.01	1.46	0.45	Upward
5/19/2015	12:57	1.03	1.46	0.43	Upward
5/19/2015	14:27	1.03	1.46	0.43	Upward
5/19/2015	17:27	1.05	1.46	0.41	Upward
5/19/2015	18:38	1.03	1.46	0.43	Upward
5/20/2015	7:12	1.04	1.48	0.44	Upward

**NEW YORK AMERICAN WATER COMPANY
WILD OAKS WATER SYSTEM
LEWISBORO, NEW YORK**

Manual Water-Level Measurements Collected from the Onsite Piezometers During 72-Hour Pumping Tests Conducted on Wells 4 and 5, May 18 Through May 30, 2015

Date	Time	Depth to Water – Groundwater (ft btoc)	Depth to Water – Surface Water (ft btoc)	Gradient (surface water – groundwater)	Gradient Direction
PZ-E (continued)					
5/20/2015	9:11	1.05	1.48	0.43	Upward
5/20/2015	12:39	1.05	1.47	0.42	Upward
5/20/2015	13:48	1.04	1.47	0.43	Upward
5/20/2015	15:23	1.06	1.46	0.40	Upward
5/20/2015	17:45	1.07	1.47	0.40	Upward
5/20/2015	18:19	1.08	1.49	0.41	Upward
5/20/2015	19:21	1.08	1.48	0.40	Upward
5/21/2015	7:34	1.06	1.50	0.44	Upward
5/21/2015	10:29	1.08	1.50	0.42	Upward
5/21/2015	11:57	1.09	1.50	0.41	Upward
5/21/2015	13:27	1.10	1.50	0.40	Upward
5/21/2015	15:30	1.07	1.51	0.44	Upward
5/21/2015	16:03	1.06	1.51	0.45	Upward
5/22/2015	10:27	0.99	1.51	0.52	Upward
5/22/2015	12:07	1.00	1.51	0.51	Upward
5/22/2015	13:43	1.00	1.52	0.52	Upward
5/22/2015	17:04	0.99	1.50	0.51	Upward
5/23/2015	6:05	1.00	1.52	0.52	Upward
5/23/2015	7:05	1.00	1.52	0.52	Upward
5/26/2015	9:47	0.98	1.52	0.54	Upward
5/26/2015	12:16	1.04	1.52	0.48	Upward
5/26/2015	14:17	1.06	1.52	0.46	Upward
5/26/2015	15:28	1.08	1.52	0.44	Upward
5/26/2015	18:14	1.08	1.54	0.46	Upward
5/27/2015	7:40	1.12	1.54	0.42	Upward
5/27/2015	10:12	1.15	1.53	0.38	Upward
5/27/2015	13:39	1.16	1.53	0.37	Upward
5/27/2015	14:36	1.17	1.53	0.36	Upward
5/27/2015	18:25	1.15	1.53	0.38	Upward
5/28/2015	10:49	1.18	1.53	0.35	Upward
5/28/2015	13:09	1.15	1.52	0.37	Upward
5/28/2015	14:10	1.15	1.52	0.37	Upward
5/28/2015	17:31	1.18	1.52	0.34	Upward
5/28/2015	18:39	1.19	1.52	0.33	Upward
5/29/2015	7:12	1.19	1.54	0.35	Upward
5/29/2015	9:16	1.20	1.55	0.35	Upward
5/29/2015	13:07	1.22	1.54	0.32	Upward
5/29/2015	15:35	1.21	1.53	0.32	Upward
5/29/2015	18:34	1.22	1.54	0.32	Upward
5/30/2015	7:14	1.25	1.56	0.31	Upward
5/30/2015	9:03	1.24	1.56	0.32	Upward
5/30/2015	11:03	1.23	1.56	0.33	Upward
5/30/2015	13:20	1.24	1.55	0.31	Upward

**NEW YORK AMERICAN WATER COMPANY
WILD OAKS WATER SYSTEM
LEWISBORO, NEW YORK**

Manual Water-Level Measurements Collected from the Onsite Piezometers During 72-Hour Pumping Tests Conducted on Wells
4 and 5, May 18 Through May 30, 2015

Date	Time	Depth to Water – Groundwater (ft btoc)	Depth to Water – Surface Water (ft btoc)	Gradient (surface water – groundwater)	Gradient Direction
PZ-E (continued)					
5/31/2015	10:36	1.24	1.55	0.31	Upward
5/31/2015	12:13	1.23	1.55	0.32	Upward
6/1/2015	14:48	0.99	1.45	0.46	Upward
6/2/2015	14:06	0.93	1.40	0.47	Upward
6/4/2015	11:45	0.99	1.49	0.50	Upward
6/4/2015	14:15	1.02	1.49	0.47	Upward
6/11/2015	11:30	1.03	1.53	0.50	Upward
PZ-F					
5/14/2015	13:44	2.81	2.67	-0.14	Downward
5/14/2015	14:56	2.81	2.67	-0.14	Downward
5/15/2015	15:00	2.84	2.70	-0.14	Downward
5/15/2015	16:46	2.85	2.70	-0.15	Downward
5/16/2015	18:47	2.58	2.31	-0.27	Downward
5/18/2015	10:40	2.45	2.25	-0.20	Downward
5/18/2015	13:46	2.49	2.27	-0.22	Downward
5/18/2015	15:27	2.50	2.29	-0.21	Downward
5/19/2015	7:44	2.56	2.43	-0.13	Downward
5/19/2015	10:36	2.60	2.43	-0.17	Downward
5/19/2015	13:17	2.60	2.43	-0.17	Downward
5/19/2015	14:32	2.62	2.43	-0.19	Downward
5/19/2015	16:24	2.62	2.43	-0.19	Downward
5/19/2015	18:53	2.63	2.44	-0.19	Downward
5/20/2015	8:37	2.54	2.40	-0.14	Downward
5/20/2015	9:28	2.54	2.36	-0.18	Downward
5/20/2015	11:23	2.55	2.36	-0.19	Downward
5/20/2015	13:47	2.59	2.35	-0.24	Downward
5/20/2015	15:30	2.54	2.35	-0.19	Downward
5/20/2015	17:52	2.54	2.35	-0.19	Downward
5/20/2015	18:26	2.54	2.35	-0.19	Downward
5/20/2015	19:28	2.54	2.35	-0.19	Downward
5/21/2015	8:20	2.56	2.40	-0.16	Downward
5/21/2015	10:37	2.60	2.40	-0.20	Downward
5/21/2015	12:09	2.60	2.41	-0.19	Downward
5/21/2015	13:36	2.61	2.42	-0.19	Downward
5/21/2015	14:54	2.61	2.43	-0.18	Downward
5/21/2015	15:57	2.61	2.44	-0.17	Downward
5/22/2015	10:36	2.67	2.50	-0.17	Downward
5/22/2015	11:31	2.67	2.50	-0.17	Downward
5/22/2015	14:05	2.68	2.51	-0.17	Downward
5/22/2015	16:38	2.69	2.53	-0.16	Downward
5/23/2015	6:16	2.74	2.56	-0.18	Downward
5/23/2015	7:13	2.72	2.56	-0.16	Downward
5/26/2015	8:40	2.85	2.71	-0.14	Downward

**NEW YORK AMERICAN WATER COMPANY
WILD OAKS WATER SYSTEM
LEWISBORO, NEW YORK**

Manual Water-Level Measurements Collected from the Onsite Piezometers During 72-Hour Pumping Tests Conducted on Wells
4 and 5, May 18 Through May 30, 2015

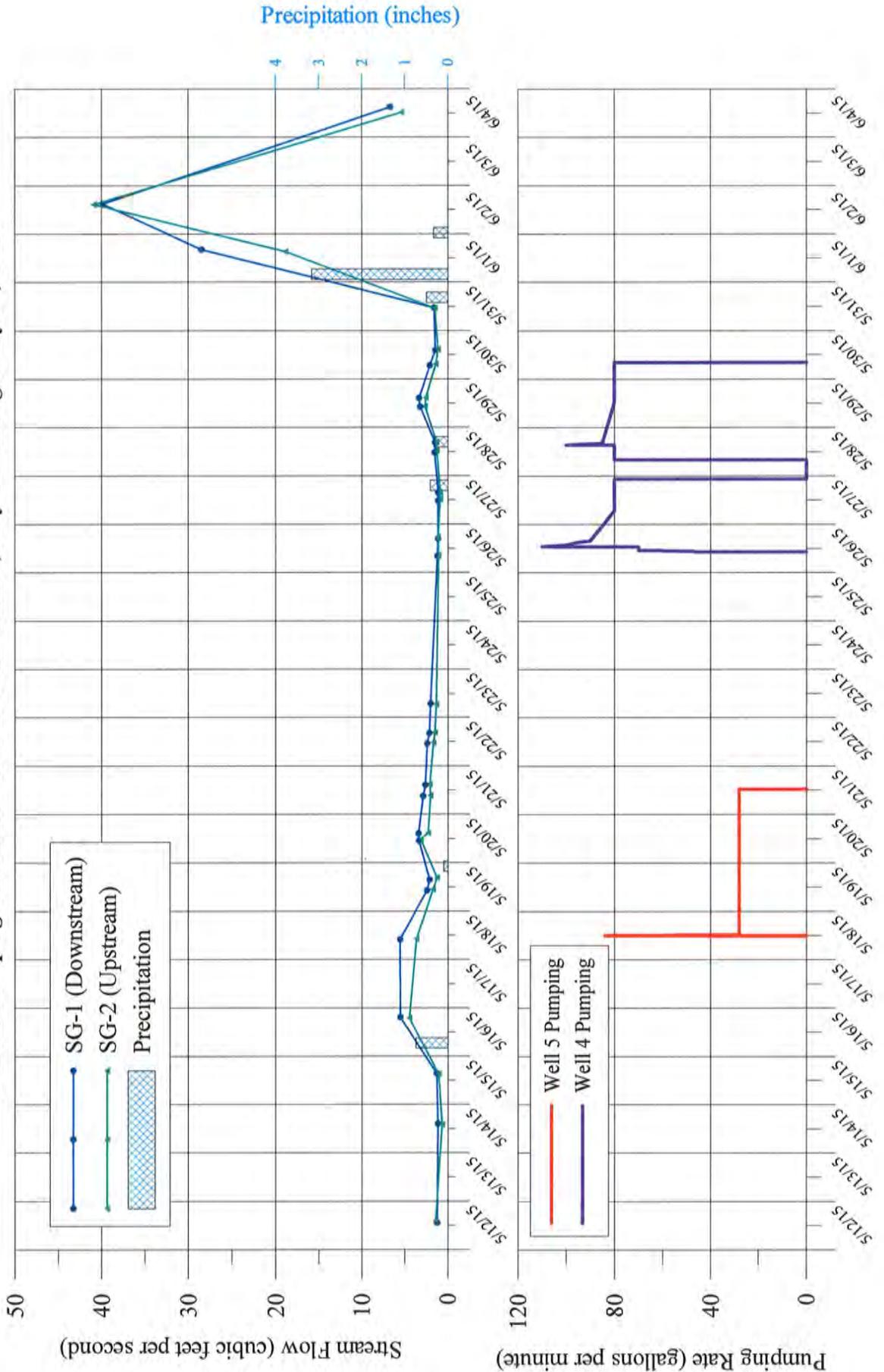
Date	Time	Depth to Water – Groundwater (ft btoc)	Depth to Water – Surface Water (ft btoc)	Gradient (surface water – groundwater)	Gradient Direction
PZ-F (continued)					
5/26/2015	9:26	2.83	2.71	-0.12	Downward
5/26/2015	12:33	2.86	2.69	-0.17	Downward
5/26/2015	14:30	2.86	2.70	-0.16	Downward
5/26/2015	15:44	2.86	2.70	-0.16	Downward
5/26/2015	17:23	2.88	2.71	-0.17	Downward
5/27/2015	9:13	2.88	2.72	-0.16	Downward
5/27/2015	10:32	2.89	2.75	-0.14	Downward
5/27/2015	12:22	2.90	2.73	-0.17	Downward
5/27/2015	13:45	2.89	2.73	-0.16	Downward
5/27/2015	14:49	2.89	2.73	-0.16	Downward
5/27/2015	15:49	2.90	2.73	-0.17	Downward
5/27/2015	18:32	2.89	2.74	-0.15	Downward
5/28/2015	10:14	2.76	2.65	-0.11	Downward
5/28/2015	12:48	2.79	2.64	-0.15	Downward
5/28/2015	14:31	2.79	2.64	-0.15	Downward
5/28/2015	16:28	2.79	2.64	-0.15	Downward
5/28/2015	17:38	2.78	2.63	-0.15	Downward
5/28/2015	18:46	2.76	2.60	-0.16	Downward
5/29/2015	7:58	2.59	2.45	-0.14	Downward
5/29/2015	9:34	2.59	2.41	-0.18	Downward
5/29/2015	10:38	2.60	2.41	-0.19	Downward
5/29/2015	11:50	2.60	2.41	-0.19	Downward
5/29/2015	13:30	2.60	2.41	-0.19	Downward
5/29/2015	14:50	2.60	2.41	-0.19	Downward
5/29/2015	15:29	2.60	2.41	-0.19	Downward
5/29/2015	18:27	2.62	2.43	-0.19	Downward
5/30/2015	7:43	2.69	2.55	-0.14	Downward
5/30/2015	9:34	2.70	2.56	-0.14	Downward
5/30/2015	11:22	2.71	2.56	-0.15	Downward
5/30/2015	13:11	2.71	2.58	-0.13	Downward
5/31/2015	10:44	2.84	2.67	-0.17	Downward
5/31/2015	12:27	2.83	2.68	-0.15	Downward
6/1/2015	15:03	1.84	1.76	-0.08	Downward
6/4/2015	12:06	2.42	2.15	-0.27	Downward
6/4/2015	14:30	2.42	2.17	-0.25	Downward
6/11/2015	11:39	2.54	2.35	-0.19	Downward

ft btoc feet below top of casing

APPENDIX VIII

NEW YORK AMERICAN WATER COMPANY
 WILD OAKS WATER SYSTEM
 LEWISBORO, NEW YORK

Graph of Stream Flow Measurements Collected from Stream Gaging Locations During 72-Hour Pumping Tests Conducted on Wells 4 and 5, May 18 Through May 30, 2015



**NEW YORK AMERICAN WATER COMPANY
WILD OAKS WATER SYSTEM
LEWISBORO, NEW YORK**

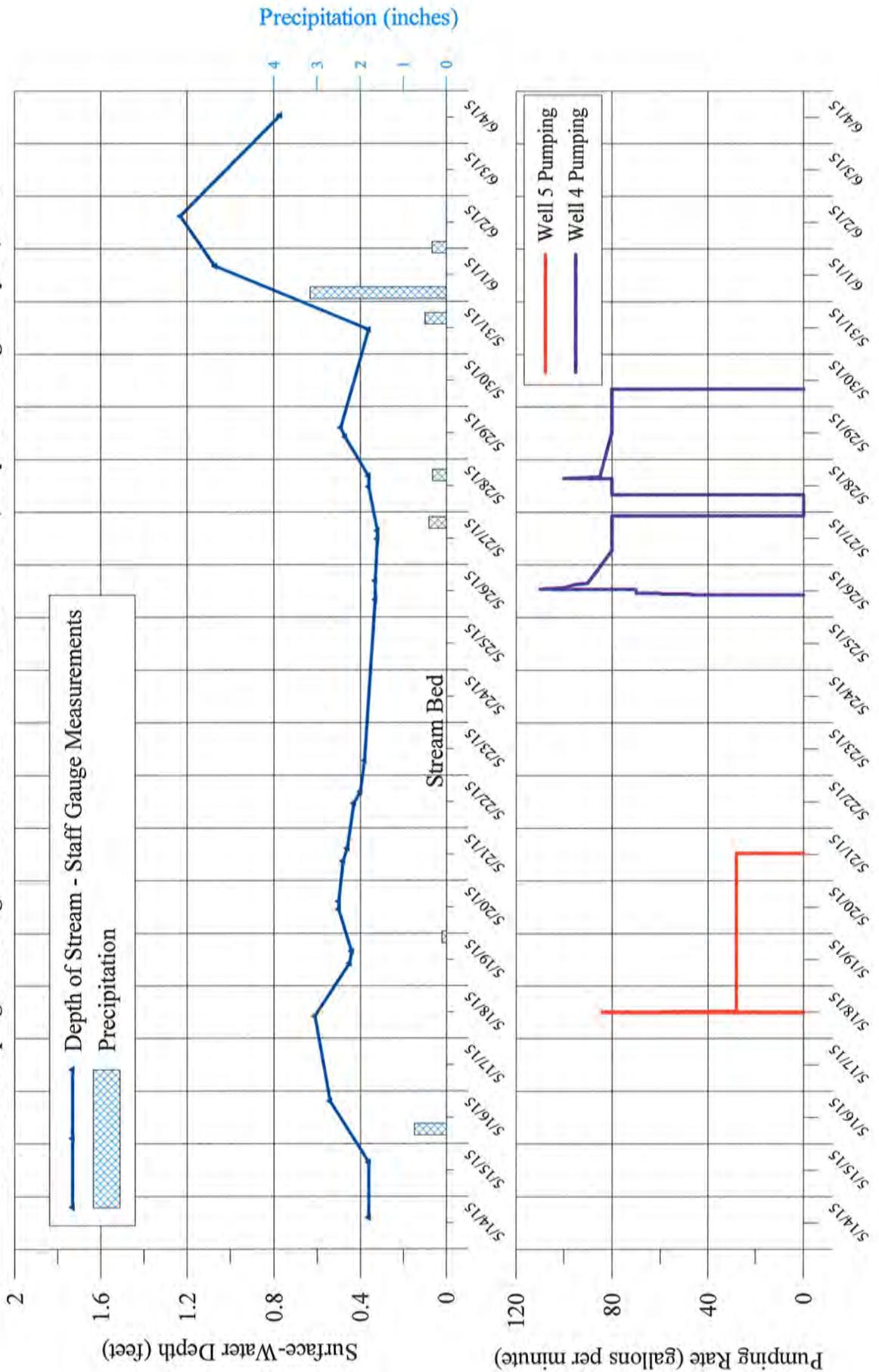
Stream Flow Measurements Collected from Onsite Stream Gaging Locations During
72-Hour Pumping Tests Conducted on Wells 4 and 5, from May 18 Through May 30, 2015

Date	Time	Stream Flow at SG-1 (cfs)	Date	Time	Stream Flow at SG-2 (cfs)
5/12/2015	13:12	1.21	5/12/2015	14:10	1.39
5/14/2015	14:17	1.13	5/14/2015	13:53	0.64
5/15/2015	15:22	1.26	5/15/2015	15:02	1.06
5/16/2015	19:15	5.48	5/16/2015	18:53	4.46
5/18/2015	9:45	5.52	5/18/2015	10:10	3.61
5/19/2015	10:09	2.42	5/19/2015	10:38	1.70
5/19/2015	15:21	2.10	5/19/2015	16:28	1.24
5/20/2015	10:42	3.31	5/20/2015	11:24	3.11
5/20/2015	14:22	3.36	5/20/2015	14:40	2.26
5/21/2015	8:50	2.85	5/21/2015	9:11	2.01
5/21/2015	14:19	2.60	5/21/2015	14:40	2.08
5/22/2015	10:50	2.37	5/22/2015	11:15	1.67
5/22/2015	16:00	2.13	5/22/2015	16:21	1.5
5/23/2015	6:39	1.98	5/23/2015	6:19	1.31
5/26/2015	7:58	1.20	5/26/2015	8:24	1.07
5/26/2015	16:38	1.13	5/26/2015	17:28	1.12
5/27/2015	11:17	1.11	5/27/2015	12:09	0.88
5/27/2015	15:18	1.10	5/27/2015	15:34	0.88
5/28/2015	11:22	1.51	5/28/2015	12:17	1.27
5/28/2015	16:13	1.46	5/28/2015	16:29	1.30
5/29/2015	10:02	3.18	5/29/2015	10:20	2.61
5/29/2015	14:20	3.31	5/29/2015	14:37	2.54
5/30/2015	6:31	2.07	5/30/2015	7:15	1.36
5/30/2015	14:05	1.43	5/30/2015	14:30	1.12
5/31/2015	11:05	1.58	5/31/2015	10:51	1.50
6/1/2015	16:00	28.45	6/1/2015	15:05	18.83
6/2/2015	14:45	39.82	6/2/2015	14:27	40.86
6/4/2015	14:45	6.69	6/4/2015	12:11	5.35

cfs cubic feet per second

NEW YORK AMERICAN WATER COMPANY
 WILD OAKS WATER SYSTEM
 LEWISBORO, NEW YORK

Hydrograph of Surface-Water Depth Measured at Staff-1 (Staff Gage) During
 72-Hour Pumping Test Program Conducted on Well 4 and Well 5, May 18 Through May 30, 2015



NEW YORK AMERICAN WATER COMPANY
WILD OAKS WATER SYSTEM
LEWISBORO, NEW YORK

Staff Gage Measurements Collected from During the
72-Hour Pumping Tests Conducted on Wells 4 and 5, from May 18 Through May 30, 2015

Date	Time	Surface-Water Depth (feet)
5/14/2015	14:14	0.36
5/15/2015	15:23	0.36
5/16/2015	19:16	0.54
5/18/2015	10:02	0.61
5/19/2015	10:10	0.45
5/19/2015	15:41	0.44
5/20/2015	10:41	0.5
5/20/2015	14:22	0.5
5/21/2015	8:44	0.48
5/21/2015	14:34	0.46
5/22/2015	11:07	0.43
5/22/2015	16:15	0.4
5/23/2015	6:38	0.38
5/26/2015	7:57	0.33
5/26/2015	16:37	0.33
5/27/2015	11:30	0.32
5/27/2015	15:16	0.32
5/28/2015	11:21	0.36
5/28/2015	16:12	0.36
5/29/2015	10:02	0.47
5/29/2015	14:19	0.49
5/31/2015	11:05	0.36
6/1/2015	15:58	1.07
6/2/2015	14:43	1.23
6/4/2015	12:47	0.77

APPENDIX IX

WELL 4

ANALYTICAL REPORT

Job Number: 420-90837-1

SDG Number: Wild Oak

Job Description: LBG, Inc.

For:

Leggette, Brashears & Graham, Inc.

4 Research Drive

Shelton, CT 06464

Attention: Stacy Stieber



Debra Bayer

Customer Service Manager

dbayer@envirotestlaboratories.com

06/16/2015

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EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOPH PH-0554

METHOD SUMMARY

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-90837-1

SDG Number: Wild Oak

Description	Lab Location	Method	Preparation Method
Matrix: Water			
ICP Metals by 200.7	EnvTest	EPA 200.7 Rev 4.4	
Sample Filtration	EnvTest		FILTRATION
200 Series Drinking Water Prep Determination Step	EnvTest		EPA 200
Total Metals Digestion for 200.7	EnvTest		EPA 200.7
ICPMS Metals by 200.8	EnvTest	EPA 200.8 Rev.5.4	
200 Series Drinking Water Prep Determination Step	EnvTest		EPA 200
Total Metals Digestion for 200.8	EnvTest		EPA 200.8
Mercury in Water by CVAA	EnvTest	EPA 245.1 Rev.3.0	
Digestion for CVAA Mercury in Waters	EnvTest		EPA 245.1
Anions by Ion Chromatography	EnvTest	MCAWW 300.0	
Anions by Ion Chromatography	EnvTest	EPA 300.0 Rev. 2.1	
EPA 504.1 EDB	Pace	EPA 504.1	
EPA 505 Pesticide/PCB	Pace	EPA 505	
EPA 515 Chlorinated Acids	Pace	EPA 515	
Purgeable Organic Compounds in Water by GC/MS	EnvTest	EPA-DW 524.2	
EPA 525.2 Semivolatile Organics	Pace	EPA 525.2	
EPA 531.1 Carbamate Pesticides in Drinki	Pace	EPA 531.1	
EPA 900 Series GA/GB/RA226/RA228/Gamma	Pace	EPA 900	
Uranium	Pace	STL-STL EPA	
Heterotropic Plate Count	EnvTest	IDEXX SIMPLATE	
Odor, Threshold Test	EnvTest	SM20 SM 2150B	
Alkalinity, Titration Method	EnvTest	SM21 SM 2320B-97,-11	
Corrosivity LSI Calculation	EnvTest	SM20 SM 2330B	
Hardness by Calculation	EnvTest	SM20 SM 2340B-97,-11	
pH	EnvTest	SM19 SM 4500 H+ B	
Nitrite by Colormetric	EnvTest	SM20 SM 4500B	
Total Coliform and Escherichia coli by Coliert- Presence/Absence	EnvTest	SMVWV SM 9223	
Apparent Color	EnvTest	SM21 SM2120B-01,11	
Turbidity	EnvTest	SM21 SM2130B-01,11	
Total Dissolved Solids (Dried at 180 °C)	EnvTest	SM21 SM2540C-97,11	
Cyanide, Total: Colorimetric Method	EnvTest	SM21 SM4500 CN E-99	
Cyanide: Distillation	EnvTest		SM21 SM 4500 CN C
General Sub Contract Method	Pace	Subcontract	

METHOD / ANALYST SUMMARY

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-90837-1

SDG Number: Wild Oak

Method	Analyst	Analyst ID
EPA-DW 524.2	Andersen, Eric C	ECA
EPA 200.7 Rev 4.4	Goldstein, Amy	AG
EPA 200.8 Rev.5.4	McPhillips, Julie	JM
EPA 200.8 Rev.5.4	Palentino, Gus J	GJP
EPA 245.1 Rev.3.0	Goldstein, Amy	AG
SM20 SM 2340B-97,-11	Goldstein, Amy	AG
MCAWW 300.0	Sirico, Derek	DS
EPA 300.0 Rev. 2.1	Sirico, Derek	DS
IDEXX SIMPLATE	Travis, Lyndsey	LT
SM20 SM 2150B	Travis, Lyndsey	LT
SM21 SM 2320B-97,-11	Sirico, Derek	DS
SM20 SM 2330B	Cusack, Renee	RC
SM19 SM 4500 H+ B	Travis, Lyndsey	LT
SM20 SM 4500B	Sirico, Derek	DS
SMVWV SM 9223	Travis, Lyndsey	LT
SM21 SM2120B-01,11	Travis, Lyndsey	LT
SM21 SM2130B-01,11	Travis, Lyndsey	LT
SM21 SM2540C-97,11	Travis, Lyndsey	LT
SM21 SM4500 CN E-99	Sirico, Derek	DS

Analytical Data

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-90837-1

Sdg Number: Wild Oak

Client Sample ID: Well 4 - 5/29

Lab Sample ID: 420-90837-1

Date Sampled: 05/29/2015 1110

Client Matrix: Water

Date Received: 05/29/2015 1225

524.2 Purgeable Organic Compounds in Water by GC/MS

Method:	524.2	Analysis Batch:	420-87368	Instrument ID:	Agilent 7890A/5975C
Preparation:	N/A			Lab File ID:	X060107.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Date Analyzed:	06/01/2015 1348			Final Weight/Volume:	5 mL
Date Prepared:	N/A				

Analyte	Result (ug/L)	Qualifier	RL
1,1,1,2-Tetrachloroethane	<0.500		0.500
1,1,1-Trichloroethane	<0.500		0.500
1,1,2,2-Tetrachloroethane	<0.500		0.500
1,1,2-Trichloroethane	<0.500		0.500
1,1-Dichloroethane	<0.500		0.500
1,1-Dichloroethene	<0.500		0.500
1,1-Dichloropropene	<0.500		0.500
1,2,3-Trichlorobenzene	<0.500		0.500
1,2,3-Trichloropropane	<0.500		0.500
1,2,4-Trichlorobenzene	<0.500		0.500
1,2,4-Trimethylbenzene	<0.500		0.500
1,2-Dichloroethane	<0.500		0.500
1,2-Dichlorobenzene	<0.500		0.500
1,2-Dichloropropane	<0.500		0.500
1,3-Dichloropropane	<0.500		0.500
1,4-Dichlorobenzene	<0.500		0.500
2,2-Dichloropropane	<0.500		0.500
Benzene	<0.500		0.500
Bromobenzene	<0.500		0.500
Bromochloromethane	<0.500		0.500
Bromomethane	<0.500		0.500
n-Butylbenzene	<0.500		0.500
cis-1,2-Dichloroethene	<0.500		0.500
cis-1,3-Dichloropropene	<0.500		0.500
Carbon tetrachloride	<0.500		0.500
Chlorobenzene	<0.500		0.500
Chloroethane	<0.500		0.500
Chloromethane	<0.500		0.500
Dibromomethane	<0.500		0.500
Ethylbenzene	<0.500		0.500
Dichlorodifluoromethane	<0.500		0.500
Hexachlorobutadiene	<0.500		0.500
Isopropylbenzene	<0.500		0.500
p-Isopropyltoluene	<0.500		0.500
Methylene Chloride	<0.500		0.500
m-Xylene & p-Xylene	<1.00		1.00
Methyl tert-butyl ether	<0.500		0.500
o-Xylene	<0.500		0.500
Tetrachloroethene	<0.500		0.500
Toluene	<0.500		0.500
trans-1,2-Dichloroethene	<0.500		0.500
trans-1,3-Dichloropropene	<0.500		0.500
Trichloroethene	<0.500		0.500
tert-Butylbenzene	<0.500		0.500

Analytical Data

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-90837-1
Sdg Number: Wild Oak

Client Sample ID: Well 4 - 5/29

Lab Sample ID: 420-90837-1
Client Matrix: Water

Date Sampled: 05/29/2015 1110
Date Received: 05/29/2015 1225

200.7 Rev 4.4 ICP Metals by 200.7

Method:	200.7 Rev 4.4	Analysis Batch: 420-87414	Instrument ID:	Thermo ICP
Preparation:	200	Prep Batch: 420-87349	Lab File ID:	N/A
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/02/2015 2253		Final Weight/Volume:	50 mL
Date Prepared:	06/01/2015 1732			

Analyte	Result (ug/L)	Qualifier	RL
Iron	<60.0		60.0
Manganese	18.8		10.0
Sodium	6800		200
Zinc	<20.0		20.0

200.7 Rev 4.4 ICP Metals by 200.7-Dissolved

Method:	200.7 Rev 4.4	Analysis Batch: 420-87466	Instrument ID:	Thermo ICP
Preparation:	200.7	Prep Batch: 420-87282	Lab File ID:	N/A
Dilution:	1.0		Initial Weight/Volume:	50 mL
Date Analyzed:	06/04/2015 0119		Final Weight/Volume:	50 mL
Date Prepared:	05/29/2015 1740			

Analyte	Result (ug/L)	Qualifier	RL
Iron	<60.0		60.0
Manganese	17.9		10.0

Analytical Data

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-90837-1

Sdg Number: Wild Oak

Client Sample ID: Well 4 - 5/29

Lab Sample ID: 420-90837-1

Date Sampled: 05/29/2015 1110

Client Matrix: Water

Date Received: 05/29/2015 1225

SM 2340B-97,-11 Hardness by Calculation

Method: SM 2340B-97,-11

Analysis Batch: 420-87417

Instrument ID: None

Preparation: N/A

Lab File ID: N/A

Dilution: 1.0

Initial Weight/Volume:

Date Analyzed: 05/02/2015 2253

Final Weight/Volume:

Date Prepared: N/A

Analyte	Result (mg/L)	Qualifier	RL
Calcium hardness as calcium carbonate	63.0		1.25

Analytical Data

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-90837-1

Sdg Number: Wild Oak

General Chemistry

Client Sample ID: Well 4 - 5/29

Lab Sample ID: 420-90837-1

Date Sampled: 05/29/2015 1110

Client Matrix: Water

Date Received: 05/29/2015 1225

Analyte	Result	Qual	Units	RL	Dil	Method
Nitrate as N	<0.250		mg/L	0.250	1.0	300.0
	Anly Batch: 420-87335	Date Analyzed	05/29/2015 2037			

Analyte	Result	Qual	Units		Dil	Method
Langelier Index	0.410		NONE		1.0	SM 2330B
	Anly Batch: 420-87767	Date Analyzed	06/12/2015 1344			

DATA REPORTING QUALIFIERS

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-90837-1
Sdg Number: Wild Oak

Lab Section	Qualifier	Description
General Chemistry	H	Sample was prepped or analyzed beyond the specified holding time
Biology	g	Result fails applicable NYS drinking water standards

MVWA WATER QUALITY LABORATORY

One Kennedy Plaza
Utica, NY 13502

Phone: (315) 792-0301
Fax: (315) 792-5201

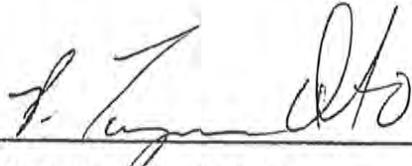
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Laboratory Analysis Report

The Water Quality Laboratory of the Mohawk Valley Water Authority warrants, to the best of its knowledge and belief, the accuracy of the analytical test results contained in this report, but makes no other warranty, expressed or implied, especially no warranties of merchantability or fitness for a particular purpose. By the Client's acceptance and/or use of this report, the Client agrees that MVWA is hereby released from any and all liabilities, claims, damages or causes of action affecting or which may affect the Client as regards to the results contained in this report. The Client further agrees that the only remedy available to the Client in the event of proven non-conformity with the above warranty shall be for MVWA to re-perform the analytical test(s) at no charge to the Client. The data contained in this report are for the exclusive use of the Client to whom it is addressed, and the release of these data to any other party, or the use of the name, trademark or service mark of MVWA especially for the use of advertising to the general public, is strictly prohibited without express prior written consent of MVWA.

This report was reviewed by:



Date:

6-1-15

Philip Tangorra, QA Officer

Telephone (315) 792-0301 One Kennedy Plaza • Utica, NY 13502 FAX (315) 792-5201

Analysis performed at:
New York State NELAP Laboratory No. 10319 and Pennsylvania State NELAP Laboratory No. 68-03428

MEMBER OF:
American Water Works Association (AWWA) • Water Research Foundation • NYAAEL

90724E



Water Quality Department
One Kennedy Plaza, 3rd Floor Lab
Ulster, NY 13502
www.nysdec.us

Page 3 of 8

Connie Schreppel, Director
Philip Tangorra, Research Scientist

Telephone: (315) 792-0338
Fax: (315) 792-5201

CHAIN OF CUSTODY

Sample ID: Well 4 - 5/27
Internal Tracking #: _____
(Internal use only)

Client:	<u>L.B.C.</u>
Source:	<u>Wild Cats Water System</u>

SAMPLE COLLECTION

Sampler	Date of Collection	Time of Collection	<u>124# JS</u>	<u>5/27/15</u>	<u>1240</u>
Water Type (Raw, Finished, Stream, etc.)			<u>Raw</u>		
Temp. (°C)	Turbidity (NTU)		<u>18°C</u>	<u>0.6 NTU</u>	
Type of Sample (circle)			Filtered <u>(Grab)</u>		
Volume Filtered			<u>NA</u>		

ANALYSES REQUESTED
(circle)

Giardia/Crypto MPA Total Coliform/E. coli
 HPC R2A Chemistries*
 Other*
 *Details: _____

CUSTODY TRANSFER(S)

Relinquished by: Brock Finel Date: 5/27/15 Time: 1400
 Received by: _____ Date: _____ Time: _____
 Relinquished by: L. Marciano Date: 5/27/15 Time: 1630
 Received by: _____ Date: _____ Time: _____

Lab Receipt: Date: 5/28/15 Time: 10:03 Temp: 1.0 Condition: Int'l Initials: gh

Laboratory name: Mohawk Valley Water Authority	Laboratory ID: NY01505
------------------------------------------------	------------------------

Method 1622/1623 Slide Examination Form

Sample ID: 5-27-15 ET LBG- Wild Oaks W-4	Analyst: PD
Examination/verification completion date and time: 5-29-15 (must be completed within 168 hours (7 days) of staining) 3=15	Slide number: 90562 Total number of slides for this sample: 1
Positive staining control acceptable <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Negative staining control acceptable <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
FITC, Size, Shape, DIC and DAPI Characteristics of 3 Oocysts Recorded <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	

Cryptosporidium Results

Object located by FA No.	Shape (oval or round)	Size L x W (µm)	DAPI -		DAPI +		D.I.C.		
			Light blue internal staining, no distinct nuclei, green rim (A)	Intense blue internal staining (B)	Number of nuclei stained sky blue (C)	Empty oocysts (D)	Oocysts with amorphous structure (E)	Oocysts with internal structure (F)	Number of sporozoites
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
Total FA number from this slide: 0					D.I.C. - Total number of empty oocysts (D):				
DAPI -: Total number (A):					D.I.C. - Total number of oocysts with amorphous structure (E):				
DAPI +: Total number (B):					D.I.C. - Total number of oocysts with internal structure (F):				
DAPI +: Total number (C):					Total count DAPI + (C) that show structure by D.I.C. (F):				

Giardia Results

Object located by FA No.	Shape (oval or round)	Size L x W (µm)	DAPI -		DAPI +		D.I.C.		
			Light blue internal staining, no distinct nuclei, green rim (A)	Intense blue internal staining (B)	Number of nuclei stained sky blue (C)	Empty cysts (D)	Cysts with amorphous structure (E)	Cysts with internal structure (F)	
							Number of nuclei	Median body	Axonemes
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
Total FA number from this slide: 0					D.I.C.: Total number of empty cysts (D):				
DAPI -: Total number (A):					D.I.C.: Total number of cysts with amorphous structure (E):				
DAPI +: Total number (B):					D.I.C.: Total number of cysts with one internal structure (F):				
DAPI +: Total number (C):					D.I.C.: Total number of cysts with >one internal structure (F):				
					Total number DAPI + (C) that show structure by D.I.C. (F):				

MVWA WATER QUALITY LABORATORY

One Kennedy Plaza
Utica, NY 13502



Phone: (315) 792-0338
Fax: (315) 792-5201

Page 7 of 8

MPA Worksheet

Client Envirotest Wild Oaks Water Sys Well 4
Lims# 90562
Date Sampled 5/27/15
Date Completed 5/29/15

Results:

pollen

no algae seen w/F

F-2

Telephone (315) 792-0301 One Kennedy Plaza • Utica, NY 13502 FAX (315) 792-5201

Analysis performed at:
New York State NELAP Laboratory No. 10319 and Pennsylvania State NELAP Laboratory No. 68-3428

MEMBER OF:
American Waterworks Association (AWWA) • AWWA Research Foundation • Underground Facilities Protective Organization



Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

June 09, 2015

Ron Bayer
EnviroTest Laboratories Inc.
315 Fullerton Avenue
Newburgh, NY 12550

RE: Project: LBG Inc
Pace Project No.: 35190843

Dear Ron Bayer:

Enclosed are the analytical results for sample(s) received by the laboratory on June 02, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Bo Garcia
bo.garcia@pacelabs.com
Project Manager

Enclosures

cc: Debra Bayer, EnviroTest Laboratories Inc.
Renee Cusack, EnviroTest Laboratories Inc.
Joyce Esposito, EnviroTest Laboratories Inc.
Janine Rader, EnviroTest Laboratories Inc.
Meredith Ruthven, EnviroTest Laboratories Inc.



REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project LBG Inc
Pace Project No.: 35190843

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35190843001	Well 4 5/29 (420-90837-1)	Drinking Water	05/29/15 11:10	06/02/15 11:05

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LBG Inc
Pace Project No.: 35190843

Sample: Well 4 5/29 (420-90837-1) Lab ID: 35190843001 Collected: 05/29/15 11:10 Received: 06/02/15 11:05 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
504.1 GCS EDB and DBCP									
Analytical Method: EPA 504.1 Preparation Method: EPA 504.1									
1,2-Dibromo-3-chloropropane	<0.0051	ug/L	0.021	0.0051	1	06/03/15 18:10	06/04/15 03:03	96-12-8	
1,2-Dibromoethane (EDB)	<0.0065	ug/L	0.010	0.0065	1	06/03/15 18:10	06/04/15 03:03	106-93-4	
508.1 GCS Pesticides									
Analytical Method: EPA 508.1 Preparation Method: EPA 508.1									
Alachlor	<0.032	ug/L	0.19	0.032	1	06/04/15 12:00	06/05/15 09:08	15972-60-8	
Atrazine	<0.020	ug/L	0.095	0.020	1	06/04/15 12:00	06/05/15 09:08	1912-24-9	
gamma-BHC (Lindane)	<0.0028	ug/L	0.019	0.0028	1	06/04/15 12:00	06/05/15 09:08	58-89-9	
Butachlor	<0.014	ug/L	0.095	0.014	1	06/04/15 12:00	06/05/15 09:08	23184-66-9	
Chlordane (Technical)	<0.044	ug/L	0.19	0.044	1	06/04/15 12:00	06/05/15 09:08	57-74-9	
Dieldrin	<0.013	ug/L	0.095	0.013	1	06/04/15 12:00	06/05/15 09:08	60-57-1	
Endrin	<0.0019	ug/L	0.0095	0.0019	1	06/04/15 12:00	06/05/15 09:08	72-20-8	
Heptachlor	<0.0057	ug/L	0.038	0.0057	1	06/04/15 12:00	06/05/15 09:08	76-44-8	
Heptachlor epoxide	<0.0028	ug/L	0.019	0.0028	1	06/04/15 12:00	06/05/15 09:08	1024-57-3	
Hexachlorobenzene	<0.010	ug/L	0.095	0.010	1	06/04/15 12:00	06/05/15 09:08	118-74-1	
Hexachlorocyclopentadiene	<0.030	ug/L	0.095	0.030	1	06/04/15 12:00	06/05/15 09:08	77-47-4	L3
Methoxychlor	<0.013	ug/L	0.095	0.013	1	06/04/15 12:00	06/05/15 09:08	72-43-5	
Metolachlor	<0.010	ug/L	0.095	0.010	1	06/04/15 12:00	06/05/15 09:08	51218-45-2	
PCB-1016 (Aroclor 1016)	<0.076	ug/L	0.095	0.076	1	06/04/15 12:00	06/05/15 09:08	12674-11-2	
PCB-1221 (Aroclor 1221)	<0.027	ug/L	0.095	0.027	1	06/04/15 12:00	06/05/15 09:08	11104-28-2	
PCB-1232 (Aroclor 1232)	<0.027	ug/L	0.095	0.027	1	06/04/15 12:00	06/05/15 09:08	11141-16-5	
PCB-1242 (Aroclor 1242)	<0.048	ug/L	0.095	0.048	1	06/04/15 12:00	06/05/15 09:08	53469-21-9	
PCB-1248 (Aroclor 1248)	<0.059	ug/L	0.095	0.059	1	06/04/15 12:00	06/05/15 09:08	12672-29-6	
PCB-1254 (Aroclor 1254)	<0.022	ug/L	0.095	0.022	1	06/04/15 12:00	06/05/15 09:08	11097-69-1	
PCB-1260 (Aroclor 1260)	<0.062	ug/L	0.095	0.062	1	06/04/15 12:00	06/05/15 09:08	11096-82-5	
PCB, Total	<0.076	ug/L	0.095	0.076	1	06/04/15 12:00	06/05/15 09:08	1336-36-3	
Propachlor	<0.0095	ug/L	0.095	0.0095	1	06/04/15 12:00	06/05/15 09:08	1918-16-7	
Simazine	<0.042	ug/L	0.066	0.042	1	06/04/15 12:00	06/05/15 09:08	122-34-9	
Toxaphene	<0.57	ug/L	0.95	0.57	1	06/04/15 12:00	06/05/15 09:08	8001-35-2	
Surrogates									
Decachlorobiphenyl (S)	127	%	70-130		1	06/04/15 12:00	06/05/15 09:08	2051-24-3	
515.3 Chlorinated Herbicides									
Analytical Method: EPA 515.3 Preparation Method: EPA 515.3									
2,4-D	<0.081	ug/L	0.10	0.081	1	06/03/15 08:50	06/04/15 01:57	94-75-7	
Dalapon	<0.89	ug/L	1.0	0.89	1	06/03/15 08:50	06/04/15 01:57	75-99-0	
Dicamba	<0.067	ug/L	0.10	0.067	1	06/03/15 08:50	06/04/15 01:57	1918-00-9	
Dinoseb	<0.16	ug/L	0.20	0.16	1	06/03/15 08:50	06/04/15 01:57	88-85-7	
Pentachlorophenol	<0.030	ug/L	0.040	0.030	1	06/03/15 08:50	06/04/15 01:57	87-86-5	
Picloram	<0.094	ug/L	0.10	0.094	1	06/03/15 08:50	06/04/15 01:57	1918-02-1	
2,4,5-TP (Silvex)	<0.16	ug/L	0.20	0.16	1	06/03/15 08:50	06/04/15 01:57	93-72-1	
Surrogates									
2,4-DCAA (S)	85	%	70-130		1	06/03/15 08:50	06/04/15 01:57	19719-28-9	
531.1 HPLC Carbamates									
Analytical Method: EPA 531.1									
Aldicarb	<0.70	ug/L	2.0	0.70	1		06/05/15 16:44	116-06-3	
Aldicarb sulfone	<0.60	ug/L	2.0	0.60	1		06/05/15 16:44	1646-88-4	
Aldicarb sulfoxide	<0.67	ug/L	2.0	0.67	1		06/05/15 16:44	1646-87-3	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LBG Inc
Pace Project No.: 35190843

QC Batch: GCSV/14781 Analysis Method: EPA 531.1
QC Batch Method: EPA 531.1 Analysis Description: 531.1 HPLC Carbamate
Associated Lab Samples: 35190843001

METHOD BLANK: 1231925 Matrix: Water
Associated Lab Samples: 35190843001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
3-Hydroxycarbofuran	ug/L	<0.51	2.0	06/05/15 10:37	
Aldicarb	ug/L	<0.70	2.0	06/05/15 10:37	
Aldicarb sulfone	ug/L	<0.60	2.0	06/05/15 10:37	
Aldicarb sulfoxide	ug/L	<0.67	2.0	06/05/15 10:37	
Carbaryl	ug/L	<0.28	2.0	06/05/15 10:37	
Carbofuran	ug/L	<0.75	2.0	06/05/15 10:37	
Methomyl	ug/L	<0.57	2.0	06/05/15 10:37	
Oxamyl	ug/L	<0.47	2.0	06/05/15 10:37	
Propoxur (S)	%	106	80-120	06/05/15 10:37	

LABORATORY CONTROL SAMPLE: 1231926

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
3-Hydroxycarbofuran	ug/L	10	10.1	101	80-120	
Aldicarb	ug/L	10	10.0	100	80-120	
Aldicarb sulfone	ug/L	10	9.8	98	80-120	
Aldicarb sulfoxide	ug/L	10	11.8	118	80-120	
Carbaryl	ug/L	10	10.3	103	80-120	
Carbofuran	ug/L	10	10.7	107	80-120	
Methomyl	ug/L	10	9.9	99	80-120	
Oxamyl	ug/L	10	9.1	91	80-120	
Propoxur (S)	%			101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1231927 1231928

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		35190710006 Result	Spike Conc.	Spike Conc.	MS Result					
3-Hydroxycarbofuran	ug/L	0.51U	10	10	10.2	11.2	102	112	80-120	9 20
Aldicarb	ug/L	0.70U	10	10	10.2	10.7	102	107	80-120	4 20
Aldicarb sulfone	ug/L	0.60U	10	10	9.8	11.2	98	112	80-120	14 20
Aldicarb sulfoxide	ug/L	0.67U	10	10	9.9	12.1	99	121	80-120	20 20 M1
Carbaryl	ug/L	0.28U	10	10	10.7	12.5	107	125	80-120	15 20 M1
Carbofuran	ug/L	0.75U	10	10	11.4	12.3	114	123	80-120	8 20 M1
Methomyl	ug/L	0.57U	10	10	10.4	11.6	104	116	80-120	11 20
Oxamyl	ug/L	0.47U	10	10	9.0	10.3	90	103	80-120	14 20
Propoxur (S)	%						104	112	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LBG Inc
Pace Project No.: 35190843

QC Batch: OEXT/22691 Analysis Method: EPA 508.1
QC Batch Method: EPA 508.1 Analysis Description: 508 GCS Pesticide
Associated Lab Samples: 35190843001

METHOD BLANK: 1231092 Matrix: Water
Associated Lab Samples: 35190843001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alachlor	ug/L	<0.034	0.20	06/05/15 04:11	
Atrazine	ug/L	<0.021	0.10	06/05/15 04:11	
Butachlor	ug/L	<0.015	0.10	06/05/15 04:11	
Chlordane (Technical)	ug/L	<0.047	0.20	06/05/15 04:11	
Dieldrin	ug/L	<0.014	0.10	06/05/15 04:11	
Endrin	ug/L	<0.0020	0.010	06/05/15 04:11	
gamma-BHC (Lindane)	ug/L	<0.0030	0.020	06/05/15 04:11	
Heptachlor	ug/L	<0.0060	0.040	06/05/15 04:11	
Heptachlor epoxide	ug/L	<0.0030	0.020	06/05/15 04:11	
Hexachlorobenzene	ug/L	<0.011	0.10	06/05/15 04:11	
Hexachlorocyclopentadiene	ug/L	<0.032	0.10	06/05/15 04:11	
Methoxychlor	ug/L	<0.014	0.10	06/05/15 04:11	
Metolachlor	ug/L	<0.011	0.10	06/05/15 04:11	
PCB, Total	ug/L	<0.080	0.10	06/05/15 04:11	
PCB-1016 (Aroclor 1016)	ug/L	<0.080	0.10	06/05/15 04:11	
PCB-1221 (Aroclor 1221)	ug/L	<0.029	0.10	06/05/15 04:11	
PCB-1232 (Aroclor 1232)	ug/L	<0.029	0.10	06/05/15 04:11	
PCB-1242 (Aroclor 1242)	ug/L	<0.051	0.10	06/05/15 04:11	
PCB-1248 (Aroclor 1248)	ug/L	<0.062	0.10	06/05/15 04:11	
PCB-1254 (Aroclor 1254)	ug/L	<0.023	0.10	06/05/15 04:11	
PCB-1260 (Aroclor 1260)	ug/L	<0.066	0.10	06/05/15 04:11	
Propachlor	ug/L	<0.010	0.10	06/05/15 04:11	
Simazine	ug/L	<0.044	0.070	06/05/15 04:11	
Toxaphene	ug/L	<0.61	1.0	06/05/15 04:11	
Decachlorobiphenyl (S)	%	133	70-130	06/05/15 04:11	S3

LABORATORY CONTROL SAMPLE: 1231093

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alachlor	ug/L	1	1.2	118	70-130	
Atrazine	ug/L	1.2	1.3	105	70-130	
Butachlor	ug/L	.5	0.57	114	70-130	
Dieldrin	ug/L	.5	0.59	118	70-130	
Endrin	ug/L	.05	0.059	119	70-130	
gamma-BHC (Lindane)	ug/L	.1	0.11	113	70-130	
Heptachlor	ug/L	.2	0.21	105	70-130	
Heptachlor epoxide	ug/L	.1	0.13	130	70-130	
Hexachlorobenzene	ug/L	.5	0.50	100	70-130	
Hexachlorocyclopentadiene	ug/L	.5	0.68	137	70-130 L0	
Methoxychlor	ug/L	.5	0.57	114	70-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LBG inc
Pace Project No.: 35190843

QC Batch: OEXT/22664 Analysis Method: EPA 515.3
QC Batch Method: EPA 515.3 Analysis Description: 5153 GCS Herbicides
Associated Lab Samples: 35190843001

METHOD BLANK: 1229221 Matrix: Water
Associated Lab Samples: 35190843001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
2,4,5-TP (Silvex)	ug/L	<0.16	0.20	06/02/15 23:36	
2,4-D	ug/L	<0.081	0.10	06/02/15 23:36	
Dalapon	ug/L	<0.89	1.0	06/02/15 23:36	
Dicamba	ug/L	<0.067	0.10	06/02/15 23:36	
Dinoseb	ug/L	<0.16	0.20	06/02/15 23:36	
Pentachlorophenol	ug/L	<0.030	0.040	06/02/15 23:36	
Picloram	ug/L	<0.094	0.10	06/02/15 23:36	
2,4-DCAA (S)	%	86	70-130	06/02/15 23:36	

LABORATORY CONTROL SAMPLE: 1229222

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4,5-TP (Silvex)	ug/L	1	0.96	96	70-130	
2,4-D	ug/L	.5	0.58	115	70-130	
Dalapon	ug/L	5	4.0	80	70-130	
Dicamba	ug/L	.5	0.46	92	70-130	
Dinoseb	ug/L	1	0.90	90	70-130	
Pentachlorophenol	ug/L	.2	0.18	88	70-130	
Picloram	ug/L	.5	0.45	91	70-130	
2,4-DCAA (S)	%			85	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1229473 1229474

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual	
		92251692001 Result	Spike Conc.	Spike Conc.	MS Result						MSD Result
2,4,5-TP (Silvex)	ug/L	ND	1	1	0.89	0.95	89	95	70-130	7	40
2,4-D	ug/L	ND	.5	.5	0.53	0.53	106	105	70-130	1	40
Dalapon	ug/L	ND	5	5	4.3	4.6	85	92	70-130	8	40
Dicamba	ug/L	ND	.5	.5	0.51	0.47	102	93	70-130	8	40
Dinoseb	ug/L	ND	1	1	0.89	0.89	89	89	70-130	0	40
Pentachlorophenol	ug/L	ND	.2	.2	0.18	0.18	88	88	70-130	0	40
Picloram	ug/L	ND	.5	.5	0.43	0.46	87	93	70-130	6	40
2,4-DCAA (S)	%						81	86	70-130		

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QUALITY CONTROL DATA

Project: LBG Inc
Pace Project No.: 35190843

QC Batch: OEXT/22692 Analysis Method: EPA 525.2
QC Batch Method: EPA 525.2 Analysis Description: 525.2 Base Neutral Extractables
Associated Lab Samples: 35190843001

METHOD BLANK: 1231096 Matrix: Water
Associated Lab Samples: 35190843001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aldrin	ug/L	<0.036	0.10	06/04/15 15:45	
Benzo(a)pyrene	ug/L	<0.019	0.10	06/04/15 15:45	
bis(2-Ethylhexyl)adipate	ug/L	<0.38	1.6	06/04/15 15:45	
bis(2-Ethylhexyl)phthalate	ug/L	<0.50	2.0	06/04/15 15:45	
Metribuzin	ug/L	<0.031	0.30	06/04/15 15:45	
1,3-Dimethyl-2-nitrobenzene(S)	%	115	70-130	06/04/15 15:45	
Perylene-d 12 (S)	%	104	70-130	06/04/15 15:45	
Triphenylphosphate (S)	%	102	70-130	06/04/15 15:45	

LABORATORY CONTROL SAMPLE: 1231097

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aldrin	ug/L	.4	0.29	72	70-130	
Benzo(a)pyrene	ug/L	.4	0.37	93	70-130	
bis(2-Ethylhexyl)adipate	ug/L	6.4	6.3	98	70-130	
bis(2-Ethylhexyl)phthalate	ug/L	8	9.1	113	70-130	
Metribuzin	ug/L	1.2	1.1	88	70-130	
1,3-Dimethyl-2-nitrobenzene(S)	%			112	70-130	
Perylene-d12 (S)	%			101	70-130	
Triphenylphosphate (S)	%			105	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1231807 1231808

Parameter	Units	MS 35190350001		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result							
Aldrin	ug/L	0.034U	.8	.8	0.78	0.73	98	91	70-130	6	40	
Benzo(a)pyrene	ug/L	0.018U	.8	.8	0.73	0.76	92	95	70-130	4	40	
bis(2-Ethylhexyl)adipate	ug/L	0.36U	12.8	12.8	12.5	10.4	97	81	70-130	18	40	
bis(2-Ethylhexyl)phthalate	ug/L	0.47U	16	16	17.3	16.3	108	102	70-130	6	40	
Metribuzin	ug/L	0.029U	2.4	2.4	2.1	2.4	88	101	70-130	13	40	
1,3-Dimethyl-2-nitrobenzene(S)	%						91	119	70-130			
Perylene-d12 (S)	%						112	111	70-130			
Triphenylphosphate (S)	%						107	90	70-130			

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QUALITY CONTROL - RADIOCHEMISTRY

Project: LBG Inc
Pace Project No.: 35190843

QC Batch: RADC/24682 Analysis Method: EPA 908.0
QC Batch Method: EPA 908.0 Analysis Description: 908.0 Total Uranium
Associated Lab Samples: 35190843001

METHOD BLANK: 902272 Matrix: Water
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Total Uranium	-0.0990 ± 0.163 (0.300) C:NA T:91%	pCi/L	06/05/15 17:17	

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: LBG Inc
Pace Project No.: 35190843

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35190843001	Well 4 5/29 (420-90837-1)	EPA 504.1	OEXT/22680	EPA 504.1	GCSV/14773
35190843001	Well 4 5/29 (420-90837-1)	EPA 508.1	OEXT/22691	EPA 508.1	GCSV/14787
35190843001	Well 4 5/29 (420-90837-1)	EPA 515.3	OEXT/22664	EPA 515.3	GCSV/14759
35190843001	Well 4 5/29 (420-90837-1)	EPA 531.1	GCSV/14781		
35190843001	Well 4 5/29 (420-90837-1)	EPA 525.2	OEXT/22692	EPA 525.2	MSSV/7901
35190843001	Well 4 5/29 (420-90837-1)	SM 7500Rn-B	RADC/24637		
35190843001	Well 4 5/29 (420-90837-1)	EPA 900.0	RADC/24688		
35190843001	Well 4 5/29 (420-90837-1)	EPA 903.1	RADC/24673		
35190843001	Well 4 5/29 (420-90837-1)	EPA 904.0	RADC/24676		
35190843001	Well 4 5/29 (420-90837-1)	EPA 908.0	RADC/24682		

REPORT OF LABORATORY ANALYSIS

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Document Name:
Sample Condition Upon Receipt Form
Document No.:
F-FL-C-007 rev. 06

Document Revised:
August 11, 2014
Issuing Authority:
Pace Florida Quality Office

Sample Condition Upon Receipt Form (SCUR)

Table Number: _____

Client Name: Equino Project # 351 90843

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking # 1737 2719 6558 / 2323 0850 / 6299 / 6426

Custody Seal on Cooler/Box Present: yes no Seals intact yes no

Date and Initials of person examining contents: 6-27-15 SJH HOS

Packing Material: Bubble Wrap Bubble Bags None Other _____

Thermometer Used T-211 Type of Ice: Wet Blue None

Cooler Temperature °C 3.8 (Visual) 0.0 (Correction Factor) 3.8 (Actual)

(Temp should be above freezing to 6°C. If below 0°C, then was sample frozen?)

Yes No

Receipt of samples satisfactory: Yes No

Rush TAT requested on COC: _____

If yes, then all conditions below were met:

If no, then mark box & describe issue (use comments area if necessary):

Chain of Custody Present	<input type="checkbox"/>
Chain of Custody Filled Out	<input type="checkbox"/>
Relinquished Signature & Sampler Name COC	<input type="checkbox"/>
Samples Arrived within Hold Time	<input type="checkbox"/>
Sufficient Volume	<input type="checkbox"/>
Correct Containers Used	<input type="checkbox"/>
Containers Intact	<input checked="" type="checkbox"/> <u>containers were damaged in coolers</u>
Sample Labels match COC (sample IDs & date/time of collection)	<input type="checkbox"/>
	No Labels: <input type="checkbox"/> No Time/Date on Labels: <input type="checkbox"/>
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/>
No Headspace in VOA Vials (>6mm):	<input type="checkbox"/>

Client Notification/Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution (use back for additional comments):

Project Manager Review: _____ Date: _____

Finished Product Information Only	
F.P. Sample ID: _____	Size & Qty of Bottles Received
Production Code: _____	_____ x 5 Gal
Date/Time Opened: _____	_____ x 2.5 Gal
Number of Unopened Bottles Remaining: _____	_____ x 1 Gal
	_____ x 1 Liter
	_____ x 500 mL
	_____ x 250 mL
	_____ x Other: _____
Extra Sample in Shed: Yes No	

WELL 5

ANALYTICAL REPORT

Job Number: 420-90570-1
SDG Number: Wild Oaks, Lewisboro, NY
Job Description: LBG, Inc.

For:
Leggette, Brashears & Graham, Inc.
4 Research Drive
Shelton, CT 06464

Attention: Stacy Stieber

Debra Bayer
Customer Service Manager
dbayer@envirotestlaboratories.com

06/16/2015

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EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOH PH-0554

METHOD SUMMARY

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-90570-1
SDG Number: Wild Oaks, Lewisboro, NY

Description	Lab Location	Method	Preparation Method
Matrix: Water			
ICP Metals by 200.7	EnvTest	EPA 200.7 Rev 4.4	
Sample Filtration	EnvTest		FILTRATION
200 Series Drinking Water Prep Determination Step	EnvTest		EPA 200
Total Metals Digestion for 200.7	EnvTest		EPA 200.7
ICPMS Metals by 200.8	EnvTest	EPA 200.8 Rev.5.4	
200 Series Drinking Water Prep Determination Step	EnvTest		EPA 200
Total Metals Digestion for 200.8	EnvTest		EPA 200.8
Mercury in Water by CVAA	EnvTest	EPA 245.1 Rev.3.0	
Digestion for CVAA Mercury in Waters	EnvTest		EPA 245.1
Anions by Ion Chromatography	EnvTest	MCAVW 300.0	
Anions by Ion Chromatography	EnvTest	EPA 300.0 Rev. 2.1	
EPA 504.1 EDB	Pace	EPA 504.1	
EPA 505 Pesticide/PCB	Pace	EPA 505	
EPA 515 Chlorinated Acids	Pace	EPA 515	
Purgeable Organic Compounds in Water by GC/MS	EnvTest	EPA-DW 524.2	
EPA 525.2 Semivolatile Organics	Pace	EPA 525.2	
EPA 531.1 Carbamate Pesticides in Drinki	Pace	EPA 531.1	
EPA 900 Series GA/GB/RA226/RA228/Gamma	Pace	EPA 900	
Uranium	Pace	STL-STL EPA	
Heterotropic Plate Count	EnvTest	IDEXX SIMPLATE	
Odor, Threshold Test	EnvTest	SM20 SM 2150B	
Alkalinity, Titration Method	EnvTest	SM21 SM 2320B-97,-11	
Corrosivity LSI Calculation	EnvTest	SM20 SM 2330B	
Hardness by Calculation	EnvTest	SM20 SM 2340B-97,-11	
pH	EnvTest	SM19 SM 4500 H+ B	
Nitrite by Colorimetric	EnvTest	SM20 SM 4500B	
Total Coliform and Escherichia coli by Collert- Presence/Absence	EnvTest	SMWW SM 9223	
Apparent Color	EnvTest	SM21 SM2120B-01,11	
Turbidity	EnvTest	SM21 SM2130B-01,11	
Total Dissolved Solids (Dried at 180 °C)	EnvTest	SM21 SM2540C-97,11	
Cyanide, Total: Colorimetric Method	EnvTest	SM21 SM4500 CN E-99	
Cyanide: Distillation	EnvTest		SM21 SM 4500 CN C
General Sub Contract Method	Pace	Subcontract	

Analytical Data

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-90570-1

Sdg Number: Wild Oaks, Lewisboro, NY

Client Sample ID: Well 5-5/21

Lab Sample ID: 420-90570-1

Date Sampled: 05/21/2015 1130

Client Matrix: Drinking Water

Date Received: 05/21/2015 1334

524.2 Purgeable Organic Compounds in Water by GC/MS

Method:	524.2	Analysis Batch: 420-87011	Instrument ID: Agilent 7890A/5975C
Preparation:	N/A		Lab File ID: X052123.D
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	05/21/2015 2006		Final Weight/Volume: 5 mL
Date Prepared:	N/A		

Analyte	Result (ug/L)	Qualifier	RL
1,1,1,2-Tetrachloroethane	<0.500		0.500
1,1,1-Trichloroethane	<0.500		0.500
1,1,2,2-Tetrachloroethane	<0.500		0.500
1,1,2-Trichloroethane	<0.500		0.500
1,1-Dichloroethane	<0.500		0.500
1,1-Dichloroethene	<0.500		0.500
1,1-Dichloropropene	<0.500		0.500
1,2,3-Trichlorobenzene	<0.500		0.500
1,2,3-Trichloropropane	<0.500		0.500
1,2,4-Trichlorobenzene	<0.500		0.500
1,2,4-Trimethylbenzene	<0.500		0.500
1,2-Dichloroethane	<0.500		0.500
1,2-Dichlorobenzene	<0.500		0.500
1,2-Dichloropropane	<0.500		0.500
1,3-Dichloropropane	<0.500		0.500
1,4-Dichlorobenzene	<0.500		0.500
2,2-Dichloropropane	<0.500		0.500
Benzene	<0.500		0.500
Bromobenzene	<0.500		0.500
Bromochloromethane	<0.500		0.500
Bromomethane	<0.500		0.500
n-Butylbenzene	<0.500		0.500
cis-1,2-Dichloroethene	<0.500		0.500
cis-1,3-Dichloropropene	<0.500		0.500
Carbon tetrachloride	<0.500		0.500
Chlorobenzene	<0.500		0.500
Chloroethane	<0.500		0.500
Chloromethane	<0.500		0.500
Dibromomethane	<0.500		0.500
Ethylbenzene	<0.500		0.500
Dichlorodifluoromethane	<0.500		0.500
Hexachlorobutadiene	<0.500		0.500
Isopropylbenzene	<0.500		0.500
p-Isopropyltoluene	<0.500		0.500
Methylene Chloride	<0.500		0.500
m-Xylene & p-Xylene	<1.00		1.00
Methyl tert-butyl ether	<0.500		0.500
o-Xylene	<0.500		0.500
Tetrachloroethene	<0.500		0.500
Toluene	<0.500		0.500
trans-1,2-Dichloroethene	<0.500		0.500
trans-1,3-Dichloropropene	<0.500		0.500
Trichloroethene	<0.500		0.500
tert-Butylbenzene	<0.500		0.500

Analytical Data

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-90570-1
Sdg Number: Wild Oaks, Lewisboro, NY

Client Sample ID: Well 5-5/21

Lab Sample ID: 420-90570-1
Client Matrix: Drinking Water

Date Sampled: 05/21/2015 1130
Date Received: 05/21/2015 1334

200.7 Rev 4.4 ICP Metals by 200.7

Method: 200.7 Rev 4.4 Analysis Batch: 420-87149 Instrument ID: Thermo ICP
Preparation: 200 Prep Batch: 420-87055 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 50 mL
Date Analyzed: 05/26/2015 2326 Final Weight/Volume: 50 mL
Date Prepared: 05/22/2015 1745

Analyte	Result (ug/L)	Qualifier	RL
Iron	<60.0		60.0
Manganese	<10.0		10.0
Zinc	<20.0		20.0

Method: 200.7 Rev 4.4 Analysis Batch: 420-87196 Instrument ID: Thermo ICP
Preparation: 200 Prep Batch: 420-87055 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 50 mL
Date Analyzed: 05/28/2015 0403 Final Weight/Volume: 50 mL
Date Prepared: 05/22/2015 1745

Analyte	Result (ug/L)	Qualifier	RL
Sodium	7850		200

200.7 Rev 4.4 ICP Metals by 200.7-Dissolved

Method: 200.7 Rev 4.4 Analysis Batch: 420-87384 Instrument ID: None
Preparation: 200.7 Prep Batch: 420-87061 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 50 mL
Date Analyzed: 05/29/2015 1820 Final Weight/Volume: 50 mL
Date Prepared: 05/22/2015 1830

Analyte	Result (ug/L)	Qualifier	RL
Iron	<60.0		60.0
Manganese	<10.0		10.0

Analytical Data

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-90570-1
 Sdg Number: Wild Oaks, Lewisboro, NY

Client Sample ID: Well 5-5/21

Lab Sample ID: 420-90570-1
 Client Matrix: Drinking Water

Date Sampled: 05/21/2015 1130
 Date Received: 05/21/2015 1334

245.1 Rev.3.0 Mercury in Water by CVAA

Method:	245.1 Rev.3.0	Analysis Batch: 420-87163	Instrument ID:	Perkin Elmer FIMS
Preparation:	245.1	Prep Batch: 420-87100	Lab File ID:	N/A
Dilution:	1.0		Initial Weight/Volume:	25 mL
Date Analyzed:	05/27/2015 1506		Final Weight/Volume:	25 mL
Date Prepared:	05/26/2015 1206			

Analyte	Result (ug/L)	Qualifier	RL
Mercury	<0.200		0.200

SM 2340B-97,-11 Hardness by Calculation

Method:	SM 2340B-97,-11	Analysis Batch: 420-87162	Instrument ID:	None
Preparation:	N/A		Lab File ID:	N/A
Dilution:	1.0		Initial Weight/Volume:	
Date Analyzed:	05/26/2015 2216		Final Weight/Volume:	
Date Prepared:	N/A			

Analyte	Result (mg/L)	Qualifier	RL
Calcium hardness as calcium carbonate	84.8		1.25

Analytical Data

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-90570-1
 Sdg Number: Wild Oaks, Lewisboro, NY

General Chemistry

Client Sample ID: Well 5-5/21

Lab Sample ID: 420-90570-1
 Client Matrix: Drinking Water

Date Sampled: 05/21/2015 1130
 Date Received: 05/21/2015 1334

Analyte	Result	Qual	Units	RL	Dil	Method
Nitrate as N	0.504		mg/L	0.250	1.0	300.0
	Anly Batch: 420-87083	Date Analyzed	05/22/2015 1710			

Analyte	Result	Qual	Units	Dil	Method
Langelier Index	0.210		NONE	1.0	SM 2330B
	Anly Batch: 420-87767	Date Analyzed	06/12/2015 1344		

DATA REPORTING QUALIFIERS

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-90570-1
Sdg Number: Wild Oaks, Lewisboro, NY

Lab Section	Qualifier	Description
General Chemistry	H	Sample was prepped or analyzed beyond the specified holding time
Biology	g	Result fails applicable NYS drinking water standards



**MOHAWK VALLEY
WATER AUTHORITY**

Final Result Report for **ENVIROTEST LABORATORIES, INC.**

Sample ID: 05/20/15 ENVIROTEST - WILD OAKS
 LIMS #: 90419
 Client: #1905 - Envirotest Laboratories, Inc.
 Source: Wild Oaks Water System - Raw Water

Method 1623 QUALITY CONTROL

Weekly Method Blank *Giardia* Count: 0 *Cryptosporidium* Count: 0
 Weekly OPR Sample *Giardia* % Recovery: 46.0 *Cryptosporidium* % Recovery: 51.5

SAMPLE RESULTS

<i>Giardia</i>	<u>Method</u> EPA 1623	<u>Total FA Count</u> 0	<u>Volume Analyzed</u> 10.00 L	<u>#cysts/L</u> 0.000
<i>Cryptosporidium</i>	<u>Method</u> EPA 1623	<u>Total FA Count</u> 0	<u>Volume Analyzed</u> 10.00 L	<u>#cysts/L</u> 0.000
MPA	<u>Method</u> NYSDOH Modified MPA	<u>Result</u> Positive (see attached report)		

MATRIX SPIKE RESULTS

<i>Giardia</i>	<u># Spiked:</u> N/A	<u># Recovered:</u>	<u>% Recovery</u>
<i>Cryptosporidium</i>	<u># Spiked:</u> N/A	<u># Recovered:</u>	<u>% Recovery</u>

Approved: *Philip A. Tangorra*
 Philip A. Tangorra
 QA Officer

Analysis performed at:
 Mohawk Valley Water Authority
 Telephone (315) 792-0301 • One Kennedy Plaza • Utica, NY 13502 • FAX (315) 792-5201
 USEPA ID#: NY01505 New York State ELAP ID#: 10319 Pennsylvania DEP ID#: 68-03428

MEMBER OF:
 American Water Works Association (AWWA) • Water Research Foundation • NYAAEL

Laboratory Name: Mohawk Valley Water Authority	Laboratory ID: NY01505
------------------------------------------------	------------------------

Method 1622/1623 Bench Sheet

Sample Identification Information	
* Lab Sample ID: <u>5-21-15 ET Well 5</u>	Person Receiving Sample: <u>JH</u>
* PWS ID:	* Sample collection date and time: <u>5-20-15/13:05</u>
* Facility ID:	Turbidity (NTU): <u>0.72</u>
* Sample Collection Point ID:	Temperature, date and time @ sample receipt: <u>5-21-15/9:41/3.2</u>
* Sample type (circle one):	Initial precision and recovery (IPR) Method blank <u>Field (monitoring) sample</u> Ongoing precision and recovery (OPR) Matrix spike (MS) Proficiency testing (PT)

Sample Spiking Information (for IPR, OPR, MS, and PT samples only)	
* Estimated number spiked:	Spiking time:
* Sample volume spiked (L):	Spiking date:
Spiking suspension ID:	Spiking analyst:

Sample Filtration	
Filter type (circle one):	Envirochek Envirochek HV <u>Filta-Max</u> CrypTest Other (specify)
Did filter clog? (circle one):	Filtration time: <u>09:50</u> Filter lot number: <u>L 1402 0430</u>
* Number of filter(s) used?: <u>1</u>	Filtration date: <u>5-21-15</u>
* Volume filtered (L) to nearest 1/4L: <u>10.0L</u>	Filtration analyst: <u>DW Training</u>

Sample Elution (must be initiated within 96 hours of sample collection/filtration)	
Elution procedure (circle one):	Wrist shaker <u>Filta-Max wash station</u> Stomacher Backflush/sonication
Type of Elution buffer: <u>PBST</u>	Elution time: <u>10:40</u>
Elution buffer lot number: <u>5-21-15</u>	Elution date: <u>5-21-15</u>
Elution buffer expiration date: <u>6-21-15</u>	Elution analyst: <u>PJ</u>

Concentration, IMS, and Slide Preparation (must be completed on same working day that samples are eluted).	
Procedure (circle one):	<u>Centrifugation</u> Filta-Max concentrator Other (specify)
* Pellet volume after concentration (mL) to nearest 0.1mL: <u>0.2</u>	Concentration analyst: <u>PJ</u>
* Total volume of resuspended concentrate (mL): <u>11</u>	IMS analyst: <u>PJ</u>
* Volume of resuspended concentrate transferred to IMS (mL): <u>10</u>	Slide preparation time: <u>3:30</u>
Number of subsamples processed through entire method: <u>0</u>	Slide preparation date: <u>5-21-15</u>
IMS lot number: <u>1639271</u>	Slide preparation analyst: <u>PJ</u>
IMS system (circle one):	<u>Dynal GC Combo</u> Dynal anti-Crypto Other (specify)
Slides (circle one):	Meridian Dynal <u>Waterborne</u> Other (specify) <u>111</u>

Slide Staining (must be completed within 72 hours of application of sample to the slide)	
Detection kit (circle one):	<u>BTF EasyStain</u> Merifluor Crypt-a-glo Gardi-a-glo Aqua-glo Other (specify)
Detection kit lot number: <u>GC-3107</u>	Staining date and time: <u>5-22-15/11:30</u>
Number of slides for this sample: <u>1</u>	Staining analyst: <u>PJ</u>

* Examination Results as Total FA number from all slides for sample Cryptosporidium: <u>0</u> Giardia: <u>0</u>

Comments:	<p align="center">ENVIROTEST LABORATORIES, INC.</p> <p>Client <u>1905</u> PWS Id _____</p> <p>Lims <u>90419</u> - <u>05202015</u></p>
-----------	----------------------------------------------------------------------------------------------------------------------------------------------

* = Data entered into LT2/Stage2 Data Collection and Tracking S;



Sample Date/Time
05202015 1305



May 2006

MVWA WATER QUALITY LABORATORY

One Kennedy Plaza
Utica, NY 13502



Phone: (315) 792-0338
Fax: (315) 792-5201

Page 5 of 7

Report of Examination Microscopic Examination for Microorganisms (MPA)

Sample : LBG Project - Wild Oaks Envirotest LIMS# 90419

Sample Date: 5-20-2015

Date completed: 5-21-2015

Sample was analyzed using modified MPA and examined using phase contrast and epifluorescence microscopy.

9000.0 ml of the sample was examined

Organisms seen:

Phylum Chlorophyta:

Unidentified ellipsoidal and spherical green algae exhibiting characteristic chlorophyll fluorescence

Kingdom Plantae:

Pollen

Plant debris

Copious debris may have prohibited further identification of organisms containing chlorophyll

A sample blank was prepared using distilled water and no organisms were observed in the blank.

A positive control culture of *Selenestrum sp* exhibited characteristics of chlorophyll fluorescence.

Mohawk Valley Water Authority

Telephone (315) 792-0301 • One Kennedy Plaza • Utica, NY 13502 • Fax (315) 792-5201

Analysis performed at:

USEPA ID#: NY01505

New York State ELAP ID#: 10319

Pennsylvania DEP ID#: 68-03428

MEMBER OF:

American Waterworks Association (AWWA) • Water Research Foundation • NYAAEL

A handwritten signature in black ink, appearing to be 'C. W. 2', is located in the bottom right corner of the page.

EnviroTest Laboratories, Inc.
 315 Fullerton Avenue
 Newburgh, NY 12550
 Phone (845) 562-0890 Fax (845) 562-0841

Chain of Custody Record

EnviroTest Laboratories Inc.

Client Information (Sub Contract Lab) Client Contact: Bayer, Debra Shipping/Receiving: dbayer@envirotestlaboratories.com Company: Mohawk Valley Water Authority		Lab Pk#: Bayer, Debra E-Mail: dbayer@envirotestlaboratories.com Carrier Tracking No(s):		COC No: 420-7601.1 Page: 1 of 1 STL Job #: 420-90534-1	
Address: Water Quality Dept., One Kennedy Plaza, 3rd Floor Lab, Utica, NY, 13502 Phone:		Due Date Requested: 6/1/2015 TAT Requested (days): PO #: WO #: Project #: 42001269 SOW#:		Analysis Requested	
Sample Identification Client ID (Lab ID) Wild Oaks Water System/Well 5-520 (420-90534-1)		Sample Date: 5/20/15 Sample Time: 13:05 Matrix: Water		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amshlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Special Instructions/Note: Turb U-7d	
Empty Kit Reinquished by: [Signature] Reinquished by: [Signature] Reinquished by:		Date: 5/20/15 16:00 Date/Time:		Method of Shipment:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temperature(s) °C and Other Remarks:		Received by: [Signature] Date/Time:	

CERTIFICATIONS

Project: LBG, Inc.
Pace Project No.: 35189601

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
 ACLASS DOD-ELAP Accreditation #: ADE-1544
 Alabama Certification #: 41590
 Arizona Certification #: AZ0734
 Arkansas Certification
 California/TNI Certification #: 04222CA
 Colorado Certification
 Connecticut Certification #: PH-0694
 Delaware Certification
 Florida/TNI Certification #: E87683
 Guam/PADEP Certification
 Hawaii/PADEP Certification
 Idaho Certification
 Illinois/PADEP Certification
 Indiana/PADEP Certification
 Iowa Certification #: 391
 Kansas/TNI Certification #: E-10358
 Kentucky Certification #: 90133
 Louisiana DHH/TNI Certification #: LA140008
 Louisiana DEQ/TNI Certification #: 4086
 Maine Certification #: PA00091
 Maryland Certification #: 308
 Massachusetts Certification #: M-PA1457
 Michigan/PADEP Certification
 Missouri Certification #: 235

Montana Certification #: Cert 0082
 Nebraska Certification #: NE-05-29-14
 Nevada Certification
 New Hampshire/TNI Certification #: 2976
 New Jersey/TNI Certification #: PA 051
 New Mexico Certification
 New York/TNI Certification #: 10888
 North Carolina Certification #: 42706
 North Dakota Certification #: R-190
 Oregon/TNI Certification #: PA200002
 Pennsylvania/TNI Certification #: 65-00282
 Puerto Rico Certification #: PA01457
 South Dakota Certification
 Tennessee Certification #: TN2867
 Texas/TNI Certification #: T104704188
 Utah/TNI Certification #: PA014572014-4
 Vermont Dept. of Health: ID# VT-0282
 Virgin Island/PADEP Certification
 Virginia/VELAP Certification #: 460198
 Washington Certification #: C868
 West Virginia DEP Certification #: 143
 West Virginia DHHR Certification #: 9964C
 Wisconsin/PADEP Certification
 Wyoming Certification #: 8TMS-Q

Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174
 Alabama Certification #: 41320
 Connecticut Certification #: PH-0216
 Delaware Certification: FL NELAC Reciprocity
 Florida Certification #: E83079
 Georgia Certification #: 955
 Guam Certification: FL NELAC Reciprocity
 Hawaii Certification: FL NELAC Reciprocity
 Illinois Certification #: 200068
 Indiana Certification: FL NELAC Reciprocity
 Kansas Certification #: E-10383
 Kentucky Certification #: 90050
 Louisiana Certification #: FL NELAC Reciprocity
 Louisiana Environmental Certificate #: 05007
 Maryland Certification: #346
 Massachusetts Certification #: M-FL1264
 Michigan Certification #: 9911
 Mississippi Certification: FL NELAC Reciprocity
 Missouri Certification #: 236

Montana Certification #: Cert 0074
 Nebraska Certification: NE-OS-28-14
 Nevada Certification: FL NELAC Reciprocity
 New Hampshire Certification #: 2958
 New Jersey Certification #: FL765
 New York Certification #: 11608
 North Carolina Environmental Certificate #: 667
 Pennsylvania Certification #: 68-00547
 Puerto Rico Certification #: FL01264
 South Carolina Certification: #96042001
 Tennessee Certification #: TN02974
 Texas Certification: FL NELAC Reciprocity
 US Virgin Islands Certification: FL NELAC Reciprocity
 Virginia Environmental Certification #: 460165
 Washington Certification #: C955
 West Virginia Certification #: 9962C
 Wisconsin Certification #: 399079670
 Wyoming (EPA Region 5): FL NELAC Reciprocity

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: LBG, Inc.
Pace Project No.: 35189601

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35189601001	90570-1	EPA 504.1	AYF	2	PASI-O
		EPA 508.1	JTJ	18	PASI-O
		EPA 515.3	LJM	8	PASI-O
		EPA 531.1	WFH	9	PASI-O
		EPA 525.2	WFH	8	PASI-O
		SM 7500Rn-B	FCC	1	PASI-PA
		EPA 900.0	FCC	2	PASI-PA
		EPA 903.1	JC2	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		EPA 908.0	LAL	1	PASI-PA

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ANALYTICAL RESULTS

Project: LBG, Inc.
 Pace Project No.: 35189601

Sample: 90570-1 Lab ID: 35189601001 Collected: 05/21/15 11:30 Received: 05/22/15 10:55 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
525.2 Base Neutral Extractable		Analytical Method: EPA 525.2 Preparation Method: EPA 525.2							
Aldrin	<0.034	ug/L	0.095	0.034	1	05/28/15 10:00	05/28/15 17:15	309-00-2	
Benzo(a)pyrene	<0.018	ug/L	0.095	0.018	1	05/28/15 10:00	05/28/15 17:15	50-32-8	
bis(2-Ethylhexyl)adipate	<0.36	ug/L	1.5	0.36	1	05/28/15 10:00	05/28/15 17:15	103-23-1	
bis(2-Ethylhexyl)phthalate	<0.47	ug/L	1.9	0.47	1	05/28/15 10:00	05/28/15 17:15	117-81-7	
Metribuzin	<0.029	ug/L	0.28	0.029	1	05/28/15 10:00	05/28/15 17:15	21087-64-9	
Surrogates									
1,3-Dimethyl-2-nitrobenzene(S)	648	%	70-130		1	05/28/15 10:00	05/28/15 17:15	81209	IS, S3
Perylene-d12 (S)	108	%	70-130		1	05/28/15 10:00	05/28/15 17:15	1520963	
Triphenylphosphate (S)	112	%	70-130		1	05/28/15 10:00	05/28/15 17:15	115-86-6	

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QUALITY CONTROL DATA

Project: LBG, Inc.
Pace Project No.: 35189601

QC Batch: OEXT/22548 Analysis Method: EPA 504.1
QC Batch Method: EPA 504.1 Analysis Description: 504 EDB DBCP
Associated Lab Samples: 35189601001

METHOD BLANK: 1223205 Matrix: Water
Associated Lab Samples: 35189601001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	<0.0049	0.020	05/26/15 19:52	
1,2-Dibromoethane (EDB)	ug/L	<0.0062	0.010	05/26/15 19:52	

LABORATORY CONTROL SAMPLE & LCSD: 1223206

1223207

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	.25	0.24	0.24	97	95	70-130	2	40	
1,2-Dibromoethane (EDB)	ug/L	.25	0.23	0.22	93	90	70-130	3	40	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1223208

1223209

Parameter	Units	40155183005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromo-3-chloropropane	ug/L	ND	.44	.44	0.42	0.45	96	102	65-135	6	40	
1,2-Dibromoethane (EDB)	ug/L	ND	.44	.44	0.40	0.43	92	98	65-135	7	40	

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QUALITY CONTROL DATA

Project: LBG, Inc.
Pace Project No.: 35189601

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1224284		1224285		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		35189786002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result										
Alachlor	ug/L	0.035U	2	2	2.3	2.4	117	118	65-135	1	40	P4			
Atrazine	ug/L	0.022U	2.5	2.5	2.2	2.4	88	95	65-135	8	40				
Butachlor	ug/L	0.015U	1	1	1.1	1.1	109	113	65-135	4	40				
Dieldrin	ug/L	0.014U	1	1	1.2	1.2	117	116	65-135	2	40				
Endrin	ug/L	0.0020U	.1	.1	0.13	0.13	127	128	65-135	1	40				
gamma-BHC (Lindane)	ug/L	0.0031U	.2	.2	0.23	0.22	115	111	65-135	4	40				
Heptachlor	ug/L	0.0061U	.4	.4	0.46	0.43	114	108	65-135	6	40				
Heptachlor epoxide	ug/L	0.0031U	.2	.2	0.26	0.25	132	125	65-135	5	40				
Hexachlorobenzene	ug/L	0.011U	1	1	1.0	0.96	100	96	65-135	4	40				
Hexachlorocyclopentadiene	ug/L	0.033U	1	1	1.0	0.88	100	88	65-135	13	40				
Methoxychlor	ug/L	0.014U	1	1	1.2	1.2	122	122	65-135	0	40				
Metolachlor	ug/L	0.011U	1	1	1.1	1.1	115	106	65-135	8	40				
Propachlor	ug/L	0.010U	1	1	1.0	1.1	100	106	65-135	7	40				
Simazine	ug/L	0.045U	1.8	1.8	2.3	2.4	130	136	65-135	5	40	M1			
Decachlorobiphenyl (S)	%						115	123	70-130		40				

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LBG, Inc.
Pace Project No.: 35189601

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1228490		1228491		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		35190350001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							
2,4,5-TP (Silvex)	ug/L	0.16U	1	1	0.81	0.77	81	77	70-130	5	40	
2,4-D	ug/L	0.081U	.5	.5	0.45	0.44	89	87	70-130	3	40	
Dalapon	ug/L	0.89U	5	5	4.3	3.9	85	78	70-130	9	40	
Dicamba	ug/L	0.067U	.5	.5	0.49	0.47	98	93	70-130	5	40	
Dinoseb	ug/L	0.16U	1	1	0.80	0.77	80	77	70-130	4	40	
Pentachlorophenol	ug/L	0.030U	.2	.2	0.16	0.15	82	77	70-130	6	40	
Picloram	ug/L	0.094U	.5	.5	0.43	0.42	86	84	70-130	1	40	
2,4-DCAA (S)	%						76	73	70-130			

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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: LBG, Inc.
 Pace Project No.: 35189601

Sample: 90570-1 Lab ID: 35189601001 Collected: 05/21/15 11:30 Received: 05/22/15 10:55 Matrix: Drinking Water
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radon	SM 7500Rn-B	3,819 ± 100 (43.9) C:NA T:NA	pCi/L	05/23/15 00:54	10043-92-2	
Gross Alpha	EPA 900.0	5.32 ± 2.16 (2.93) C:NA T:NA	pCi/L	06/01/15 07:21	12587-46-1	
Gross Beta	EPA 900.0	2.13U ± 1.14 (2.13) C:NA T:NA	pCi/L	06/01/15 07:21	12587-47-2	
Radium-226	EPA 903.1	0.672U ± 0.492 (0.672) C:NA T:90%	pCi/L	06/01/15 09:57	13982-63-3	
Radium-228	EPA 904.0	0.728U ± 0.319 (0.728) C:77% T:82%	pCi/L	06/01/15 13:04	15262-20-1	
Total Uranium	EPA 908.0	4.85 ± 0.406 (0.345) C:NA T:84%	pCi/L	05/29/15 19:22	7440-61-1	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: LBG, Inc.
Pace Project No.: 35189601

QC Batch:	RADC/24551	Analysis Method:	SM 7500Rn-B
QC Batch Method:	SM 7500Rn-B	Analysis Description:	7500Rn B Radon
Associated Lab Samples:	35189601001		

METHOD BLANK: 897076 Matrix: Water
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radon	-11.5 ± 18.5 (33.1) C:NA T:NA	pCi/L	05/22/15 22:09	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, Inc..

QUALIFIERS

Project: LBG, Inc.
Pace Project No.: 35189601

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.
ND - Not Detected at or above adjusted reporting limit.
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
MDL - Adjusted Method Detection Limit.
POL - Practical Quantitation Limit.
RL - Reporting Limit.
S - Surrogate
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.
LCS(D) - Laboratory Control Sample (Duplicate)
MS(D) - Matrix Spike (Duplicate)
DUP - Sample Duplicate
RPD - Relative Percent Difference
NC - Not Calculable.
SG - Silica Gel - Clean-Up
U - Indicates the compound was analyzed for, but not detected.
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.
Act - Activity
Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).
Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)
(MDC) - Minimum Detectable Concentration
Trac - Tracer Recovery (%)
Carr - Carrier Recovery (%)
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.
TNI - The NELAC Institute.

LABORATORIES

PASI-O Pace Analytical Services - Ormond Beach
PASI-PA Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

IS The internal standard response is below criteria. Results may be biased high.
M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
P4 Sample field preservation does not meet EPA or method recommendations for this analysis.
S3 Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt Form (SCUR) Table Number: _____

Client Name: Environist Project # 35189601

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking # 7736 5893 5110

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

Packing Material: Bubble Wrap Bubble Bags None Other _____

Thermometer Used 7.165 Type of Ice: Wet Blue None

Cooler Temperature °C 6.5 (Visual) -1.0 (Correction Factor) 5.5 (Actual)

Date and Initials of person examining contents: JP 5/22/15

JP 5/22/15 10:55

(Temp should be above freezing to 6°C). If below 0°C, then was sample frozen?

Yes No

Receipt of samples satisfactory: Yes No

Rush TAT requested on COC: _____

If yes, then all conditions below were met: If no, then mark box & describe issue (use comments area if necessary):

Chain of Custody Present	<input type="checkbox"/>
Chain of Custody Filled Out	<input type="checkbox"/>
Relinquished Signature & Sampler Name COC	<input type="checkbox"/>
Samples Arrived within Hold Time	<input type="checkbox"/>
Sufficient Volume	<input type="checkbox"/>
Correct Containers Used	<input type="checkbox"/>
Containers Intact	<input type="checkbox"/>
Sample Labels match COC (sample IDs & date/time of collection)	<input type="checkbox"/>
	No Labels: <input type="checkbox"/> No Time/Date on Labels: <input type="checkbox"/>
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/>
No Headspace in VOA Vials (>6mm):	<input type="checkbox"/>

Client Notification/Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution (use back for additional comments):

Project Manager Review: [Signature] Date: 5/22/15

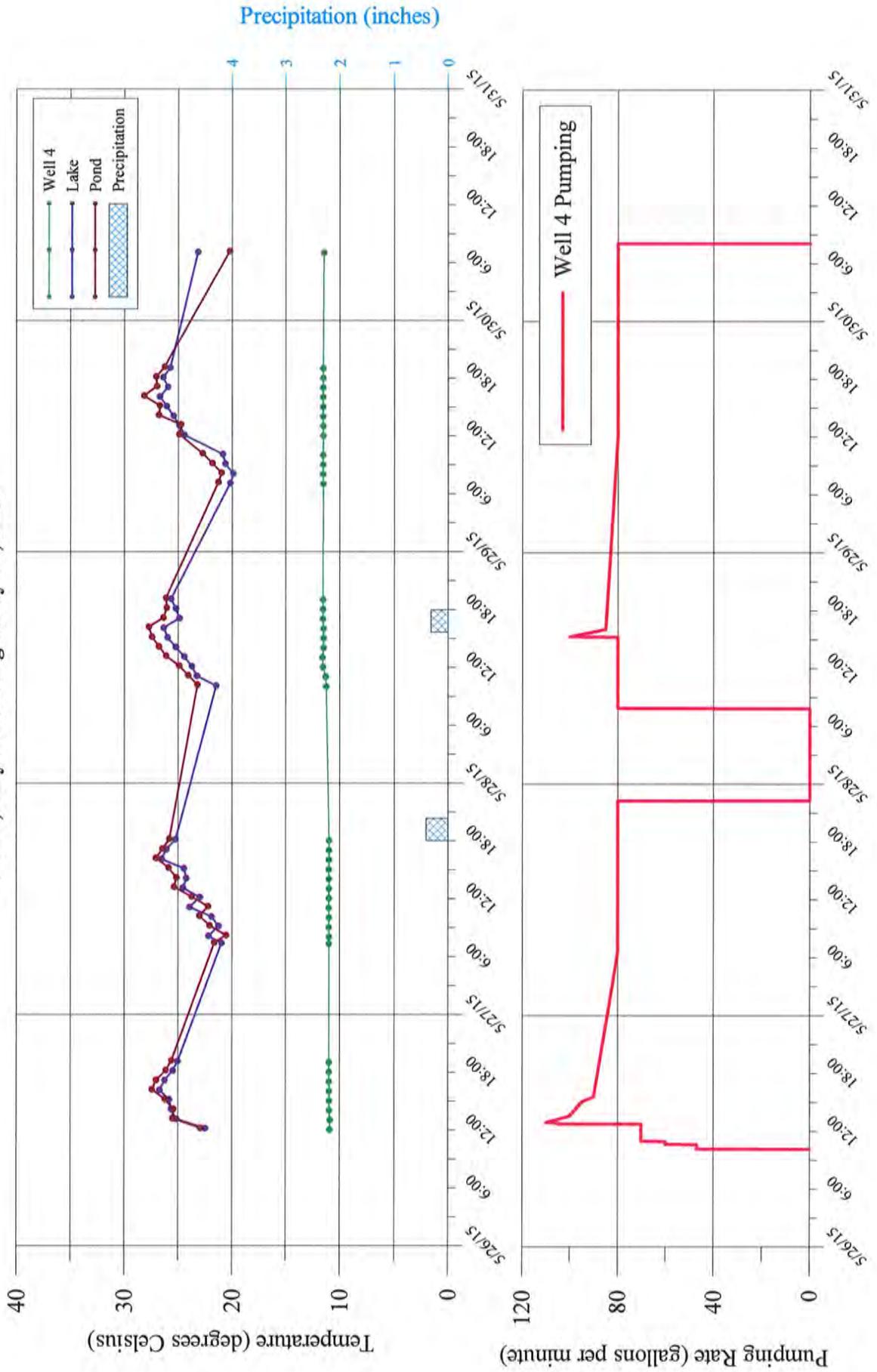
Finished Product Information Only	
F.P. Sample ID: _____	Size & Qty of Bottles Received <input type="checkbox"/> x 5 Gal <input type="checkbox"/> x 2.5 Gal <input type="checkbox"/> x 1 Gal <input type="checkbox"/> x 1 Liter <input type="checkbox"/> x 500 mL <input type="checkbox"/> x 250 mL <input type="checkbox"/> x Other: _____
Production Code: _____	
Date/Time Opened: _____	
Number of Unopened Bottles Remaining: _____	
Extra Sample in Shed: Yes No	

APPENDIX X

WELL 4

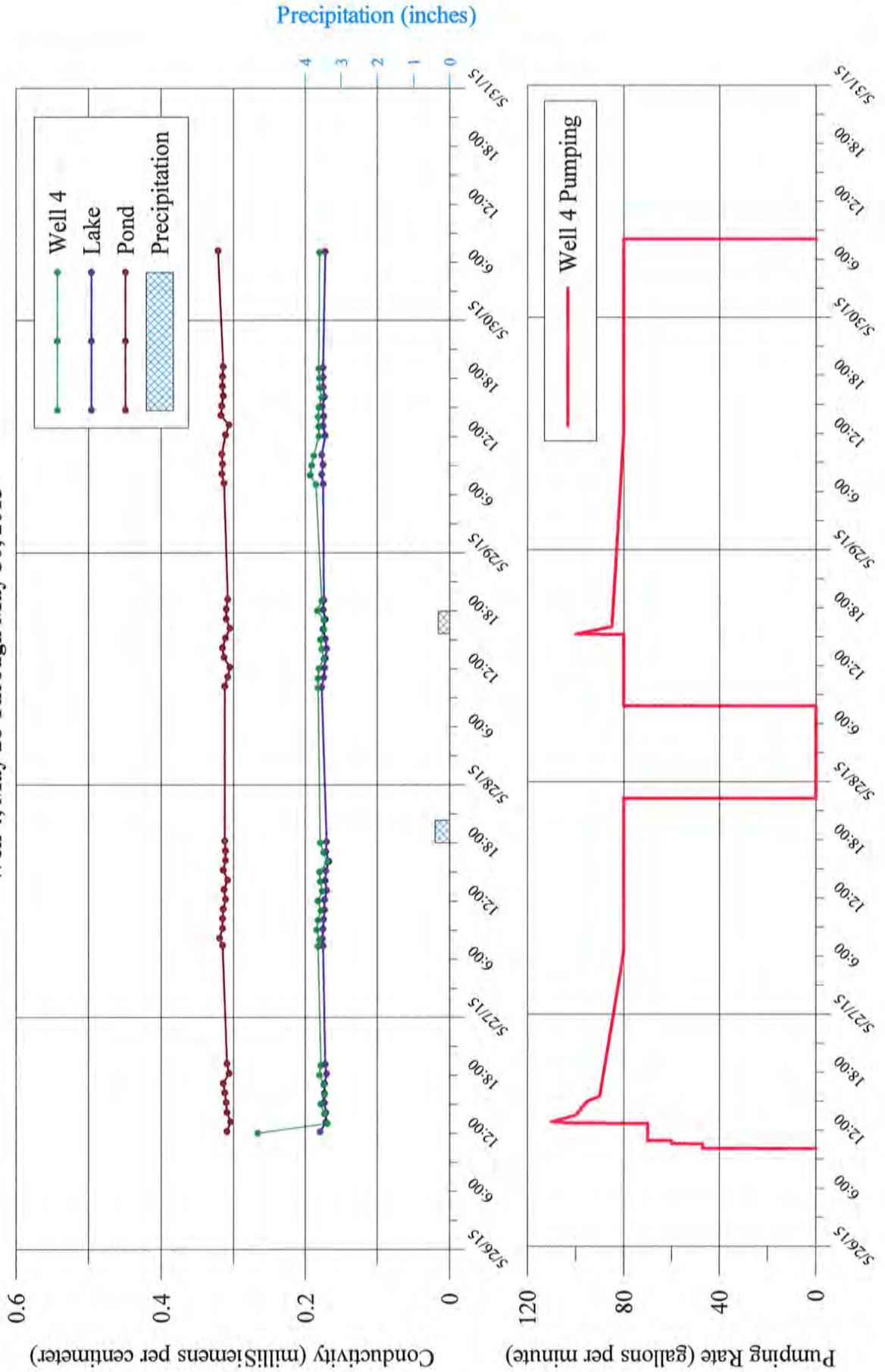
**NEW YORK AMERICAN WATER COMPANY
WILD OAKS WATER SYSTEM
LEWISBORO, NEW YORK**

Temperature Measurements Collected from Well 4, Pond, and Lake During 72-Hour Pumping Test of Well 4, May 26 Through May 30, 2015



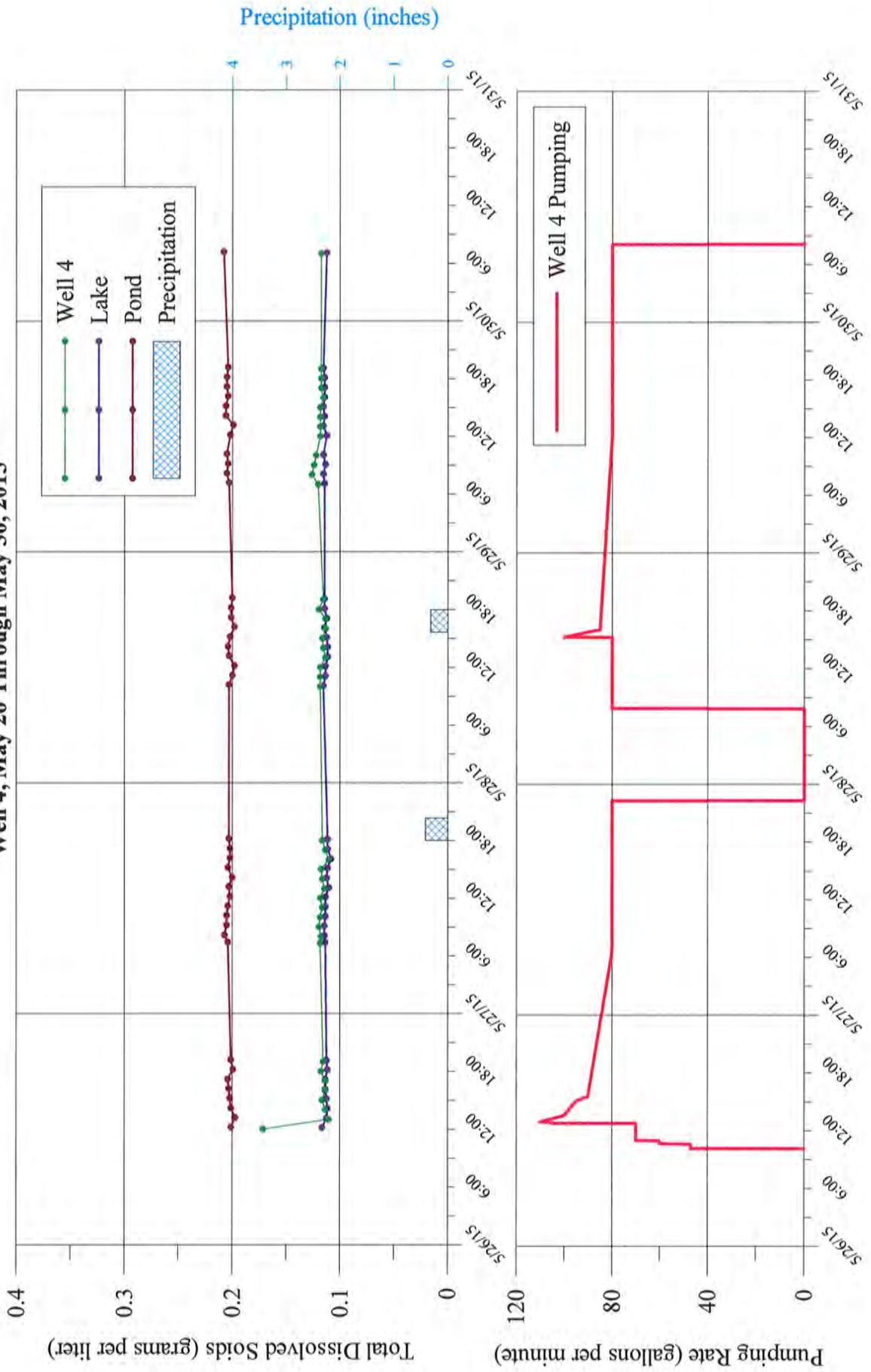
NEW YORK AMERICAN WATER COMPANY
 WILD OAKS WATER SYSTEM
 LEWISBORO, NEW YORK

Conductivity Measurements Collected from Well 4, Pond, and Lake During 72-Hour Pumping Test of Well 4, May 26 Through May 30, 2015



NEW YORK AMERICAN WATER COMPANY
 WILD OAKS WATER SYSTEM
 LEWISBORO, NEW YORK

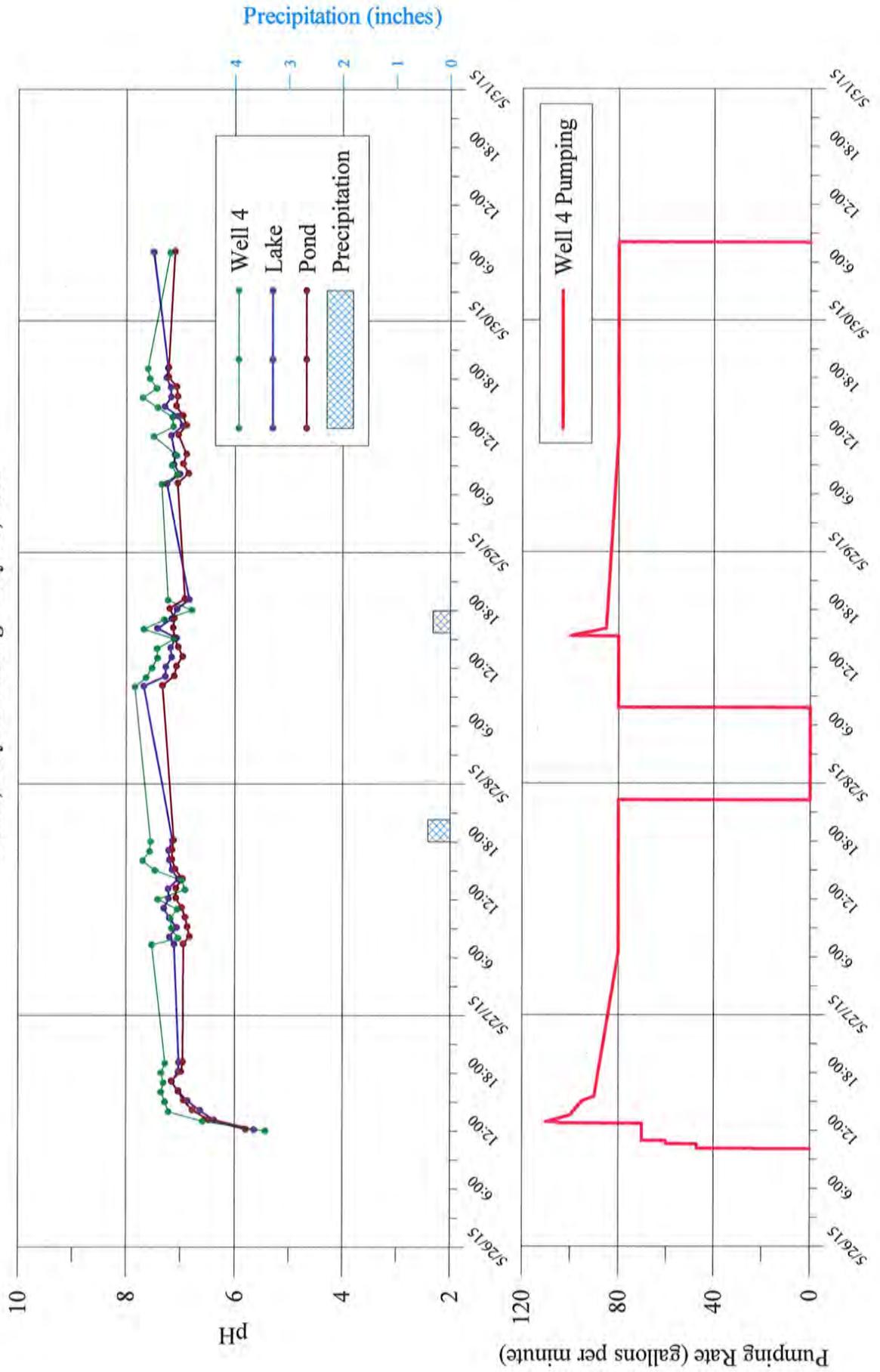
Total Dissolved Solid Measurements Collected from Well 4, Pond, and Lake During 72-Hour Pumping Test of Well 4, May 26 Through May 30, 2015



K:\Jobs\American Water Co\Wild Oaks\72-Hour Pumping Test (May 2015)\Hydrographs\Surface Water Parameters\Well 4 TDS.grf

NEW YORK AMERICAN WATER COMPANY
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pH Measurements Collected from Well 4, Pond, and Lake During 72-Hour Pumping Test of Well 4, May 26 Through May 30, 2015



NEW YORK AMERICAN WATER COMPANY
WILD OAKS WATER SYSTEM
LEWISBORO, NEW YORK

Physical Parameter Measurements Collected During 72-Hour Pumping Test Conducted on Well 4 from May 26 Through May 30, 2015

Well 4										Pond										Lake									
Date	Time	pH (S.U.)	Temperature (°C)	Conductivity (mS/cm)	TDS (g/L)	Date	Time	pH (S.U.)	Temperature (°C)	Conductivity (mS/cm)	TDS (g/L)	Date	Time	pH (S.U.)	Temperature (°C)	Conductivity (mS/cm)	TDS (g/L)	Date	Time	pH (S.U.)	Temperature (°C)	Conductivity (mS/cm)	TDS (g/L)						
5/26/15	12:00	5.43	10.91	0.266	0.171	5/26/15	12:10	5.79	22.91	0.309	0.201	5/26/15	12:07	5.64	22.45	0.179	0.116	5/26/15	12:07	5.64	22.45	0.179	0.116						
5/26/15	13:00	6.58	10.88	0.169	0.110	5/26/15	13:10	6.48	25.49	0.304	0.197	5/26/15	13:07	6.37	25.13	0.171	0.112	5/26/15	13:07	6.37	25.13	0.171	0.112						
5/26/15	14:00	7.21	10.94	0.173	0.113	5/26/15	14:10	6.77	25.40	0.309	0.201	5/26/15	14:07	6.63	25.63	0.171	0.111	5/26/15	14:07	6.63	25.63	0.171	0.111						
5/26/15	15:00	7.28	10.95	0.178	0.116	5/26/15	15:10	6.93	26.21	0.310	0.202	5/26/15	15:07	6.86	25.80	0.173	0.112	5/26/15	15:07	6.86	25.80	0.173	0.112						
5/26/15	16:00	7.35	10.96	0.173	0.113	5/26/15	16:10	7.03	27.39	0.312	0.203	5/26/15	16:07	7.03	26.70	0.173	0.113	5/26/15	16:07	7.03	26.70	0.173	0.113						
5/26/15	17:00	7.31	10.97	0.174	0.113	5/26/15	17:10	7.16	27.03	0.314	0.204	5/26/15	17:07	7.15	26.24	0.173	0.113	5/26/15	17:07	7.15	26.24	0.173	0.113						
5/26/15	18:00	7.35	10.97	0.180	0.117	5/26/15	18:10	6.98	26.12	0.306	0.199	5/26/15	18:07	7.03	25.47	0.170	0.111	5/26/15	18:07	7.03	25.47	0.170	0.111						
5/26/15	19:00	7.28	10.97	0.178	0.115	5/26/15	19:10	6.95	25.59	0.309	0.201	5/26/15	19:07	7.02	25.01	0.172	0.112	5/26/15	19:07	7.02	25.01	0.172	0.112						
5/27/15	7:18	7.52	10.97	0.182	0.118	5/27/15	7:24	6.94	21.61	0.315	0.204	5/27/15	7:21	7.11	20.95	0.175	0.113	5/27/15	7:21	7.11	20.95	0.175	0.113						
5/27/15	8:00	7.04	10.97	0.180	0.117	5/27/15	8:10	6.83	20.52	0.319	0.207	5/27/15	8:05	7.2	22.15	0.176	0.114	5/27/15	8:05	7.2	22.15	0.176	0.114						
5/27/15	9:00	7.16	10.98	0.184	0.119	5/27/15	9:10	6.87	22.06	0.315	0.205	5/27/15	9:05	7.06	21.23	0.175	0.114	5/27/15	9:05	7.06	21.23	0.175	0.114						
5/27/15	10:00	7.18	10.98	0.182	0.118	5/27/15	10:10	6.91	22.98	0.315	0.205	5/27/15	10:05	7.2	21.87	0.174	0.113	5/27/15	10:05	7.2	21.87	0.174	0.113						
5/27/15	11:00	7.05	10.98	0.178	0.116	5/27/15	11:10	6.97	22.20	0.314	0.204	5/27/15	11:05	7.3	23.90	0.173	0.113	5/27/15	11:05	7.3	23.90	0.173	0.113						
5/27/15	12:00	7.41	10.97	0.182	0.118	5/27/15	12:10	7.08	23.72	0.311	0.202	5/27/15	12:05	7.21	22.94	0.173	0.113	5/27/15	12:05	7.21	22.94	0.173	0.113						
5/27/15	13:00	6.91	10.97	0.176	0.114	5/27/15	13:10	7.08	25.34	0.313	0.203	5/27/15	13:05	7.22	24.53	0.170	0.110	5/27/15	13:05	7.22	24.53	0.170	0.110						
5/27/15	14:00	6.97	10.98	0.179	0.116	5/27/15	14:10	6.96	25.12	0.308	0.200	5/27/15	14:05	7.03	24.23	0.172	0.112	5/27/15	14:05	7.03	24.23	0.172	0.112						
5/27/15	15:00	7.46	10.98	0.180	0.117	5/27/15	15:10	7.09	25.87	0.314	0.204	5/27/15	15:05	7.15	24.44	0.171	0.111	5/27/15	15:05	7.15	24.44	0.171	0.111						
5/27/15	16:00	7.69	10.97	0.169	0.110	5/27/15	16:10	7.15	27.04	0.311	0.202	5/27/15	16:05	7.2	26.52	0.167	0.108	5/27/15	16:05	7.2	26.52	0.167	0.108						
5/27/15	17:00	7.56	10.98	0.174	0.113	5/27/15	17:10	7.15	26.44	0.311	0.202	5/27/15	17:05	7.21	26.07	0.171	0.111	5/27/15	17:05	7.21	26.07	0.171	0.111						
5/27/15	18:00	7.54	10.97	0.179	0.116	5/27/15	18:10	7.12	25.80	0.312	0.203	5/27/15	18:05	7.14	25.22	0.170	0.111	5/27/15	18:05	7.14	25.22	0.170	0.111						
5/28/15	10:00	7.84	11.24	0.182	0.118	5/28/15	10:10	7.33	23.18	0.312	0.203	5/28/15	10:05	7.67	21.45	0.177	0.115	5/28/15	10:05	7.67	21.45	0.177	0.115						
5/28/15	11:00	7.63	11.28	0.182	0.118	5/28/15	11:10	7.11	24.06	0.308	0.200	5/28/15	11:05	7.28	23.24	0.174	0.113	5/28/15	11:05	7.28	23.24	0.174	0.113						
5/28/15	12:00	7.52	11.54	0.181	0.118	5/28/15	12:10	7.07	24.89	0.305	0.198	5/28/15	12:05	7.27	23.70	0.173	0.113	5/28/15	12:05	7.27	23.70	0.173	0.113						
5/28/15	13:00	7.42	11.57	0.174	0.113	5/28/15	13:10	6.96	26.13	0.313	0.203	5/28/15	13:05	7.16	24.41	0.172	0.111	5/28/15	13:05	7.16	24.41	0.172	0.111						
5/28/15	14:00	7.43	11.48	0.177	0.115	5/28/15	14:10	7.04	26.79	0.315	0.204	5/28/15	14:05	7.18	25.19	0.170	0.111	5/28/15	14:05	7.18	25.19	0.170	0.111						
5/28/15	15:00	7.12	11.49	0.179	0.116	5/28/15	15:10	7.11	27.42	0.311	0.202	5/28/15	15:05	7.07	25.97	0.172	0.112	5/28/15	15:05	7.07	25.97	0.172	0.112						

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WILD OAKS WATER SYSTEM
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Physical Parameter Measurements Collected During 72-Hour Pumping Test Conducted on Well 4 from May 26 Through May 30, 2015

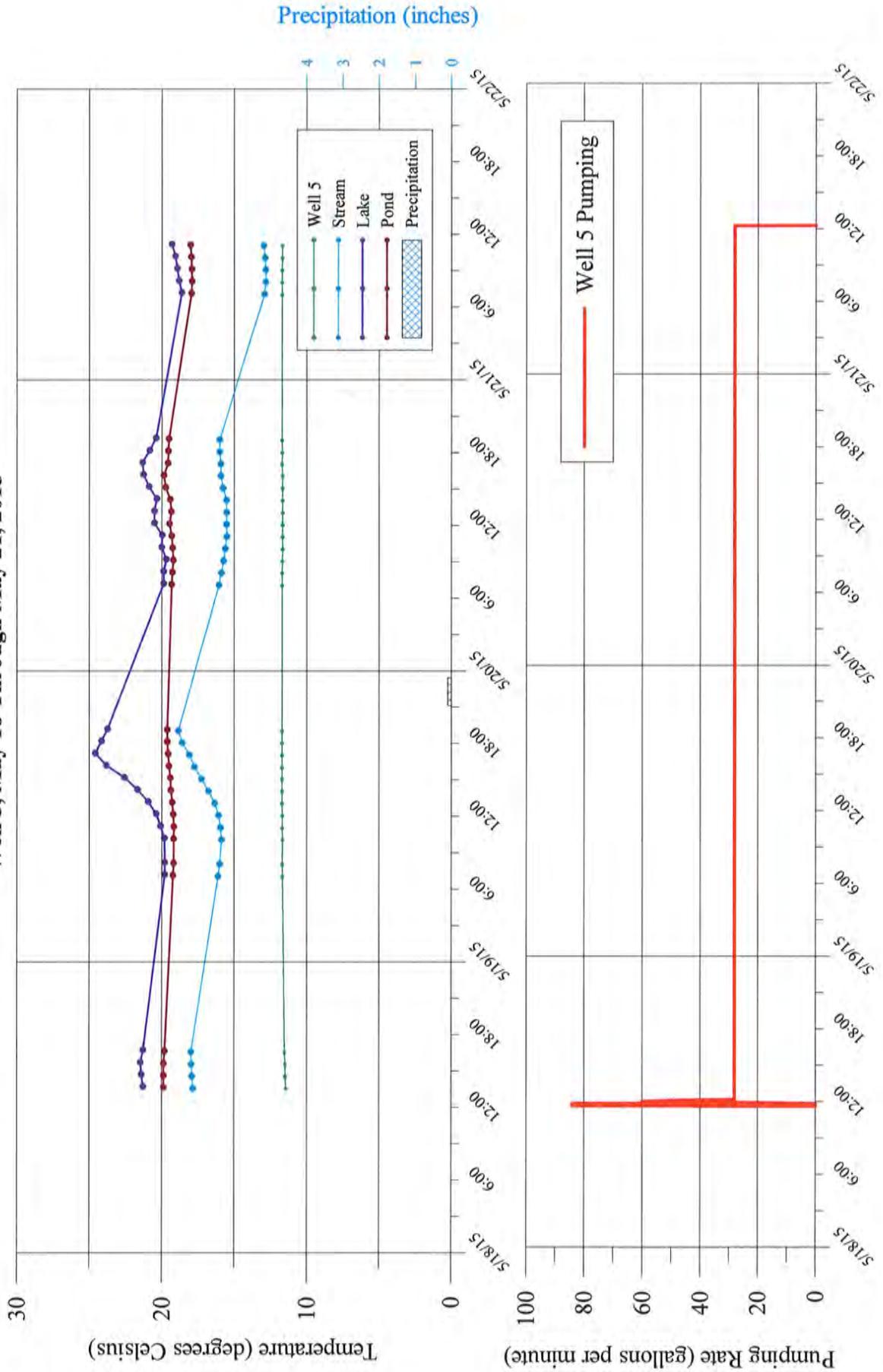
Well 4 (continued)										Lake (continued)									
Date	Time	pH (S.U.)	Temperature (°C)	Conductivity (mS/cm)	TDS (g/L)	Date	Time	pH (S.U.)	Temperature (°C)	Conductivity (mS/cm)	TDS (g/L)	Date	Time	pH (S.U.)	Temperature (°C)	Conductivity (mS/cm)	TDS (g/L)		
5/28/15	16:00	7.67	11.50	0.174	0.113	5/28/15	16:10	7.13	27.70	0.305	0.198	5/28/15	16:05	7.42	26.36	0.175	0.114		
5/28/15	17:00	7.30	11.53	0.174	0.113	5/28/15	17:10	7.11	26.37	0.310	0.201	5/28/15	17:05	7.16	24.85	0.172	0.112		
5/28/15	18:00	6.79	11.53	0.183	0.119	5/28/15	18:10	7.2	26.06	0.310	0.201	5/28/15	18:05	7.06	25.20	0.175	0.114		
5/28/15	19:00	7.23	11.53	0.177	0.115	5/28/15	19:10	6.92	26.12	0.308	0.200	5/28/15	19:05	6.84	25.64	0.174	0.114		
5/29/15	7:00	7.35	11.50	0.185	0.120	5/29/15	7:10	7.05	21.25	0.313	0.203	5/29/15	7:05	7.25	20.16	0.175	0.114		
5/29/15	8:00	7.06	11.52	0.193	0.126	5/29/15	8:10	6.85	20.97	0.316	0.205	5/29/15	8:05	7.01	19.86	0.177	0.115		
5/29/15	9:00	7.16	11.53	0.191	0.124	5/29/15	9:10	6.95	21.82	0.315	0.204	5/29/15	9:05	7.12	20.63	0.175	0.113		
5/29/15	10:00	7.07	11.53	0.188	0.122	5/29/15	10:10	6.89	22.73	0.316	0.205	5/29/15	10:05	7.1	20.84	0.177	0.115		
5/29/15	12:00	7.49	11.51	0.181	0.118	5/29/15	12:10	7.04	24.88	0.311	0.202	5/29/15	12:05	7.17	24.41	0.172	0.112		
5/29/15	13:00	7.13	11.51	0.181	0.118	5/29/15	13:10	6.89	24.72	0.306	0.199	5/29/15	13:05	6.96	24.85	0.175	0.115		
5/29/15	14:00	7.15	11.52	0.182	0.118	5/29/15	14:10	6.96	26.80	0.317	0.206	5/29/15	14:05	7.04	25.42	0.174	0.114		
5/29/15	15:00	7.42	11.53	0.181	0.118	5/29/15	15:10	7.08	26.71	0.316	0.206	5/29/15	15:05	7.29	26.06	0.176	0.115		
5/29/15	16:00	7.69	11.53	0.177	0.115	5/29/15	16:10	7.05	28.14	0.314	0.204	5/29/15	16:05	7.17	26.70	0.173	0.114		
5/29/15	17:00	7.44	11.53	0.180	0.117	5/29/15	17:10	7.07	26.97	0.315	0.205	5/29/15	17:05	7.18	25.93	0.175	0.114		
5/29/15	18:00	7.56	11.54	0.180	0.117	5/29/15	18:10	7.22	27.04	0.315	0.205	5/29/15	18:05	7.26	26.4	0.175	0.114		
5/29/15	19:00	7.60	11.54	0.181	0.117	5/29/15	19:10	7.22	26.27	0.314	0.204	5/29/15	19:05	7.23	25.72	0.175	0.115		
5/30/15	7:00	7.19	11.47	0.180	0.117	5/30/15	7:10	7.1	20.23	0.321	0.208	5/30/15	7:05	7.49	23.15	0.172	0.112		

- S.U. standard units
- °C degrees Celsius
- mS/cm millisiemens per centimeter
- g/L grams per liter
- mV millivolt

WELL 5

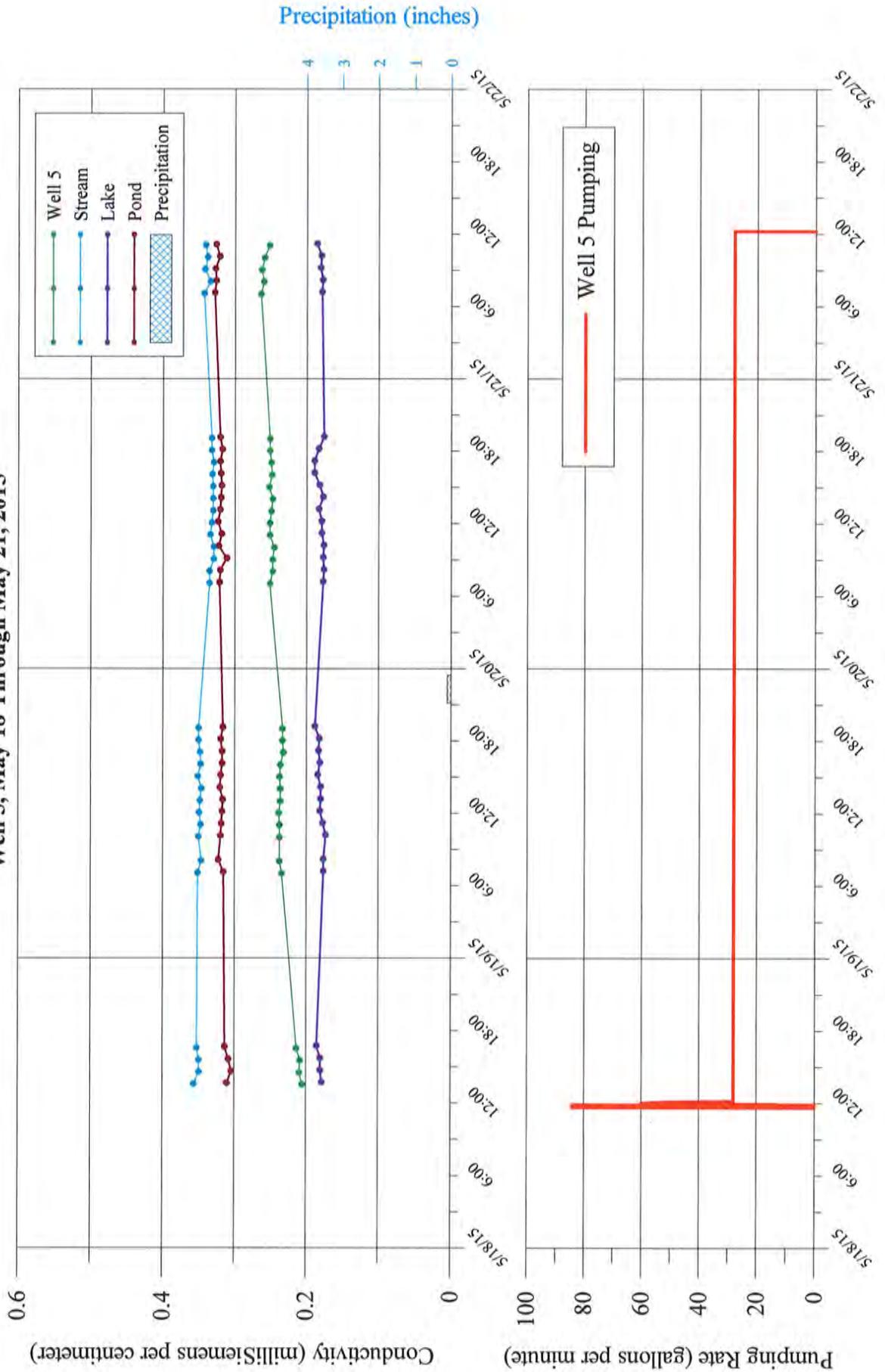
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 WILD OAKS WATER SYSTEM
 LEWISBORO, NEW YORK

Temperature Measurements Collected from Well 5, Pond, Stream, and Lake During 72-Hour Pumping Test of Well 5, May 18 Through May 21, 2015



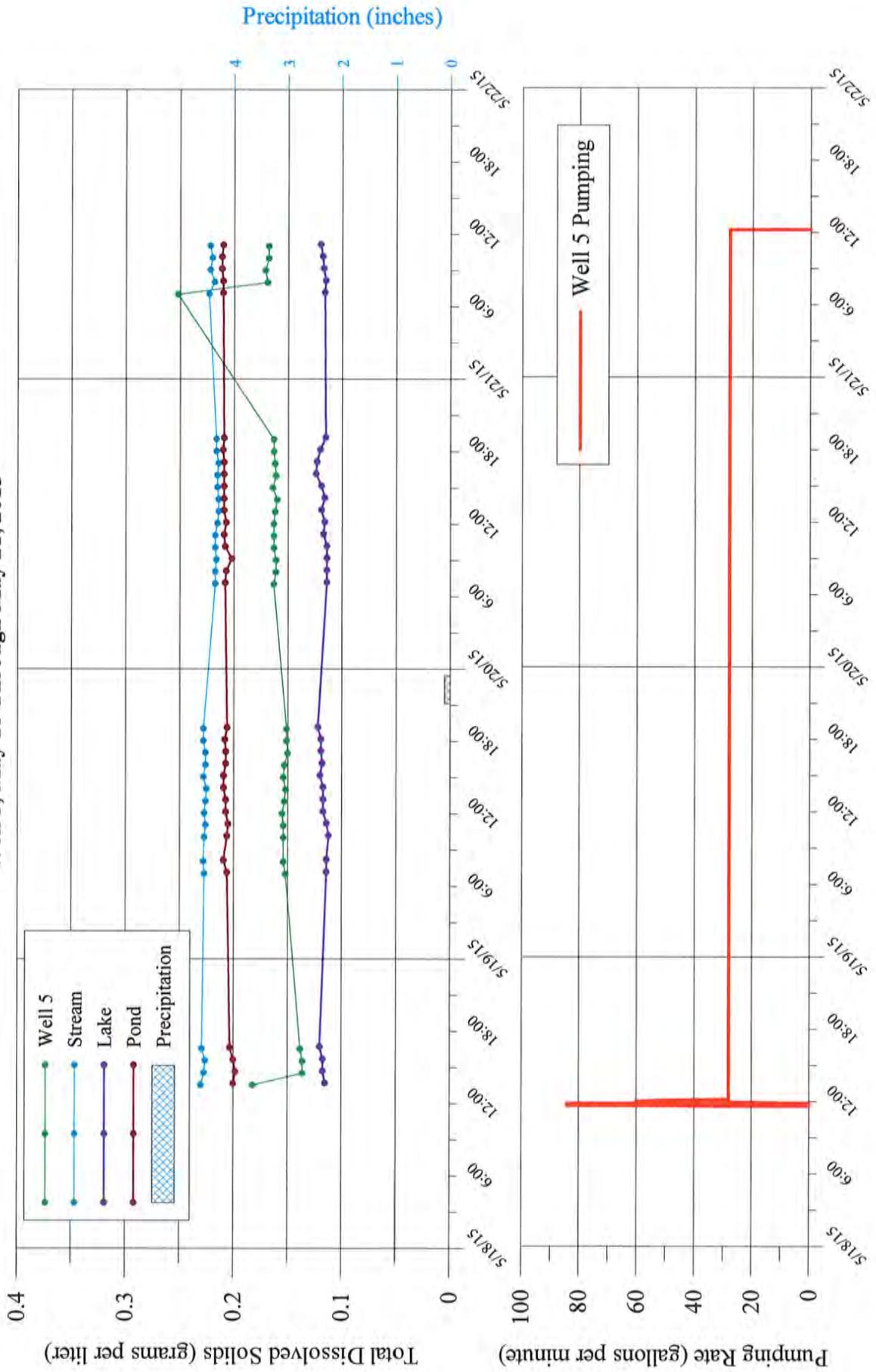
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Conductivity Measurements Collected from Well 5, Pond, Stream, and Lake During 72-Hour Pumping Test of Well 5, May 18 Through May 21, 2015



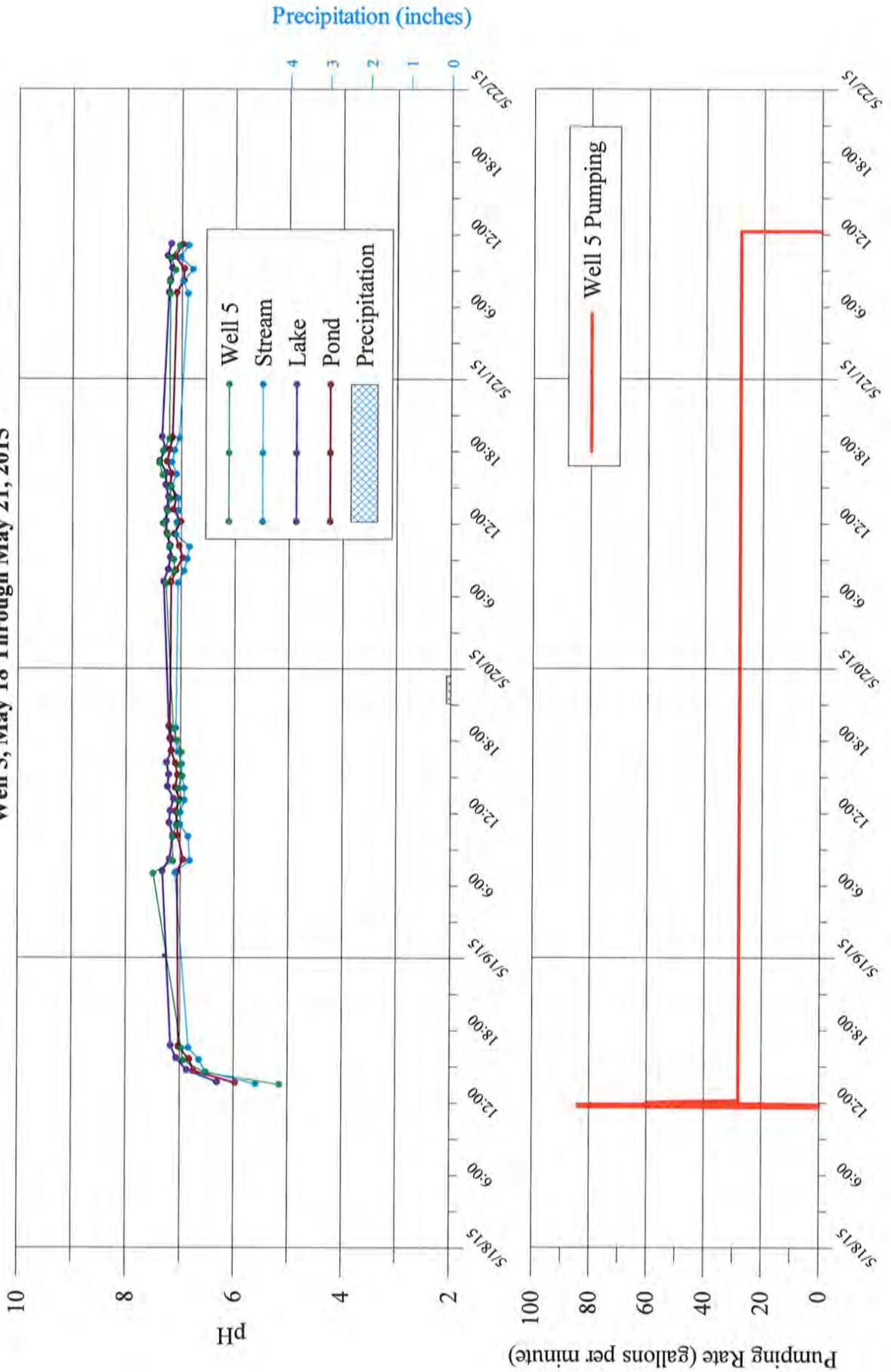
NEW YORK AMERICAN WATER COMPANY
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 LEWISBORO, NEW YORK

Total Dissolved Solid Measurements Collected from Well 5, Pond, Stream, and Lake During 72-Hour Pumping Test of Well 5, May 18 Through May 21, 2015



NEW YORK AMERICAN WATER COMPANY
 WILD OAKS WATER SYSTEM
 LEWISBORO, NEW YORK

pH Measurements Collected from Well 5, Pond, Stream, and Lake During 72-Hour Pumping Test of Well 5, May 18 Through May 21, 2015



NEW YORK AMERICAN WATER COMPANY
WILD OAKS WATER SYSTEM
LEWISBORO, NEW YORK

Physical Parameter Measurements Collected During 72-Hour Pumping Test Conducted on Well 5 from May 18 Through May 21, 2015

Date	Well 5						Stream						Pond						Lake					
	Time	pH (S.U.)	Cond (mS/cm)	Temp (°C)	TDS (g/L)		Time	pH (S.U.)	Cond (mS/cm)	Temp (°C)	TDS (g/L)		Time	pH (S.U.)	Cond (mS/cm)	Temp (°C)	TDS (g/L)		Time	pH (S.U.)	Cond (mS/cm)	Temp (°C)	TDS (g/L)	
5/18/15	13:31	5.15	0.285	11.44	0.182		13:33	5.59	0.356	17.82	0.230		13:38	5.97	0.310	19.86	0.200		13:41	6.31	0.178	21.27	0.115	
5/18/15	14:30	6.54	0.209	11.48	0.136		14:33	6.52	0.349	17.88	0.227		14:37	6.75	0.304	19.86	0.198		14:41	6.87	0.180	21.38	0.117	
5/18/15	15:30	6.94	0.208	11.48	0.136		15:33	6.64	0.349	17.93	0.226		15:37	6.83	0.308	19.86	0.200		15:41	7.07	0.180	21.45	0.117	
5/18/15	16:30	6.97	0.213	11.53	0.138		16:33	6.84	0.352	17.94	0.229		16:37	7.03	0.313	19.79	0.203		16:42	7.17	0.185	21.26	0.120	
5/19/15	7:00	7.50	0.234	11.67	0.152		7:03	7.10	0.351	16.08	0.227		7:07	7.06	0.315	19.22	0.206		7:10	7.33	0.176	19.78	0.114	
5/19/15	8:00	7.14	0.237	11.68	0.154		8:03	6.83	0.346	15.97	0.228		8:07	6.95	0.322	19.17	0.209		8:10	7.2	0.176	19.78	0.114	
5/19/15	10:00	7.15	0.237	11.67	0.154		10:03	6.86	0.350	15.85	0.227		10:07	7.05	0.319	19.16	0.206		10:10	7.14	0.173	19.79	0.112	
5/19/15	11:00	7.08	2.370	11.68	0.154		11:03	7.01	0.347	15.91	0.226		11:07	7.06	0.318	19.14	0.205		11:10	7.21	0.177	20.06	0.114	
5/19/15	12:00	7.05	0.238	11.68	0.155		12:03	7.00	0.349	16.05	0.227		12:07	7.09	0.317	19.20	0.207		12:10	7.19	0.181	20.37	0.117	
5/19/15	13:00	7.04	0.236	11.69	0.153		13:03	6.93	0.348	16.32	0.226		13:07	7.02	0.316	19.27	0.207		13:10	7.13	0.180	20.92	0.117	
5/19/15	14:00	7.05	0.236	11.69	0.152		14:03	6.93	0.346	16.75	0.225		14:07	7.10	0.320	19.36	0.209		14:10	7.24	0.180	21.64	0.117	
5/19/15	15:00	6.98	0.237	11.69	0.154		15:03	6.97	0.351	17.21	0.228		15:07	7.06	0.319	19.40	0.209		15:10	7.22	0.184	22.55	0.120	
5/19/15	16:00	7.02	0.236	11.69	0.153		16:03	6.98	0.347	17.71	0.226		16:07	7.10	0.317	19.49	0.207		16:10	7.26	0.181	23.79	0.118	
5/19/15	17:00	6.99	0.232	11.69	0.150		17:03	7.05	0.348	18.07	0.226		17:07	7.18	0.317	19.55	0.207		17:10	7.17	0.183	24.56	0.119	
5/19/15	18:00	7.07	0.233	11.69	0.151		18:03	7.10	0.350	18.56	0.228		18:07	7.18	0.319	19.61	0.208		18:10	7.2	0.182	24.13	0.119	
5/19/15	19:00	7.14	0.233	11.69	0.151		19:03	7.09	0.350	18.83	0.228		19:07	7.20	0.316	19.61	0.206		19:10	7.22	0.188	23.71	0.122	
5/20/15	7:00	7.28	0.251	11.70	0.163		7:03	7.06	0.335	16.03	0.217		7:07	7.19	0.321	19.31	0.208		7:10	7.32	0.177	19.87	0.114	
5/20/15	8:00	7.13	0.247	11.70	0.161		8:03	6.95	0.335	15.87	0.217		8:07	7.10	0.320	19.26	0.207		8:10	7.24	0.176	19.87	0.114	
5/20/15	9:00	7.14	0.247	11.69	0.161		9:03	6.89	0.329	15.71	0.216		9:07	6.97	0.311	19.20	0.202		9:10	7.2	0.177	19.68	0.114	
5/20/15	10:00	7.22	0.245	11.67	0.163		10:03	6.85	0.329	15.60	0.217		10:07	7.04	0.322	19.25	0.208		10:10	7.21	0.176	20.00	0.114	
5/20/15	11:00	7.25	0.251	11.67	0.163		11:03	7.10	0.334	15.50	0.217		11:07	7.13	0.318	19.31	0.209		11:10	7.27	0.179	19.96	0.117	
5/20/15	12:00	7.34	0.251	11.67	0.163		12:03	7.09	0.332	15.52	0.215		12:07	7.01	0.323	19.46	0.207		12:10	7.28	0.179	20.50	0.116	
5/20/15	13:00	7.26	0.249	11.67	0.162		13:03	7.05	0.330	15.51	0.214		13:07	7.15	0.320	19.33	0.209		13:10	7.27	0.183	20.50	0.119	
5/20/15	14:00	7.20	0.247	11.67	0.160		14:03	7.06	0.330	15.51	0.214		14:07	7.10	0.319	19.42	0.209		14:10	7.24	0.177	20.33	0.116	
5/20/15	15:00	7.21	0.252	11.67	0.164		15:03	7.19	0.330	15.74	0.215		15:07	7.21	0.318	19.73	0.209		15:10	7.29	0.182	20.86	0.119	
5/20/15	16:00	7.35	0.248	11.67	0.161		16:03	7.09	0.331	15.89	0.215		16:07	7.19	0.319	19.85	0.209		16:10	7.28	0.189	21.24	0.124	
5/20/15	17:00	7.41	0.249	11.69	0.162		17:03	7.18	0.329	15.89	0.214		17:07	7.27	0.320	19.56	0.209		17:10	7.4	0.189	21.32	0.123	
5/20/15	18:00	7.34	0.251	11.68	0.163		18:03	7.13	0.332	15.98	0.216		18:07	7.22	0.317	19.55	0.210		18:10	7.3	0.183	20.82	0.120	

NEW YORK AMERICAN WATER COMPANY
 WILD OAKS WATER SYSTEM
 LEWISBORO, NEW YORK

Physical Parameter Measurements Collected During 72-Hour Pumping Test Conducted on Well 5 from May 18 Through May 21, 2015

Date	Well 5						Stream						Pond						Lake					
	Time	pH (S.U.)	Cond (mS/cm)	Temp (°C)	TDS (g/L)		Time	pH (S.U.)	Cond (mS/cm)	Temp (°C)	TDS (g/L)		Time	pH (S.U.)	Cond (mS/cm)	Temp (°C)	TDS (g/L)		Time	pH (S.U.)	Cond (mS/cm)	Temp (°C)	TDS (g/L)	
5/20/15	19:00	7.23	0.251	11.69	0.163		19:03	7.04	0.332	15.98	0.216		19:07	7.17	0.320	19.49	0.209		19:10	7.36	0.176	20.38	0.115	
5/21/15	7:00	7.22	0.264	11.69	0.252		7:03	6.89	0.343	12.90	0.223		7:07	7.10	0.328	17.93	0.210		7:10	7.24	0.179	18.59	0.116	
5/21/15	8:00	7.23	0.260	11.69	0.169		8:03	6.98	0.334	12.81	0.218		8:07	6.97	0.326	17.89	0.210		8:10	7.22	0.178	18.79	0.115	
5/21/15	9:00	7.12	0.263	11.69	0.171		9:03	6.80	0.342	12.82	0.222		9:07	6.96	0.327	17.91	0.211		9:10	7.19	0.181	18.92	0.117	
5/21/15	10:00	7.21	0.259	11.68	0.168		10:03	7.03	0.338	12.86	0.220		10:07	7.13	0.321	17.95	0.211		10:10	7.27	0.180	19.04	0.118	
5/21/15	11:00	7.04	0.252	11.69	0.168		11:03	6.88	0.341	12.97	0.222		11:07	6.99	0.326	18.00	0.210		11:10	7.2	0.186	19.29	0.120	

Cond conductivity

Temp temperature

mS/cm millisiemens per centimeter

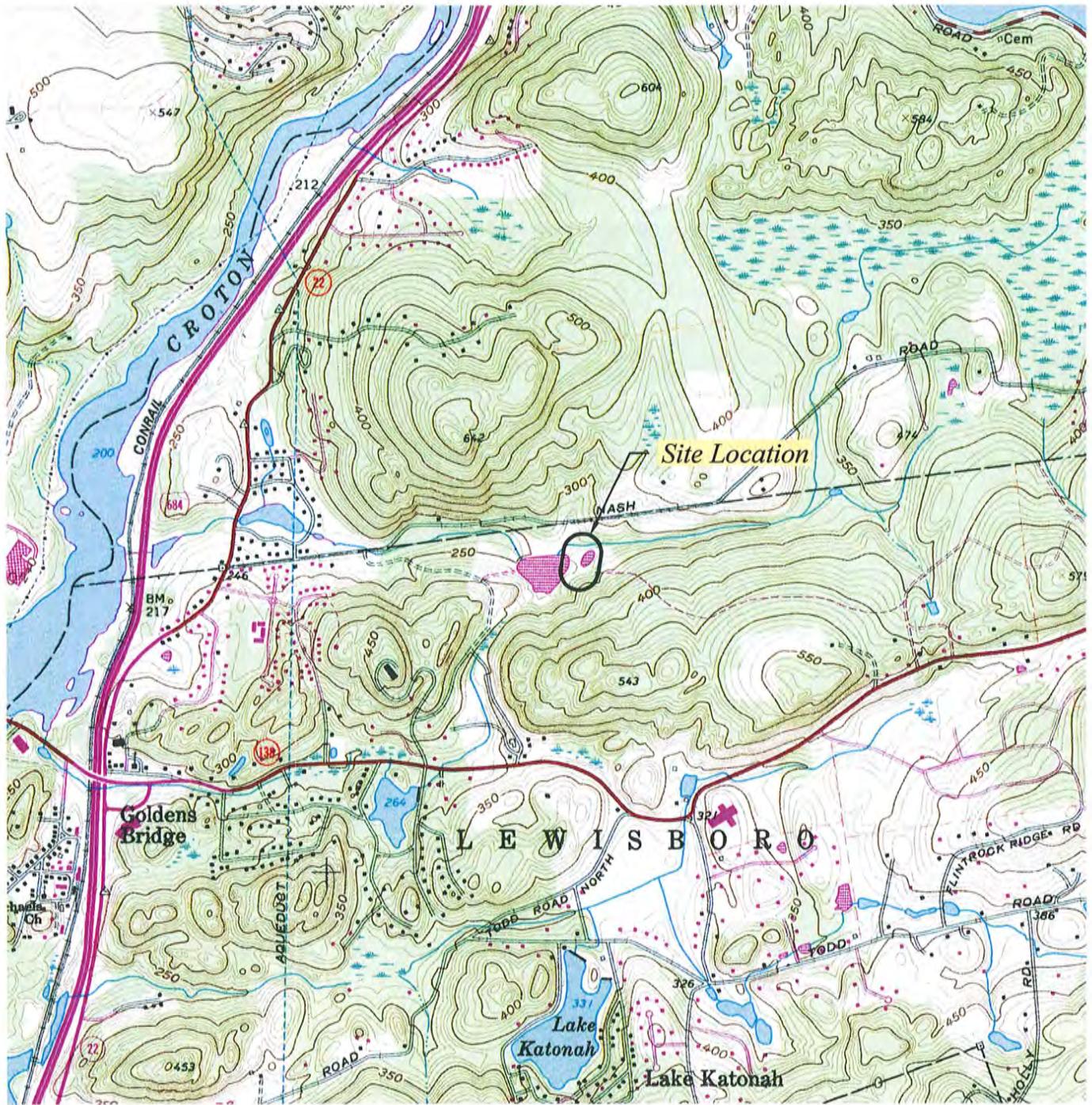
NTU nephelometric turbidity units

mg/L milligrams per liter

g/L grams per liter

mV millivolts

O:\DWG\Wld Oaks\2015\F1-SLM.dwg, Layout1, 8/27/2015 1:29:13 PM, \L.BG-ADD1\Drafting - CFS255DN



SOURCE: USGS TOPOGRAPHIC QUADRANGLE CROTON FALLS, NEW YORK (PHOTOREVISED 1981).

LEGEND

— LOCATION OF EXISTING WELL FIELD EASEMENT



QUADRANGLE LOCATION

0 2000

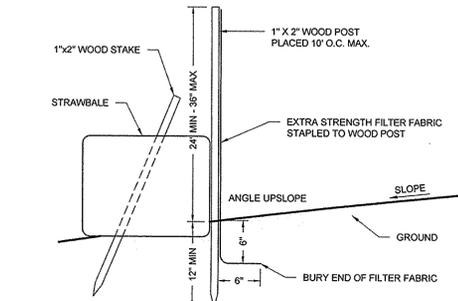
SCALE IN FEET

**WILD OAKS WATER SYSTEM
NEW YORK AMERICAN WATER
LEWISBORO, NEW YORK**

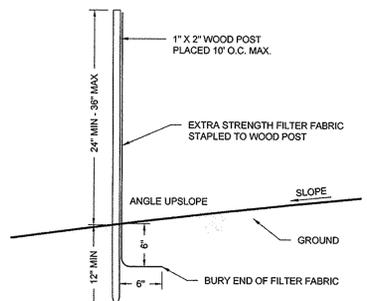
SITE LOCATION MAP

DATE	REVISED	PREPARED BY:	LEGGETTE, BRASHEARS & GRAHAM, INC.	
			Professional Groundwater and Environmental Engineering Services	
			4 Research Drive	
			Suite 204	
			Shelton, Connecticut 06484	
			(203) 929-8555	
DRAWN:	RAC	CHECKED:	SS	DATE: 08/20/15
				FIGURE: 1

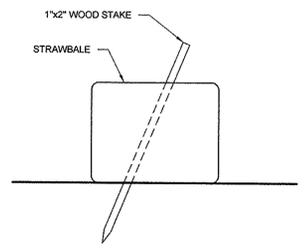




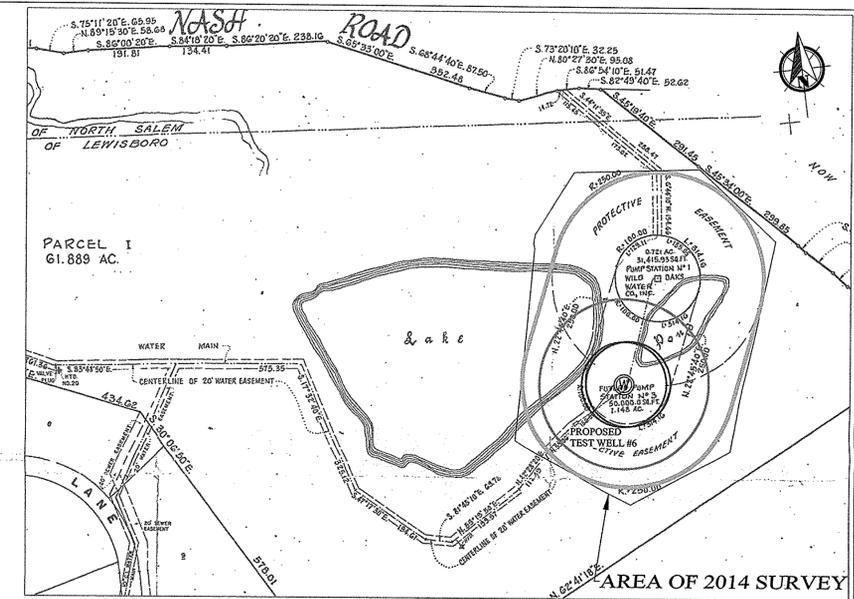
SILTATION CONTROL FENCE WITH STRAWBALE BACKING - TYPICAL
NOT TO SCALE



SILTATION CONTROL FENCE - TYPICAL
NOT TO SCALE



SEDIMENTATION CONTROL - STRAWBALE
NOT TO SCALE



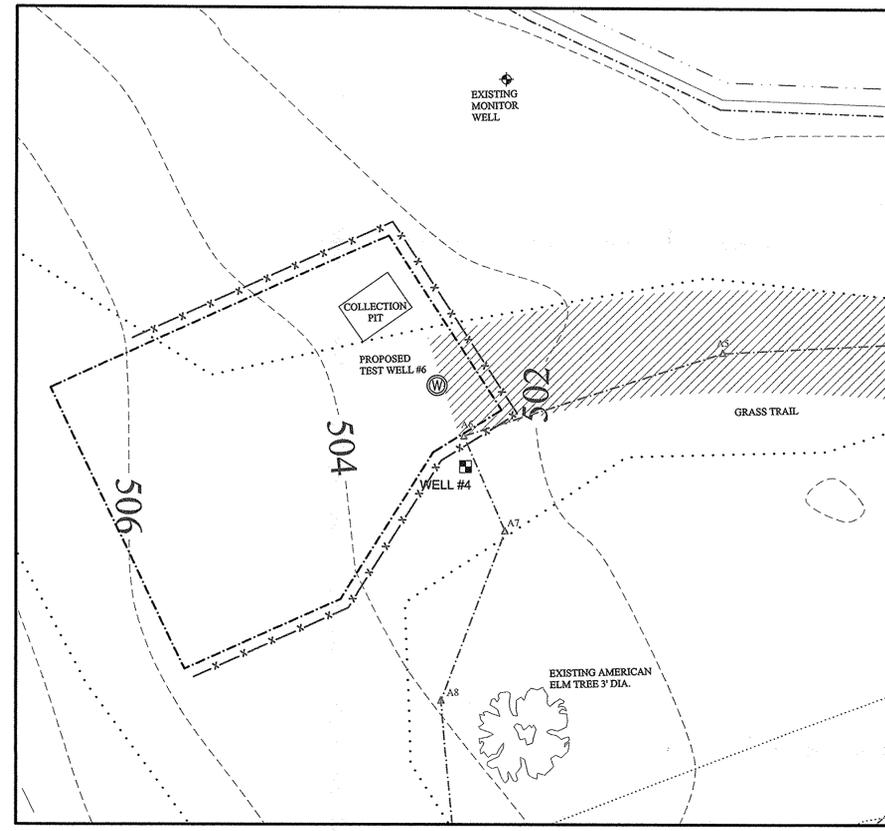
BLOW UP
SCALE: 1" = 200'

LEGEND

EXISTING PROPERTY LINE	—————
EXISTING CONTOUR LINE	- - - - -
EXISTING EDGE OF GRAVEL	—————
EXISTING EDGE OF WATER	—————
EXISTING STONE WALL	—————
EXISTING DRAINAGE COURSE	—————
A.C.O.E. WETLAND BOUNDARY	A10 ——— A11
EXISTING UTILITY POLE	⊙
EXISTING SAND AND GRAVEL SUPPLY WELL	⊗
EXISTING MONITOR WELL	⊕
EXISTING BEDROCK WELL	⊖
PROPOSED BEDROCK WELL LOCATION	⊗
BOUNDARY FOR PROPERTY OWNED BY NEW YORK AMERICAN WATER COMPANY	—————
BOUNDARY FOR EXISTING PROTECTIVE EASEMENT FOR NEW YORK AMERICAN WATER COMPANY OVERLAID FROM EXISTING SITE PLAN MAP	—————
PROPOSED ACCESS ROUTE	—————
SILT FENCE/STRAWBALES	- x - x - x - x - x - x - x - x -
EROSION CONTROL BARRIER	—————
100-FOOT RADIUS OF OWNERSHIP	—————
200-FOOT RADIUS OF SANITARY CONTROL	—————
DISCHARGE LOCATION FOR EXCESS WATER GENERATED DURING DRILLING WITH UNDERLYING TARP	⊞
AREA OF POTENTIAL DISTURBANCE AROUND WELL HEAD	⊞

GENERAL NOTES:
 1. TOWN OF LEWISBORO, COUNTY OF WESTCHESTER, STATE OF NY.
 2. TOPOGRAPHY AND MAPPING BY KIRK ROTHER, P.E. CONSULTING ENGINEERING, PLLC. FIELD WORK COMPLETED IN APRIL AND JUNE 2014. TOPOGRAPHY BASED ON AN ASSUMED DATUM.

- NOTES:**
- THERE ARE NO KNOWN SOURCES OF POLLUTION WITHIN 200 FEET OF THE PROPOSED BEDROCK TEST WELL LOCATION.
 - BEDROCK TEST WELL WILL BE CONSTRUCTED IN ACCORDANCE WITH NEW YORK STATE DEPARTMENT OF HEALTH SANITARY CODE APPENDIX 5B & 5D GUIDELINES.
 - WETLAND FRINGE BOUNDARY IN VICINITY OF PROPOSED BEDROCK TEST WELL LOCATIONS WAS FLAGGED BY HAZEN AND SAWYER IN MAY 2014 WITH NUMBERED FLAGS. THE WETLAND BOUNDARY DELINEATION WHICH OVERLAYS THE LAKE, POND AND WATERCOURSE EDGES ARE DEPICTED ON THIS DRAWING BUT ARE NOT FLAGGED ON SITE.
 - THE ACCESS ROUTE TO THE PROPOSED WELL LOCATION WILL BE STABILIZED WHERE NEEDED WITH TEMPORARY MATS TO PREVENT DISTURBANCE DURING MOBILIZATION AND DEMOBILIZATION OF DRILLING EQUIPMENT.
 - ALL DISTURBED AREAS WILL BE RAKED, SEEDED AND MULCHED FOLLOWING CONSTRUCTION. ERNST SEED FACULTATIVE WET MEADOW MIX (PRODUCT ERNMX-122) OR ITS EQUIVALENT WILL BE USED FOR RESEEDING.
 - THE TOWN ENGINEER SHALL BE NOTIFIED 48 HOURS PRIOR TO CONSTRUCTION AND MAY INSPECT AND MONITOR WELL DRILLING OPERATIONS FOLLOWING COMPLETION OF WORK. THE TOWN ENGINEER AND/OR TOWN WETLAND INSPECTOR SHALL CONDUCT A FINAL INSPECTION TO ENSURE THAT THE SITE HAS BEEN RESTORED IN AN APPROPRIATE MANNER.



PROPOSED TEST WELL #6
SCALE: 1" = 10'

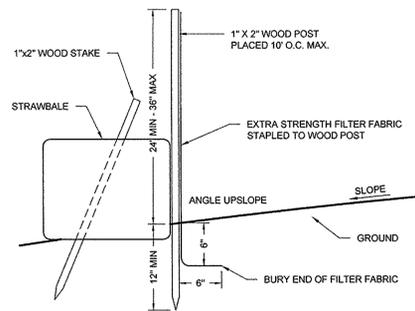
AREA OF POTENTIAL DISTURBANCE NEAR PROPOSED TEST WELL #6 = 1,480 SQUARE FEET.
 DIMENSION OF COLLECTION PIT = 7-FEET (LENGTH) x 5-FEET (WIDTH) x 6-FEET (DEPTH).
 THE AREA OF THE PROPOSED ACCESS ROUTE ON THE EXISTING GRASS TRAIL = 2,567 SQUARE FEET.

WILD OAKS WATER SYSTEM NEW YORK AMERICAN WATER LEWISBORO, NEW YORK

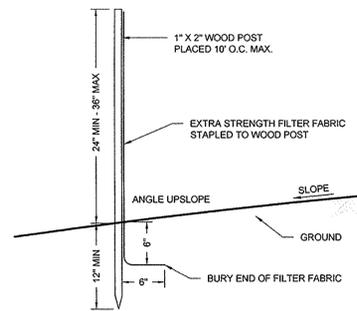
BLOW-UP OF PROPOSED BEDROCK TEST WELL LOCATION

DATE	REVISED	PREPARED BY:	LEGGETTE, BRASHEARS & GRAHAM, INC. Professional Groundwater and Environmental Engineering Services 4 Research Drive Suite 204 Shelton, Connecticut 06484 (203) 929-8555
DATE	REVISED	DATE:	08/26/15
DRAWN:	RAC	CHECKED:	SS
PLATE:	2		

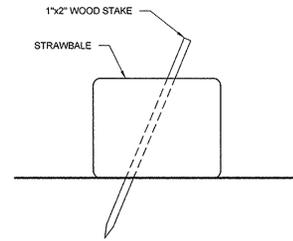
SOURCE: KIRK ROTHERS, P.E., CONSULTING ENGINEER, PLLC "TOPOGRAPHY & EXISTING CONDITIONS MAP", SHEET # 1 OF 1 DATED 06-09-14.
 C:\DWG\Wild Oaks\2015\Plan2.dwg, Layout1, 8/27/2015 1:30:48 PM, HP Designer 11.30.04.HPGD2



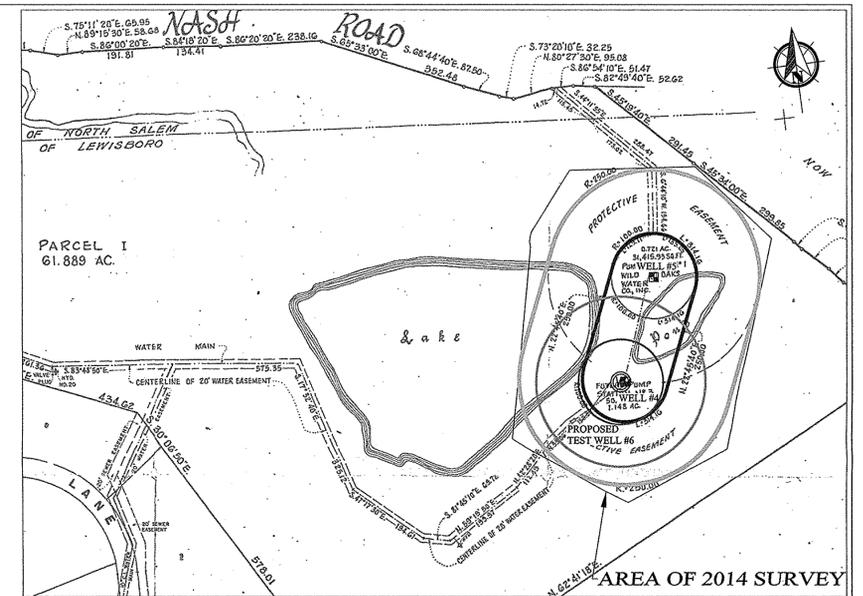
SILTATION CONTROL FENCE WITH STRAWBALE BACKING - TYPICAL
NOT TO SCALE



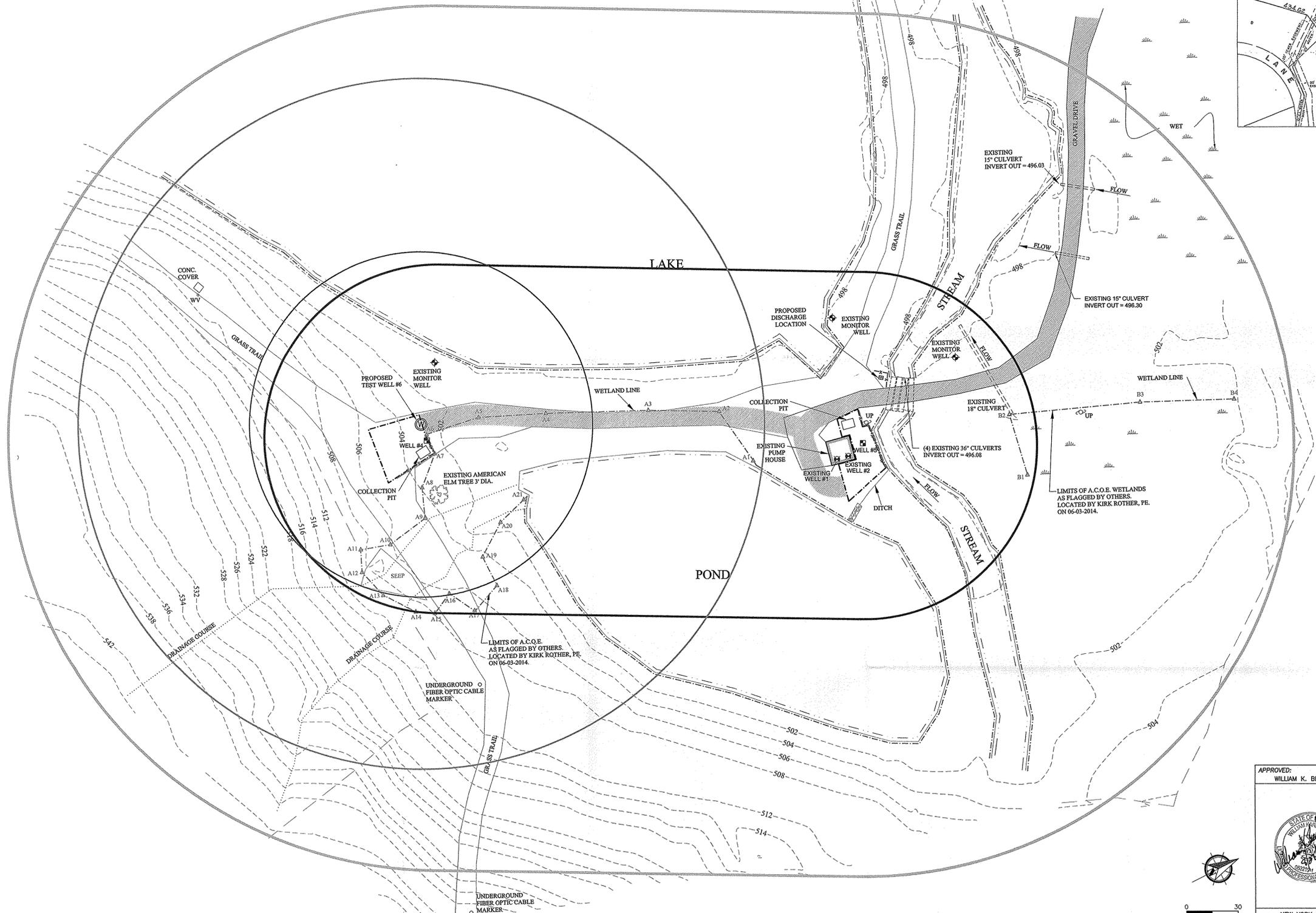
SILTATION CONTROL FENCE - TYPICAL
NOT TO SCALE



SEDIMENTATION CONTROL - STRAWBALE
NOT TO SCALE



BLOW UP
1" = 200'



LEGEND

EXISTING PROPERTY LINE	---
EXISTING CONTOUR LINE	- - - -
EXISTING EDGE OF GRAVEL	=====
EXISTING EDGE OF WATER	~~~~~
EXISTING STONE WALL	-----
EXISTING DRAINAGE COURSE
A.C.O.E. WETLAND BOUNDARY	A10 A11
EXISTING UTILITY POLE	○
EXISTING SAND AND GRAVEL SUPPLY WELL	⊗
EXISTING 2 1/2 INCH DIAMETER SAND AND GRAVEL MONITOR WELL	⊕
EXISTING BEDROCK SUPPLY WELL	⊙
PROPOSED BEDROCK WELL LOCATION	⊗
BOUNDARY FOR PROPERTY OWNED BY NEW YORK AMERICAN WATER COMPANY	-----
BOUNDARY FOR EXISTING PROTECTIVE EASEMENT FOR NEW YORK AMERICAN WATER COMPANY OVERLAID FROM EXISTING SITE PLAN MAP	-----
ACCESS ROUTE	-----
SILT FENCE/STRAWBALES	-----
100-FOOT RADIUS - PROPOSED TEST WELL #6	-----
200-FOOT RADIUS - PROPOSED TEST WELL #6	-----
DISCHARGE LOCATION FOR EXCESS WATER GENERATED DURING DRILLING	⊞
AREA OF POTENTIAL DISTURBANCE AROUND WELL HEAD	-----

GENERAL NOTES:
1. TOWN OF LEWISBORO, COUNTY OF WESTCHESTER, STATE OF NY.
2. TOPOGRAPHY AND MAPPING BY KIRK ROTHER, P.E. CONSULTING ENGINEERING, PLLC. FIELD WORK COMPLETED IN APRIL AND JUNE 2014. TOPOGRAPHY BASED ON AN ASSUMED DATUM.

- NOTES:
1. THERE ARE NO KNOWN SOURCES OF POLLUTION WITHIN 200 FEET OF THE PROPOSED BEDROCK TEST WELL LOCATION.
 2. BEDROCK TEST WELL WILL BE CONSTRUCTED IN ACCORDANCE WITH NEW YORK STATE DEPARTMENT OF HEALTH SANITARY CODE APPENDIX 53 & 53 GUIDELINES.
 3. WETLAND BOUNDARY IN VICINITY OF PROPOSED BEDROCK WELL WAS FLAGGED BY HAZEN AND SAWYER IN MAY 2014.
 4. THE ACCESS ROUTE TO THE PROPOSED WELL LOCATION WILL BE STABILIZED WHERE NEEDED WITH TEMPORARY MATS TO PREVENT DISTURBANCE DURING MOBILIZATION AND DEMOBILIZATION OF DRILLING EQUIPMENT.
 5. A WETLANDS DISTURBANCE PERMIT WILL BE OBTAINED FROM THE TOWN OF LEWISBORO BEFORE DRILLING ACTIVITIES COMMENCE.

NOTE:
IT IS A VIOLATION OF ARTICLE 130 OF THE NEW YORK STATE EDUCATION LAW FOR ANY PERSON TO ALTER THIS DOCUMENT IN ANY WAY WITHOUT THE EXPRESS WRITTEN VERIFICATION OR ADOPTION BY A NEW YORK STATE LICENSED LAND SURVEYOR OR ENGINEER IN ACCORDANCE WITH SECTION 7209 (2), ARTICLE 130, NEW YORK STATE EDUCATION LAW.

APPROVED:
WILLIAM K. BECKMAN

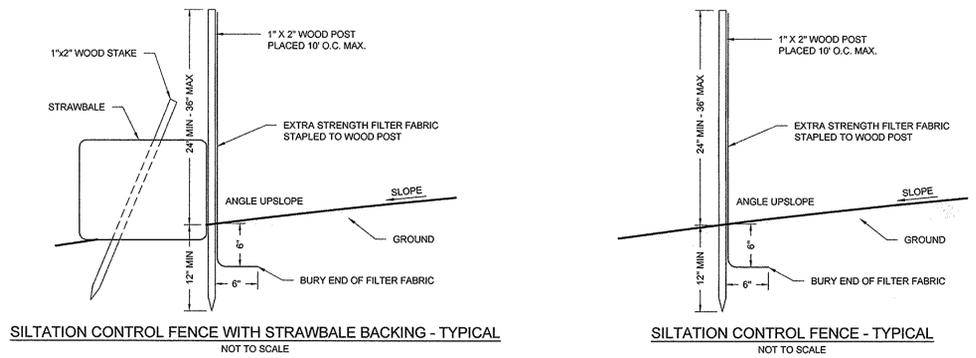


NEW YORK STATE
PROFESSIONAL ENGINEER
NO. 063219-1

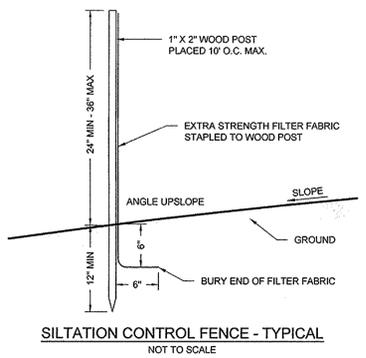
WILD OAKS WATER SYSTEM
NEW YORK AMERICAN WATER
LEWISBORO, NEW YORK

PROPOSED BEDROCK TEST WELL LOCATION

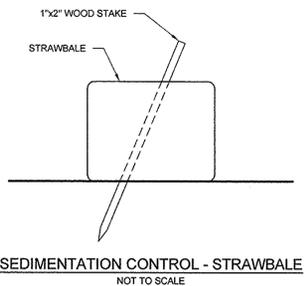
DATE	REVISED	PREPARED BY:	LBG ENGINEERING SERVICES, P.C. Professional Environmental and Civil Engineers 4 Research Drive Suite 204 Shelton, Connecticut 06484 (203) 929-8555				
DRAWN:	RAC	CHECKED:	KD	DATE:	06/30/15	PLATE:	1



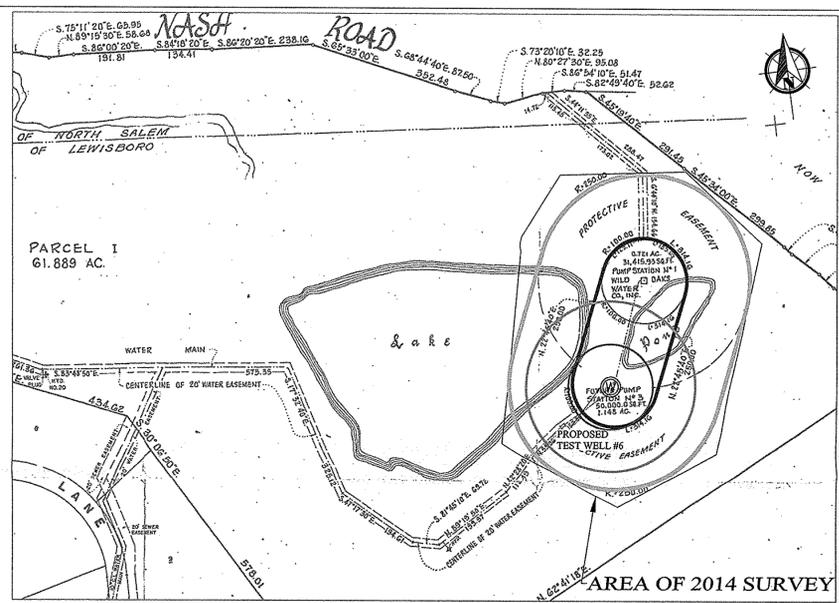
SILTATION CONTROL FENCE WITH STRAWBALE BACKING - TYPICAL
NOT TO SCALE



SILTATION CONTROL FENCE - TYPICAL
NOT TO SCALE



SEDIMENTATION CONTROL - STRAWBALE
NOT TO SCALE



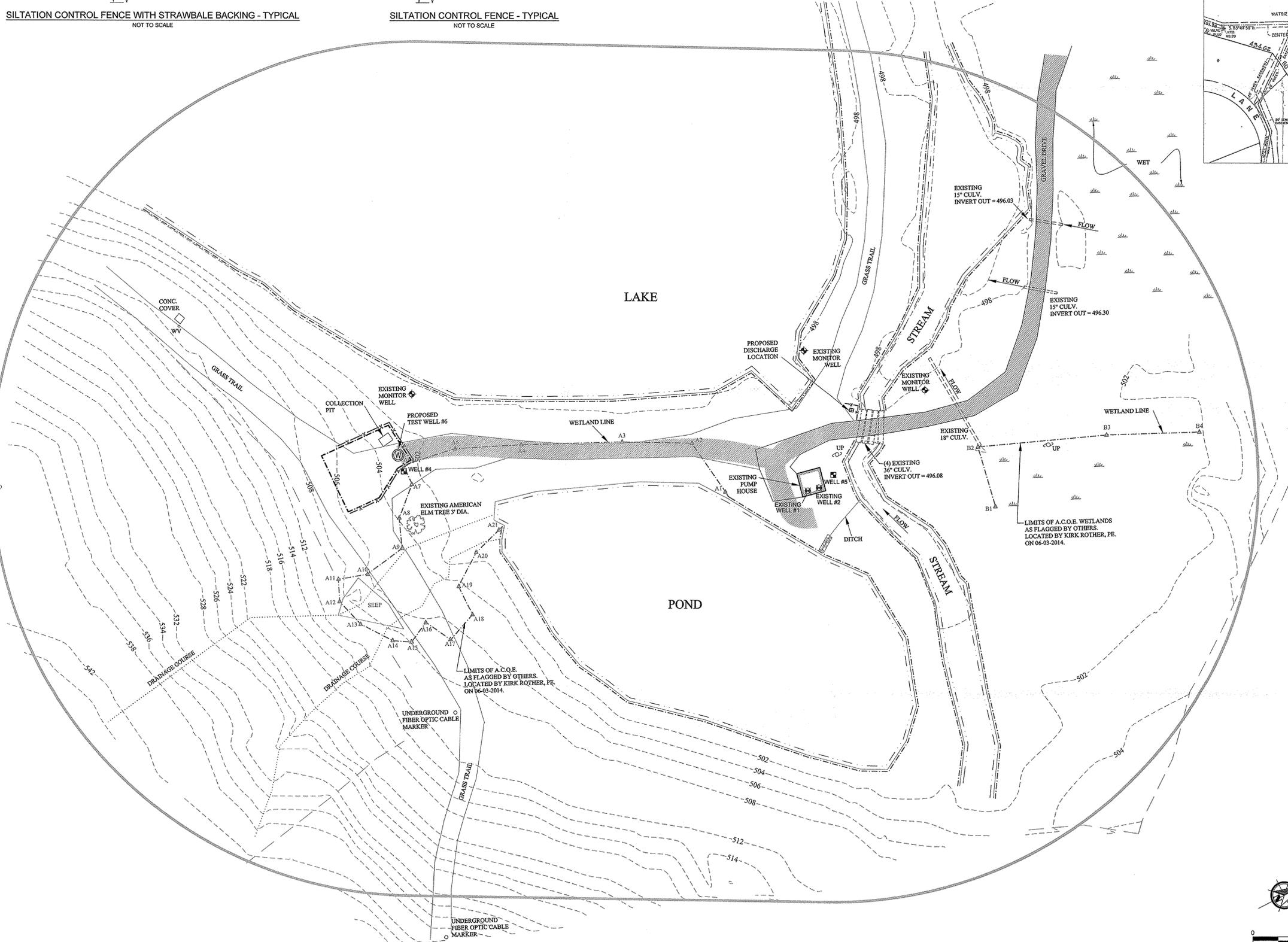
BLOW UP
1" = 200'

LEGEND

EXISTING PROPERTY LINE	---
EXISTING CONTOUR LINE	- - - -
EXISTING EDGE OF GRAVEL	=====
EXISTING EDGE OF WATER	~~~~~
EXISTING STONE WALL	-----
EXISTING DRAINAGE COURSE	-----
A.C.O.E. WETLAND BOUNDARY	A10 A11
EXISTING UTILITY POLE	○
EXISTING SAND AND GRAVEL SUPPLY WELL	⊗
EXISTING MONITOR WELL	⊕
EXISTING BEDROCK WELL	⊖
PROPOSED BEDROCK WELL LOCATION	⊙
BOUNDARY FOR PROPERTY OWNED BY NEW YORK AMERICAN WATER COMPANY	=====
BOUNDARY FOR EXISTING PROTECTIVE EASEMENT FOR NEW YORK AMERICAN WATER COMPANY OVERLAID FROM EXISTING SITE PLAN MAP	-----
ACCESS ROUTE	-----
SILT FENCE/STRAWBALES	X X X X X X X X
100-FOOT RADIUS	-----
200-FOOT RADIUS	-----
DISCHARGE LOCATION FOR EXCESS WATER GENERATED DURING DRILLING	⊞
AREA OF POTENTIAL DISTURBANCE AROUND WELL HEAD	-----

GENERAL NOTES:
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 6. THE TOWN ENGINEER SHALL BE NOTIFIED 48 HOURS PRIOR TO CONSTRUCTION AND MAY INSPECT AND MONITOR WELL DRILLING OPERATIONS FOLLOWING COMPLETION OF WORK. THE TOWN ENGINEER AND/OR TOWN WETLAND INSPECTOR SHALL CONDUCT A FINAL INSPECTION TO ENSURE THAT THE SITE HAS BEEN RESTORED IN AN APPROPRIATE MANNER.



WILD OAKS WATER SYSTEM
NEW YORK AMERICAN WATER
LEWISBORO, NEW YORK

PROPOSED BEDROCK TEST WELL LOCATION

DATE	REVISED	PREPARED BY:	LEGGETTE, BRASHEARS & GRAHAM, INC.
			Professional Groundwater and Environmental Engineering Services
			4 Research Drive
			Suite 204
			Shelton, Connecticut 06484
			(203) 929-8555

DRAWN: RAC CHECKED: SS DATE: 08/26/15 PLATE: 1

SOURCE: KIRK ROTHERS, P.E., CONSULTING ENGINEER, PLLC "TOPOGRAPHY & EXISTING CONDITIONS MAP", SHEET # 1 OF 1 DATED 06-09-14.

MEMORANDUM

TO: Chairman Jerome Kerner, AIA and
Members of Lewisboro Planning Board

CC: Judson Siebert, Esq.

FROM: Jan K. Johannessen, AICP
Joseph M. Cermele, P.E., CFM
David J. Sessions, RLA, AICP
Town Consulting Professionals

DATE: September 23, 2015

RE: Wild Oaks Storage Tank Replacement
Fairmount Road
Sheet 7H, Block 11139, Lot 23

Project Description

The subject property is located off of Fairmount Road, consists of approximately one (1) acre of land, is located within the R-MF Zoning District, and is developed with a 120,000 gallon above-ground storage tank servicing the Wild Oaks water system. The applicant is proposing to replace the existing steel tank with a ±40'H x 25'D storage tank on the same parcel.

SEQRA

The proposed action is an Unlisted Action under the State Environmental Quality Review Act (SEQRA) and a coordinated review is not required. Prior to making a decision on this pending application, the Planning Board must issue a determination of significance.

Required Approvals

1. Site Development Plan Approval is required from the Planning Board.
2. If land disturbance exceeds 5,000 s.f., a Town Stormwater Permit will be required as will coverage under the New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-15-002).
3. A height variance is required from the Zoning Board of Appeals.
4. The application should be referred to ACARC for review and recommendation.
5. Approval from the Westchester County Department of Health (WCDH) is required.

Comments:

1. The applicant has submitted a basic sketch plan for initial comment. A fully engineered site plan shall be provided for review and must include, at a minimum, the following information:
 - Existing conditions survey, including 2-foot contours and trees located within the limits of disturbance and ≥ 8 " dbh
 - Demolition plan
 - Grading, utility and erosion and sediment control plan
 - Illustration and calculation of the area of land disturbance
 - Improvements and modifications to site access and vehicular parking, if any
 - Construction details, including the proposed tank and foundation, driveway, concrete foundation, erosion and sediment controls
2. The geotechnical investigation and report referenced in the applicant's cover letter should be submitted when complete.
3. Future submissions should include applications for Step II Site Development Plan and Town Stormwater Permit, if deemed required.
4. The applicant shall complete and submit Parts 1 and 2 of the Short Environmental Assessment Form (EAF).

5. The applicant should update the Board on the status of any and all outside agency approvals.
6. The subject property is accessed over an adjacent parcel; please provide existing easement information.
7. All application materials shall be revised to reference the correct Tax Parcel identification number.

In order to expedite the review of subsequent submissions, the applicant should provide annotated responses to each of the comments outlined herein.

Plan Reviewed, prepared by Hazen and Sawyer, dated August 27, 2015:

- Preliminary Site Plan

Documents Reviewed:

- Letter, prepared by Hazen and Sawyer, dated August 28, 2015
- Planning Board Application
- *Engineer's Report*, prepared by Hazen and Sawyer, dated August 2015

JKJ/JMC/DJS/dc

Hazen

Hazen and Sawyer
498 Seventh Avenue, 11th Floor • New York, NY 10018

August 28, 2015

Mr. Jan Johannessen, AICP
Project Manager
Kellard Sessions Consulting, P.C.
500 Main Street
Armonk, New York 10504

**RE: New York American Water Wild Oaks Storage Tank Replacement, Lewisboro, NY
Application for Step 1 Site Development Plan**

Dear Mr. Johannessen:

On behalf of New York American Water (NYAW), we are submitting the Step 1 Sketch Plan Review application for the proposed construction of a new water storage tank for the Wild Oaks Water System. The replacement tank would be placed on the same site as the existing tank, on a Wild Oaks Water System property located on Fairmount Road in Lewisboro, NY.

We are submitting this application in advance of the September 1, 2015 deadline for consideration and review during the next Planning Board meeting scheduled on September 29, 2015. The application package consists of the following items enclosed for your review. As directed, nine (9) hard copies including the original set are enclosed.

- Application Fee of \$205
- Attachment 1. Planning Board application form;
- Attachment 2. Tax Payment Affidavit Form;
- Attachment 3. Westchester County Affidavit of Ownership Form
- Attachment 4. Engineer's Report;
- Attachment 5. Project Site Sketch Plan;

Should you have any questions or require additional information, please contact me at (212) 539-7098.

Very Truly Yours,



Oliver Tsai, P.E.
Project Manager

Encl.

cc: NYAW: Richard Ruge
H&S: Kristen Barrett; file 90185-002

**WILD OAKS WATER SYSTEM
STORAGE TANK REPLACEMENT**

Town of Lewisboro Step 1 Site Development Plan

Attachment 1

Planning Board Application Form

TOWN OF LEWISBORO PLANNING BOARD

PO Box 725, 20 North Salem Road, Cross River, NY 10518

Email: planning@lewisborogov.com Tel: (914) 763-5592

Site Development Plan/Subdivision Plat Application - Check all that apply:

- Waiver of Site Development Plan Procedures
Site Development Plan Approval
Special Use Permit Approval
Subdivision Plat Approval

Form with checkboxes for Step I, Step II, and Step III for various approval types.

Project Information

Project Name: Wild Oaks Storage Tank
Project Address: Fairmount Road
Gross Parcel Area: 1.017 ac. Zoning District: R-MF Sheet(s): 11139 Block(s): 023 Lot(s): 0004
Project Description: Construction of a new replacement finished water storage tank.

Is the site located within 500 feet of any Town boundary? YES [checked] NO []
Is the site located within the New York City Watershed? YES [checked] NO []
Is the site located on a State or County Highway? YES [] NO [checked]

Does the proposed action require any other permits/approvals from other agencies/departments?

Grid of checkboxes for various agencies: Town Board, ACARC, NYSDOT, ZBA, NYSDEC, Town Wetland, Building Dept, NYCDEP, Town Stormwater, Town Highway, WCDH.

Other

Owner's Information

Name: Brian Bruce, New York American Water Email: Brian.Bruce@amwater.com
Address: 2116 Merrick Avenue, Suite 3008, Merrick, NY 11566 Phone: 516-596-4835

Applicant's Information (if different)

Name: Richard Ruge, New York American Water Email: Richard.Ruge@amwater.com
Address: 260 Harrison Avenue, Harrison, NY 10528 Phone: 516-596-4860

Authorized Agent's Information

Name: Kristen Barrett, Hazen and Sawyer Email: kbarrett@hazenandsawyer.com
Address: 498 Seventh Ave, 11th Floor, New York, NY 10018 Phone: 212-539-7074

THE APPLICANT understands that any application is considered complete only when all information and documents required have been submitted and received by the Planning Board.

THE UNDERSIGNED WARRANTS the truth of all statements contained herein and in all supporting documents according to the best of his/her knowledge and belief, and authorizes visitation and inspection of the subject property by the Town of Lewisboro and its agents.

APPLICANT'S SIGNATURE [Signature] DATE 8/17/15
OWNER'S SIGNATURE [Signature] DATE 8/17/15

**WILD OAKS WATER SYSTEM
STORAGE TANK REPLACEMENT**

Town of Lewisboro Step 1 Site Development Plan

Attachment 2

Tax Payment Affidavit Form

TOWN OF LEWISBORO PLANNING BOARD

PO Box 725, 20 North Salem Road, Cross River, NY 10518

Email: planning@lewisborogov.com

Tel: (914) 763-5592 Fax: (914) 763-3637

Tax Payment Affidavit Requirement

This form must accompany all applications to the Planning Board.

Under regulations adopted by the Town of Lewisboro, the Planning Board may not accept any application unless an affidavit from the Town of Lewisboro Receiver of Taxes is on file in the Planning Board office. The affidavit must show that all amounts due to the Town of Lewisboro as real estate taxes and special assessments on the total area encompassed by the application, together with all penalties and interest thereon, have been paid.

Under New York State law, the Westchester County Clerk may not accept any subdivision map for filing unless the same type of affidavit from the Town of Lewisboro Receiver of Taxes is submitted by the applicant at the time of filing.

This form must be completed by the applicant and must accompany all applications to the Planning Board. Upon receipt, the Planning Board Secretary will send the form to the Receiver of Taxes for signature and notarization. If preferred, the applicant may directly obtain the signature of the Receiver of Taxes and notarization prior to submission.

To Be Completed by Applicant (Please type or print)

Richard Ruge	Wild Oaks Storage Tank
<i>Name of Applicant</i>	<i>Project Name</i>
<u>Property Description</u>	<u>Property Assessed to:</u>
Tax Block(s): 023	New York American Water
Tax Lot(s): 0004	<i>Name</i> 260 Harrison Ave.
Tax Sheet(s): 11139	<i>Address</i> Harrison, NY 10528
	<i>City</i> State Zip

The undersigned, being duly sworn deposes and says that a search of the tax records in the office of the Receiver of Taxes, Town of Lewisboro, reveals that all amounts due to the Town of Lewisboro as real estate taxes and special assessments, together with all penalties and interest thereon, affecting the premises described below, have been paid.

Signature - Receiver of Taxes: _____ *Date* _____

Sworn to before me this

_____ day of _____, 2_____

Signature - Notary Public (affix stamp)

**WILD OAKS WATER SYSTEM
STORAGE TANK REPLACEMENT**

Town of Lewisboro Step 1 Site Development Plan

Attachment 3

Affidavit of Ownership Form

TOWN OF LEWISBORO PLANNING BOARD

PO Box 725, 20 North Salem Road, Cross River, NY 10518

Email: planning@lewisborogov.com

Tel: (914) 763-5592

Fax: (914) 763-3637

Affidavit of Ownership

State of: New York

County of: Westchester County

Brian Bruce, being duly sworn, deposes and says that he/she

resides at _____

in the County of _____, State of New York

and that he/she is (check one) the owner, or the President

of New York American Water *Title*

Name of corporation, partnership, or other legal entity

which is the owner, in fee of all that certain log, piece or parcel of land situated, lying and being in the

Town of Lewisboro, New York, aforesaid and know and designated on the Tax Map in the Town of

Lewisboro as:

Block 023, Lot 0004, on Sheet 11139.

Brian Bruce, PRES. NYAW
Owner's Signature

Sworn to before me this

19th day of August, 2015

Rose M. Simpson
Notary Public - affix stamp

ROSE M. SIMPSON
Notary Public, State of New York
No. 01S15031048
Qualified in Nassau County
Commission Expires July 25, 2018

**WILD OAKS WATER SYSTEM
STORAGE TANK REPLACEMENT**

Town of Lewisboro Step 1 Site Development Plan

Attachment 4

Engineer's Report - Project Description



WILD OAKS WATER SYSTEM STORAGE TANK REPLACEMENT

Engineer's Report

August 2015

Hazen

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Appendices

Preliminary Site Plan.....	Appendix A
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1.0 Introduction

1.1 Purpose of Report

The purpose of this report is to present the basis of design for the construction of a new finished water storage tank for the Wild Oaks Water System. The report provides a description of the existing storage tank and site, the new tank design, and proposed piping connection to the supply line to the existing tank.

1.2 Background

New York American Water (NYAW) currently owns and operates the Wild Oaks groundwater system in the Town of Lewisboro, Westchester County, New York. The water system is supplied by groundwater wells, which provide up to 75 gpm supply. Finished water from the groundwater wells are pumped to an existing above-ground storage tank located at an intermediate point in the distribution system. The existing tank was constructed and placed into service in 1968 and is in need of replacement. Construction of a new tank located on the same parcel would provide a more reliable means of providing system storage.

The scope of this project will include the following items:

- Survey of the proposed replacement tank site;
- Geotechnical borings for the proposed tank location;
- Construction of a concrete foundation;
- Construction of a new glass fused-to-steel tank;
- Installation of piping to connect to the valve box feeding the existing tank;
- All accessories and electrical components to accommodate new tank operation.

1.3 System Demands and Pressure

The Wild Oaks system serves 610 customers through 223 service connections. Recent demand data for the Wild Oaks System is summarized below:

Table 1: System Demand Data

Year	Average Day (gallons)	Average Day (gpm)	Maximum Day (gallons)	Maximum Day (gpm)
2010	16,098	11.2	86,300	59.9
2013	52,727	36.6	114,400	79.4
2014	43,200	30.0	89,080	61.9

The existing elevated water 120,000 gallon water storage tank provides peak demands and fire flow. The new tank will be sized to meet these demands as a minimum. The existing well pumps system that feeds this tank is capable of pumping 75 gpm and the proposed well pumps (submitted under a separate approval) will be capable of pumping 80 gpm.

The existing tank slab is located at an elevation of approximately 428 ft (NAVD 88) and is approximately 40 ft high with a maximum water level of 37ft (HGL 465 ft). The customers in the distribution system served by this tank and are located elevations of 380 ft or lower therefore at a minimum tank depth of 5 ft (HGL 433 ft) the pressure to the customers located at 380 ft would be approximately 23 psi. A full tank would provide a pressure of approximately 37 psi to the customers at elevation 380 ft. A majority of the customers are located at an elevations ranging between 280 ft -310 ft resulting in normal working pressures of 67-80 psi at maximum water levels in the tank.

2.0 Existing Water Storage Tank

This section discusses the existing Wild Oaks storage tank. The review was developed through on-site inspection of facilities and discussion with New York American Water personnel.

2.1 Existing System Configuration

The existing 120,000 gallon storage tank consists of welded steel construction. The tank is approximately 25 feet in diameter with a height of 40 feet. The storage tank, located within the distribution network, serves as a balancing reservoir for the Wild Oaks water system. The tank is filled and emptied through a single 12-inch pipe connection branching off at the end of Fairmount Rd. An existing concrete vault adjacent to the tank encloses isolation valves to either side of a tee fitting.

2.2 Site Description

The existing tank is located on a one-acre parcel owned by New York American Water . The property is undeveloped with the exception of the existing storage tank.

The site is located at the end of Fairmount Road, where there is a partly-paved access driveway along an easement for the Wild Oaks Water Company. On the Wild Oaks property, an unpaved path and turnaround area leading up to the existing storage tank is available for contractor and equipment access. Much of the site remains moderately wooded, and large boulders and outcropping of rocks are present. A detailed topographic survey is in progress and will be used for development of a final site plan.

The parcel is approximately 120 ft wide and 460 ft long. The existing tank is located approximately 300 ft from the north property line and 28 feet from the west property line.

3.0 Proposed System Upgrades

This section discusses the proposed facilities required for the replacement of the existing tank. The scope of the improvements described in this report includes site work, tank foundation, tank construction, piping connection, and auxiliary controls and accessories necessary for the function of the new storage tank.

3.1 Storage Tank Description

New York American Water has selected a glass lined fused-to-steel material for the new storage tank. The tank will be sized to meet a minimum of 120,000 gallons as direct replacement of the existing tank. The alternative materials considered were pre-stressed concrete and painted welded steel. Pre-stressed concrete tanks are not cost effective in this size and welded painted steel tanks require more costly maintenance over the life of the tank. Our design process has included meetings and correspondence with a pre-qualified tank fabricator, Statewide Aquastore, to obtain product details and specifications.

Glass fused-to-steel panels are factory lined and fabricated in standard dimensions. The first (lowest) ring of panels are embedded into the foundation and the remaining sidewall erection is completed using a series of motorized jacks. Each glass fused-to-steel panel is bolted and sealed into place. Upon completion, the motorized jacks raise the sidewall ring so subsequent rings can be erected. The roof will be glass fused-to-steel construction and will be free span not requiring internal columns. The roof is installed during the first phase of construction.

Cathodic protection will be provided to prevent corrosion of the tank interior. The system uses sacrificial anodes to protect the reinforcing bars, mitigate corrosion and provide protection to internal submerged surfaces of the tank. A mechanical mixer will be equipped to prevent freezing during winter seasons. The tank overflow shall be designed to maintain one foot minimum freeboard, and 18 inches to the high water alarm. A vent will be provided to allow for air exchange during filling and emptying and will be equipped with corrosion-resistant bird and insect screens. A ladder, cage and platform will be provided for access to the top of the tank and access manways will be provided to allow access into the tank.

3.2 Tank Dimensions and Cost

A partial selection of tank configurations from the manufacturer is presented below. Larger diameter tanks are generally less cost effective due to greater footprint and foundation requirements. Among the tank configurations listed, a 40 ft tall tank with 25 ft diameter is the most cost effective sizing to match the existing tank hydraulics. All tanks smaller than 31 ft diameter may be constructed with a glass fused-to-steel roof material.

Nominal Capacity (gal)	Actual Capacity w/ 12" freeboard	Diameter (ft)	Height (ft)	Tank Price Only	Total Price with Foundation	Cost per Gallon Storage (\$/gal)
147,200	143,400	25	40	\$ 200,000	\$ 235,000	\$1.64
157,000	153,300	25	42	\$ 210,000	\$ 250,000	\$1.63
139,600	135,000	28	30	\$ 190,000	\$ 245,000	\$1.81
151,700	147,100	28	33	\$ 200,000	\$ 255,000	\$1.73

To maintain consistent system hydraulics, the new tank will be constructed so that the base elevation and top elevation are aligned with that of the existing tank.

Construction of the tank will be dependent upon field weather conditions. In winter conditions, temperatures below 40°F would require additional provisions to weatherproof concrete during the curing period. The time required for tank sealer to cure is also weather dependent, inversely related to temperature. (For example, temperature of 35°F would take up to 21 days to cure). These factors would add cost to winter construction.

3.3 Site Work

Prior to tank construction, site preparation involving tree clearing, excavation, and regrading are necessary to make adequate room for contractor mobilization and construction of the tank. Stabilization of the unpaved access path and turnaround area will be required to allow access for equipment and transport of materials. Furthermore, a 10 foot clear area around the perimeter of the new tank footprint will be required to maintain sufficient clearance for construction work.

A request for information from the NYSDEC Natural Heritage Program has been completed and a consultation with the US Fish and Wildlife Service is in progress. As a result, tree clearing will likely be limited to the period between October 2015 and April 2016.

3.4 Piping Connection

A new tee fitting will be inserted to create a new branch off the existing supply line within the existing pipe vault. The ductile iron pipe shall be buried at least four feet below grade, below the frost line. A new vault may be required to house the new fittings and valve connections.

3.5 Electrical and Controls

Existing electrical service will be connected to power the motorized mixer as well as the level control instruments at the tank. Specific electrical requirements will be assessed following selection of these powered components.

The new tank will be equipped with field instruments to monitor water levels and flows to enable remote operation of the well pump system. Water level may be reported by

either an ultrasonic sensor or submersible pressure sensor within the tank. High water sensors and spill alarms may be included to alert the well pumps to stop. Provision of these field instruments will be included as accessories to this tank installation.

4.0 Appendices

Appendix A:

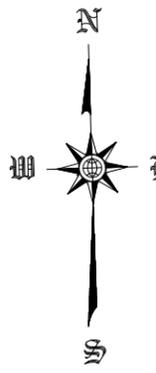
Preliminary site plan attached

**WILD OAKS WATER SYSTEM
STORAGE TANK REPLACEMENT**

Town of Lewisboro Step 1 Site Development Plan

Attachment 5

Project Site Sketch Plan



LEGEND

----- LOT / PROPERTY LINE

GENERAL NOTES:

1. SITE INFORMATION HAS BEEN OBTAINED FROM LIDAR DATA PROVIDED BY THE WESTCHESTER COUNTY FOR GENERAL INFORMATION AND PLANNING PURPOSES ONLY.
2. HORIZONTAL CONTROL IS REFERENCED TO THE NEW YORK STATE PLANE FEET COORDINATE SYSTEM, EAST GRID ZONE, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NAD 83).
VERTICAL CONTROL IS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
3. TAX PARCEL BOUNDARIES REPRESENT APPROXIMATE PROPERTY LINE LOCATION AND SHOULD NOT BE INTERPRETED AS OR USED IN LIEU OF A SURVEY OR PROPERTY BOUND DESCRIPTION.

- EXISTING WATER TANK
- EXISTING VALVE BOX
- PROPOSED LOCATION FOR NEW WATER TANK

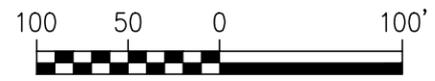
Hazen

HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NY 10018



NEW YORK
AMERICAN WATER

WILD OAKS WATER SYSTEM STORAGE TANK REPLACEMENT



SCALE: 1"=100'-0"

DATE
08/27/2015

PRELIMINARY SITE PLAN

MEMORANDUM

TO: Chairman Jerome Kerner, AIA and
Members of Lewisboro Planning Board

CC: Gregory Monteleone, Esq.

FROM: Jan K. Johannessen, AICP 
Joseph M. Cermele, P.E., CFM 
Town Consulting Professionals

DATE: September 23, 2015

RE: Verizon Wireless @ Leon Levy Preserve - Amendment
NYS Route 35
Sheet 40, Block 10263, Lots 1 & 62

Project Description

The subject property consists of ± 4.0 acres of land and is located within the R-4A Zoning District. The site is landlocked (surrounded by lands known as the Leon Levy Preserve) and is accessed from NYS Route 35. The subject property is developed with a telecommunication facility consisting of a ± 125 -foot tall lattice tower, a $\pm 75' \times 35'$ equipment building, and a $\pm 2,900$ s.f. fenced equipment compound area. The applicant, New York SMSA Limited Partnership d/b/a Verizon Wireless, has submitted a Special Use Permit application to replace three (3) existing panel antennas and install six (6) additional panel antennas (nine (9) antennas total), along with additional ancillary equipment. While the applicant's existing antennas appear to be mounted at or below 124'-3" AGL, it appears that the proposed antennas will have a maximum height of 138'-3" AGL. The applicant is also seeking a five (5) year renewal of its Special Use Permit.

SEQRA

The proposed action is an Unlisted Action under the State Environmental Quality Review Act (SEQRA). Prior to approval, the Planning Board must issue a Determination of Significance.

Required Approvals/Referrals

1. Special Use Permit Approval is required from the Planning Board.
2. A public hearing is required to be held on the Special Use Permit.
3. A height variance is required from the Zoning Board of Appeals.
4. The application should be referred to ACARC and the AAB.
5. A “notification only” referral should be made to the Westchester County Planning Board in accordance with Section 239-m of the General Municipal Law; the Planning Board Secretary will coordinate this referral.

Short EAF Review

- 1.2: The applicant should identify the required height variance.
- 1.4: The applicant should also mark “forest” and “parkland”.
- 2.0: On behalf of the Planning Board, the applicant should complete Part 2 of the Short EAF.

Comments:

1. This application was originally reviewed and approved by resolution dated December 11, 2012 (see Cal. #6-12 P.B.). While the resolution was adopted, the conditions of approval were never satisfied, the plans were never endorsed by the Planning Board Chairman, and the Special Use Permit expired. As noted above, the application requires a height variance from the Zoning Board of Appeals (maximum height allowed 120’/138’-3” proposed). The applicant should determine if a zoning variance was in fact granted and, if so, whether it is still valid.
2. Please remove the Planning Board Secretary’s name from the signature block; the Planning Board Secretary title should remain.
3. Any subsequent submission should include the Step II Special Use Permit application form.

In order to expedite the review of subsequent submissions, the applicant should provide annotated responses to each of the comments outlined herein.

Chairman Jerome Kerner, AIA
September 23, 2015
Page 3 of 3

Plan Reviewed, prepared by Structural Consulting Services, P.C., dated (last revised) August 24, 2015:

- Location Plan, Compound Plan, Project Information, Topographic Map and Notes (C-1)
- Site Elevation, Antenna & Cable Schedule, Cable Diagram and Notes (C-2)

Documents Reviewed:

- Letter, prepared by Snyder & Snyder, dated August 28, 2015
- Planning Board Application
- *Structural Analysis Report*

JKJ/JMC/DJS/dc

T:\Lewisboro\Correspondence\LW2098JJ-LWPB-VerizonLeonLevyAmend-Review-Memo-9-23-15.docx

LAW OFFICES OF
SNYDER & SNYDER, LLP

94 WHITE PLAINS ROAD

TARRYTOWN, NEW YORK 10591

(914) 333-0700

FAX (914) 333-0743

WRITER'S E-MAIL ADDRESS

Lsnyder@snyderlaw.net

NEW JERSEY OFFICE
ONE GATEWAY CENTER, SUITE 2600
NEWARK, NEW JERSEY 07102
(973) 824-9772
FAX (973) 824-9774

REPLY TO:

Tarrytown Office

NEW YORK OFFICE
445 PARK AVENUE, 9TH FLOOR
NEW YORK, NEW YORK 10022
(212) 749-1448
FAX (212) 932-2693

LESLIE J. SNYDER
ROBERT D. GAUDIOSO

DAVID L. SNYDER
(1956-2012)

August 28, 2015

Hon. Chairman Jerome Kerner
and Members of the Planning Board
Town of Lewisboro
20 North Salem Road
Cross River, New York 10590

RE: New York SMSA Limited Partnership d/b/a Verizon Wireless
Request for Special Permit Amendment for Antenna Work
on the Existing Tower located at
Route 35, Lewisboro, New York

Dear Hon. Chairman Kerner and Members of the Planning Board:

I am the attorney for New York SMSA Limited Partnership d/b/a Verizon Wireless ("Verizon Wireless") in connection with its request for a special permit amendment and renewal with respect to antenna work ("Antenna Work") on the existing communications tower ("Existing Tower") at the captioned site. Verizon Wireless' Antenna Work consists of the replacement and installation of antennas on the Existing Tower, as indicated on the plans submitted herewith. The Antenna Work is necessary for Verizon Wireless to be able to provide enhanced voice and data services to the area, allowing for high speed wireless data transmission. In accordance with Section 220-41.1(H) of the Town Code, alteration of an approved communications facility requires special permit approval.

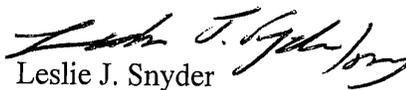
In connection therewith, I have enclosed the required special permit application fee and 14 copies of the following materials:

1. Special permit application;
2. Signed and sealed plans prepared by APT Engineering, depicting the proposed work;
3. Memorandum in Support of the Application with Exhibits, including a radio frequency emissions compliance report and a structural certification; and
4. An electronic copy of this application.

Section 220-41.1 C (2) of the Town of Lewisboro's Zoning Code specifically encourages the collocation of antennas on existing towers like the instant case, and provides in Section 220-41.1(H)(2), that applications involving amending an approved communications facility in connection with co-location shall be processed in an expedited manner. Kindly also note that the Middle Class Tax Relief and Job Creation Act of 2012 ("TRA"), signed by the President on February 22, 2012, contains a provision fostering the deployment of wireless communication facilities and modifications thereto. Section 6409 of TRA provides that a local government "may not deny, and shall approve" an application for "collocation of new transmission equipment" or "replacement of transmission equipment" on an existing wireless tower or base station that does not "substantially change the physical dimensions of such tower or base station." On October 17, 2014, the Federal Communications Commission adopted the Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies order ("FCC Order") further implementing Section 6409 of the TRA. Under the FCC Order, municipalities shall approve an "eligible facilities request" within 60 days of receiving all application materials or the request will be deemed granted. *The proposed Facility is an eligible facilities request pursuant to the TRA and FCC Order since it involves the collocation of transmission equipment that does not constitute a "substantial change."* In connection therewith, it is respectfully submitted that Verizon Wireless' request for the Antenna Work shall be approved forthwith so that the special permit is amended to permit such Antenna Work and the special permit shall continue for another five (5) years from the date of special permit amendment.

Thank you for your consideration. I look forward to discussing this matter with the Planning Board at your next meeting. If you have any questions or require additional documentation, please do not hesitate to call me or Michael Sheridan of my office at (914) 333-0700.

Respectfully submitted,


Leslie J. Snyder

LJS/jg

cc: Verizon Wireless

James Fahey

Y:\WPDATA\SS4\WP\NEWBANM\Joe Rollins\LTE Zoning Analyses\South Salem (Lewisboro) 4PB Ltr.FIN.docx

TOWN OF LEWISBORO PLANNING BOARD

PO Box 725, 20 North Salem Road, Cross River, NY 10518

Email: planning@lewisborogov.com Tel: (914) 763-5592

Site Development Plan/Subdivision Plat Application - Check all that apply:

Waiver of Site Development Plan Procedures	<input type="checkbox"/>		
Site Development Plan Approval	Step I <input type="checkbox"/>	Step II <input type="checkbox"/>	
Special Use Permit Approval	Step I <input checked="" type="checkbox"/>	Step II <input type="checkbox"/>	
Subdivision Plat Approval	Step I <input type="checkbox"/>	Step II <input type="checkbox"/>	Step III <input type="checkbox"/>

Project Information

Project Name: Antenna replacement and related improvements

Project Address: Route 35, South Salem, New York

Gross Parcel Area: _____ Zoning District: R-4A Sheet(s): 40 Block (s): 10263 Lot(s): 1, 62

Project Description: Antenna replacement and related improvements per plans.

Is the site located within 500 feet of any Town boundary?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Is the site located within the New York City Watershed?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Is the site located on a State or County Highway?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>

Does the proposed action require any other permits/approvals from other agencies/departments?

Town Board	<input type="checkbox"/>	ZBA	<input type="checkbox"/>	Building Dept.	<input type="checkbox"/>	Town Highway	<input type="checkbox"/>
ACARC	<input type="checkbox"/>	NYSDEC	<input type="checkbox"/>	NYCDEP	<input type="checkbox"/>	WCDH	<input type="checkbox"/>
NYSDOT	<input type="checkbox"/>	Town Wetland	<input type="checkbox"/>	Town Stormwater	<input type="checkbox"/>		

Other _____

Owner's Information

Name: American Tower Email: _____

Address: 10 Presidential Way, Woburn, MA Phone: _____

Applicant's Information (if different)

Name: New York SMSA Limited Partnership d/b/a Verizon Wireless Email: jsnyder@snyderlaw.net

Address: c/o Snyder & Snyder, LLP, 94 White Plains Road, Tarrytown, New York 10591 Phone: 914-333-0700

Authorized Agent's Information

Name: Leslie J. Snyder, Esq. Email: jsnyder@snyderlaw.net

Address: Snyder & Snyder, LLP, 94 White Plains Road, Tarrytown, New York 10591 Phone: 914-333-0700

THE APPLICANT understands that any application is considered complete only when all information and documents required have been submitted and received by the Planning Board. The applicant further understands that the applicant is responsible for the payment of all application and review fees incurred by the Planning Board.

THE UNDERSIGNED WARRANTS the truth of all statements contained herein and in all supporting documents according to the best of his/her knowledge and belief, and authorizes visitation and inspection of the subject property by the Town of Lewisboro and its agents.

New York SMSA Limited Partnership d/b/a Verizon Wireless

APPLICANT'S SIGNATURE By: [Signature] DATE 9/25/15

OWNER'S SIGNATURE See attached letter of authorization DATE _____

TOWN OF LEWISBORO PLANNING BOARD

PO Box 725, 20 North Salem Road, Cross River, NY 10518
Email: planning@lewisborogov.com
Tel: (914) 763-5592 Fax: (914) 763-3637

Tax Payment Affidavit Requirement

This form must accompany all applications to the Planning Board.

Under regulations adopted by the Town of Lewisboro, the Planning Board may not accept any application unless an affidavit from the Town of Lewisboro Receiver of Taxes is on file in the Planning Board office. The affidavit must show that all amounts due to the Town of Lewisboro as real estate taxes and special assessments on the total area encompassed by the application, together with all penalties and interest thereon, have been paid.

Under New York State law, the Westchester County Clerk may not accept any subdivision map for filing unless the same type of affidavit from the Town of Lewisboro Receiver of Taxes is submitted by the applicant at the time of filing.

This form must be completed by the applicant and must accompany all applications to the Planning Board. Upon receipt, the Planning Board Secretary will send the form to the Receiver of Taxes for signature and notarization. If preferred, the applicant may directly obtain the signature of the Receiver of Taxes and notarization prior to submission.

To Be Completed by Applicant (Please type or print)

New York SMSA Limited Partnership
d/b/a Verizon Wireless

Antenna work and related improvements

Name of Applicant

Project Name

Property Description

Property Assessed to:

Tax Block(s): 10263

American Towers LLC

Tax Lot(s): 1 & 62

Name
10 Presidential Way

Tax Sheet(s): 40

Address
Woburn MA 01801
City State Zip

The undersigned, being duly sworn deposes and says that a search of the tax records in the office of the Receiver of Taxes, Town of Lewisboro, reveals that all amounts due to the Town of Lewisboro as real estate taxes and special assessments, together with all penalties and interest thereon, affecting the premises described below, have been paid.

Signature - Receiver of Taxes: _____

Date

Sworn to before me this

_____ day of _____, 20_____

Signature - Notary Public (affix stamp)

LETTER OF AUTHORIZATION

SITE NO: 88166

SITE NAME: SOUTH SALEM NY, NY

ADDRESS: Route 35,
South Salem, NY 10590

APN: _____

I, Richard Rossi, VP of Contract Management of American Tower*, owner of the property and tower facility located at the address identified above (the "Tower Facility"), do hereby authorize New York SMSA Limited Partnership d/b/a Verizon Wireless, its successors and assigns, ("VERIZON WIRELESS") and/or its agent, to act as American Tower's non-exclusive agent for the sole purpose of filing and consummating any land-use or building permit application(s) necessary to obtain approval of the applicable jurisdiction for VERIZON WIRELESS' installation of its antennas and related telecommunications equipment on the existing tower and Tower Facility. This installation shall not affect adjoining lands and will occur only within the area leased by American Tower.

We understand that this application may be denied, modified or approved with conditions. The above authorization is limited to the acceptance by VERIZON WIRELESS only of conditions related to VERIZON WIRELESS' installation, provided that any such conditions of approval or modifications will be the sole responsibility of VERIZON WIRELESS.

The above authorization does not permit VERIZON WIRELESS to modify or alter any existing permit(s) and/or zoning or land-use conditions or impose any additional conditions unrelated to VERIZON WIRELESS' installation of telecommunications equipment without the prior written approval of American Tower.

Signature: _____

Print Name: Richard Rossi, VP Contract Management
American Tower*

NOTARY BLOCK

Commonwealth of MASSACHUSETTS
County of Middlesex

This instrument was acknowledged before me by Richard Rossi, VP of Contract Management of American Tower (Property and Tower Facility owner), personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same.

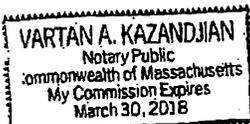
WITNESS my hand and official seal, this 23 day of April, 2012.

NOTARY SEAL

Notary Public _____

My Commission Expires: 5/20/18

* American Tower as used herein is defined as American Towers LLC and any of its affiliates or subsidiaries.



PLANNING BOARD
TOWN OF LEWISBORO

-----X
In the matter of the Application of

**NEW YORK SMSA LIMITED PARTNERSHIP
d/b/a VERIZON WIRELESS**

Premises: NYS Route 35
Town of Lewisboro, New York
Section 40, Block 10263, Lot 1 & 62
-----X

**MEMORANDUM IN SUPPORT OF THE APPLICATION BY NEW YORK
SMSA LIMITED PARTNERSHIP d/b/a VERIZON WIRELESS FOR ANTENNA WORK
ON THE EXISTING PUBLIC UTILITY WIRELESS COMMUNICATIONS FACILITY**

I. **Introduction**

New York SMSA Limited Partnership d/b/a Verizon Wireless ("Verizon Wireless") respectfully submits this memorandum in support of its application to amend its special permit to perform antenna work ("Antenna Work") in connection with its existing public utility wireless communications facility ("Facility") at the property ("Property") located on NYS Route 35, Town of Lewisboro, New York. The Antenna Work consists of the installation of replacing 3 antennas and installing 6 additional antennas on the existing tower ("Existing Tower") to improve Verizon Wireless' wireless services to the area.¹ In connection therewith, we request that the Board also grant a renewal of the existing special permit for an additional five (5) years from the time of the special permit amendment.

II. **Statement of Facts**

The Property is located in the R-4A zoning district in the Town of Lewisboro ("Town") and is currently used for public utility wireless communications purposes. Verizon Wireless' proposed Antenna Work will enable it to provide enhanced wireless communication services to the area. The proposed Antenna Work is detailed in the site plan ("Site Plan") prepared by Structural Consulting Services, P.C. ("SCS") and submitted herewith.

III. **Public Utility Status**

Verizon Wireless is licensed by the Federal Communications Commission ("FCC"), and is a wireless telecommunication public utility in the State of New York, providing an essential public service. See Cellular One v. Rosenberg, 82 N.Y.2d 364 (1993) (hereinafter referred to as

¹ Please note that on November 28, 2012, the Town of Lewisboro Zoning Board of Appeals granted Verizon Wireless a height variance to locate antennas at a maximum height of 138'-3" at the Facility and the Antenna Work is consistent with such height.

"Rosenberg"). In *Rosenberg, supra*, New York's highest court held that federally licensed wireless carriers are public utilities in the State of New York, and provide an essential public service. The court found that public utilities, such as Verizon Wireless, are entitled to a relaxed standard in zoning decisions, since the proposed use is necessary for it to render safe and adequate service.

The instant application is filed in furtherance of the goals and objectives established by Congress under the federal Telecommunications Act of 1996. The federal Telecommunications Act of 1996 is "an unusually important legislative enactment," establishing national public policy in favor of encouraging "*rapid deployment of new telecommunications technologies* (emphasis supplied)." *Reno v. ACLU*, 521 U.S. 844, 857, 117 S.Ct. 2329, 2337-38, 138 L.Ed.2d 874 (1997). In fact, in 1999, Congress expanded further upon this policy by enacting the Wireless Communications and Public Safety Act of 1999, Pub.L. 106-81, 113 Stat. 1286 (the "911 Act"). The "911 Act," empowered the FCC to develop regulations to make wireless 911 services available to all Americans. The express purpose of the Act, as articulated by Congress, was "*to encourage and facilitate the prompt deployment throughout the United States of seamless, ubiquitous, and reliable end-to-end infrastructure for communications, including wireless communications, to meet the Nation's public safety and other communications needs.*" (emphasis added).

Please note that on November 18, 2009, the FCC issued a Declaratory Ruling regarding timely review of applications for siting of wireless facilities, WT Docket NO. 08-165 (the "Shot Clock Order").¹ The Shot Clock Order finds that a "reasonable period of time" for a local government to act on this type of application, a collocation application, is presumptively 90 days.² According to the Shot Clock Order, if the Town fails to act within such reasonable period of time, the applicant may commence an action in court for "failure to act" under Section 332(c)(7)(B)(v) of the Federal Communications Act. Furthermore, under 220-41.1.H(2) of the Town's Zoning Code, a collocation, like the one proposed here, on an approved communication tower, which is consistent with the structural, safety and visual aspects of the approved tower, "shall be processed in an expedited manner."

Moreover, the Middle Class Tax Relief and Job Creation Act of 2012 ("TRA"), signed by the President on February 22, 2012, contains a provision fostering the deployment of wireless communication facilities. Section 6409 of TRA provides that a local government "may not deny, and shall approve" an application for "collocation of new transmission equipment" or "replacement of transmission equipment" on an existing wireless tower or base station that does not "substantially change the physical dimensions of such tower or base station." On October 17, 2014, the Federal Communications Commission adopted the Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies order ("FCC Order") further implementing Section 6409 of the TRA. Under the FCC Order, municipalities shall approve an "eligible facilities request" within 60 days of receiving all application materials or the request will be deemed granted. *The proposed Facility is an eligible facilities request pursuant to the TRA and FCC Order since it involves the collocation of transmission equipment that does not constitute a "substantial change."*

1. A copy of the Rule is available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-09-99A1.pdf.

2. Rule, ¶71

Accordingly, the Antenna Work as proposed on the Existing Tower should be approved forthwith.

IV. Verizon Wireless' Facility Meets the Standards for a Special Permit

A special permit use is permitted as of right when the applicant has demonstrated compliance with the applicable standards. See Matter of North Shore Steak House v. Board of Appeals of Inc. Vil. of Thomaston, 30 N.Y.2d 238, 331 N.Y.S. 2d 645 (1972). As detailed herein, Verizon Wireless' facility, as modified by the Antenna Work, will continue to meet the special permit criteria set forth in Section 220-41.1 of the Town Zoning Code ("Zoning Code").

A. Structural Compliance §220.41.1B(1),(2),(3),(4): Pursuant to the Structural Analysis Report from SCS attached hereto as Exhibit 1, the Existing Tower can accommodate Verizon Wireless' Antenna Work.

B. FCC and FAA Regulations §220.41.1B(5),(6),(9): Verizon Wireless will continue to operate and maintain its existing facility in accordance with its licenses from the Federal Communications Commission ("FCC"), which are attached hereto as Exhibit 2. Verizon Wireless' facility will remain in conformance with all applicable rules and regulations of those governmental agencies having jurisdiction over communications facilities, including the FCC and FAA. Attached hereto as Exhibit 3 is an RF compliance Report ("RF Compliance Report") issued by Pinnacle Telecom Group, which indicates that Verizon Wireless' facility, taking into account all existing and/or proposed antennas, will continue to conform with the applicable regulations promulgated by the FCC pertaining to radio frequency emissions.

C. Need for Facility §220.41.1B(7): The proposed Antenna Work is necessary for Verizon Wireless to enhance its wireless services and meet current and expected demands for Verizon Wireless' services in the surrounding area. Due to the nature of Verizon Wireless' Antenna Work, Verizon Wireless respectfully requests that this Honorable Board waive its requirement under the Zoning Code to provide a verifiable list of complaints provided to the Public Service Commission for interruptions of service in the area. Such waiver is permitted under §220.41.1H(3) of the Zoning Code.

D. Facility Siting §220.41.1B(8), C (1) (2), D (2), (3), (4) & (9): Due to the nature of Verizon Wireless' Antenna Work, Verizon Wireless respectfully requests that this Honorable Board waive the requirements of §220.41.1 relating to review of other properties and need for the site, including, without limitation §220.41.1 B (8) C(1), (2); and D (2), (3), (4) & (9). Such waivers are permitted under §220.41.1H(3) of the Zoning Code.

E. Location of Antennas §220-41.1C(3); D(6): In accordance with the requirements of Sections 220-41(C)(3) and (D)(6) of the Zoning Code, the Structural Analysis Report from SCS, attached hereto as Exhibit 1, confirms that the Existing Tower has sufficient capacity for Verizon Wireless' Antenna Work.

F. Environmental Assessment Form §220-41.1D(1): It is respectfully submitted that the proposed action is a Type II action under the New York State Environmental Quality Review Act

("SEQRA") 6 NYCRR 617.5(C)(1) and (2), and, therefore, no environmental review under SEQRA is required. In any event, attached hereto as Exhibit 4 is a short Environmental Assessment Form ("EAF"). Due to the fact that Verizon Wireless' Antenna Work consists of a the replacement/collocation of equipment on an Existing Tower as encouraged by the Zoning Code, Verizon Wireless respectfully requests that this Honorable Board waive the requirement for a long EAF and any remaining requirements of §220.41.1D(1).

G. Site Plan §220-41.1D(5): Submitted herewith is a Site Plan, which includes the elevations and locations of the Antenna Work. Kindly note that the RF Compliance Report, attached hereto as Exhibit 3, indicates the type of antennas to be installed. There will be no lighting or signage associated with the Antenna Work.

H. Structural Certification, and Emissions Safety and Compliance Report and Certification §220-41.1 D(6); (7): As noted above, the Structural Analysis Report, attached hereto as Exhibit 1, demonstrates that the Existing Tower can accommodate the Antenna Work. The RF Compliance Report, attached hereto as Exhibit 3, certifies that the RF levels from all existing and proposed antennas will be "in clear compliance with the FCC regulations and limit concerning RF safety." As you are aware, RF interference is governed by the FCC and is therefore not a matter for local determination. See New York SMSA Limited Partnership d/b/a Verizon Wireless v. Town of Clarkstown, 2009 WL 782971 (S.D.N.Y., 2009). In any event, as noted in the RF Compliance Report, Verizon Wireless operates pursuant to its licenses from the FCC and in connection therewith, Verizon Wireless' installation will not interfere with the existing equipment of other federally licensed communications providers. Due to the nature of the Antenna Work, Verizon Wireless respectfully requests that this Honorable Board waive any remaining requirements of §220.41.1D(6) and (7). Such waiver is permitted under §220.41.1H(3) of the Zoning Code.

I. Site Access Driveway § 220-41.1D(8): Verizon Wireless will continue to utilize the existing driveway to access its wireless communications facility. Therefore, no new site access driveways are proposed.

J. Inapplicable Provisions § 206-41.1E: It is respectfully submitted that Section 206-41.1E of the Zoning Code is inapplicable to the instant application since those sections apply to the construction of communications tower and the instant application involves the Antenna Work on the Existing Tower.

In addition to the specific special permit criteria indicated above, Verizon Wireless' facility, as modified by the Antenna Work, will continue to meet the general special permit criteria as follows in accordance with § 220-32 of the Zoning Code:

A. Nature of the Proposal: The location and size of the project, the nature and intensity of the operations, and the size and location of the Property are such that Verizon Wireless' facility will continue to be in harmony with the appropriate and orderly development of the area for the following reasons. First, the proposed use is specifically authorized by special permit in accordance with the Zoning Code, and the Property is already utilized for the Existing Tower with facilities for Verizon Wireless. Second, since the Antenna Work

involves the use of an Existing Tower, it eliminates Verizon Wireless' need for any additional tower in the area. Third, the wireless communications facility will remain unmanned; requiring infrequent maintenance visits of approximately once a month so there will be no detrimental effect on the neighborhood due to traffic or other environmental impacts.

B. Appropriate Development of the Neighborhood: The location, nature and height of the project are such that the special permit will not hinder or discourage the appropriate development and use of adjacent land and buildings. Since the Antenna Work merely involves the use of the Existing Tower and involves no ground disturbance, there will be no additional disturbance to the area that would affect other development.

C. Nature of the Operations: The proposed Antenna Work will not produce noise, smoke, gas, heat, odor, dust, fumes, vibrations or flashing lights onto nearby properties, nor will it attract insects, vermin or vectors. In addition, the wireless communications facility will remain unmanned and not require water supply, waste disposal or other municipal resources.

D. Parking: Verizon Wireless' Antenna Work has no impact on pedestrian or vehicular traffic, since Verizon Wireless' facility will continue to be unmanned requiring infrequent maintenance visits of approximately once per month.

V. Conclusion

By granting Verizon Wireless an amended special permit for the Antenna Work, the Planning Board will enable Verizon Wireless to improve its wireless service to the area, affording Verizon Wireless users in the area the ability to have enhanced voice and high speed data transmission, with no significant adverse effect.

WHEREFORE, for all of the foregoing reasons, Verizon Wireless respectfully prays that this Honorable Board deem the proposed action a Type II Action or issue a negative declaration pursuant to the New York State Environmental Quality Review Act and grant the requested special permit approval for the Antenna Work so that the special permit, as amended, will continue for an additional five (5) years from the date of the special permit amendment.

Dated: August 28, 2015
Tarrytown, New York

Respectfully submitted,
Leslie J. Snyder
SNYDER & SNYDER, LLP
94 White Plains Road
Tarrytown, NY 10591

EXHIBIT 1
Structural Analysis Report



August 3, 2015

Hon. Chairman Kerner
And Members of the Planning Board
Town of Lewisboro
20 North Salem Road
Cross River, NY 10518

RE: New York SMSA Limited Partnership d/b/a Verizon Wireless
Site: South Salem
NYS Route 35, South Salem, NY 10590
Tax Block: 10263, Tax Lots: 1 & 62
Antenna Modifications

Dear Hon. Chairman Kerner and Members of the Planning Board:

New York SMSA Limited Partnership d/b/a Verizon Wireless is proposing to replace all three (3) of their existing panel antennas and install six (6) additional panel antennas for a net total of nine (9) antennas total on the existing 125' +/- self-supporting lattice at the above referenced site as shown on the construction drawings prepared by our office, drawings C-1 & C-2. The antennas will be attached to new antenna mounts on the top of the tower and nine (9) additional coax cables will be installed as part of the proposed antenna modification.

Our office has reviewed a copy of the structural analysis report prepared by American Tower Engineering Services, Cary, NC, Eng. Number 60530922, dated 12/3/14, for the existing tower under the proposed and existing antenna loadings which deemed the existing tower and foundation to have sufficient capacity. In our professional opinion, the existing tower and foundation can accommodate the proposed antenna modifications. Should you have any questions, please do not hesitate to contact our office.

Sincerely,

Structural Consulting Services, P.C.

James H. Fahey, P.E., S.E.
Principal



cc: Verizon Wireless
Snyder & Snyder
JHF/jhf

67 Federal Road, Brookfield, CT 06804
Tel: 203.740.7578 Fax: 203.775.5670

EXHIBIT 2
FCC Licenses

Federal Communications Commission
Wireless Telecommunications Bureau

Radio Station Authorization (Reference Copy Only)

This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.

Licensee: Cellco Partnership

ATTN Regulatory
Cellco Partnership
1120 Sanctuary Pkwy, #150 GASA5REG
Alpharetta, GA 30004

FCC Registration Number (FRN): 0003290673	
Call Sign: KNLH264	File Number: 0003047719
Radio Service: CW - PCS Broadband	

Grant Date 07/23/2007	Effective Date 07/23/2007	Expiration Date 06/27/2017	Print Date 07/26/2007
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Market Number: BTA321	Channel Block: F	Sub-Market Designator: 0
Market Name: New York, NY		

1st Build-out Date 06/27/2002	2nd Build-out Date	3rd Build-out Date	4th Build-out Date
----------------------------------	--------------------	--------------------	--------------------

Special Conditions or Waivers/Conditions This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/United States), future coordination of any base station transmitters within 72 km (45 miles) of the United States/Canada border shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

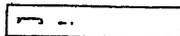
This authorization is conditioned upon the full and timely payment of all monies due pursuant to Sections 1.2110 and 24.716 of the Commission's Rules and the terms of the Commission's installment plan as set forth in the Note and Security Agreement executed by the licensee. Failure to comply with this condition will result in the automatic cancellation of this authorization.

Conditions

Pursuant to Section 309(h) of the Communications Act of 1934, as amended, 47 U.S.C. Section 309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. Section 310(d). This license is subject in terms to the right of use or control conferred by Section 706 of the Communications Act of 1934, as amended. See 47 U.S.C. Section 606.

To view the geographic areas associated with the license, go to the Universal Licensing System (ULS) homepage at <http://wireless.fcc.gov/uls/> and select "License Search". Follow the instruction on how to search for license information

FCC 601 - MB
September 2002





Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
1120 SANCTUARY PKWY, #150 GASA5REG
ALPHARETTA, GA 30009-7630

ANNED

Call Sign WQBT539	File Number 0003864879
Radio Service CW - PCS Broadband	

FCC Registration Number (FRN): 0003290673

Grant Date 02-28-2007	Effective Date 06-11-2009	Expiration Date 01-03-2017	Print Date 06-11-2009
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Market Number BTA321	Channel Block C	Sub-Market Designator 4
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Market Name New York, NY

1st Build-Out Date 12-07-2003	2nd Build-Out Date	3rd Build-Out Date	4th Build-Out Date
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Waivers/Conditions:

This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/United States), future coordination of any base station transmitters within 72 km (45 miles) of the United States/Canada border shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

This authorization is conditioned upon the full and timely payment of all monies due pursuant to Sections 1.2110 and 24.711 of the Commission's Rules and the terms of the Commission's installment plan as set forth in the Note and Security Agreement executed by the licensee. Failure to comply with this condition will result in the automatic cancellation of this authorization.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at <http://wireless.fcc.gov/uls/index.htm?job=home> and select "License Search". Follow the instructions on how to search for license information.



Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: VERIZON WIRELESS TELECOM INC.

ATTN: REGULATORY
VERIZON WIRELESS TELECOM INC.
1120 SANCTUARY PKWY #150 - GASASREG
ALPHARETTA, GA 30004

SCANNED

Call Sign KNLP644	File Number 0003298939
Radio Service CW - PCS Broadband	

FCC Registration Number (FRN): 0005798061

Grant Date 02-28-2007	Effective Date 01-23-2008	Expiration Date 01-03-2017	Print Date 01-24-2008
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Market Number BTA321	Channel Block C	Sub-Market Designator 3
--------------------------------	---------------------------	-----------------------------------

Market Name New York, NY

1st Build-Out Date 12-07-2003	2nd Build-Out Date 01-03-2007	3rd Build-Out Date	4th Build-Out Date
-----------------------------------------	-----------------------------------------	---------------------------	---------------------------

Waivers/Conditions:

This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/United States), future coordination of any base station transmitters within 72 km (45 miles) of the United States/Canada border shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

To view the geographic areas associated with the license, go to the Universal Licensing System (ULS) homepage at <http://wireless.fcc.gov/uls> and select "License Search". Follow the instructions on how to search for license information.



Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
1120 SANCTUARY PKWY, #150 GASASREG
ALPHARETTA, GA 30009-7630

SCANNED

Call Sign WQJQ696	File Number 0003864907
Radio Service WY - 700 MHz Lower Band (Blocks A, B, E)	

FCC Registration Number (FRN): 0003290673

Grant Date 11-26-2008	Effective Date 06-11-2009	Expiration Date 06-13-2019	Print Date 06-11-2009
---------------------------------	-------------------------------------	--------------------------------------	---------------------------------

Market Number BEA010	Channel Block A	Sub-Market Designator 0
--------------------------------	---------------------------	-----------------------------------

Market Name New York-No. New Jer.-Long Isl

1st Build-Out Date 06-13-2013	2nd Build-Out Date 06-13-2019	3rd Build-Out Date	4th Build-Out Date
-----------------------------------------	-----------------------------------------	---------------------------	---------------------------

Waivers/Conditions:

If the facilities authorized herein are used to provide broadcast operations, whether exclusively or in combination with other services, the licensee must seek renewal of the license either within eight years from the commencement of the broadcast service or within the term of the license had the broadcast service not been provided, whichever period is shorter in length. See 47 CFR §27.13(b).

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at <http://wireless.fcc.gov/uls/index.htm?job=home> and select "License Search". Follow the instructions on how to search for license information.

REFERENCE COPY

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Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: NEW YORK SMSA LIMITED PARTNERSHIP

ATTN: REGULATORY
 NEW YORK SMSA LIMITED PARTNERSHIP
 1120 SANCTUARY PKWY #1500 SASA5REG
 ALPHARETTA, GA 30009-7410

Call Sign KNKA206	File Number 0006358273
Radio Service CL - Cellular	
Market Numer CMA001	Channel Block B
Sub-Market Designator 0	

FCC Registration Number (FRN): 000347221

Market Name New York, NY-NJ/Nassau-Suffolk

Grant Date 09-03-2014	Effective Date 09-03-2014	Expiration Date 10-01-2024	Five Yr Build-Out Date	Print Date 09-03-2014
--------------------------	------------------------------	-------------------------------	------------------------	--------------------------

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
2	40-50-32.0 N	073-01-33.0 W	89.6	93.0	1043284
Address: ADIRONDACK DR 300 FT S OF MIDVALE City: SELDEN County: SUFFOLK State: NY Construction Deadline:					
Antenna: 4 Azimuth (from true north)	0	45	90	135	180 225 270 315
Antenna Height AAT (meters)	86.100	83.100	83.800	99.800	106.000 93.200 84.600 81.800
Transmitting ERP (watts)	33.190	240.100	576.810	458.170	102.570 1500 1.210 1.660
Antenna: 5 Azimuth (from true north)	0	45	90	135	180 225 270 315
Antenna Height AAT (meters)	86.100	83.100	83.800	99.800	106.000 93.200 84.600 81.800
Transmitting ERP (watts)	0.110	0.100	0.150	1.780	9.770 15.850 8.510 1.350
Antenna: 6 Azimuth (from true north)	0	45	90	135	180 225 270 315
Antenna Height AAT (meters)	86.100	83.100	83.800	99.800	106.000 93.200 84.600 81.800
Transmitting ERP (watts)	0.110	0.100	0.150	1.780	9.770 15.850 8.510 1.350

Conditions:
 Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in any of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.



Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
1120 SANCTUARY PKWY, #150 GASASREG
ALPHARETTA, GA 30009-7630

Call Sign WQJQ689	File Number 0003865021
Radio Service WU - 700 MHz Upper Band (Block C)	

SCANNED

FCC Registration Number (FRN): 0003290673

Grant Date 11-26-2008	Effective Date 06-11-2009	Expiration Date 06-13-2019	Print Date 06-11-2009
---------------------------------	-------------------------------------	--------------------------------------	---------------------------------

Market Number REA001	Channel Block C	Sub-Market Designator 0
--------------------------------	---------------------------	-----------------------------------

Market Name Northeast

1st Build-Out Date 06-13-2013	2nd Build-Out Date 06-13-2019	3rd Build-Out Date	4th Build-Out Date
-----------------------------------------	-----------------------------------------	---------------------------	---------------------------

Waivers/Conditions:

If the facilities authorized herein are used to provide broadcast operations, whether exclusively or in combination with other services, the licensee must seek renewal of the license either within eight years from the commencement of the broadcast service or within the term of the license had the broadcast service not been provided, whichever period is shorter in length. See 47 CFR §27.13(b).

This authorization is conditioned upon compliance with section 27.16 of the Commission's rules

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
 CELLCO PARTNERSHIP
 1120 SANCTUARY PKWY #50 GASA5REG
 ALPHARETTA, GA 30009-7630

Call Sign WQGA715	File Number 0003833180
Radio Service AW - AWS, 1710-1755/2110-2155 MHz bands	

FCC Registration Number (FRN): 0003290673

Grant Date 11-29-2006	Effective Date 05-12-2009	Expiration Date 11-29-2021	Print Date 05-12-2009
Market Number REA001	Channel Block	Sub-Market Designator 0	
Market Name Northeast			
1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This authorization is conditioned upon the licensee, prior to initiating operations from any base or fixed station, making reasonable efforts to coordinate frequency usage with known co-channel and adjacent channel incumbent federal users operating in the 1710-1755 MHz band whose facilities could be affected by the proposed operations. See, e.g., FCC and NTIA Coordination Procedures in the 1710-1755 MHz Band, Public Notice, FCC 06-50, WTB Docket No. 02-353, rel. April 20, 2006.

AWS operations must not cause harmful interference across the Canadian or Mexican Border. The authority granted herein is subject to future international agreements with Canada or Mexico, as applicable.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

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EXHIBIT 3
RF Compliance Report



PINNACLE TELECOM GROUP
Professional and Technical Services

**ANTENNA SITE FCC RF COMPLIANCE
ASSESSMENT AND REPORT**

PREPARED FOR
**NEW YORK SMSA LIMITED PARTNERSHIP
d/b/a VERIZON WIRELESS**

**"SOUTH SALEM" SITE
ROUTE 35
SOUTH SALEM, NY**

AUGUST 25, 2015

14 Ridgedale Avenue - Suite 260 • Cedar Knolls, NJ 07927 • 973-451-1630

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COMPLIANCE ANALYSIS	9
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Appendix A. BACKGROUND ON THE FCC MPE LIMIT

INTRODUCTION AND SUMMARY

At the request of New York SMSA Limited Partnership d/b/a Verizon Wireless ("Verizon Wireless"), Pinnacle Telecom Group has performed an independent expert assessment of radiofrequency (RF) levels and related FCC compliance for the modification of an existing wireless base station antenna operation on a lattice tower on Route 35 in South Salem, NY. Verizon Wireless refers to the site as "South Salem" and the antenna modifications are proposed so Verizon Wireless can effectively operate under its FCC-licensed frequencies, including 746 MHz, 850 MHz, 1900 MHz and 2100 MHz.

The FCC requires wireless system operators to perform an assessment of potential human exposure to radiofrequency (RF) fields emanating from all the transmitting antennas at a site whenever antenna operations are added or modified, and to ensure compliance with the Maximum Permissible Exposure (MPE) limit in the FCC regulations. In this case, the tower supports other existing wireless antenna operations by AT&T, Sprint, and T-Mobile – the RF effects of which will be conservatively included in this compliance assessment.

This report describes a mathematical analysis of compliance with the FCC MPE limit for safe continuous exposure of the general public. The RF effects of the antennas are calculated using a standard FCC formula – and the analysis is designed to conservatively overstate the RF levels that actually occur from the antennas. In that way, as long as the results indicate RF levels below the MPE limit, we can have great confidence the compliance requirement is satisfied.

The results of a compliance assessment can be explained in layman's terms by describing the calculated RF levels as simple percentages of the FCC MPE limit. If the reference for that limit is 100 percent, then calculated RF levels higher than 100 percent indicate the MPE limit is exceeded, while calculated RF levels consistently lower than 100 percent serve as a clear and sufficient demonstration of compliance with the MPE limit. We will also describe the overall worst-case calculated result via the "plain-English" equivalent "times-below-the-limit factor".

The result of the FCC RF compliance assessment in this case is as follows:

- The conservatively calculated maximum RF level from the combination of the Verizon Wireless antenna operations, as proposed to be modified, along with the other antenna operations at the site, is 1.5297 percent of the FCC MPE limit – well below the 100-percent reference for compliance. In other words, even with the significant degree of conservatism incorporated in the analysis, the worst-case calculated RF level is still more than 65 times below the FCC limit established as safe for continuous human exposure to the RF emissions from antennas.
- The results of the calculations provide a clear demonstration that the RF levels from the combination of proposed and existing antenna operations at the site satisfy the applicable criteria for controlling potential human exposure to RF fields, and the RF levels will be in clear compliance with the FCC regulations and limit concerning RF safety. Moreover, because of the conservative methodology and incorporated assumptions, RF levels actually caused by the antennas will be even less significant than the calculation results here indicate.

The remainder of this report provides the following:

- relevant technical data on the Verizon Wireless antenna operations, as proposed to be modified, along with data on the other existing antenna operations at the site;
- a description of the applicable FCC mathematical model for assessing MPE compliance, and application of the relevant technical data to that model; and
- the results of the analysis, and the compliance conclusion for the site.

In addition, Appendix A provides background on the FCC MPE limit, along with a list of FCC references on compliance.

NOTE ON NON-INTERFERENCE

In connection with the RF emissions from the proposed antenna operation, we note that Verizon Wireless has been granted by the FCC exclusive geographic rights to its channel frequencies, and is further subject to strict FCC technical standards on parameters such as maximum power and out-of-band emissions, as well as regulations related to non-interference. Therefore, we can provide a clear assurance that the proposed antenna operation will not interfere with public safety communications, or the usual and customary reception of radio, television, or other communications services enjoyed by the nearby residential and non-residential properties, or other existing telecommunications devices. At the same time, however, we would be professionally remiss in omitting a reference to a July 2003 FCC decision – a “Memorandum Opinion and Order” in “WT Docket No. 02-100” that related to interference. That FCC Order concluded that any local ordinance requiring a certification of non-interference related to a wireless antenna siting application represents “impermissible regulation” of RF interference, an area under exclusive FCC jurisdiction and federally-preempted from local regulation.

ANTENNA AND TRANSMISSION DATA

The table below provides the key compliance-related data for the Verizon Wireless antenna operations, as proposed to be modified.

General Data	
Frequency Bands	746 MHz, 850 MHz, 1900 MHz and 2100 MHz
Service Coverage Type	Sectorized
Antenna Type	Directional Panel
Antenna Centerline Height AGL	121 ft. 3 in., 129 ft. 3 in., 135 ft. 3 in.
Antenna Line Loss	Conservatively ignored (assumed 0 dB)
746 MHz Antenna Data	
Antenna Model / Max. Gain	Amphenol BXA-70090/6CF / 14.1 dBi
RF Channels per Sector	2 @ 40 watts

850 MHz Antenna Data	
Antenna Model / Max. Gain	Amphenol BXA-70090/6CF / 14.6 dBi
RF Channels per Sector	8 @ 20 watts
1900 MHz Antenna Data	
Antenna Model / Max. Gain	Amphenol BXA-171085/12CF / 17.6 dBi
RF Channels per Sector	4 @ 16 watts and 4 @ 40 watts
2100 MHz Antenna Data	
Antenna Model / Max. Gain	Amphenol BXA-171085/12CF / 18.0 dBi
RF Channels per Sector	2 @ 40 watts

The antenna vertical-plane radiation pattern is used in the calculations of RF levels at ground level around a site. Figures 1 through 4 that follow show the vertical-plane radiation patterns of the antenna models proposed by Verizon Wireless in each frequency band. Note that in this type of diagram, the antenna is effectively pointed at the three o'clock position (the horizon) and the relative strength of the pattern at different angles is described using decibel units.

Figure 1. Amphenol BXA-70090/4CF Antenna – 746 MHz Vertical-plane Pattern

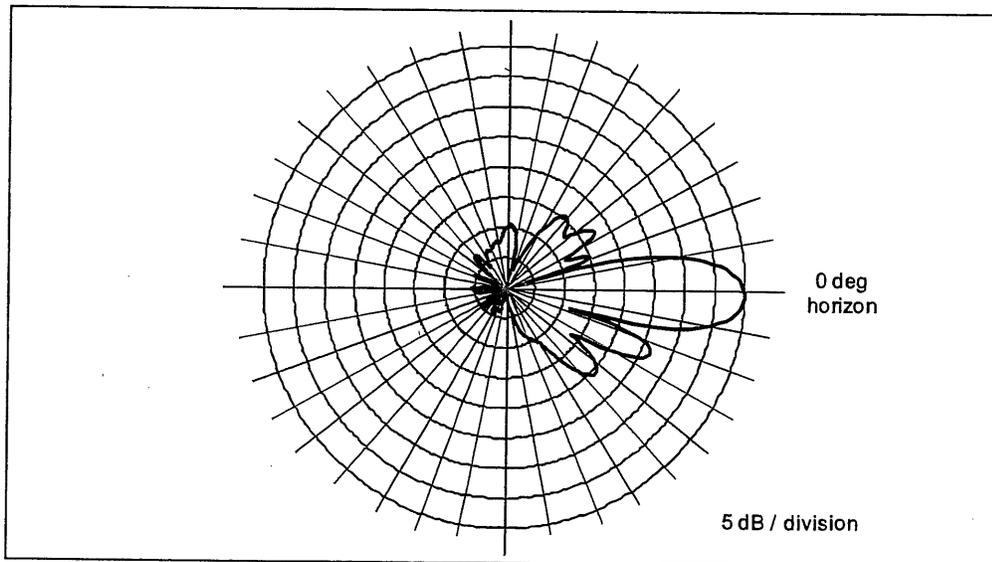


Figure 2. Amphenol BXA-70090/6CF Antenna – 850 MHz Vertical-plane Pattern

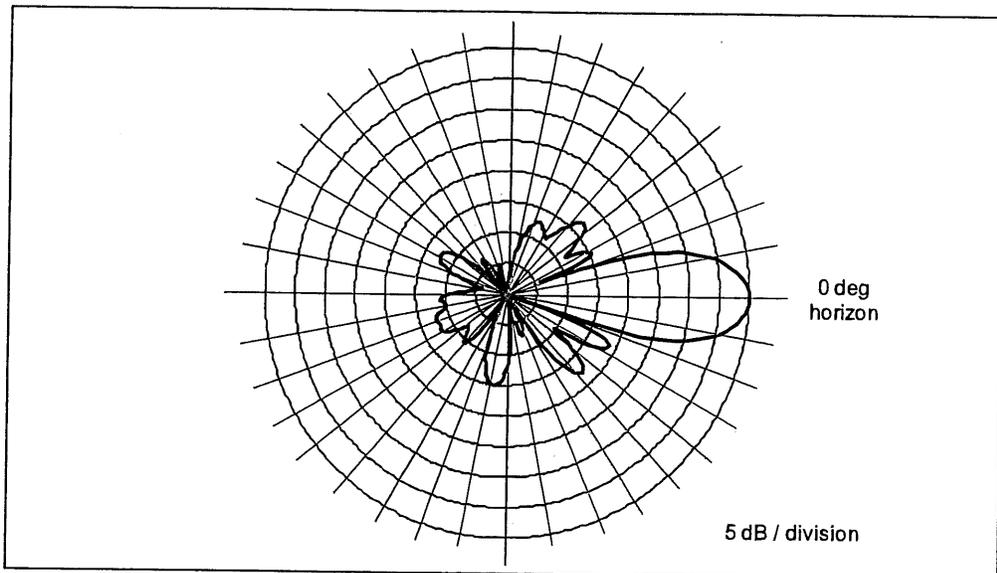


Figure 3. Amphenol BXA-171085/12CF Antenna – 1900 MHz Vertical-plane Pattern

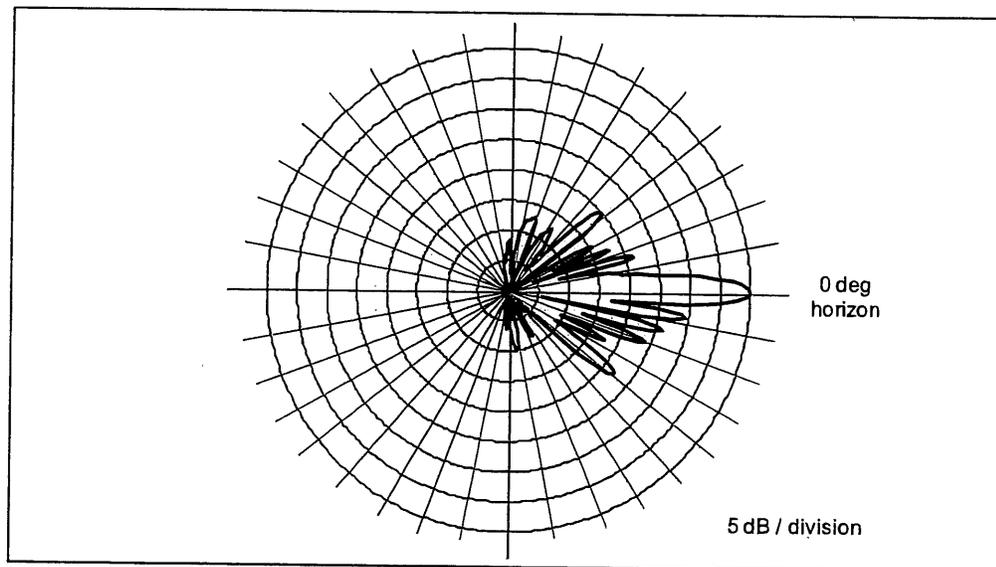
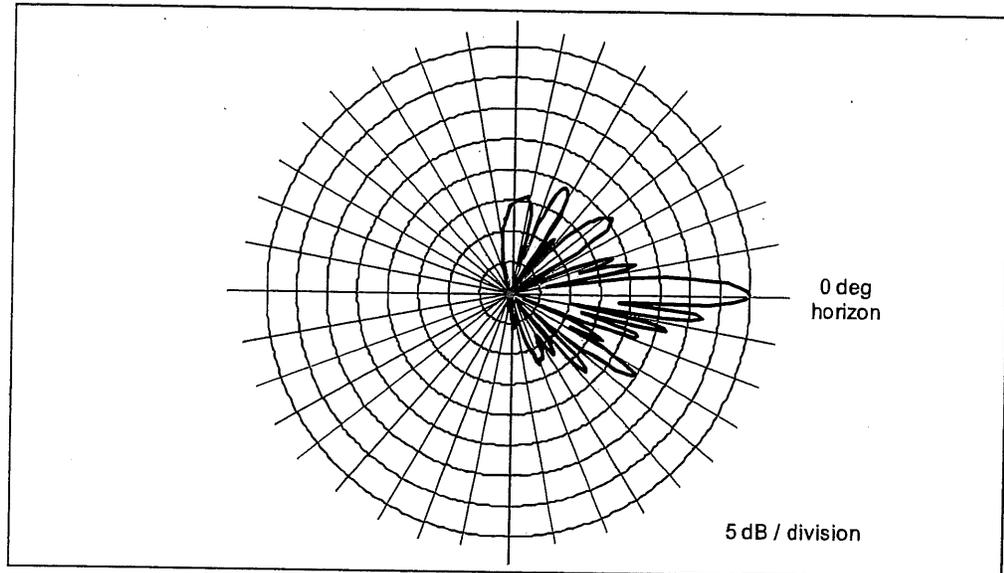


Figure 4. Amphenol BXA-171085/12CF Antenna – 2100 MHz Vertical-plane Pattern



As noted at the outset, there are other wireless antenna operations at the site that we need to include in the compliance assessment, each of which involves directional panel antennas arranged for sectorized wireless service coverage. In the analysis for each of the wireless carriers, we will conservatively assume operation with maximum channel capacity and at maximum transmitter power in each of their respective FCC-licensed wireless frequency bands.

AT&T is licensed to operate in the 700 MHz, 850 MHz and 1900 MHz frequency bands. In the 700 MHz band, AT&T uses as many as four RF channels per antenna sector and a maximum transmitter power of 40 watts. In the 850 MHz band, AT&T uses two 20-watt channels and two 40-watt channels per sector. In the 1900 MHz band, AT&T uses two 60-watt channels and two 80-watt channels per sector.

Sprint (a.k.a., Sprint-Nextel) is licensed to operate in the 860 MHz, 1900 MHz and 2500 MHz frequency bands. In the 860 MHz band, Sprint uses two 40-watt channels per antenna sector. In the 1900 MHz band, Sprint uses two 20-watt

channels and two 40-watt channels per sector. In the 2500 MHz band, Sprint uses four 5-watt channels and four 10-watt channels per sector.

T-Mobile is licensed to operate in the 700 MHz, 1900 MHz and 2100 MHz frequency bands. In the 700 MHz band, T-Mobile uses one 40-watt channel per sector. In the 1900 MHz band, T-Mobile uses four 20-watt channels and one 40-watt channel (for a total of 120 watts) per sector. In the 2100 MHz band, T-Mobile uses one 80-watt channel and two 40-watt channels (for a total of 160 watts) per sector.

Although there may be other antennas at this site, a search of FCC records indicates there are no other licensed transmitting antennas to include in the compliance assessment.

Compliance Analysis

FCC Office of Engineering and Technology Bulletin 65 ("OET Bulletin 65") provides guidelines for mathematical models to calculate the RF levels at various points around transmitting antennas. At street-level around an antenna site (in what is called the "far field" of the antennas), the RF levels are directly proportional to the total antenna input power and the relative antenna gain in the downward direction of interest – and the levels are otherwise inversely proportional to the square of the straight-line distance to the antenna. Conservative calculations also assume the potential RF exposure is enhanced by reflection of the RF energy from the ground. Our calculations will assume a 100% "perfect" reflection, the worst-case approach.

The formula for street-level RF compliance calculations for any given wireless antenna operation is as follows:

$$\text{MPE}\% = (100 * \text{TxPower} * 10^{(\text{Gmax-Vdisc}/10)} * 4) / (\text{MPE} * 4\pi * R^2)$$

where the individual factors are described on the next page.

- MPE% = RF level, expressed as a percentage of the MPE limit applicable to continuous exposure of the general public
- 100 = factor to convert the raw result to a percentage
- TxPower = maximum net power into antenna sector, in milliwatts, a function of the number of channels per sector, the transmitter power per channel, and line loss
- $10^{(G_{max}-V_{disc}/10)}$ = numeric equivalent of the relative antenna gain in the downward direction of interest, referenced to any applied antenna mechanical downtilt; data on the antenna vertical-plane pattern is taken from manufacturer specifications
- 4 = factor to account for a 100-percent-efficient ground reflection, and the squared relationship between RF field strength and power density ($2^2 = 4$)
- MPE = FCC general population MPE limit
- R = straight-line distance from the RF source to the point of interest, centimeters

The MPE% calculations are performed out to a distance of 500 feet from the facility to points 6.5 feet (approximately two meters, the FCC-recommended standing height) off the ground, as illustrated in Figure 5, below.

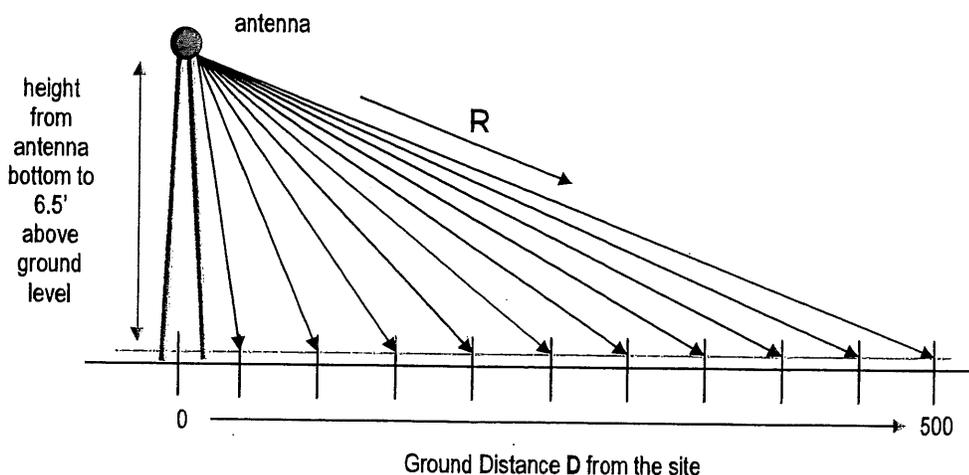


Figure 5. MPE% Calculation Geometry

It is popularly understood that the farther away one is from an antenna, the lower the RF level – which is generally but not universally correct. The results of MPE% calculations fairly close to the site will reflect the variations in the vertical-plane antenna pattern as well as the variation in straight-line distance to the antennas. Therefore, RF levels may actually increase slightly with increasing distance within the range of zero to 500 feet from the site. As the distance approaches 500 feet and beyond, though, the antenna pattern factor becomes less significant, the RF levels become primarily distance-controlled, and as a result the RF levels generally decrease with increasing distance, and are well understood to be in compliance.

FCC compliance for a collocated antenna site is assessed in the following manner. At each distance point along the ground, an MPE% calculation is made for each antenna operation, and the sum of the individual MPE% contributions at each point is compared to 100 percent, the normalized reference for compliance with the MPE limit. We refer to the sum of the individual MPE% contributions as “total MPE%”, and any calculated total MPE% result exceeding 100 percent is, by definition, higher than the FCC limit and represents non-compliance and a need to mitigate the potential exposure. If all results are consistently below 100 percent, on the other hand, that set of results serves as a clear and sufficient demonstration of compliance with the MPE limit.

The following conservative methodology and assumptions are incorporated into the MPE% calculations on a general basis:

1. The antennas are assumed to be operating continuously at maximum power, and at maximum channel capacity. In addition, the effects of antenna line loss are ignored wherever possible.
2. The power-attenuation effects of shadowing or other obstructions to the line-of-sight path from the antenna to the point of interest are ignored.
3. The calculations intentionally minimize the distance factor (R) by assuming a 6’6” human and performing the calculations from the bottom (rather than the centerline) of each operator’s lowest-mounted like antenna, as applicable.

4. The potential RF exposure at ground level is assumed to be 100-percent enhanced (increased) via a “perfect” field reflection from the intervening ground.

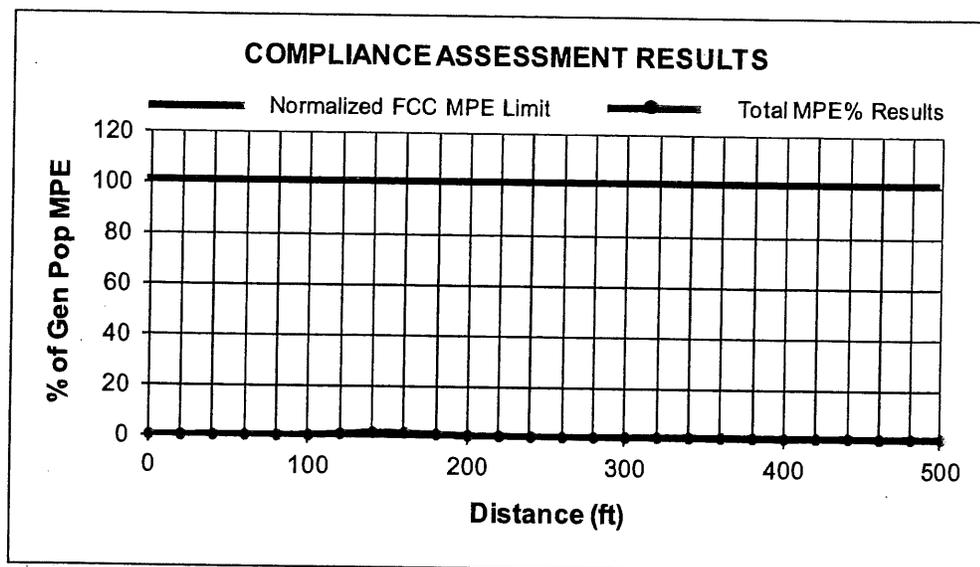
The net result of these assumptions is to significantly overstate the calculated RF exposure levels relative to the levels that will actually occur – and the purpose of this conservatism is to allow very “safe-side” conclusions about compliance.

The table on the following page provides the results of the MPE% calculations for each operator, with the worst-case result highlighted in bold in the last column.

Ground Distance (ft)	Verizon Wireless 746 MHz MPE%	Verizon Wireless 850 MHz MPE%	Verizon Wireless 1900 MHz MPE%	Verizon Wireless 2100 MHz MPE%	AT&T MPE%	Sprint MPE%	T-Mobile MPE%	Total MPE%
0	0.0209	0.0031	0.0149	0.0022	0.0473	0.0084	0.0028	0.0996
20	0.0150	0.0004	0.0331	0.0007	0.0582	0.0106	0.0122	0.1302
40	0.0217	0.0006	0.0001	0.0086	0.1026	0.0323	0.0161	0.1820
60	0.0066	0.0025	0.0197	0.0154	0.1442	0.0062	0.0702	0.2648
80	0.0005	0.0077	0.0045	0.0150	0.0601	0.0734	0.0313	0.1925
100	0.0016	0.0330	0.0015	0.0043	0.0504	0.0965	0.1390	0.3263
120	0.0084	0.0364	0.0200	0.0206	0.3368	0.1182	0.3524	0.8928
140	0.0347	0.0113	0.2206	0.0088	0.8999	0.0599	0.2945	1.5297
160	0.0556	0.0170	0.0615	0.1005	1.0968	0.0541	0.0452	1.4307
180	0.0483	0.0346	0.0077	0.0725	0.6465	0.0472	0.0935	0.9503
200	0.0336	0.0355	0.0158	0.0136	0.3317	0.0366	0.1074	0.5742
220	0.0225	0.0198	0.0452	0.0154	0.1566	0.1188	0.1028	0.4811
240	0.0246	0.0065	0.0057	0.0069	0.1021	0.1324	0.1001	0.3783
260	0.0259	0.0035	0.0095	0.0027	0.0962	0.0952	0.0723	0.3053
280	0.0329	0.0065	0.1003	0.0027	0.1257	0.0683	0.0575	0.3939
300	0.0328	0.0098	0.1120	0.0063	0.1758	0.0741	0.0661	0.4769
320	0.0299	0.0123	0.0850	0.0241	0.3136	0.0771	0.1024	0.6444
340	0.0250	0.0136	0.0325	0.0243	0.3497	0.0688	0.1536	0.6675
360	0.0188	0.0128	0.0060	0.0182	0.3725	0.0583	0.1923	0.6789
380	0.0126	0.0114	0.0285	0.0048	0.3967	0.0455	0.1928	0.6923
400	0.0079	0.0111	0.0713	0.0018	0.3610	0.0413	0.1750	0.6694
420	0.0065	0.0146	0.1009	0.0150	0.4040	0.0492	0.1332	0.7234
440	0.0059	0.0134	0.0924	0.0138	0.4755	0.0913	0.1219	0.8142
460	0.0086	0.0229	0.0724	0.0357	0.4374	0.0837	0.0640	0.7247
480	0.0080	0.0212	0.0668	0.0329	0.5209	0.0771	0.0590	0.7859
500	0.0161	0.0391	0.0270	0.0278	0.4821	0.1344	0.0224	0.7489

As indicated, even with the significant degree of conservatism built into the calculations, the maximum calculated RF level is 1.5297 percent of the FCC MPE limit – well below the 100-percent reference for compliance.

A graph of the overall calculation results, provided below, probably provides a clearer *visual* illustration of the relative compliance of the calculated RF levels. The line representing the calculated total MPE% results barely rises above the graph's zero baseline, and shows an obviously clear and consistent margin to the FCC MPE limit.



COMPLIANCE CONCLUSION

According to the FCC, the MPE limit has been constructed in such a manner that continuous human exposure to RF emissions up to and including 100 percent of the MPE limit is acceptable and safe.

The analysis in this case shows that the maximum calculated RF level from the combination of the Verizon Wireless antenna operations, as proposed to be modified, along with the other existing antenna operations at the site, is 1.5297 percent of the FCC MPE limit. In other words, the worst-case calculated RF level

from the combination of antenna operations is more than 65 times below the limit established as safe for continuous human exposure to the RF emissions from antennas.

The results of the calculations provide a clear demonstration of compliance with the FCC MPE limit. Moreover, because of the conservative calculation methodology and operational assumptions we applied in the analysis, RF levels actually caused by the antennas will be even less significant than the calculation results here indicate.

CERTIFICATION

The undersigned certifies as follows:

1. I have read and fully understand the FCC regulations concerning RF safety and the control of human exposure to RF fields (47 CFR 1.1301 *et seq.*).
2. To the best of my knowledge, the statements and information disclosed in this report are true, complete and accurate.
3. The analysis of RF compliance provided herein is consistent with the applicable FCC regulations, additional guidelines issued by the FCC, and industry practice.
4. The results of the analysis indicate that the antenna operations at the subject site will be in compliance with the FCC regulations concerning RF exposure.



Patricia A. Stankovich
Manager – RF Compliance

8/25/15

Date

Appendix A. BACKGROUND ON THE FCC MPE Limit

FCC Rules and Regulations

As directed by the Telecommunications Act of 1996, the FCC has established limits for maximum continuous human exposure to RF fields.

The FCC maximum permissible exposure (MPE) limits represent the consensus of federal agencies and independent experts responsible for RF safety matters. Those agencies include the National Council on Radiation Protection and Measurements (NCRP), the Occupational Safety and Health Administration (OSHA), the National Institute for Occupational Safety and Health (NIOSH), the American National Standards Institute (ANSI), the Environmental Protection Agency (EPA), and the Food and Drug Administration (FDA). In formulating its guidelines, the FCC also considered input from the public and technical community – notably the Institute of Electrical and Electronics Engineers (IEEE).

The FCC's RF exposure guidelines are incorporated in Section 1.301 *et seq* of its Rules and Regulations (47 CFR 1.1301-1.1310). Those guidelines specify MPE limits for both occupational and general population exposure.

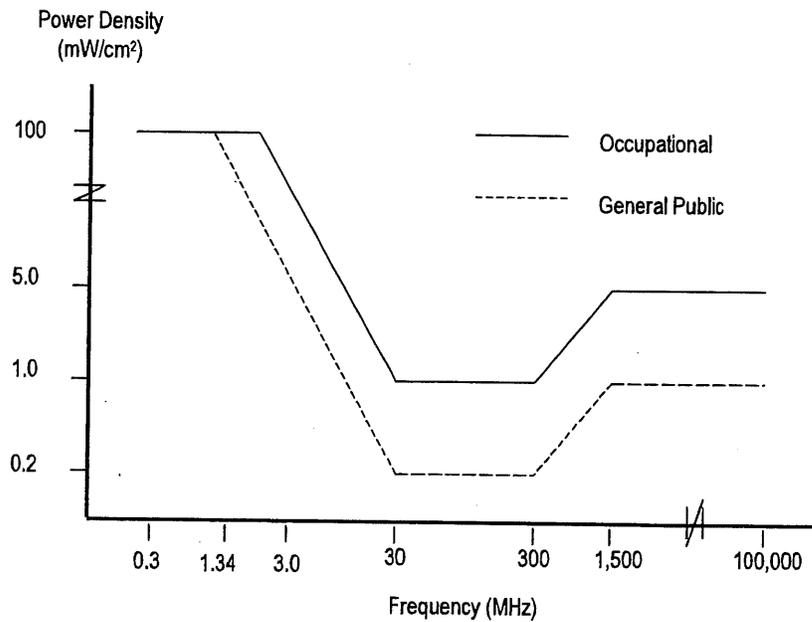
The specified continuous exposure MPE limits are based on known variation of human body susceptibility in different frequency ranges, and a Specific Absorption Rate (SAR) of 4 watts per kilogram, which is universally considered to accurately represent human capacity to dissipate incident RF energy (in the form of heat). The occupational MPE guidelines incorporate a safety factor of 10 or greater with respect to RF levels known to represent a health hazard, and an additional safety factor of five is applied to the MPE limits for general population exposure. Thus, the general population MPE limit has a built-in safety factor of more than 50. The limits were constructed to appropriately protect humans of both sexes and all ages and sizes and under all conditions – and continuous exposure at levels equal to or below the applicable MPE limits is considered to result in no adverse health effects or even health risk.

The reason for two tiers of MPE limits is based on an understanding and assumption that members of the general public are unlikely to have had appropriate RF safety training and may not be aware of the exposures they receive; occupational exposure in controlled environments, on the other hand, is assumed to involve individuals who have had such training, are aware of the exposures, and know how to maintain a safe personal work environment.

The FCC's RF exposure limits are expressed in two equivalent forms, using alternative units of field strength (expressed in volts per meter, or V/m), and power density (expressed in milliwatts per square centimeter, or mW/cm²). The table on the next page lists the FCC limits for both occupational and general population exposures, using the mW/cm² reference, for the different radio frequency ranges.

Frequency Range (F) (MHz)	Occupational Exposure (mW/cm ²)	General Public Exposure (mW/cm ²)
0.3 - 1.34	100	100
1.34 - 3.0	100	180 / F ²
3.0 - 30	900 / F ²	180 / F ²
30 - 300	1.0	0.2
300 - 1,500	F / 300	F / 1500
1,500 - 100,000	5.0	1.0

The diagram below provides a graphical illustration of both the FCC's occupational and general population MPE limits.



Because the FCC's MPE limits are frequency-shaped, the exact MPE limits applicable to the instant situation depend on the frequency range used by the systems of interest.

The most appropriate method of determining RF compliance is to calculate the RF power density attributable to a particular system and compare that to the MPE limit applicable to the operating frequency in question. The result is usually expressed as a percentage of the MPE limit.

For potential exposure from multiple systems, the respective percentages of the MPE limits are added, and the total percentage compared to 100 (percent of the limit). If the result is less than 100, the total exposure is in compliance; if it is more than 100, exposure mitigation measures are necessary to achieve compliance.

Note that the FCC "categorically excludes" certain types of antenna facilities from the routine requirement to specifically (i.e., mathematically) demonstrate compliance with the MPE limit. Among those types of facilities are cellular antennas mounted on any type of tower, when the bottoms of the antennas are more than 10 meters (c. 32.8 feet) above ground. The basis for the categorical exclusion, according to the FCC, is the understanding that because of the low power and the directionality of the antennas, such facilities – individually and collectively – are well understood to have no significant effect on the human environment. As a result, the FCC automatically deems such facilities to be in compliance.

FCC References on Compliance

47 CFR, FCC Rules and Regulations, Part 1 (Practice and Procedure), Section 1.1310 (Radiofrequency radiation exposure limits).

FCC Second Memorandum Opinion and Order and Notice of Proposed Rulemaking (FCC 97-303), *In the Matter of Procedures for Reviewing Requests for Relief From State and Local Regulations Pursuant to Section 332(c)(7)(B)(v) of the Communications Act of 1934 (WT Docket 97-192), Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation (ET Docket 93-62), and Petition for Rulemaking of the Cellular Telecommunications Industry Association Concerning Amendment of the Commission's Rules to Preempt State and Local Regulation of Commercial Mobile Radio Service Transmitting Facilities*, released August 25, 1997.

FCC First Memorandum Opinion and Order, ET Docket 93-62, *In the Matter of Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation*, released December 24, 1996.

FCC Report and Order, ET Docket 93-62, *In the Matter of Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation*, released August 1, 1996.

FCC Office of Engineering and Technology (OET) Bulletin 65, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields", Edition 97-01, August 1997.

EXHIBIT 4
EAF

Short Environmental Assessment Form

Part 1 - Project Information

Instructions for Completing

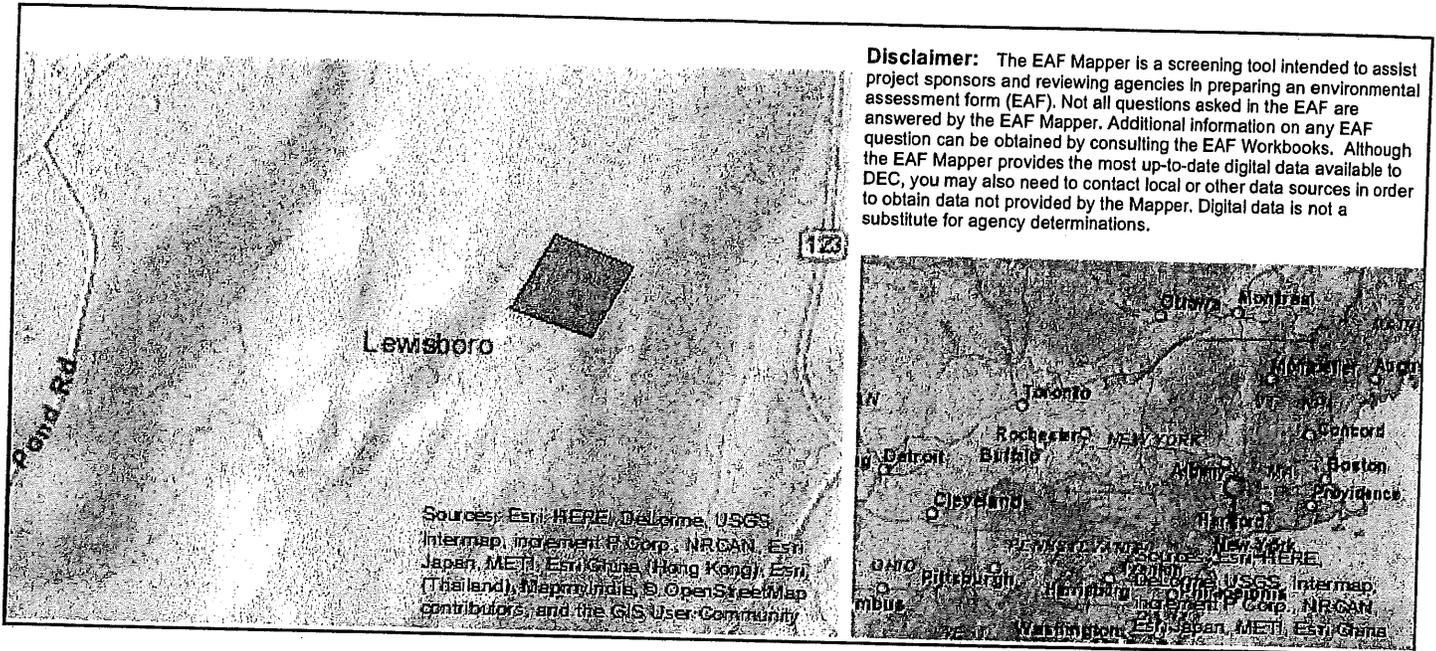
Part 1 - Project Information. The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

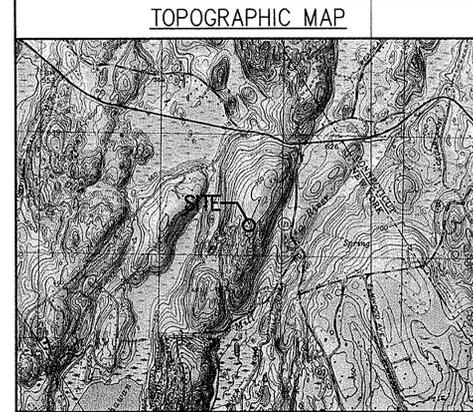
Part 1 - Project and Sponsor Information			
New York SMSA Limited Partnership d/b/a Verizon Wireless			
Name of Action or Project: Modification to Verizon Wireless Public Utility Wireless Telecommunications Facility			
Project Location (describe, and attach a location map): NYS Route 35 (Block 10263, Lots 1 & 62)			
Brief Description of Proposed Action: Installation of replacement antennas together with ancillary equipment on the existing tower, and renew the special permit for (5) years.			
Name of Applicant or Sponsor: New York SMSA Limited Partnership d/b/a Verizon Wireless		Telephone: 914-333-0700	
		E-Mail: lsnyder@snyderlaw.net	
Address: c/o Snyder & Snyder LLP, 94 White Plains Road			
City/PO: Tarrytown		State: NY	Zip Code: 10591
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.			NO <input type="checkbox"/>
			YES <input type="checkbox"/>
2. Does the proposed action require a permit, approval or funding from any other governmental Agency? If Yes, list agency(s) name and permit or approval: Special Permit - Planning Board Building Permit - Building Department			NO <input type="checkbox"/>
			YES <input checked="" type="checkbox"/>
3.a. Total acreage of the site of the proposed action?		approx .08 acres	
b. Total acreage to be physically disturbed?		0 acres	
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor?		approx .08 acres	
4. Check all land uses that occur on, adjoining and near the proposed action.			
<input type="checkbox"/> Urban <input checked="" type="checkbox"/> Rural (non-agriculture) <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential (suburban) <input type="checkbox"/> Forest <input type="checkbox"/> Agriculture <input type="checkbox"/> Aquatic <input checked="" type="checkbox"/> Other (specify): <u>Wireless Telecommunications Facility</u> <input type="checkbox"/> Parkland			

5. Is the proposed action, a. A permitted use under the zoning regulations?	NO	YES	N/A
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Consistent with the adopted comprehensive plan?	NO	YES	N/A
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	NO	YES	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area? If Yes, identify: _____	NO	YES	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
8. a. Will the proposed action result in a substantial increase in traffic above present levels? b. Are public transportation service(s) available at or near the site of the proposed action? c. Are any pedestrian accommodations or bicycle routes available on or near site of the proposed action?	NO	YES	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
9. Does the proposed action meet or exceed the state energy code requirements? If the proposed action will exceed requirements, describe design features and technologies: _____	NO	YES	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
10. Will the proposed action connect to an existing public/private water supply? If No, describe method for providing potable water: _____	NO	YES	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
11. Will the proposed action connect to existing wastewater utilities? If No, describe method for providing wastewater treatment: _____	NO	YES	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
12. a. Does the site contain a structure that is listed on either the State or National Register of Historic Places? b. Is the proposed action located in an archeological sensitive area? N/A- Proposed Action is on an existing tower	NO	YES	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency? N/A- Proposed Action is on an existing tower b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody? If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____	NO	YES	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply: <input type="checkbox"/> Shoreline <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Agricultural/grasslands <input type="checkbox"/> Early mid-successional <input type="checkbox"/> Wetland <input type="checkbox"/> Urban <input checked="" type="checkbox"/> Suburban			
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	NO	YES	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
16. Is the project site located in the 100 year flood plain?	NO	YES	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
17. Will the proposed action create storm water discharge, either from point or non-point sources? If Yes, a. Will storm water discharges flow to adjacent properties? <input type="checkbox"/> NO <input type="checkbox"/> YES b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)? If Yes, briefly describe: _____	NO	YES	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

<p>18. Does the proposed action include construction or other activities that result in the impoundment of water or other liquids (e.g. retention pond, waste lagoon, dam)?</p> <p>If Yes, explain purpose and size: _____</p> <p>_____</p> <p>_____</p>	<p>NO</p> <p><input checked="" type="checkbox"/></p>	<p>YES</p> <p><input type="checkbox"/></p>
<p>19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility?</p> <p>If Yes, describe: _____</p> <p>_____</p> <p>_____</p>	<p>NO</p> <p><input checked="" type="checkbox"/></p>	<p>YES</p> <p><input type="checkbox"/></p>
<p>20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?</p> <p>If Yes, describe: _____</p> <p>_____</p> <p>_____</p>	<p>NO</p> <p><input checked="" type="checkbox"/></p>	<p>YES</p> <p><input type="checkbox"/></p>
<p>I AFFIRM THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE</p>		
<p>Applicant/sponsor name: <u>New York SMSA Limited Partnership d/b/a Verizon Wireless</u></p>		<p>Date: <u>8/25/15</u></p>
<p>Signature: By: <u></u>, as attorney</p>		



Part 1 / Question 7 [Critical Environmental Area]	No
Part 1 / Question 12a [National Register of Historic Places]	No
Part 1 / Question 12b [Archeological Sites]	Yes
Part 1 / Question 13a [Wetlands or Other Regulated Waterbodies]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
Part 1 / Question 15 [Threatened or Endangered Animal]	No
Part 1 / Question 16 [100 Year Flood Plain]	No
Part 1 / Question 20 [Remediation Site]	No



S C S STRUCTURAL CONSULTING SERVICES, P.C.
 67 FEDERAL ROAD, BROOKFIELD, CT 06804
 TEL: 203.740.7578 FAX: 203.775.5670

CLIENT:

 4 CENTEROCK ROAD
 WEST NYACK, NEW YORK 10994

PROJECT INFORMATION

1. **Scope of Work:**
 The purpose of these drawings is to illustrate the new installation of the following:
 - Nine (9) panel antennas (transmit and receive) mounted to the existing 125'± lattice tower on new mounting pipes on side of platform to replace existing three (3) panel antennas mounted below platform
 - Nine (9) 1-5/8" coax signal cables routed up along existing lattice tower leg up to new panel antennas
 - Two (2) GPS antennas (receive only) mounted to the existing overhead cable bridge

2. **Applicant:**
 New York SMSA Limited Partnership
 d/b/a Verizon Wireless
 4 Centerock Road
 West Nyack, NY 10994

3. **Engineer of Record:**
 James H. Fahey, P.E., S.E.
 Structural Consulting Services, P.C.
 67 Federal Road
 Brookfield, CT 06804

4. **Property Contact:**
 American Tower Corporation (Site Number 88166)
 116 Huntington Avenue (11th floor)
 Boston, MA 02116
 (617) 375-7500

5. **Site Data:**
 Street Address: N.Y.S. Route 35
 South Salem, NY 10590
 Block: 10263
 Lots: 1 & 62
 Zoning District: R-4A (1 Family Residence District)
 Existing Use: Wireless Telecommunications Facility
 New Use: Unchanged
 Approximate Latitude: N41° 15' 30.43" (NAD '83)
 Approximate Longitude: W73° 32' 04.82" (NAD '83)
 Approximate Ground Elevation: 758 feet (NAVD '88)

6. **Notes:**
 1.) New features labeled as such; all else existing.
 2.) Boundary information and existing features shown hereon were taken from limited field measurements taken on 12/6/2011 and from a drawing of the property entitled "Plot Plan & Site Plan" prepared by Tectonic Engineering & Surveying Consultants P.C.; 1279 Route 300; Newburgh, NY 12550 last revised 11/13/1999 for modifications to Verizon Wireless' installation at the site.
 3.) The use is unmanned and will be visited approximately once a month for maintenance purposes; therefore the site is not anticipated to generate additional noise, fumes, vibrations or traffic.
 4.) No additional parking is required as this is an unmanned site.
 5.) No solid or liquid waste will be produced as this is an unmanned site; therefore, no water or sewage facilities are required.
 6.) There will be no commercial or retail signs, nor special lighting required.
 7.) Fire protection and security provisions will include remote monitoring of the subject site.

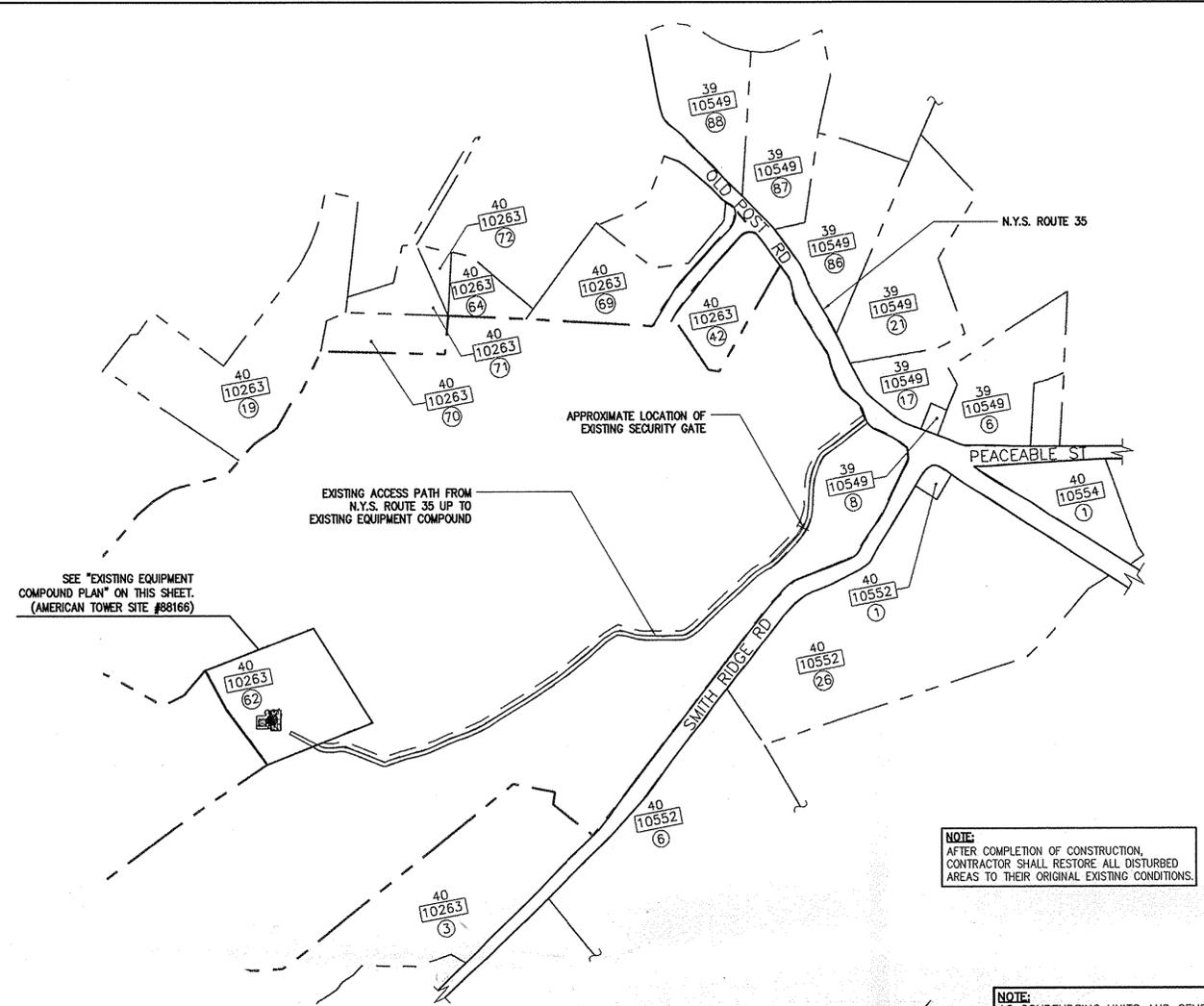
No.	ISSUE OR REVISION	DATE
2	ISSUED FOR FILING	7/24/15
1	ISSUED FOR REVIEW	7/22/15

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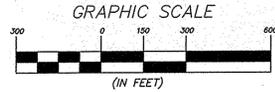
PROJECT TITLE
New York SMSA Limited Partnership
 d/b/a VERIZON WIRELESS
 SITE: SOUTH SALEM PCS-LTE
 N.Y.S. ROUTE 35
 SOUTH SALEM, NY 10590

DRAWING TITLE
LOCATION PLAN, COMPOUND PLAN, PROJECT INFORMATION, TOPOGRAPHIC MAP AND NOTES

	SCALE AS NOTED	PROJECT NO. VER1349
	DRAWN BY CTL	DRAWING NO.
	CHECKED BY JHF	C-1
	DATE 7/22/15	

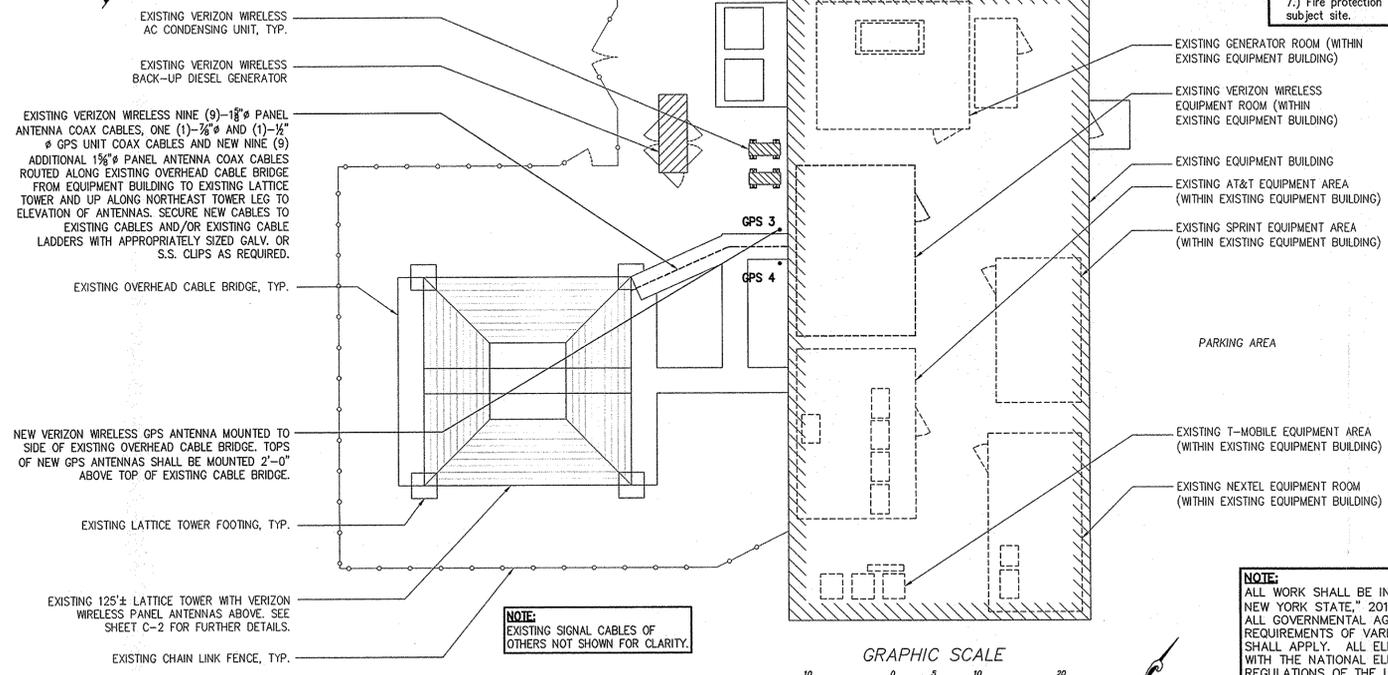


1 LOCATION PLAN
 SCALE: 1" = 300'

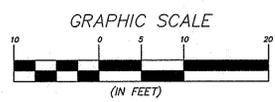


NOTE:
 AFTER COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS TO THEIR ORIGINAL EXISTING CONDITIONS.

NOTE:
 AC CONDENSING UNITS AND GENERATOR WERE INSTALLED PURSUANT TO BUILDING PERMITS DATED MARCH 22, 2004 AND JUNE 24, 2004, RESPECTIVELY. THE GENERATOR IS MORE THAN 1,000 FROM THE NEAREST EXISTING STRUCTURE.



2 EXISTING EQUIPMENT COMPOUND PLAN
 SCALE: 1" = 10'



NOTE:
 ALL WORK SHALL BE IN ACCORDANCE WITH THE "BUILDING CODE OF NEW YORK STATE," 2010 EDITION AND WITH THE REGULATIONS OF ALL GOVERNMENTAL AGENCIES HAVING JURISDICTION. WHERE THE REQUIREMENTS OF VARIOUS CODES CONFLICT, THE MORE STRINGENT SHALL APPLY. ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, AND WITH THE RULES AND REGULATIONS OF THE LOCAL UTILITY COMPANIES WHEN APPLICABLE.

PLANNING BOARD APPROVAL

Approved by the Planning Board of the Town of Lewisboro, Westchester County, N.Y. by resolution dated _____
 Any change, erasure, modification or revision to this Plan, as approved, shall void this approval.

Jerome Kerner Date _____
 Aimee Hodges Date _____

OWNER'S CERTIFICATION

The undersigned owner(s) of the property shown hereon is familiar with this drawing(s), its contents, and its legends and hereby approves the same for filing.

Richard Rossi Date _____
 VP of Contract Management of American Tower

TOWN ENGINEER'S CERTIFICATION

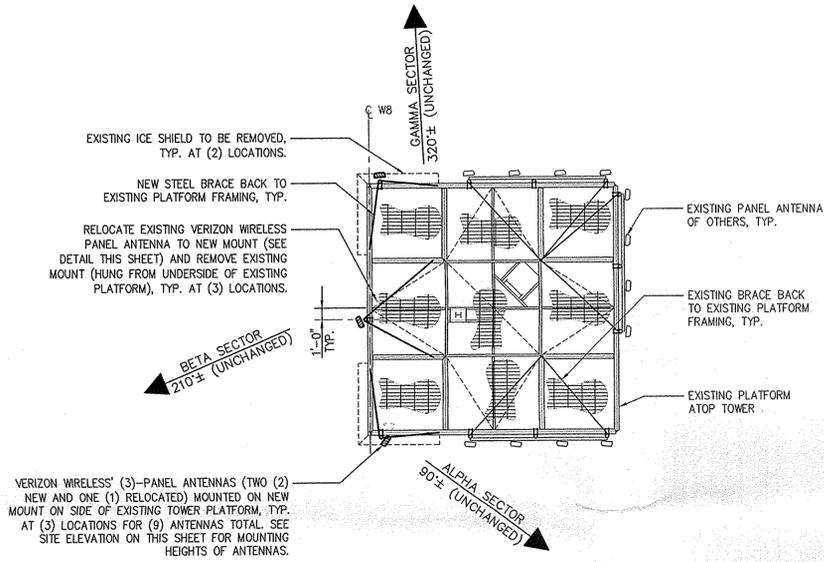
Reviewed for compliance with the Planning Board Resolution dated _____

Joseph M. Cerreto, P.E. Date _____
 Kellard Sessions Consulting, P.C.
 Town Consulting Engineer

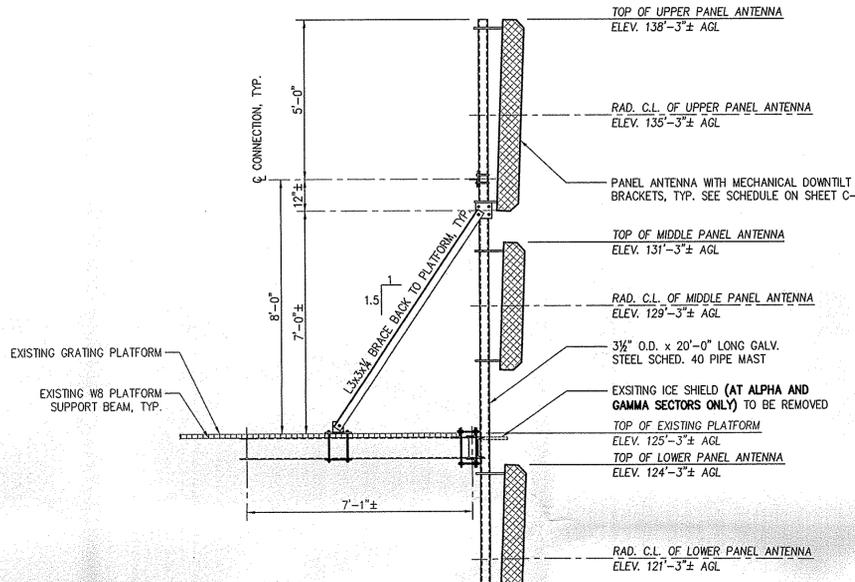


NOTE:
 THE COLOR OF THE PROPOSED ANTENNAS, MOUNTING FRAMING, CABLES, AND ASSOCIATED EQUIPMENT WILL APPROXIMATELY MATCH THE COLOR OF THE EXISTING TOWER.

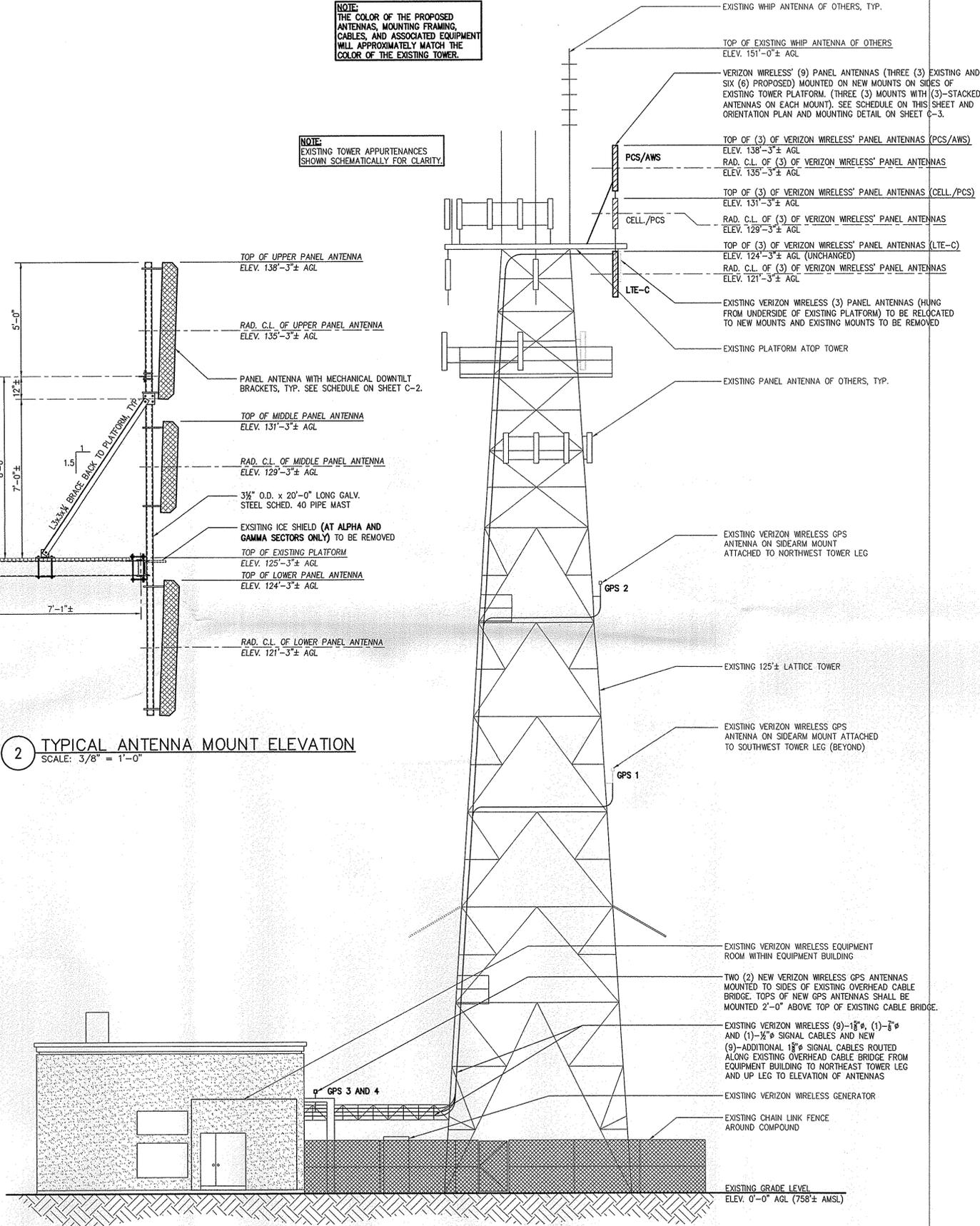
NOTE:
 EXISTING TOWER APPURTENANCES SHOWN SCHEMATICALLY FOR CLARITY.



1 VERIZON WIRELESS ANTENNA ORIENTATION PLAN
 SCALE: 1/8" = 1'-0"



2 TYPICAL ANTENNA MOUNT ELEVATION
 SCALE: 3/8" = 1'-0"



3 NORTH SITE ELEVATION
 SCALE: 1/8" = 1'-0"

No.	ISSUE OR REVISION	DATE
2	ISSUED FOR FILING	7/24/15
1	ISSUED FOR REVIEW	7/22/15

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PROJECT TITLE
 New York SMSA Limited Partnership
 d/b/a VERIZON WIRELESS
 SITE: SOUTH SALEM PCS-LTE
 N.Y.S. ROUTE 35
 SOUTH SALEM, NY 10590

DRAWING TITLE
 SITE ELEVATION, ANTENNA & CABLE SCHEDULE, CABLE DIAGRAM AND NOTES



SCALE AS NOTED	PROJECT NO. VER1949
DRAWN BY CTL	DRAWING NO. C-2
CHECKED BY JHF	DATE 7/22/15

PLANNING BOARD APPROVAL

Approved by the Planning Board of the Town of Lewisboro, Westchester County, N.Y. by resolution dated _____
 Any change, erasure, modification or revision to this Plan, as approved, shall void this approval.

Jerome Kerner Date _____
 Aimee Hodges Date _____

OWNER'S CERTIFICATION

The undersigned owner(s) of the property shown hereon is familiar with this drawing(s), its contents, and its legends and hereby approves the same for filing.

Richard Rossi Date _____
 VP of Contract Management of American Tower

TOWN ENGINEER'S CERTIFICATION

Reviewed for compliance with the Planning Board Resolution dated _____

Joseph M. Cermelo, P.E. Date _____
 Kellard Sessions Consulting, P.C.
 Town Consulting Engineer

MEMORANDUM

TO: Chairman Jerome Kerner, AIA and
Members of Lewisboro Planning Board

CC: Judson Siebert, Esq.

FROM: Jan K. Johannessen, AICP *JK*
Joseph M. Cermele, P.E., CFM *JM*
David J. Sessions, RLA, AICP *DS*
Town Consulting Professionals

DATE: September 23, 2015

RE: Silvermine Preserve Subdivision
Lockwood Road
Sheet 48, Block 10057, Lot 15

Project Description

The applicant, Silvermine Group, is proposing a 12-lot subdivision on ±55.9 acres of land located between Silvermine and Lockwood Roads and within the R-2A Zoning District.

The Planning Board has concluded its review of the conventional subdivision plan and has determined that the proposed subdivision could yield a maximum of 12 lots. The applicant has submitted a 12-lot cluster subdivision plan, which includes a 1,200 l.f. cul-de-sac extending off of Lockwood Road and over 40 acres of open space.

SEQRA

The proposed action has been preliminarily identified as an Unlisted Action under the State Environmental Quality Review Act (SEQRA). The Planning Board is conducting a coordinated review and declared itself Lead Agency on June 11, 2013.

Required Approvals

1. Preliminary and Final Subdivision Plat Approval, a Wetland Activity Permit and a Town Stormwater Permit is required from the Planning Board.
2. A public hearing is required to be held on the Preliminary Plat and Wetland Activity Permit.
3. Open Development Area Approval is required from the Town Board.
4. Town Board approval is required for those lots that do not meet the dimensional zoning requirements of the R-1A Zoning District.
5. Construction within the right-of-way of Lockwood Road will require approval from the Town Highway Superintendent.
6. Realty subdivision approval is required from the Westchester County Department of Health (WCDH).
7. An Article 24 Freshwater Wetland Permit is required from the New York State Department of Environmental Conservation (NYSDEC).
8. Coverage under the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activities (GP-0-15-002) will be required.

Part 1 EAF Review - Complete

Part 2 EAF Review

1. Items 1.a, 3.d, 3.g, 3.k, 4.c, and 5.d should be marked “moderate to large impact may occur”.
2. Question 11, Impact on Open Space and Recreation, should be marked “no”.
3. Question 12, Impact on Critical Environmental Areas, should be marked “yes”; the applicant should answer the subsequent questions.
4. Question 17, Consistent with Community Plans, should be marked “no”.

Part 3 EAF Review

1. The applicant should provide a detailed narrative response, including identification of the potential impact and proposed mitigation measures (as necessary), for the following items identified as “moderate to large impact may occur” within the Part 2 EAF: Items 1.a, 1.e, 1.f, 3.d, 3.g, 3.k, 4.a, 4.c, and 5.d. The information provided by the applicant in the Part 3 EAF is not sufficient or detailed enough for the Planning Board to make a SEQRA determination.

Planning and Engineering Review Comments:

1. The “Lot Area” and “Provided Rear Yard” for Lot 5, as illustrated on the plan and noted in the Bulk Zoning Table, shall be coordinated.
2. The subdivision plat was revised as requested; however, the building setback and dimensional zoning information must still be included on the plan, as should a signature block for the Consulting Town Engineer.
3. The location, species and size of existing trees and those to be removed have been included on the plan except for the private road entry and surrounding area. The existing trees within this area shall be illustrated and the plan shall identify whether they are to be removed or protected.
4. As previously requested, improvements proposed within the right-of-way of Lockwood Road will require approval from the Highway Superintendent. The Planning Board should solicit comment from the Highway Superintendent, including any necessary improvements to Lockwood Road. The applicant has acknowledged the need for this meeting and should coordinate a field meeting between the Town Highway Superintendent, the applicant’s engineer and our office to review the work proposed within the Town right-of-way.
5. As previously requested, the applicant should provide sight line profiles to demonstrate that adequate sight distance is provided at the proposed intersection; any required improvements to achieve sight distance should be illustrated on the plan. The Construction Plan, CP-1, simply notes sight distances and the need to clear vegetation, as required to maintain adequate sight distances. The noted distances shall be verified by the requested profiles and any necessary sight easement areas shall be shown on the plan and plat.
6. While it is our understanding that the Vista Fire Department has stated to the applicant that it will not require a through road and, instead, has requested an underground fire storage

tank, a formal written response from the Vista Fire Department regarding access, road design and any other comment should be obtained.

7. In an effort to improve the visual appearance of the proposed subdivision entrance from Lockwood Road, it was recommended that stone landscaping walls be considered at the entrance. The plan illustrates the location of the suggested walls; however, the walls are located within the Town right-of-way. The location of the walls shall be modified to avoid this and details of the walls shall be included on the plans.
8. As previously requested, the applicant should consider the installation of street trees along the length of the proposed road. The plan proposes minimal evergreen screening at the entrance to the site with 4 inch caliper trees. The Board should discuss adequacy of the screening as proposed.
9. As previously noted, while the applicant has identified the proposed access point into the open space parcel, including provisions for parking, the Planning Board may wish to request that all existing and future trails be illustrated on the plans. Additionally, it appears that sections of the existing stone walls must be removed to provide access in the locations of the proposed easement areas.
10. As previously noted, the boundary of the open space parcel shall be physically demarcated in the field. Specifically, additional demarcation shall be provided where stonewalls do not exist such as at the rear of Lots 1 through 6 and the westerly side of the private road.
11. The plans illustrate provisions for winter drawdown of pool water for Lots 6 and 7 via infiltrators. The applicant has indicated that pool drawdown for Lots 8 and 9 will be accomplished via the proposed stormwater basin. No sizing calculations have been provided for any of the drawdown areas and no provisions have been shown for the pool on Lot 12. The plans shall note that prior to discharge of drawdown water to the stormwater basins that chlorine levels shall be allowed to fully dissipate.
12. As previously requested, the latest deed for the subject property should be submitted; the ownership information provided on Sheet EX-1 and the owner/applicant signature block must be consistent with ownership information included within the deed.
13. The Planning Board's standard "Town Engineer" signature block must be added to Sheet PP-1.
14. As previously requested, the site plan shall note that any walls greater than four (4) feet in height shall be designed by a New York State Professional Engineer prior to the issuance of a Building Permit.

15. The plan shall illustrate any proposed grading associated with the pool on Lot #6.

Wetland Review Comments:

1. As previously noted, the applicant has stated that the wetland mitigation plan is currently being revised and will be submitted at a future date. The wetland-related comments outlined in our January 7, 2013 memorandum remain applicable and should be addressed.
2. The applicant should update the Board on the status of the required NYSDEC Wetland Permit.

SWPPP Review Comments:

1. The construction sequence provided on Sheet PH-1, Phasing Plan, should be consistent with that included in the SWPPP.
2. As previously requested, hydraulic calculations for all drainage pipes should be provided within the SWPPP to demonstrate adequate capacity for the 25-year storm.
3. As previously requested, the level spreader sizing depicted in the detail should be verified for conformance with the New York State Standards and Specifications for Erosion and Sediment Control. The detail should be modified as necessary and sizing calculations should be provided in the SWPPP.
4. The plan proposes drainage swales on Lots #5, and #6 that are in close proximity to the subsurface sewage disposal absorption fields and do not appear to meet the regulated setbacks, as required by the WCDH; this should be verified by the applicant. This office expressed similar concerns for the swales proposed for Lots 9 and 10. The swales have been shortened apparently to provide the necessary setbacks; however, in doing so, they no longer appear to capture stormwater runoff from the developed portions of the site (house, drive, patios). Additionally, because the swales were intended to provide pre-treatment of flows to the stormwater basin, the SWPPP shall include updated sizing calculations in accordance with the New York State Stormwater Management Design Manual to demonstrate that adequate pre-treatment has been maintained or additional measures shall be implemented.
5. The location of End Section #3 has been revised; however, the plan now requires a bend in the storm line (without a structure) and termination of the pipe beyond the existing stone wall. The applicant should consider an alternative layout that avoids both of these conditions.

6. The orifice and outlet pipe invert elevations for Stormwater Basins 2, 3 and 4 appear to be reversed on the construction plans. Please verify and revise as necessary.
7. The Infiltration System #1 Detail indicates a total of 24 units, as opposed to the 21 units required by the sizing calculations. Please verify and revise as necessary.
8. As previously requested, the hydrologic analysis for Stormwater Basins #2 and #3 should be revised to eliminate the starting elevation of 508.0.
9. As previously requested, the exfiltration rate utilized in the hydrologic analysis and the pre-treatment calculation for Infiltration System #2 should correspond with the witnessed testing results provided in Appendix G of the SWPPP Report.
10. While the hydrologic calculations provided in the SWPPP demonstrate that Stormwater Basin #1 functions properly, the analysis should accurately reflect a top-of-berm elevation of 617.0, as indicated on the construction plans and the individual stormwater basin detail.
11. The Preliminary Plat indicates a total disturbance of ± 12.9 acres, however, the Phasing Plan, PH-1, indicates a total of ± 13.98 acres. This area shall be verified and the plans, SWPPP and NOI coordinated as necessary.
12. The SWPPP shall be revised to reference the current NYSDEC General Permit for Stormwater Discharges, GP-0-15-002.

NOI Review Comments:

1. Question #5 should be answered "No".
2. Provide responses for Questions: #7, #27A, and #36.
3. Question #43 should be answered "Yes".
4. Provide a draft copy of the MS4 SWPPP Acceptance Form for review.

In order to expedite the review of subsequent submissions, the applicant should provide annotated responses to each of the comments outlined herein.

Plans Reviewed, prepared by Bibbo Associates, LLP and dated (last revised) July 20, 2015:

- Existing Conditions Map - Conservation Subdivision (EX-1)
- Preliminary Plat - Conservation Subdivision (PP-1)
- Zoning Conformance (ZON)
- Construction Plan I (CP-1)
- Construction Plan II (CP-2)
- Erosion Control Plan (EC-1)
- Phasing Plan (PH-1)
- Profiles and Details (RP-1)
- Miscellaneous Details (D-1)
- Additional Details (D-2)
- Stormwater Management (SW-1 and SW-2)

Documents Reviewed:

- Letter, prepared by Bibbo Associates, LLP, dated August 31, 2015
- Full Environmental Assessment Form (Parts 2 and 3)
- Notice of Intent, dated August 31, 2015
- *Stormwater Pollution Prevention Plan*, prepared by Bibbo Associates, LLP, dated (last revised) July 22, 2015

JKJ/JMC/DJS/dc

BIBBO ASSOCIATES, L.L.P.

Consulting Engineers

Joseph J. Buschynski, P.E.

Timothy S. Allen, P.E.

Sabri Barisser, P.E.

August 31, 2015

Town of Lewisboro Planning Board
P.O. Box 725
20 North Salem Road, Suite L
Cross River, NY 10518

ATTN: Mr. Jerome Kerner, R.A.; Chairman

RE: Silvermine Preserve Subdivision

Dear Members of the Board:

On behalf of our client, please find enclosed the following in support of subdivision approval:

- 9 copies – 4 sets (30" x 42") & 5 sets (11" x 17") of Preliminary Construction Plans, last revised 7-20-2015
- 10 copies of the long form EAF Parts 2 and 3, last revised 7-20-2015
- 3 copies of the Stormwater Pollution Prevention Plan, last revised 7-22-2015
- 3 copies of the NYSDEC Notice of Intent, last revised 8-31-2015
- 1 CD containing full submittal

The plans have been revised in response to comments from the Town Consultants in a memorandum dated December 10, 2014. We offer the following in response, keyed to their memo:

Planning and Engineering Review Comments:

1. Parts 2 and 3 of the Environmental Assessment Form have been provided for your review.
2. The Bulk Zoning Table has been revised. The figures presented for Lots 4, 8, 11 and 12 have been corrected. The "Total Lot Area" has been changed to "Actual Lot Area" to help clarify the numbers provided. The "Building Coverage" calculations have been verified and adjusted accordingly.
3. The Subdivision Plat has been updated to improve clarity. The Plat is now on a 36" by 48" sheet with a 1" = 100' scale Plan and an Inset Plan showing more detail at a scale of 1" = 60'.
4. The Construction Plans have been revised to illustrate all trees surveyed. The trees to be removed have been marked on the Plans and a tree protection detail has been added to the Miscellaneous Details sheet.
5. A meeting with the Town Highway Superintendent will be scheduled to discuss any road improvements.

Site Design ♦ Environmental

Mill Pond Offices · 293 Route 100, Suite 203 · Somers, NY 10589
Phone: 914-277-5805 · Fax: 914-277-8210 · E-Mail: bibbo@optonline.net

6. Sight distance has been provided for the proposed intersection. There doesn't appear to be any necessary improvements made to achieve sight distance except trimming any low branches or brush that may inhibit the sight distance.
7. Comment Noted. A letter from the Vista Fire Department shall be provided.
8. Stone landscaping walls have been added to the plan to improve visual appearance of the proposed subdivision.
9. The size of the proposed evergreens have been provided. Trees along the proposed street will be considered by the applicant.
10. Comment Noted.
11. The boundary of the Open Space Parcel will be physically marked in the field by monuments shown on the plan.
12. Proposed drainage and utility easements have been added for access to the sediment basins and their associated features.
13. The underground utilities have been relocated to remain in the proposed road lot lines as well as within the associated lot lines of each individual lot.
14. Pool drawdown will be accommodated by the stormwater practices for lots 8, 9 and 12. Lot 6 and lot 7 both contain areas shown on the Construction Plans, where infiltrators may be installed when a pool is constructed.
15. Easements have been provided for access, utility, grading, drainage, sight and other necessary maintenance to the plans and plat.
16. Comment Noted.
17. The signature block has been added to all of the sheets.
18. A site visit was conducted with the Planning Board on May 7, 2015.
19. Top and bottom elevations on all proposed walls were added to the Construction Plans.
20. The proposed grading has been revised on Lots #6, #9, #11, and #12.
21. The proposed underdrain has been removed from the plans and guiderail limits can be found on the construction plans.
22. The word "approximate" has been removed from the disturbance notes on the Plans.
23. A technical meeting was held with the Town Consultants on January 8, 2015.

Wetland Review Comments:

Our office is currently working with the Wetland Consultant for the project. Evans Associates is updating the wetland mitigation plans based on the recent changes to the stormwater management design and miscellaneous changes to the plan as a whole. Revised mitigation plans shall be provided as part of future submissions.

SWPPP Review Comments:

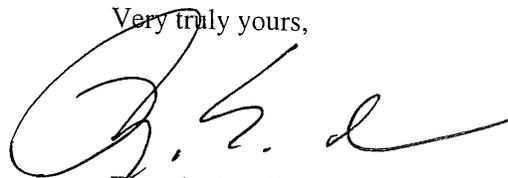
1. The construction sequence has been modified to indicate the construction of the vegetative swales be in conjunction with the SB-2 and SB-3 construction.
2. The hydraulic calculations for all of the drainage pipes has been sized to accommodate the 25-year storm event. Pipe cover for the driveways under Lot #9 and Lot #11 are now adequate after some minor grading changes.
3. The hydrologic analysis for the 25-year storm event has been provided to verify the rip-rap outlet protection sizing provided on the detail.
4. The level spreader sizing has been made in conformance with the New York State Standards and Specifications for Erosion and Sediment Control section 5A.13. Level spreader sizing can be found on the Additional Details sheet.
5. The drainage swale near the proposed sewage areas on Lots #4 and #5 has been removed to avoid setback issues. The proposed sewage areas and the proposed vegetative swales on Lots #8 – #11 have all been adjusted to avoid any setbacks.
6. The vegetative swales have been sized using the New York Standards and Specifications for Erosion and Sediment Control section 5B.11.
7. Catch Basins #1 and #2 have been relocated to be fully located within the limits of the private road.
8. The inverts on End Section #12 and #13 have been coordinated between the Plans, the Drainage Structure and Pipe Schedule Table, individual stormwater basin details and the hydrologic analysis in HydroCAD.
9. The invert elevation on End Section #3 has been changed to match existing topography.
10. The construction sequence has been modified to require the asphalt top course for the private road be installed upon completion of Phase 3.
11. The Stormwater Basin Outlet Control Configuration Detail, the individual Stormwater Basin Details, the Construction Plans and the hydrologic analysis have been adjusted correctly. Top of berm and spillway elevations can now be found on the Construction Plans.
12. The SWPPP now includes the 90% storm event calculations within Appendix A to clarify that the proposed Contech CDS pre-treatment chambers correlate with the flows found in Appendix E of the SWPPP.
13. The starting elevation of 508.0 has been removed from the Stormwater Basins #2 and #3 in the hydrologic analysis.
14. The exfiltration rate for Infiltration System #2 has been changed to correlate to the witnessed testing results from Appendix G.
15. The hydrologic analysis for Stormwater Basin #1 now reflects the top-of-berm elevation of 617.0 as indicated on the construction plans and the individual stormwater basin detail.
16. The elevations and corresponding surface areas for Stormwater Basins #3 and #4 have been coordinated between the construction plans, individual stormwater basin details and the hydrologic analysis.

NOI Review Comments:

1. The questions previously mentioned have been answered in the NOI.
2. The total contributing impervious area for the underground infiltration has been verified and revised accordingly.
3. The total RRv provided has been verified and revised accordingly.
4. The total WQv provided in the SMP's have been verified and revised accordingly.

We respectfully request this matter be placed on your next available agenda for consideration.

Very truly yours,

A handwritten signature in black ink, appearing to read 'T.S. Allen', written over a large, stylized circular flourish.

Timothy S. Allen, P.E.

TSA/neh
Enclosures

cc: Kellard Sessions Consulting P.C. (w/encls)
G. Tortorella, Esq.
E. Moss
D. Higgins

617.20
Appendix A
State Environmental Quality Review
FULL ENVIRONMENTAL ASSESSMENT FORM

Purpose: The full EAF is designed to help applicants and agencies determine, in an orderly manner, whether a project or action may be significant. The question of whether an action may be significant is not always easy to answer. Frequently, there are aspects of a project that are subjective or unmeasurable. It is also understood that those who determine significance may have little or no formal knowledge of the environment or may not be technically expert in environmental analysis. In addition, many who have knowledge in one particular area may not be aware of the broader concerns affecting the question of significance.

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

Full EAF Components: The full EAF is comprised of three parts:

- Part 1:** Provides objective data and information about a given project and its site. By identifying basic project data, it assists a reviewer in the analysis that takes place in Parts 2 and 3.
- Part 2:** Focuses on identifying the range of possible impacts that may occur from a project or action. It provides guidance as to whether an impact is likely to be considered small to moderate or whether it is a potentially-large impact. The form also identifies whether an impact can be mitigated or reduced.
- Part 3:** If any impact in Part 2 is identified as potentially-large, then Part 3 is used to evaluate whether or not the impact is actually important.

THIS AREA FOR LEAD AGENCY USE ONLY

DETERMINATION OF SIGNIFICANCE -- Type 1 and Unlisted Actions

Identify the Portions of EAF completed for this project:

Part 1

Part 2

Part 3

Upon review of the information recorded on this EAF (Parts 1 and 2 and 3 if appropriate), and any other supporting information, and considering both the magnitude and importance of each impact, it is reasonably determined by the lead agency that:

- A. The project will not result in any large and important impact(s) and, therefore, is one which **will not** have a significant impact on the environment, therefore **a negative declaration will be prepared.**
- B. Although the project could have a significant effect on the environment, there will not be a significant effect for this Unlisted Action because the mitigation measures described in PART 3 have been required, therefore **a CONDITIONED negative declaration will be prepared.***
- C. The project may result in one or more large and important impacts that may have a significant impact on the environment, therefore **a positive declaration will be prepared.**

*A Conditioned Negative Declaration is only valid for Unlisted Actions
SILVERMINE PRESERVE *CONSERVATION SUBDIVISION)

Name of Action

TOWN OF LEWISBORO PLANNING BOARD

Name of Lead Agency

JEROME KERNER

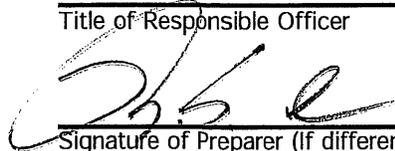
CHAIRMAN

Print or Type Name of Responsible Officer in Lead Agency

Title of Responsible Officer

Signature of Responsible Officer in Lead Agency

Signature of Preparer (If different from responsible officer)



Revision: January 21, 2013

SEPTEMBER 9, 2011

October 3, 2013

Date

PART 1--PROJECT INFORMATION

Prepared by Project Sponsor

NOTICE: This document is designed to assist in determining whether the action proposed may have a significant effect on the environment. Please complete the entire form, Parts A through E. Answers to these questions will be considered as part of the application for approval and may be subject to further verification and public review. Provide any additional information you believe will be needed to complete Parts 2 and 3.

It is expected that completion of the full EAF will be dependent on information currently available and will not involve new studies, research or investigation. If information requiring such additional work is unavailable, so indicate and specify each instance.

Name of Action SILVERMINE PRESERVE (CONSERVATION SUBDIVIWIION)

Location of Action (include Street Address, Municipality and County)

LOCKWOOD ROAD, LEWISBORO, NY PARCEL TAX I.D. # 48 - 10057 - 95

Name of Applicant/Sponsor SILVERMINE GROUP (D. HIGGINS, S. HAFT AND E. MOSS)

Address 45 BENDER WAY

City / PO POUND RIDGE State NY Zip Code 10576

Business Telephone _____

Name of Owner (if different) _____

Address _____

City / PO _____ State _____ Zip Code _____

Business Telephone _____

Description of Action:

SUBDIVIDE 55.9 Ac. PARCEL INTO 12 RESIDENTIAL LOTS, SETTING ASIDE APPROXIMATELY 40 Ac. IN OPEN SPACE.

THE SUBDIVISION IS CREATED PURSUANT TO THE PROVISIONS OF SECTION 220-88 OF THE ZONING CODE WHICH ALLOWS REDUCTION IN LOT SIZE TO 1 Ac. SOME OF THE PROPOSED LOTS DO NOT MEET THIS REQUIREMENT DUE TO THE DESIRE TO UTILIZE EXISTING STONE WALLS AS LOT LINES. NONE OF THE LOTS ARE LESS THAN 40,000 SF IN AREA.

ACCESS TO THE LOTS AND OPEN SPACE IS PROVIDED BY MEANS OF A 1,200 FT LONG PRIVATE ROAD. SURFACE RUNOFF IS CAPTURED AND TREATED IN VARIOUS "GREEN INFRASTRUCTURE" PRACTICES AND STANDARD STORMWATER MANAGEMENT PRACTICES BEFORE BEING DISCHARGED.

EACH NEW LOT WILL BE PROVIDED WITH INDIVIDUAL DRILLED WATER WELLS AND SUBSURFACE SEWAGE TREATMENT SYSTEMS.

Please Complete Each Question--Indicate N.A. if not applicable

A. SITE DESCRIPTION

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

1. Present Land Use: Urban Industrial Commercial Residential (suburban) Rural (non-farm)
 Forest Agriculture Other _____

2. Total acreage of project area: 55.9 acres.

APPROXIMATE ACREAGE	PRESENTLY	AFTER COMPLETION
Meadow or Brushland (Non-agricultural)	<u>0</u> acres	<u>0</u> acres
Forested	<u>49.1</u> acres	<u>36.2</u> acres
Agricultural (includes orchards, cropland, pasture, etc.)	<u>0</u> acres	<u>0</u> acres
Wetland (Freshwater or tidal as per Articles 24,25 of ECL) <u>N.Y.S. WETLAND D-6 AND LOCAL WETLANDS</u>	<u>6.8</u> acres	<u>6.8</u> acres
Water Surface Area	<u>0</u> acres	<u>0</u> acres
Unvegetated (Rock, earth or fill)	<u>0</u> acres	<u>0</u> acres
Roads, buildings and other paved surfaces	<u>0</u> acres	<u>2.3</u> acres
Other (Indicate type) <u>LAWNS</u>	<u>0</u> acres	<u>10.6</u> acres

3. What is predominant soil type(s) on project site? CHARLTON. LEICESTER LOAM, SU LOAM

- a. Soil drainage: Well drained 75 % of site Moderately well drained 15 % of site.
 Poorly drained 10 % of site
- b. If any agricultural land is involved, how many acres of soil are classified within soil group 1 through 4 of the NYS Land Classification System? N/A acres (see 1 NYCRR 370).

4. Are there bedrock outcroppings on project site? Yes No

a. What is depth to bedrock 0-7'+(in feet) Visual inspection of site, deep test holes conducted by Bibbo Assoc.

5. Approximate percentage of proposed project site with slopes:
 0-10% 40 % 10- 15% 25 % 15% or greater 35 %

6. Is project substantially contiguous to, or contain a building, site, or district, listed on the State or National Registers of Historic Places? Yes No

7. Is project substantially contiguous to a site listed on the Register of National Natural Landmarks? Yes No

8. What is the depth of the water table? 0' - 7' +(in feet) based on hydric soils per NRCS

9. Is site located over a primary, principal, or sole source aquifer? Yes No

10. Do hunting, fishing or shell fishing opportunities presently exist in the project area? Yes No

11. Does project site contain any species of plant or animal life that is identified as threatened or endangered? Yes No

According to:

Letter, dated August 18, 2004, from Betty A. Ketcham, of the New York Natural Heritage Program, previously submitted to the Planning Board by Evans Associates

Identify each species:

12. Are there any unique or unusual land forms on the project site? (i.e., cliffs, dunes, other geological formations?)

Yes No

Describe:

13. Is the project site presently used by the community or neighborhood as an open space or recreation area?

Yes No

If yes, explain:

While non-public, the subject property contains trails that are used by the community.

14. Does the present site include scenic views known to be important to the community? Yes No

15. Streams within or contiguous to project area:

a. Name of Stream and name of River to which it is tributary

SILVERMINE RIVER (EAST)

16. Lakes, ponds, wetland areas within or contiguous to project area:

NYS WETLAND D-6
LOCAL JURISDICTION WETLANDS

b. Size (in acres):

NYS WETLAND D-6 = 5.9 Ac. ON-SITE
LOCAL JURISDICTION WETLANDS = 1.1 Ac.

17. Is the site served by existing public utilities? Yes No Electricity
- a. If YES, does sufficient capacity exist to allow connection? Yes No
- b. If YES, will improvements be necessary to allow connection? Yes No
18. Is the site located in an agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? Yes No
19. Is the site located in or substantially contiguous to a Critical Environmental Area designated pursuant to Article 8 of the ECL, and 6 NYCRR 617? Yes No Property is adjacent to the Brown's Reservoir CEA
20. Has the site ever been used for the disposal of solid or hazardous wastes? Yes No

B. Project Description

1. Physical dimensions and scale of project (fill in dimensions as appropriate).
- a. Total contiguous acreage owned or controlled by project sponsor: 55.9 acres.
- b. Project acreage to be developed: 12.9 acres initially; 12.9 acres ultimately.
- c. Project acreage to remain undeveloped: 43.0 acres.
- d. Length of project, in miles: N/A (if appropriate)
- e. If the project is an expansion, indicate percent of expansion proposed. N/A %
- f. Number of off-street parking spaces existing 0; proposed 24
- g. Maximum vehicular trips generated per hour: 24 (upon completion of project)? based on 2 vehicles per lot and one trip per vehicle per lot at peak hour
- h. If residential: Number and type of housing units:
- | | One Family | Two Family | Multiple Family | Condominium |
|------------|------------|-----------------------------|-----------------------------|-----------------------------|
| Initially | <u>12</u> | <u> </u> | <u> </u> | <u> </u> |
| Ultimately | <u>12</u> | <u> </u> | <u> </u> | <u> </u> |
- i. Dimensions (in feet) of largest proposed structure: 35' height; 40'+ width; 80'+ length.
- j. Linear feet of frontage along a public thoroughfare project will occupy is? N/A ft.
2. How much natural material (i.e. rock, earth, etc.) will be removed from the site? 0.0 tons/cubic yards.
3. Will disturbed areas be reclaimed Yes No N/A
- a. If yes, for what intended purpose is the site being reclaimed?
- All areas disturbed, not covered by buildings or pavement, will be reclaimed as lawn and landscaping.
- b. Will topsoil be stockpiled for reclamation? Yes No
- c. Will upper subsoil be stockpiled for reclamation? Yes No
4. How many acres of vegetation (trees, shrubs, ground covers) will be removed from site? 12.9 acres.

5. Will any mature forest (over 100 years old) or other locally-important vegetation be removed by this project?

Yes No

6. If single phase project: Anticipated period of construction: 24 months, (including demolition)

7. If multi-phased:

a. Total number of phases anticipated _____ (number)

b. Anticipated date of commencement phase 1: _____ month _____ year, (including demolition)

c. Approximate completion date of final phase: _____ month _____ year.

d. Is phase 1 functionally dependent on subsequent phases? Yes No

8. Will blasting occur during construction? Yes No

9. Number of jobs generated: during construction 15 ; after project is complete 0

10. Number of jobs eliminated by this project _____ .

11. Will project require relocation of any projects or facilities? Yes No

If yes, explain:

TWO UTILITY POLES AT THE ENTRANCE TO THE SITE WILL HAVE TO BE RELOCATED

12. Is surface liquid waste disposal involved? Yes No

a. If yes, indicate type of waste (sewage, industrial, etc) and amount _____

b. Name of water body into which effluent will be discharged _____

13. Is subsurface liquid waste disposal involved? Yes No Type RESIDENTIAL SEWAGE

14. Will surface area of an existing water body increase or decrease by proposal? Yes No

If yes, explain:

15. Is project or any portion of project located in a 100 year flood plain? Yes No

16. Will the project generate solid waste? Yes No

a. If yes, what is the amount per month? 1.0 tons

b. If yes, will an existing solid waste facility be used? Yes No

c. If yes, give name APPROVED LANDFILL ; location BY APPROVED CARTER

d. Will any wastes not go into a sewage disposal system or into a sanitary landfill? Yes No

e. If yes, explain:

17. Will the project involve the disposal of solid waste? Yes No

a. If yes, what is the anticipated rate of disposal? _____ tons/month.

b. If yes, what is the anticipated site life? _____ years.

18. Will project use herbicides or pesticides? Yes No

19. Will project routinely produce odors (more than one hour per day)? Yes No

20. Will project produce operating noise exceeding the local ambient noise levels? Yes No _____

21. Will project result in an increase in energy use? Yes No

If yes, indicate type(s)

ELECTRICITY
FOSSIL FUELS

22. If water supply is from wells, indicate pumping capacity 5.0 min gallons/minute.

23. Total anticipated water usage per day 3600 gallons/day. based on 75 gallons per person per day x 4 people x 12 households

24. Does project involve Local, State or Federal funding? Yes No

If yes, explain:

25. Approvals Required:

			Type	Submittal Date
City, Town, Village Board	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<u>OPEN DEVELOPMENT</u> <u>AND VARIANCES</u>	_____
City, Town, Village Planning Board	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<u>CONSERVATION</u> <u>SUBDIVISION</u> <input checked="" type="checkbox"/>	_____
City, Town Zoning Board	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<u>WETLAND PERMIT</u> <u>Town Stormwater Permit</u>	_____
City, County Health Department	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<u>REVIEW and APPRVL</u> <u>OF S.S.T.As and WATER</u> <u>SUPPLY for SUBDIV.</u>	_____
Other Local Agencies	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<u>Highway Work Permit</u> <u>from Town Highway</u> <u>Superintendant</u>	_____
Other Regional Agencies	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	_____	_____
State Agencies	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<u>NYSDEC WETLANDS &</u> <u>SPDES PERMIT UNDER</u> <u>GP-0-10-001</u>	_____
Federal Agencies	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	_____	_____

C. Zoning and Planning Information

1. Does proposed action involve a planning or zoning decision? Yes No

If Yes, indicate decision required:

- | | | | |
|-------------------------------------------|-----------------------------------------------------|------------------------------------------------------|-------------------------------------------------|
| <input type="checkbox"/> Zoning amendment | <input checked="" type="checkbox"/> Zoning variance | <input type="checkbox"/> New/revision of master plan | <input checked="" type="checkbox"/> Subdivision |
| <input type="checkbox"/> Site plan | <input type="checkbox"/> Special use permit | <input type="checkbox"/> Resource management plan | <input type="checkbox"/> Other |

2. What is the zoning classification(s) of the site?

R-2A

3. What is the maximum potential development of the site if developed as permitted by the present zoning?

12 RESIDENTIAL LOTS

4. What is the proposed zoning of the site?

SAME

5. What is the maximum potential development of the site if developed as permitted by the proposed zoning?

SAME

6. Is the proposed action consistent with the recommended uses in adopted local land use plans? Yes No

The proposal requires OPEN DEVELOPMENT approval from the Town Board. In addition, a few lots will require VARIANES from the Towns Conservation Subdivision Law as regards minimum lot size.

7. What are the predominant land use(s) and zoning classifications within a ¼ mile radius of proposed action?

R-2A RESIDENTIAL 2-AC MIN. LOT SIZE
R-4A RESIDENTIAL 4-AC MIN. LOT SIZE

8. Is the proposed action compatible with adjoining/surrounding land uses with a ¼ mile? Yes No

9. If the proposed action is the subdivision of land, how many lots are proposed? 12

a. What is the minimum lot size proposed? 0.92 Ac.

10. Will proposed action require any authorization(s) for the formation of sewer or water districts? Yes No

11. Will the proposed action create a demand for any community provided services (recreation, education, police, fire protection)?

Yes No

a. If yes, is existing capacity sufficient to handle projected demand? Yes No

12. Will the proposed action result in the generation of traffic significantly above present levels? Yes No Unknown

a. If yes, is the existing road network adequate to handle the additional traffic. Yes No

D. Informational Details

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

E. Verification

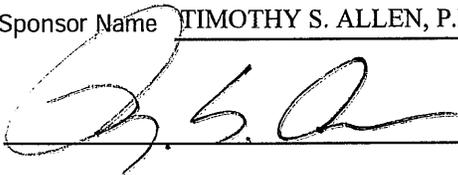
I certify that the information provided above is true to the best of my knowledge.

Rev. October 3, 2013
January 21, 2013

Applicant/Sponsor Name TIMOTHY S. ALLEN, P.E., Agent for Silvermine Group

Date SEPT 9, 2011

Signature



Title PARTNER

If the action is in the Coastal Area, and you are a state agency, complete the Coastal Assessment Form before proceeding with this assessment.

Full Environmental Assessment Form
Part 2 - Identification of Potential Project Impacts

Agency Use Only [If applicable]

Project : _____
 Date : _____

Part 2 is to be completed by the lead agency. Part 2 is designed to help the lead agency inventory all potential resources that could be affected by a proposed project or action. We recognize that the lead agency's reviewer(s) will not necessarily be environmental professionals. So, the questions are designed to walk a reviewer through the assessment process by providing a series of questions that can be answered using the information found in Part 1. To further assist the lead agency in completing Part 2, the form identifies the most relevant questions in Part 1 that will provide the information needed to answer the Part 2 question. When Part 2 is completed, the lead agency will have identified the relevant environmental areas that may be impacted by the proposed activity.

If the lead agency is a state agency **and** the action is in any Coastal Area, complete the Coastal Assessment Form before proceeding with this assessment.

Tips for completing Part 2:

- Review all of the information provided in Part 1.
- Review any application, maps, supporting materials and the Full EAF Workbook.
- Answer each of the 18 questions in Part 2.
- If you answer "Yes" to a numbered question, please complete all the questions that follow in that section.
- If you answer "No" to a numbered question, move on to the next numbered question.
- Check appropriate column to indicate the anticipated size of the impact.
- Proposed projects that would exceed a numeric threshold contained in a question should result in the reviewing agency checking the box "Moderate to large impact may occur."
- The reviewer is not expected to be an expert in environmental analysis.
- If you are not sure or undecided about the size of an impact, it may help to review the sub-questions for the general question and consult the workbook.
- When answering a question consider all components of the proposed activity, that is, the "whole action".
- Consider the possibility for long-term and cumulative impacts as well as direct impacts.
- Answer the question in a reasonable manner considering the scale and context of the project.

1. Impact on Land Proposed action may involve construction on, or physical alteration of, the land surface of the proposed site. (See Part 1. D.1) <i>If "Yes", answer questions a - j. If "No", move on to Section 2.</i>	<input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES	
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may involve construction on land where depth to water table is less than 3 feet.	E2d	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may involve construction on slopes of 15% or greater.	E2f	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
c. The proposed action may involve construction on land where bedrock is exposed, or generally within 5 feet of existing ground surface.	E2a	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may involve the excavation and removal of more than 1,000 tons of natural material.	D2a	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may involve construction that continues for more than one year or in multiple phases.	D1e	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. The proposed action may result in increased erosion, whether from physical disturbance or vegetation removal (including from treatment by herbicides).	D2e, D2q	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g. The proposed action is, or may be, located within a Coastal Erosion hazard area.	B1i	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h. Other impacts: _____		<input type="checkbox"/>	<input type="checkbox"/>

W/ans
form

2. Impact on Geological Features
 The proposed action may result in the modification or destruction of, or inhibit access to, any unique or unusual land forms on the site (e.g., cliffs, dunes, minerals, fossils, caves). (See Part 1. E.2.g) NO YES
If "Yes", answer questions a - c. If "No", move on to Section 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Identify the specific land form(s) attached: _____ _____	E2g	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may affect or is adjacent to a geological feature listed as a registered National Natural Landmark. Specific feature: _____	E3c	<input type="checkbox"/>	<input type="checkbox"/>
c. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

3. Impacts on Surface Water
 The proposed action may affect one or more wetlands or other surface water bodies (e.g., streams, rivers, ponds or lakes). (See Part 1. D.2, E.2.h) NO YES
If "Yes", answer questions a - l. If "No", move on to Section 4.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may create a new water body.	D2b, D1h	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in an increase or decrease of over 10% or more than a 10 acre increase or decrease in the surface area of any body of water.	D2b	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may involve dredging more than 100 cubic yards of material from a wetland or water body.	D2a	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may involve construction within or adjoining a freshwater or tidal wetland, or in the bed or banks of any other water body.	E2h	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
e. The proposed action may create turbidity in a waterbody, either from upland erosion, runoff or by disturbing bottom sediments.	D2a, D2h	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. The proposed action may include construction of one or more intake(s) for withdrawal of water from surface water.	D2c	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. The proposed action may include construction of one or more outfall(s) for discharge of wastewater to surface water(s).	D2d	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
h. The proposed action may cause soil erosion, or otherwise create a source of stormwater discharge that may lead to siltation or other degradation of receiving water bodies.	D2e	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i. The proposed action may affect the water quality of any water bodies within or downstream of the site of the proposed action.	E2h	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j. The proposed action may involve the application of pesticides or herbicides in or around any water body.	D2q, E2h	<input checked="" type="checkbox"/>	<input type="checkbox"/>
k. The proposed action may require the construction of new, or expansion of existing, wastewater treatment facilities.	D1a, D2d	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

I. Other impacts: _____ _____	<input type="checkbox"/>	<input type="checkbox"/>
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4. Impact on groundwater

The proposed action may result in new or additional use of ground water, or may have the potential to introduce contaminants to ground water or an aquifer. NO YES

(See Part 1. D.2.a, D.2.c, D.2.d, D.2.p, D.2.q, D.2.t)
If "Yes", answer questions a - h. If "No", move on to Section 5.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may require new water supply wells, or create additional demand on supplies from existing water supply wells.	D2c	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Water supply demand from the proposed action may exceed safe and sustainable withdrawal capacity rate of the local supply or aquifer. Cite Source: _____	D2c	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may allow or result in residential uses in areas without water and sewer services.	D1a, D2c	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may include or require wastewater discharged to groundwater.	D2d, E2l	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may result in the construction of water supply wells in locations where groundwater is, or is suspected to be, contaminated.	D2c, E1f, E1g, E1h	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. The proposed action may require the bulk storage of petroleum or chemical products over ground water or an aquifer.	D2p, E2l	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. The proposed action may involve the commercial application of pesticides within 100 feet of potable drinking water or irrigation sources.	E2h, D2q, E2l, D2c	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

5. Impact on Flooding

The proposed action may result in development on lands subject to flooding. NO YES

(See Part 1. E.2)
If "Yes", answer questions a - g. If "No", move on to Section 6.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in development in a designated floodway.	E2i	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in development within a 100 year floodplain.	E2j	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may result in development within a 500 year floodplain.	E2k	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may result in, or require, modification of existing drainage patterns.	D2b, D2e	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may change flood water flows that contribute to flooding.	D2b, E2i, E2j, E2k	<input type="checkbox"/>	<input type="checkbox"/>
f. If there is a dam located on the site of the proposed action, is the dam in need of repair, or upgrade?	E1e	<input type="checkbox"/>	<input type="checkbox"/>

g. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>
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6. Impacts on Air
 The proposed action may include a state regulated air emission source. NO YES
 (See Part 1. D.2.f., D.2.h, D.2.g)
If "Yes", answer questions a - f. If "No", move on to Section 7.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. If the proposed action requires federal or state air emission permits, the action may also emit one or more greenhouse gases at or above the following levels: i. More than 1000 tons/year of carbon dioxide (CO ₂) ii. More than 3.5 tons/year of nitrous oxide (N ₂ O) iii. More than 1000 tons/year of carbon equivalent of perfluorocarbons (PFCs) iv. More than .045 tons/year of sulfur hexafluoride (SF ₆) v. More than 1000 tons/year of carbon dioxide equivalent of hydrochlorofluorocarbons (HFCs) emissions vi. 43 tons/year or more of methane	D2g D2g D2g D2g D2g D2h	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
b. The proposed action may generate 10 tons/year or more of any one designated hazardous air pollutant, or 25 tons/year or more of any combination of such hazardous air pollutants.	D2g	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may require a state air registration, or may produce an emissions rate of total contaminants that may exceed 5 lbs. per hour, or may include a heat source capable of producing more than 10 million BTU's per hour.	D2f, D2g	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may reach 50% of any of the thresholds in "a" through "c", above.	D2g	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may result in the combustion or thermal treatment of more than 1 ton of refuse per hour.	D2s	<input type="checkbox"/>	<input type="checkbox"/>
f. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

7. Impact on Plants and Animals
 The proposed action may result in a loss of flora or fauna. (See Part 1. E.2. m.-q.) NO YES
If "Yes", answer questions a - j. If "No", move on to Section 8.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may cause reduction in population or loss of individuals of any threatened or endangered species, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2o	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in a reduction or degradation of any habitat used by any rare, threatened or endangered species, as listed by New York State or the federal government.	E2o	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may cause reduction in population, or loss of individuals, of any species of special concern or conservation need, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2p	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may result in a reduction or degradation of any habitat used by any species of special concern and conservation need, as listed by New York State or the Federal government.	E2p	<input checked="" type="checkbox"/>	<input type="checkbox"/>

e. The proposed action may diminish the capacity of a registered National Natural Landmark to support the biological community it was established to protect.	E3c	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. The proposed action may result in the removal of, or ground disturbance in, any portion of a designated significant natural community. Source: _____	E2n	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. The proposed action may substantially interfere with nesting/breeding, foraging, or over-wintering habitat for the predominant species that occupy or use the project site.	E2m	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h. The proposed action requires the conversion of more than 10 acres of forest, grassland or any other regionally or locally important habitat. Habitat type & information source: _____ _____	E1b	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i. Proposed action (commercial, industrial or recreational projects, only) involves use of herbicides or pesticides.	D2q	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

8. Impact on Agricultural Resources			
The proposed action may impact agricultural resources. (See Part 1. E.3.a. and b.)		<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES
<i>If "Yes", answer questions a - h. If "No", move on to Section 9.</i>			
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may impact soil classified within soil group 1 through 4 of the NYS Land Classification System.	E2c, E3b	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may sever, cross or otherwise limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc).	E1a, E1b	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may result in the excavation or compaction of the soil profile of active agricultural land.	E3b	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may irreversibly convert agricultural land to non-agricultural uses, either more than 2.5 acres if located in an Agricultural District, or more than 10 acres if not within an Agricultural District.	E1b, E3a	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may disrupt or prevent installation of an agricultural land management system.	E1 a, E1b	<input type="checkbox"/>	<input type="checkbox"/>
f. The proposed action may result, directly or indirectly, in increased development potential or pressure on farmland.	C2c, C3, D2c, D2d	<input type="checkbox"/>	<input type="checkbox"/>
g. The proposed project is not consistent with the adopted municipal Farmland Protection Plan.	C2c	<input type="checkbox"/>	<input type="checkbox"/>
h. Other impacts: _____		<input type="checkbox"/>	<input type="checkbox"/>

9. Impact on Aesthetic Resources The land use of the proposed action are obviously different from, or are in sharp contrast to, current land use patterns between the proposed project and a scenic or aesthetic resource. (Part 1. E.1.a, E.1.b, E.3.h.) <i>If "Yes", answer questions a - g. If "No", go to Section 10.</i>		<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Proposed action may be visible from any officially designated federal, state, or local scenic or aesthetic resource.	E3h	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in the obstruction, elimination or significant screening of one or more officially designated scenic views.	E3h, C2b	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may be visible from publicly accessible vantage points: i. Seasonally (e.g., screened by summer foliage, but visible during other seasons) ii. Year round	E3h	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
d. The situation or activity in which viewers are engaged while viewing the proposed action is: i. Routine travel by residents, including travel to and from work ii. Recreational or tourism based activities	E3h E2q, E1c	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
e. The proposed action may cause a diminishment of the public enjoyment and appreciation of the designated aesthetic resource.	E3h	<input type="checkbox"/>	<input type="checkbox"/>
f. There are similar projects visible within the following distance of the proposed project: 0-1/2 mile 1/2 -3 mile 3-5 mile 5+ mile	D1a, E1a, D1f, D1g	<input type="checkbox"/>	<input type="checkbox"/>
g. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

10. Impact on Historic and Archeological Resources The proposed action may occur in or adjacent to a historic or archaeological resource. (Part 1. E.3.e, f. and g.) <i>If "Yes", answer questions a - e. If "No", go to Section 11.</i>		<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may occur wholly or partially within, or substantially contiguous to, any buildings, 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.	E3e	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may occur wholly or partially within, or substantially contiguous to, an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory.	E3f	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may occur wholly or partially within, or substantially contiguous to, an archaeological site not included on the NY SHPO inventory. Source: _____	E3g	<input type="checkbox"/>	<input type="checkbox"/>

d. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>
e. If any of the above (a-d) are answered "Yes", continue with the following questions to help support conclusions in Part 3:			
i. The proposed action may result in the destruction or alteration of all or part of the site or property.	E3e, E3g, E3f	<input type="checkbox"/>	<input type="checkbox"/>
ii. The proposed action may result in the alteration of the property's setting or integrity.	E3e, E3f, E3g, E1a, E1b	<input type="checkbox"/>	<input type="checkbox"/>
iii. The proposed action may result in the introduction of visual elements which are out of character with the site or property, or may alter its setting.	E3e, E3f, E3g, E3h, C2, C3	<input type="checkbox"/>	<input type="checkbox"/>

11. Impact on Open Space and Recreation The proposed action may result in a loss of recreational opportunities or a reduction of an open space resource as designated in any adopted municipal open space plan. (See Part 1. C.2.c, E.1.c., E.2.q.) <i>If "Yes", answer questions a - e. If "No", go to Section 12.</i>			
		<input checked="" type="checkbox"/> NO	<input checked="" type="checkbox"/> YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in an impairment of natural functions, or "ecosystem services", provided by an undeveloped area, including but not limited to stormwater storage, nutrient cycling, wildlife habitat.	D2e, E1b, E2h, E2m, E2o, E2n, E2p	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in the loss of a current or future recreational resource.	C2a, E1c, C2c, E2q	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may eliminate open space or recreational resource in an area with few such resources.	C2a, C2c, E1c, E2q	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may result in loss of an area now used informally by the community as an open space resource.	C2c, E1c	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Other impacts: <u>40.8 ACRES OF THE 55.9 ACRE SITE TO REMAIN AS OPEN SPACE</u>		<input type="checkbox"/>	<input type="checkbox"/>

12. Impact on Critical Environmental Areas The proposed action may be located within or adjacent to a critical environmental area (CEA). (See Part 1. E.3.d) <i>If "Yes", answer questions a - c. If "No", go to Section 13.</i>			
		<input checked="" type="checkbox"/> NO	<input checked="" type="checkbox"/> YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in a reduction in the quantity of the resource or characteristic which was the basis for designation of the CEA.	E3d	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in a reduction in the quality of the resource or characteristic which was the basis for designation of the CEA.	E3d	<input type="checkbox"/>	<input type="checkbox"/>
c. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

13. Impact on Transportation
 The proposed action may result in a change to existing transportation systems. NO YES
 (See Part 1. D.2.j)
If "Yes", answer questions a - g. If "No", go to Section 14.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Projected traffic increase may exceed capacity of existing road network.	D2j	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in the construction of paved parking area for 500 or more vehicles.	D2j	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action will degrade existing transit access.	D2j	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action will degrade existing pedestrian or bicycle accommodations.	D2j	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may alter the present pattern of movement of people or goods.	D2j	<input type="checkbox"/>	<input type="checkbox"/>
f. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

14. Impact on Energy
 The proposed action may cause an increase in the use of any form of energy. NO YES
 (See Part 1. D.2.k)
If "Yes", answer questions a - e. If "No", go to Section 15.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action will require a new, or an upgrade to an existing, substation.	D2k	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. The proposed action will require the creation or extension of an energy transmission or supply system to serve more than 50 single or two-family residences or to serve a commercial or industrial use.	D1f, D1q, D2k	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may utilize more than 2,500 MWhrs per year of electricity.	D2k	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may involve heating and/or cooling of more than 100,000 square feet of building area when completed.	D1g	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Other Impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

15. Impact on Noise, Odor, and Light
 The proposed action may result in an increase in noise, odors, or outdoor lighting. NO YES
 (See Part 1. D.2.m., n., and o.)
If "Yes", answer questions a - f. If "No", go to Section 16.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may produce sound above noise levels established by local regulation.	D2m	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may result in blasting within 1,500 feet of any residence, hospital, school, licensed day care center, or nursing home.	D2m, E1d	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may result in routine odors for more than one hour per day.	D2o	<input checked="" type="checkbox"/>	<input type="checkbox"/>

d. The proposed action may result in light shining onto adjoining properties.	D2n	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may result in lighting creating sky-glow brighter than existing area conditions.	D2n, E1a	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

16. Impact on Human Health The proposed action may have an impact on human health from exposure to new or existing sources of contaminants. (See Part 1.D.2.q., E.1. d. f. g. and h.) <i>If "Yes", answer questions a - m. If "No", go to Section 17.</i>			
		<input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES
	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action is located within 1500 feet of a school, hospital, licensed day care center, group home, nursing home or retirement community.	E1d	<input type="checkbox"/>	<input type="checkbox"/>
b. The site of the proposed action is currently undergoing remediation.	E1g, E1h	<input type="checkbox"/>	<input type="checkbox"/>
c. There is a completed emergency spill remediation, or a completed environmental site remediation on, or adjacent to, the site of the proposed action.	E1g, E1h	<input type="checkbox"/>	<input type="checkbox"/>
d. The site of the action is subject to an institutional control limiting the use of the property (e.g., easement or deed restriction).	E1g, E1h	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may affect institutional control measures that were put in place to ensure that the site remains protective of the environment and human health.	E1g, E1h	<input type="checkbox"/>	<input type="checkbox"/>
f. The proposed action has adequate control measures in place to ensure that future generation, treatment and/or disposal of hazardous wastes will be protective of the environment and human health.	D2t	<input type="checkbox"/>	<input type="checkbox"/>
g. The proposed action involves construction or modification of a solid waste management facility.	D2q, E1f	<input type="checkbox"/>	<input type="checkbox"/>
h. The proposed action may result in the unearthing of solid or hazardous waste.	D2q, E1f	<input type="checkbox"/>	<input type="checkbox"/>
i. The proposed action may result in an increase in the rate of disposal, or processing, of solid waste.	D2r, D2s	<input type="checkbox"/>	<input type="checkbox"/>
j. The proposed action may result in excavation or other disturbance within 2000 feet of a site used for the disposal of solid or hazardous waste.	E1f, E1g E1h	<input type="checkbox"/>	<input type="checkbox"/>
k. The proposed action may result in the migration of explosive gases from a landfill site to adjacent off site structures.	E1f, E1g	<input type="checkbox"/>	<input type="checkbox"/>
l. The proposed action may result in the release of contaminated leachate from the project site.	D2s, E1f, D2r	<input type="checkbox"/>	<input type="checkbox"/>
m. Other impacts: _____ _____			

17. Consistency with Community Plans
 The proposed action is not consistent with adopted land use plans.
 (See Part 1. C.1, C.2. and C.3.)
 If "Yes", answer questions a - h. If "No", go to Section 18.

NO YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action's land use components may be different from, or in sharp contrast to, current surrounding land use pattern(s).	C2, C3, D1a E1a, E1b	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. The proposed action will cause the permanent population of the city, town or village in which the project is located to grow by more than 5%.	C2	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. The proposed action is inconsistent with local land use plans or zoning regulations.	C2, C2, C3	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. The proposed action is inconsistent with any County plans, or other regional land use plans.	C2, C2	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. The proposed action may cause a change in the density of development that is not supported by existing infrastructure or is distant from existing infrastructure.	C3, D1c, D1d, D1f, D1d, E1b	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. The proposed action is located in an area characterized by low density development that will require new or expanded public infrastructure.	C4, D2c, D2d D2j	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. The proposed action may induce secondary development impacts (e.g., residential or commercial development not included in the proposed action)	C2a	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h. Other: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

18. Consistency with Community Character
 The proposed project is inconsistent with the existing community character.
 (See Part 1. C.2, C.3, D.2, E.3)
 If "Yes", answer questions a - g. If "No", proceed to Part 3.

NO YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may replace or eliminate existing facilities, structures, or areas of historic importance to the community.	E3e, E3f, E3g	<input type="checkbox"/>	<input type="checkbox"/>
b. The proposed action may create a demand for additional community services (e.g. schools, police and fire)	C4	<input type="checkbox"/>	<input type="checkbox"/>
c. The proposed action may displace affordable or low-income housing in an area where there is a shortage of such housing.	C2, C3, D1f D1g, E1a	<input type="checkbox"/>	<input type="checkbox"/>
d. The proposed action may interfere with the use or enjoyment of officially recognized or designated public resources.	C2, E3	<input type="checkbox"/>	<input type="checkbox"/>
e. The proposed action is inconsistent with the predominant architectural scale and character.	C2, C3	<input type="checkbox"/>	<input type="checkbox"/>
f. Proposed action is inconsistent with the character of the existing natural landscape.	C2, C3 E1a, E1b E2g, E2h	<input type="checkbox"/>	<input type="checkbox"/>
g. Other impacts: _____ _____		<input type="checkbox"/>	<input type="checkbox"/>

PRINT FULL FORM

Project : Date :

Full Environmental Assessment Form
Part 3 - Evaluation of the Magnitude and Importance of Project Impacts
and
Determination of Significance

Part 3 provides the reasons in support of the determination of significance. The lead agency must complete Part 3 for every question in Part 2 where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.

Based on the analysis in Part 3, the lead agency must decide whether to require an environmental impact statement to further assess the proposed action or whether available information is sufficient for the lead agency to conclude that the proposed action will not have a significant adverse environmental impact. By completing the certification on the next page, the lead agency can complete its determination of significance.

Reasons Supporting This Determination:

To complete this section:

- Identify the impact based on the Part 2 responses and describe its magnitude. Magnitude considers factors such as severity, size or extent of an impact.
- Assess the importance of the impact. Importance relates to the geographic scope, duration, probability of the impact occurring, number of people affected by the impact and any additional environmental consequences if the impact were to occur.
- The assessment should take into consideration any design element or project changes.
- Repeat this process for each Part 2 question where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.
- Provide the reason(s) why the impact may, or will not, result in a significant adverse environmental impact
- For Conditional Negative Declarations identify the specific condition(s) imposed that will modify the proposed action so that no significant adverse environmental impacts will result.
- Attach additional sheets, as needed.

1.e. The proposed project consists of 3 construction phases to minimize the disturbance during each phase. The first phase consists of building the proposed private road including the three stormwater basins to capture runoff created by the next 2 phases of house and driveway construction.

1.f. Increased erosion will occur during construction and the removal of vegetation. Existing site conditions are woodland with little forest floor cover. Erosion control measures during construction include, but are not limited to silt fence, level spreaders, stabilized construction entrance, stormwater infiltration, and stormwater basins. Each construction phase will end with soil stabilization to limit the amount of erosion on the overall site.

4.a. Each new residential lot will contain a new drilled well for water supply.

Determination of Significance - Type 1 and Unlisted Actions

SEQR Status: Type 1 Unlisted

Identify portions of EAF completed for this Project: Part 1 Part 2 Part 3

Upon review of the information recorded on this EAF, as noted, plus this additional support information

and considering both the magnitude and importance of each identified potential impact, it is the conclusion of the _____ as lead agency that:

A. This project will result in no significant adverse impacts on the environment, and, therefore, an environmental impact statement need not be prepared. Accordingly, this negative declaration is issued.

B. Although this project could have a significant adverse impact on the environment, that impact will be avoided or substantially mitigated because of the following conditions which will be required by the lead agency:

There will, therefore, be no significant adverse impacts from the project as conditioned, and, therefore, this conditioned negative declaration is issued. A conditioned negative declaration may be used only for UNLISTED actions (see 6 NYCRR 617.d).

C. This Project may result in one or more significant adverse impacts on the environment, and an environmental impact statement must be prepared to further assess the impact(s) and possible mitigation and to explore alternatives to avoid or reduce those impacts. Accordingly, this positive declaration is issued.

Name of Action:

Name of Lead Agency:

Name of Responsible Officer in Lead Agency:

Title of Responsible Officer:

Signature of Responsible Officer in Lead Agency:

Date:

Signature of Preparer (if different from Responsible Officer)

Date:

For Further Information:

Contact Person:

Address:

Telephone Number:

E-mail:

For Type 1 Actions and Conditioned Negative Declarations, a copy of this Notice is sent to:

Chief Executive Officer of the political subdivision in which the action will be principally located (e.g., Town / City / Village of)

Other involved agencies (if any)

Applicant (if any)

Environmental Notice Bulletin: <http://www.dec.ny.gov/enb/enb.html>

PRINT FULL FORM

Project Site Information

Project/Site Name

S i l v e r m i n e P r e s e r v e

Street Address (NOT P.O. BOX)

S i l v e r M i n e D r i v e & L o c k w o o d R o a d

Side of Street

North South East West

City/Town/Village (THAT ISSUES BUILDING PERMIT)

L e w i s b o r o

State

Zip

County

DEC Region

N Y

1 0 5 9 0 -

W e s t c h e s t e r

Name of Nearest Cross Street

E a s t S t r e e t

Distance to Nearest Cross Street (Feet)

1 5 0 0

Project In Relation to Cross Street

North South East West

Tax Map Numbers

Section-Block-Parcel

4 8 - 1 0 0 5 7 - 1 5

Tax Map Numbers

1. Provide the Geographic Coordinates for the project site in NYTM Units. To do this you **must** go to the NYSDEC Stormwater Interactive Map on the DEC website at:

www.dec.ny.gov/imsmaps/stormwater/viewer.htm

Zoom into your Project Location such that you can accurately click on the centroid of your site. Once you have located your project site, go to the tool boxes on the top and choose "i"(identify). Then click on the center of your site and a new window containing the X, Y coordinates in UTM will pop up. Transcribe these coordinates into the boxes below. For problems with the interactive map use the help function.

X Coordinates (Easting)

6 2 5 4 6 0

Y Coordinates (Northing)

4 5 6 4 7 4 6

2. What is the nature of this construction project?

- New Construction
- Redevelopment with increase in impervious area
- Redevelopment with no increase in impervious area

3. Select the predominant land use for both pre and post development conditions.
SELECT ONLY ONE CHOICE FOR EACH

**Pre-Development
Existing Land Use**

- FOREST
- PASTURE/OPEN LAND
- CULTIVATED LAND
- SINGLE FAMILY HOME
- SINGLE FAMILY SUBDIVISION
- TOWN HOME RESIDENTIAL
- MULTIFAMILY RESIDENTIAL
- INSTITUTIONAL/SCHOOL
- INDUSTRIAL
- COMMERCIAL
- ROAD/HIGHWAY
- RECREATIONAL/SPORTS FIELD
- BIKE PATH/TRAIL
- LINEAR UTILITY
- PARKING LOT
- OTHER

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

**Post-Development
Future Land Use**

- SINGLE FAMILY HOME
- SINGLE FAMILY SUBDIVISION
- TOWN HOME RESIDENTIAL
- MULTIFAMILY RESIDENTIAL
- INSTITUTIONAL/SCHOOL
- INDUSTRIAL
- COMMERCIAL
- MUNICIPAL
- ROAD/HIGHWAY
- RECREATIONAL/SPORTS FIELD
- BIKE PATH/TRAIL
- LINEAR UTILITY (water, sewer, gas, etc.)
- PARKING LOT
- CLEARING/GRADING ONLY
- DEMOLITION, NO REDEVELOPMENT
- WELL DRILLING ACTIVITY *(Oil, Gas, etc.)
- OTHER

Number of Lots

		1	2
--	--	---	---

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

*Note: for gas well drilling, non-high volume hydraulic fractured wells only

4. In accordance with the larger common plan of development or sale, enter the total project site area; the total area to be disturbed; existing impervious area to be disturbed (for redevelopment activities); and the future impervious area constructed within the disturbed area. (Round to the nearest tenth of an acre.)

Total Site Area	Total Area To Be Disturbed	Existing Impervious Area To Be Disturbed	Future Impervious Area Within Disturbed Area
<input type="text"/> <input type="text"/> 5 <input type="text"/> 5 . <input type="text"/> 9	<input type="text"/> <input type="text"/> 1 <input type="text"/> 3 . <input type="text"/> 5	<input type="text"/> <input type="text"/> <input type="text"/> 0 . <input type="text"/> 0	<input type="text"/> <input type="text"/> <input type="text"/> 2 . <input type="text"/> 6

5. Do you plan to disturb more than 5 acres of soil at any one time? Yes No

6. Indicate the percentage of each Hydrologic Soil Group (HSG) at the site.

A	B	C	D
<input type="text"/> <input type="text"/> <input type="text"/> %	<input type="text"/> 8 <input type="text"/> 7 %	<input type="text"/> <input type="text"/> 5 %	<input type="text"/> <input type="text"/> 8 %

7. Is this a phased project? Yes No

8. Enter the planned start and end dates of the disturbance activities.

Start Date	<input type="text"/> 4 / <input type="text"/> 1 / 2016	End Date	<input type="text"/> 4 / <input type="text"/> 1 / 2020
-------------------	--------------------------------------------------------	-----------------	--------------------------------------------------------

15. Does the site runoff enter a separate storm sewer system (including roadside drains, swales, ditches, culverts, etc)? Yes No Unknown

16. What is the name of the municipality/entity that owns the separate storm sewer system?

Two rows of empty grid boxes for entering the name of the municipality/entity.

17. Does any runoff from the site enter a sewer classified as a Combined Sewer? Yes No Unknown

18. Will future use of this site be an agricultural property as defined by the NYS Agriculture and Markets Law? Yes No

19. Is this property owned by a state authority, state agency, federal government or local government? Yes No

20. Is this a remediation project being done under a Department approved work plan? (i.e. CERCLA, RCRA, Voluntary Cleanup Agreement, etc.) Yes No

21. Has the required Erosion and Sediment Control component of the SWPPP been developed in conformance with the current NYS Standards and Specifications for Erosion and Sediment Control (aka Blue Book)? Yes No

22. Does this construction activity require the development of a SWPPP that includes the post-construction stormwater management practice component (i.e. Runoff Reduction, Water Quality and Quantity Control practices/techniques)? Yes No
If No, skip questions 23 and 27-39.

23. Has the post-construction stormwater management practice component of the SWPPP been developed in conformance with the current NYS Stormwater Management Design Manual? Yes No

Post-construction Stormwater Management Practice (SMP) Requirements

Important: Completion of Questions 27-39 is not required if response to Question 22 is No.

27. Identify all site planning practices that were used to prepare the final site plan/layout for the project.

- Preservation of Undisturbed Areas
- Preservation of Buffers
- Reduction of Clearing and Grading
- Locating Development in Less Sensitive Areas
- Roadway Reduction
- Sidewalk Reduction
- Driveway Reduction
- Cul-de-sac Reduction
- Building Footprint Reduction
- Parking Reduction

27a. Indicate which of the following soil restoration criteria was used to address the requirements in Section 5.1.6("Soil Restoration") of the Design Manual (2010 version).

- All disturbed areas will be restored in accordance with the Soil Restoration requirements in Table 5.3 of the Design Manual (see page 5-22).
- Compacted areas were considered as impervious cover when calculating the **WQv Required**, and the compacted areas were assigned a post-construction Hydrologic Soil Group (HSG) designation that is one level less permeable than existing conditions for the hydrology analysis.

28. Provide the total Water Quality Volume (WQv) required for this project (based on final site plan/layout).

Total WQv Required

. acre-feet

29. Identify the RR techniques (Area Reduction), RR techniques (Volume Reduction) and Standard SMPs with RRv Capacity in Table 1 (See Page 9) that were used to reduce the Total WQv Required (#28).

Also, provide in Table 1 the total impervious area that contributes runoff to each technique/practice selected. For the Area Reduction Techniques, provide the total contributing area (includes pervious area) and, if applicable, the total impervious area that contributes runoff to the technique/practice.

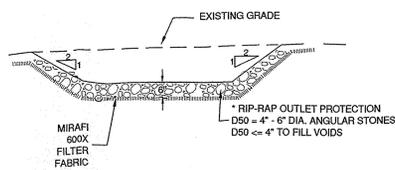
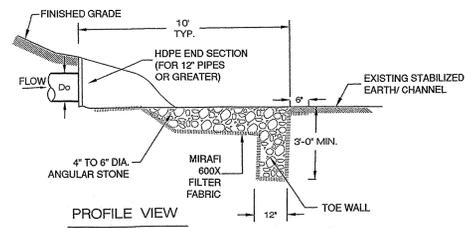
Note: Redevelopment projects shall use Tables 1 and 2 to identify the SMPs used to treat and/or reduce the WQv required. If runoff reduction techniques will not be used to reduce the required WQv, skip to question 33a after identifying the SMPs.

Table 1 - Runoff Reduction (RR) Techniques and Standard Stormwater Management Practices (SMPs)

<u>RR Techniques (Area Reduction)</u>	<u>Total Contributing Area (acres)</u>	<u>Total Contributing Impervious Area (acres)</u>
<input type="radio"/> Conservation of Natural Areas (RR-1) ...	14.90	and/or 2.60
<input type="radio"/> Sheetflow to Riparian Buffers/Filters Strips (RR-2)	and/or
<input type="radio"/> Tree Planting/Tree Pit (RR-3)	and/or
<input type="radio"/> Disconnection of Rooftop Runoff (RR-4)	and/or
<u>RR Techniques (Volume Reduction)</u>		
<input type="radio"/> Vegetated Swale (RR-5)
<input type="radio"/> Rain Garden (RR-6)
<input type="radio"/> Stormwater Planter (RR-7)
<input type="radio"/> Rain Barrel/Cistern (RR-8)
<input type="radio"/> Porous Pavement (RR-9)
<input type="radio"/> Green Roof (RR-10)
<u>Standard SMPs with RRv Capacity</u>		
<input type="radio"/> Infiltration Trench (I-1)
<input checked="" type="radio"/> Infiltration Basin (I-2)	1 6 5 0
<input type="radio"/> Dry Well (I-3)
<input checked="" type="radio"/> Underground Infiltration System (I-4)	0 7 2
<input type="radio"/> Bioretention (F-5)
<input type="radio"/> Dry Swale (O-1)
<u>Standard SMPs</u>		
<input type="radio"/> Micropool Extended Detention (P-1)
<input type="radio"/> Wet Pond (P-2)
<input type="radio"/> Wet Extended Detention (P-3)
<input type="radio"/> Multiple Pond System (P-4)
<input type="radio"/> Pocket Pond (P-5)
<input type="radio"/> Surface Sand Filter (F-1)
<input type="radio"/> Underground Sand Filter (F-2)
<input type="radio"/> Perimeter Sand Filter (F-3)
<input type="radio"/> Organic Filter (F-4)
<input type="radio"/> Shallow Wetland (W-1)
<input type="radio"/> Extended Detention Wetland (W-2)
<input type="radio"/> Pond/Wetland System (W-3)
<input type="radio"/> Pocket Wetland (W-4)
<input type="radio"/> Wet Swale (O-2)

REVISION

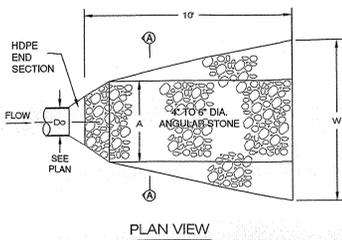
06-16-11	Conservation Plan
09-01-12	Review / Response
11-10-14	Review / Response
2-17-15	Review / Response
7-20-15	Review / Response



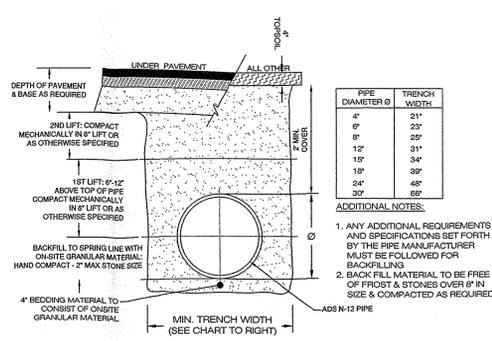
(*) RIP RAP SIZE IS SPECIFIED IN THE TABLE N.T.S.

STRUCTURE	PIPE DIA (INCH)	PIPE LENGTH (L) (FT)	PIPE SLOPE (%)	DISCHARGE Q (CFS)	RIP RAP DIA (INCHES)	MIN. APRON LENGTH (L) (FT)	APRON WIDTH (W) (FT)	A
ES #1	18"	67	3.0	2.07	4	10 (*)	11.5	4.5
ES #2	12"	17	11.6	1.84	4	10 (*)	11	3
ES #3	12"	62	4.8	0.49	4	10 (*)	11	3
ES #12	12"	74	4.1	0.03	4	10 (*)	11	3
ES #13	12"	29	5.2	0.02	4	10 (*)	11	3
ES #14	12"	29	29.3	12.99	4	10 (*)	11	3
ES #15	18"	21	2.4	1.50	4	10 (*)	11.5	4.5

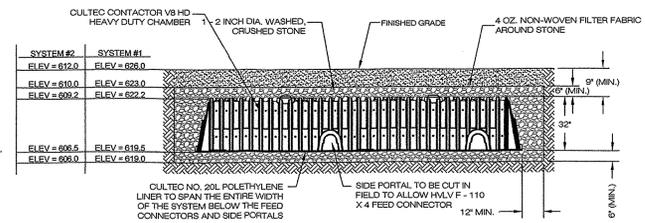
(*) BASED ON 25 YEAR STORM PEAK FLOWS.
DESIGN IS BASED ON NYS STANDARDS & SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL, APRIL 2005
(**) MINIMUM DIMENSION OF 10 FT. USED



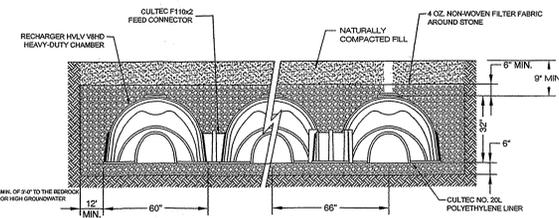
RIP-RAP OUTLET PROTECTION DETAIL N.T.S.



DRAINAGE PIPE INSTALLATION N.T.S.



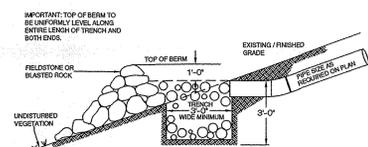
CULTEC RECHARGER V8 HD MANIFOLD DETAIL N.T.S.



CULTEC RECHARGER V8 HD TYPICAL SECTION N.T.S.

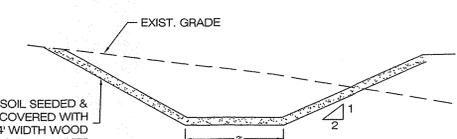
GENERAL NOTES:
RECHARGER V8 HD BY CULTEC, INC. OF BROOKFIELD, CT. STORAGE PROVIDED +65 DB OF PFR ORIGINAL UNIT. INSTALL LENGTH = 7.9 FT. REFER TO CULTEC, INC.'S CURRENT RECOMMENDED INSTALLATION GUIDELINES. USE RECHARGER V8 HD FOR TRAFFIC AND/OR H2S APPLICATIONS.
ALL RECHARGER V8 HD HEAVY DUTY UNITS ARE MARKED WITH A COLOR STRIPE FORMED INTO THE PART ALONG THE LENGTH OF THE CHAMBER. ALL RECHARGER V8 HD CHAMBERS MUST BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.

CULTEC RECHARGER V8 HD TYPICAL SECTION N.T.S.



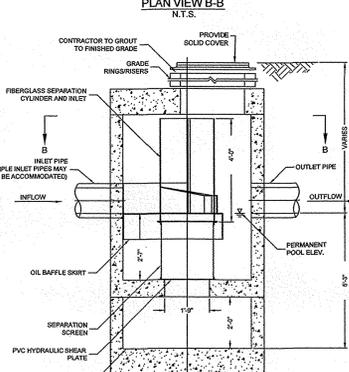
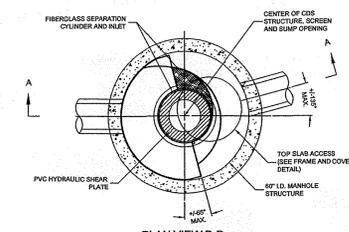
LEVEL SPREADER N.T.S.

IMPORTANT: TOP OF BEAM TO BE MINIMUM LEVEL ABOVE ENTIRE LENGTH OF TRENCH AND BOTH ENDS.
MINIMUM TRENCH LENGTH OF 10 FEET IS REQUIRED.
TRENCH SHALL REMAIN UNFILLED WITH FILL. COMPLETION OF PAVING AND SITE STABILIZATION WITH SUITABLE VEGETATIVE COVER, AS DIRECTED BY ENGINEER, IS REQUIRED BEFORE CONSTRUCTION SHALL BE REMOVED AND TRENCH FILLED AS SHOWN WITH FIELDSTONE OR TALUS - MINIMUM 4' DIA.
* EXCEPT AT PIPE DISCHARGE POINT: A PILE OF FIELDSTONE SHALL BE PLACED IN TRENCH AS A "FLASH PLATE" TO MINIMIZE SCOURING.



GRASS SWALE DETAIL N.T.S.

SEED MIXTURE RATE / 1000 SF
BIRDSFOOT .2lb
TREFOIL .5lb
TALL FESCUE .1lb
RED TOP 1 lb/1000 SF LAWN STARTING
FERTILIZER MIX OF N.P.K.
MULCH: CURLEX BLANKET BY AMERICAN EXCELSIOR COMPANY INSTALL AND STAPLE PER MANUFACTURERS INSTRUCTIONS.

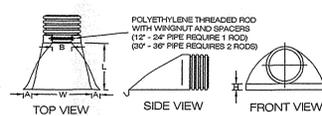


ELEVATION A-A N.T.S.

RATED TREATMENT CAPACITY = 1.1 CFS
NOTE: PEAK FLOWS FROM 10% STORM AT ALL PROPOSED CDS UNITS ARE BELOW TREATMENT FLOW CAPACITY AND THEREFORE SHALL USE CDS 2020-C MODEL.
MAXIMUM INTERNAL BYPASS CAPACITY = 14.0 CFS (INLET PIPE MODEL)

CONTECH STORMWATER SOLUTIONS CDS 2020-C PRECAST CONCRETE WATER QUALITY SYSTEM DETAIL N.T.S.

GENERAL NOTES:
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. DIMENSIONS MARKED WITH (1) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
3. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH STORMWATER SOLUTIONS REPRESENTATIVE.
4. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
5. STRUCTURE SHALL MEET MASH20 H250 LOAD RATING, AND CASTINGS SHALL MEET MASH20 H200 LOAD RATING, ASSUMING GROUNDWATER ELEVATION AT OR BELOW OUTLET PIPE INVERT ELEVATION.
6. PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.
INSTALLATION NOTES:
1. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
2. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE (LIFTING CLUTCHES PROVIDED).
3. CONTRACTOR TO MAKE JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS, AND ASSEMBLE STRUCTURE.
4. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN.
5. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.



PART #	PIPE G	A	B (MAX)	H	L	W
1210NP	12"	6.5"	10"	8.5"	29"	20"
1510NP	15"	6.5"	10"	8.5"	29"	20"
1810NP	18"	7.5"	15"	9.5"	35"	30"
2410NP	24"	7.5"	18"	9.5"	36"	40"
3015NP	30"	7.5"	12"	8.5"	39"	60"
3615NP	36"	7.5"	25"	9.5"	55"	60"

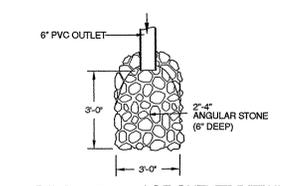
ADS - FLARED END SECTION N.T.S.

APPROVED BY RESOLUTION OF THE LEWISBORO TOWN PLANNING BOARD.

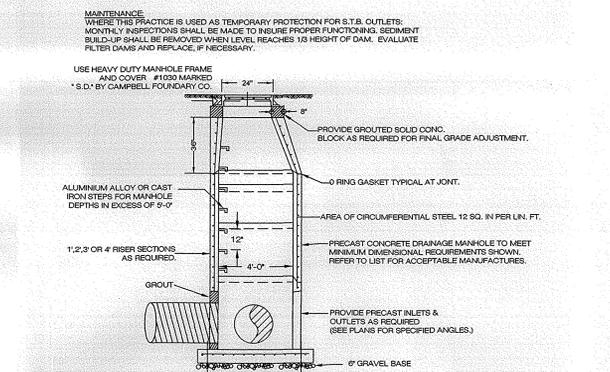
CHAIRMAN	DATE
SECRETARY	DATE
TOWN ENGINEER	DATE

APPROVED FOR FILING IN THE WESTCHESTER COUNTY CLERK'S OFFICE, DIVISION OF LAND RECORDS

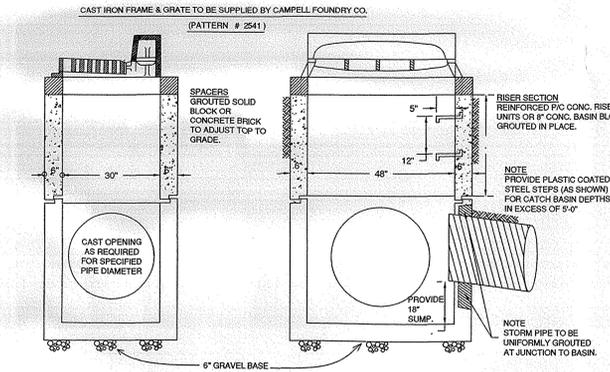
ERIC MOSS, MEMBER SILVERMINE GROUP	DATE
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RIP RAP DRAINAGE OUTLET DETAIL N.T.S. (TO BE USED AT THE OUTFALL OF 6\"/>



TYPICAL DRAINAGE MANHOLE N.T.S. (H20 DESIGN LOADING REQUIRED)



TYPICAL CATCH BASIN N.T.S.

ENGINEERING CONSULTANT:
BIBBO ASSOCIATES, L.L.P.
CONSULTING ENGINEERS AND PLANNERS
205 AMITY ROAD
203 ROUTE 100, SUITE 203
SCHEMERS, NEW YORK
TEL (914) 277-5885



ENVIRONMENTAL CONSULTANT:
EVANS ASSOCIATES
ENVIRONMENTAL CONSULTING, INC.
205 Amity Road
Lewisburg, NY 12090
T: (203) 593-0990
F: (203) 593-0196

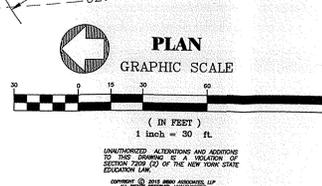
ADDITIONAL DETAILS
PROJECT NAME: SILVERMINE PRESERVE
SILVERMINE DRIVE & LOCKWOOD ROAD
TOWN OF LEWISBORO, NEW YORK

Dwg. Title:
Dwn. by:
Checked by:
Doc. ID:
DWG. No.:
EAC Proj. No.: 809
D-2
SHEET 10 OF 12

DRAINAGE STRUCTURE & PIPE SCHEDULE

FROM	TO	TYPE	RM ELEV.	SIDE INLET	INV. OUTLET	LENGTH	SLOPE	DIA.
CB #1	CL	CL	612.4	-	609.4	15'	2.7%	12" HDPE
CB #2	CL	CL	612.2	-	609.0	65'	2.8%	12" HDPE
DMH #1	DIV MH	DIV MH	612.0	-	607.5	7'	7.1%	12" HDPE
DMH #1	DIV MH	DIV MH	612.0	-	609.0	67'	3.0%	18" HDPE
ES #1	ES	ES	-	-	607.0	-	-	-
CB #3	CL	CL	618.12	-	610.12	14'	3.6%	12" HDPE
CB #4	CL	CL	618.12	-	609.62	14'	3.6%	12" HDPE
CB #4	CL	CL	618.12	-	609.62	204'	1.0%	12" HDPE
DMH #1	DIV MH	DIV MH	612.0	-	607.5	204'	1.0%	12" HDPE
CB #5	CL	CL	623.0	-	619.5	14'	3.6%	12" HDPE
CB #6	CL	CL	623.0	-	619.5	14'	3.6%	12" HDPE
CB #8	CL	CL	623.0	-	619.0	6'	16.7%	12" HDPE
CDS #2	HDS	HDS	622.0	-	616.0	17'	11.8%	12" HDPE
ES #2	ES	ES	-	-	616.0	-	-	-
OS #1	OS	OS	615.5	-	613.5	63'	4.0%	12" HDPE
ES #3	ES	ES	-	-	611.0	-	-	-
ES #4	ES	ES	-	-	625.0	-	-	-
ES #5	ES	ES	-	-	624.2	-	-	-
ES #6	ES	ES	-	-	626.0	-	-	-
ES #7	ES	ES	-	-	626.0	-	-	-
ES #8	ES	ES	-	-	619.5	-	-	-
ES #9	ES	ES	-	-	618.5	-	-	-
ES #10	ES	ES	-	-	620.5	-	-	-
ES #11	ES	ES	-	-	618.5	-	-	-
CB #7	SI	SI	617.0	616.0	612.5	69'	0.7%	12" HDPE
CB #8	SI	SI	617.0	616.0	612.0	69'	0.7%	12" HDPE
DMH #2	DMH	DMH	603.0	-	596.5	289'	5.4%	12" HDPE
YD #1	YD	YD	605.5	-	597.5	54'	1.9%	18" HDPE
DMH #2	DMH	DMH	603.0	-	596.5	54'	1.9%	18" HDPE
DMH #2	DMH	DMH	603.0	-	596.5	58'	8.6%	12" HDPE
CDS #3	HDS	HDS	595.0	-	591.5	29'	25.9%	12" HDPE
ES #14	ES	ES	-	-	584.0	-	-	-
CB #9	CL	CL	625.0	-	620.0	24'	1.2%	12" HDPE
CDS #4	HDS	HDS	628.0	-	619.75	24'	1.2%	12" HDPE
CB #9	CL	CL	625.0	-	621.5	36'	1.3%	18" HDPE
LS #1	LS	LS	-	-	621.0	-	-	-
OS #2	OS	OS	601.0	-	597.5	74'	2.0%	12" HDPE
ES #12	ES	ES	-	-	596.0	-	-	-
OS #3	OS	OS	601.0	-	597.5	29'	5.2%	12" HDPE
ES #13	ES	ES	-	-	596.0	-	-	-
OS #4	OS	OS	587.0	-	583.5	21'	2.4%	18" HDPE
ES #15	ES	ES	-	-	583.0	-	-	-

- SI = SIDE INLET CATCH BASIN
- CL = FLAT TOP CATCH BASIN
- YD = YARD DRAIN (2' x 2' INSIDE DIMENSIONS)
- DMH = DRAIN MANHOLE
- ES = END SECTION
- HDS = HYDRODYNAMIC SEPARATOR
- DIV MH = DIVERSION MANHOLE
- INF = INFILTRATION CHAMBERS
- OS = OUTLET STRUCTURE
- CB #9 R = 625.0
- 1 (LS #1) = 621.5
- 1 (CDS #4) = 620.0

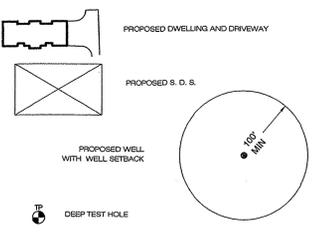


APPROVED BY RESOLUTION OF THE LEWISBORO TOWN PLANNING BOARD.

CHAIRMAN	DATE
SECRETARY	DATE
TOWN ENGINEER	DATE

APPROVED FOR FILING IN THE WESTCHESTER COUNTY CLERK'S OFFICE, DIVISION OF LAND RECORDS

ERIC MOSS, MEMBER SILVERMINE GROUP	DATE
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- SITE LEGEND**
- EXISTING 2' CONTOUR
 - EXISTING 10' CONTOUR
 - 150' WETLAND SETBACK
 - 100' STATE WETLAND ADJACENT AREA
 - WETLAND BOUNDARY (STATE AND LOCAL) (PLANNED BY T.M. HILLER ASSOCIATES) RECONFIRMED BY EVANS ASSOCIATES, 2010
 - EXISTING STONE WALL TO REMAIN
 - EXISTING STONE WALL AS PROPOSED LOT LINE
 - EXISTING STONE WALL TO BE REMOVED (WHERE FEASIBLE, RELOCATE WALL TO A NEW LOT LINE)
 - EXISTING TREE
 - EXISTING TREE TO BE REMOVED
 - LIMIT OF DISTURBANCE (TOTAL ESTIMATED DISTURBANCE = 12.9 AC ±)
 - DRAINAGE, UTILITY AND ACCESS EASEMENT

DATE: 05-09-05

- REVISIONS:**
- 06-16-11 Conservation Plan
 - 09-15-11 Review / Response
 - 10-31-11 DEC Review
 - 09-01-12 Review / Response
 - 11-10-14 Review / Response
 - 2-17-15 Review / Response
 - 7-20-15 Review / Response

ENGINEERING CONSULTANT:
BIBBO ASSOCIATES, L.L.P.
 CONSULTING ENGINEERS AND PLANNERS
 288 ROUTE 100, SUITE 803
 LEWISBORO, NEW YORK
 TEL: (847) 277-6495

ENVIRONMENTAL CONSULTANT:
EVANS ASSOCIATES
 ENVIRONMENTAL CONSULTING, INC.
 505 Amity Road
 P.O. Box 100
 T. (203) 393-0890
 F. (203) 393-0196

DWG. TITLE:
CONSTRUCTION PLAN II
 with 3-way stop intersection

PROJECT NAME:
 SILVERMINE PRESERVE
 SILVERMINE DRIVE & LOCKWOOD ROAD
 TOWN OF LEWISBORO, NEW YORK

Dwn. by:
 Checked by:
 Doc. ID:
 EAEC Proj. No.: 809
 DWG. NO.:
CP-2
 SHEET 5 OF 12

REVISIONS:

06-16-11	Conservation Plan
09-15-11	Review / Response
10-31-11	DEC Review
09-10-12	Review / Response
11-10-14	Review / Response
2-17-15	Review / Response
7-20-15	Review / Response

APPROVED BY RESOLUTION OF THE LEWISBORO TOWN PLANNING BOARD.

CHAIRMAN _____ DATE _____

SECRETARY _____ DATE _____

TOWN ENGINEER _____ DATE _____

APPROVED FOR FILING IN THE WESTCHESTER COUNTY CLERK'S OFFICE, DIVISION OF LAND RECORDS

ERIC MOSS, MEMBER SILVERMINE GROUP _____ DATE _____

ENGINEERING CONSULTANT:

BIBBO ASSOCIATES, L.L.P.
 CONSULTING ENGINEERS AND PLANNERS
 288 ROUTE 100, SUITE 303
 LEWISBORO, NEW YORK
 TEL: (847) 277-8888

ENVIRONMENTAL CONSULTANT:

EVANS ASSOCIATES ENVIRONMENTAL CONSULTING, INC.
 205 Amity Road
 Lehigh Valley, PA 18015
 T: (203) 393-0890
 F: (203) 393-0196

ENVIRONMENTAL CONSULTANT:

CONSTRUCTION PLAN I
 with 3-way stop intersection
 PROJECT NAME: SILVERMINE PRESERVE
 SILVERMINE DRIVE & LOCKWOOD ROAD
 TOWN OF LEWISBORO, NEW YORK

Dwn. by: _____
 Checked by: _____
 Des. ID: EAEC Proj. No.: 809
 DWG. NO.: CP-1

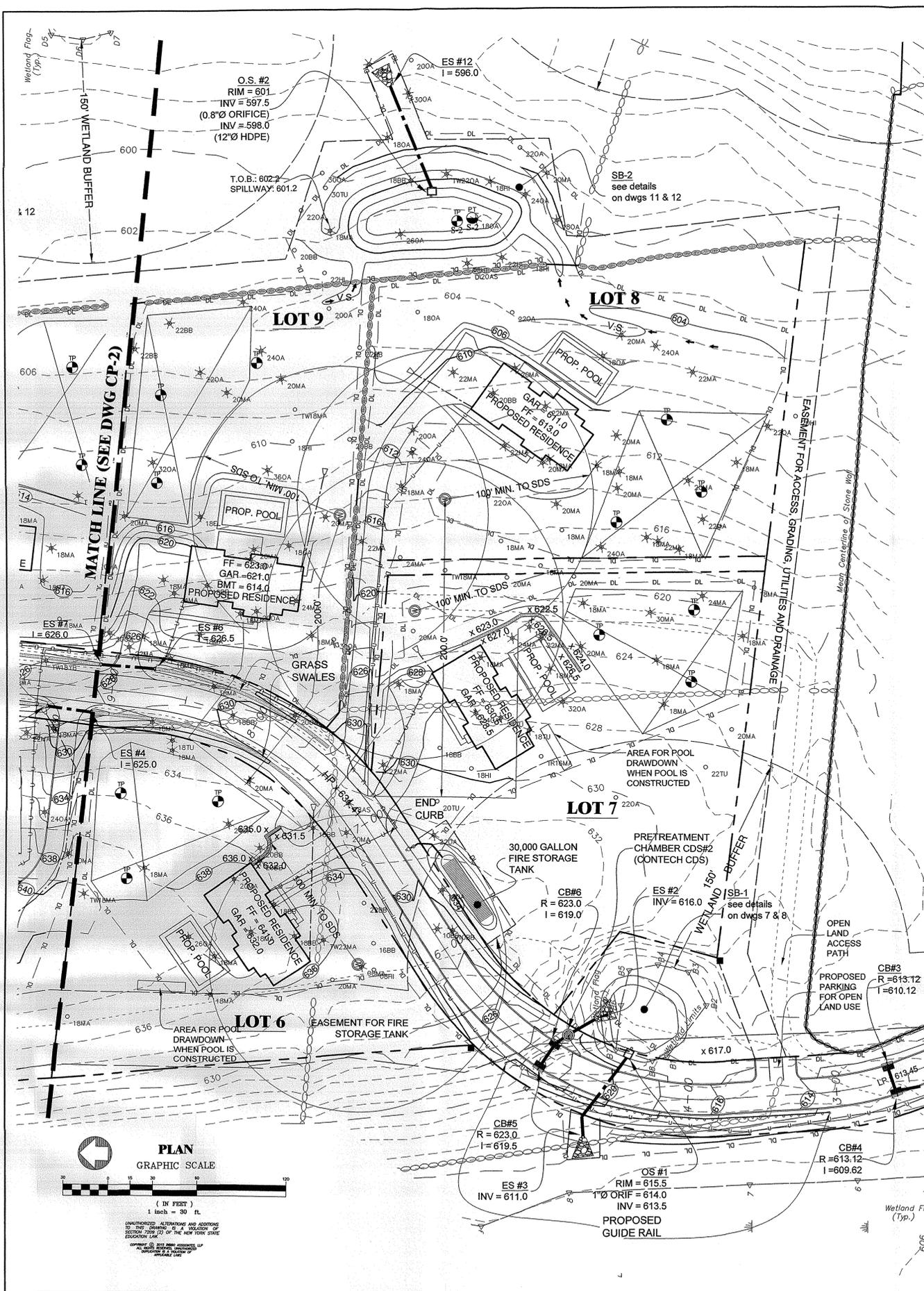
DRAINAGE STRUCTURE & PIPE SCHEDULE

FROM	TO	STRUCTURE	TYPE	RIM EL.	SIDE INLET	IN/OUT INV IN'	LENGTH	SLOPE	DI
CB #1	-	CL	CL	612.4	-	609.4	15'	2.7%	12" HDPE
CB #2	-	CL	CL	612.2	-	608.0	15'	2.7%	12" HDPE
CB #2	-	CL	CL	612.2	-	609.0	65'	2.3%	12" HDPE
DMH #1	-	DIV MH	DIV MH	612.0	-	607.5	7'	7.1%	12" HDPE
DMH #1	-	DIV MH	DIV MH	612.0	-	607.0	67'	3.0%	18" HDPE
ES #1	-	ES	ES	-	-	607.0	-	-	-
CB #3	-	CL	CL	613.12	-	610.12	14'	3.6%	12" HDPE
CB #4	-	CL	CL	613.12	-	609.62	204'	1.0%	12" HDPE
DMH #1	-	DIV MH	DIV MH	612.0	-	607.5	-	-	-
CB #5	-	CL	CL	623.0	-	619.5	14'	3.6%	12" HDPE
CB #6	-	CL	CL	623.0	-	619.0	6'	16.7%	12" HDPE
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ES #3	-	ES	ES	-	-	611.0	-	-	-
ES #4	-	ES	ES	-	-	625.0	29'	2.6%	12" HDPE
ES #5	-	ES	ES	-	-	624.2	-	-	-
ES #6	-	ES	ES	-	-	626.5	35'	14.3%	12" HDPE
ES #7	-	ES	ES	-	-	626.0	-	-	-
ES #8	-	ES	ES	-	-	619.5	42'	2.4%	12" HDPE
ES #9	-	ES	ES	-	-	618.5	-	-	-
ES #10	-	ES	ES	-	-	620.5	90'	2.2%	12" HDPE
ES #11	-	ES	ES	-	-	616.5	-	-	-
CB #7	-	SI	SI	617.0	616.0	612.5	65'	0.7%	12" HDPE
CB #8	-	SI	SI	617.0	616.0	612.0	289'	5.4%	12" HDPE
DMH #2	-	DMH	DMH	603.0	-	596.5	54'	1.9%	12" HDPE
YD #1	-	YD	YD	600.5	-	597.5	54'	1.9%	12" HDPE
DMH #2	-	DMH	DMH	603.0	-	596.5	58'	8.6%	12" HDPE
CDS #3	-	HDS	HDS	595.0	-	591.5	29'	25.9%	12" HDPE
ES #14	-	ES	ES	-	-	584.0	-	-	-
CB #9	-	CL	CL	625.0	-	620.0	24'	1.0%	12" HDPE
CDS #4	-	HDS	HDS	626.0	-	619.75	-	-	-
CB #9	-	CL	CL	625.0	-	621.5	38'	1.3%	18" HDPE
LS #1	-	LS	LS	-	-	621.0	-	-	-
OS #2	-	OS	OS	601.0	-	597.5	74'	2.0%	12" HDPE
ES #12	-	ES	ES	-	-	596.0	-	-	-
OS #3	-	OS	OS	601.0	-	597.5	29'	5.2%	12" HDPE
ES #13	-	ES	ES	-	-	596.0	-	-	-
OS #4	-	OS	OS	587.0	-	583.5	21'	2.4%	18" HDPE
ES #15	-	ES	ES	-	-	583.0	-	-	-

SI = SIDE INLET CATCH BASIN
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 YD = YARD DRAIN (2' x 2' INSIDE DIMENSIONS)
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 ES = END SECTION
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 DIV MH = DIVERSION MANHOLE
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 OS = OUTLET STRUCTURE

SITE LEGEND

- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- 150' WETLAND SETBACK
- 100' STATE WETLAND ADJACENT AREA
- WETLAND BOUNDARY (STATE AND LOCAL) (FLAGGED BY TIM MILLER ASSOCIATES) RECONFORMED BY EVANS ASSOCIATES, 2010
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- EXISTING TREE TO BE REMOVED
- LIMIT OF DISTURBANCE (TOTAL ESTIMATED DISTURBANCE = 12.9 AC ±)
- DRAINAGE, UTILITY AND ACCESS EASEMENT
- GUIDE RAIL
- V.S. = VEGETATED SWALE
- PROPOSED ROOF & FOOTINGS DRAIN
- PROPOSED CATCH BASIN & DRAINAGE PIPING
- PROPOSED STORMWATER BASIN (SEE PLAN)
- PROPOSED 2' CONTOUR
- PROPOSED 10' CONTOUR
- PROP. PROPERTY LINE
- PROPOSED DWELLING AND DRIVEWAY
- PROPOSED S. D. S.
- PROPOSED WELL WITH WELL SETBACK
- DEEP TEST HOLE
- PROPOSED UNDERGROUND UTILITY LINES



PROVIDE 4" EVERGREENS TO SCREEN THE ENTRANCE FROM EXISTING HOUSE ON THE ADJACENT PROPERTY TO THE EAST

PROPOSED BUS STOP & MAILBOX AREA

TRIM ANY LOW HANGING BRANCHES AND SHRUBS IF INCREASED SITE DISTANCE IS REQUIRED

APPROX. 240' SITE DISTANCE

APPROX. 250' SITE DISTANCE

PROVIDE STOP-SIGN
 2 FOOT HIGH STONEWALLS FOR ENTRY WAY AESTHETICS

REVISION	
06-16-11	Conservation Plan
09-01-12	Review / Response
11-10-14	Review / Response
2-17-15	Review / Response
7-20-15	Review / Response

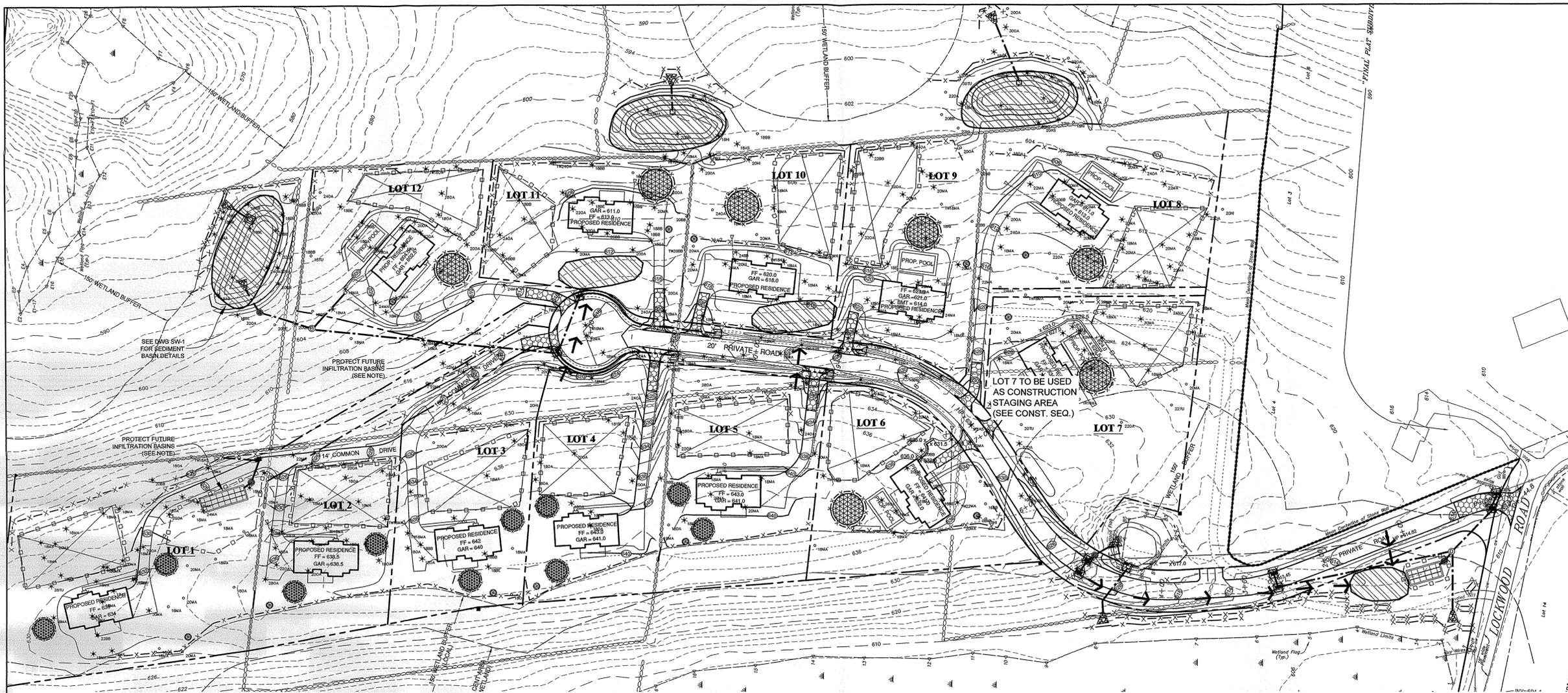
ENGINEERING CONSULTANT:
 BIBBO ASSOCIATES, L.L.P.
 CONSULTING ENGINEERS AND PLANNERS
 200 WEST 10TH STREET
 203 ROUTE 108, SUITE 203
 SOMERS, NEW YORK
 TEL: (914) 277-5805



ENVIRONMENTAL CONSULTANT:
 EVANS ASSOCIATES
 ENVIRONMENTAL CONSULTING, INC.
 205 Arny Road
 P.O. Box 100
 Somers, New York 10589
 F. (203) 393-0196
 F. (203) 393-0196

EROSION CONTROL PLAN
 PROJECT NAME: SILVERMINE PRESERVE
 SILVERMINE DRIVE & LOCKWOOD ROAD
 TOWN OF LEWISBORO, NEW YORK

DWG. TITLE:
 DWG. No.:
 Checked by:
 Doc. ID:
 EAC Proj. No.: 809
 EC-1
 SHEET 6 OF 12



GENERAL EROSION CONTROL PROGRAM

NOTE: THESE GUIDELINES ARE PROVIDED AS A GENERIC AID TO THE CONTRACTOR IN THE PROPER IMPLEMENTATION OF EROSION AND SEDIMENTATION CONTROLS. WHERE SITE-SPECIFIC MEASURES AND PROCEDURES HAVE BEEN ESTABLISHED (REFER TO "GENERALIZED CONSTRUCTION SEQUENCE" ON IPP-1 AND "SITE SPECIFIC EROSION CONTROLS AND SEQUENCING" ON EC-3) SUCH MEASURES AND PROCEDURES TAKE PRECEDENCE.

- PURPOSE**
- ALL CONSTRUCTION ACTIVITIES INVOLVING THE REMOVAL OR DEPOSITION OF SOILS ARE TO BE PROVIDED WITH APPROPRIATE PROTECTIVE MEASURES TO INHIBIT EROSION AND TO CONTAIN SEDIMENT DEPOSITION WITHIN THE AREA UNDER DEVELOPMENT. THOSE METHODS DEEMED HIGHLY EFFECTIVE ARE DESCRIBED BELOW AND SHOWN ON THIS DRAWING.
- REQUIRED PROCEDURES**
- PRIOR TO START OF SITE CONSTRUCTION, ALL CONSTRUCTION ENTRANCES TO SITE SHALL BE INSTALLED AND STABILIZED. ALL TEMPORARY SILTATION BASINS AND/OR OTHER APPROVED SEDIMENT CONTROL MEASURES SHALL BE IN PLACE WHERE MOST EFFECTIVE.
 - ALL TEMPORARY EROSION AND SEDIMENT CONTROLS SHALL REMAIN IN PLACE, MAINTAINED REGULARLY IN PROPER FUNCTIONING CONDITION, UNTIL ALL AREAS EXPOSED DURING SITE CONSTRUCTION HAVE BEEN SUITABLY STABILIZED WITH PAVEMENT, PERMANENT STRUCTURES AND/OR FINAL VEGETATION COVER.
 - CONSTRUCTION GUIDELINES
 - WHENEVER FEASIBLE, NATURAL VEGETATION SHALL BE RETAINED AND PROTECTED (BY FLAGGING OR OTHER EFFECTIVE MEANS).
 - ONLY THE SMALLEST PRACTICAL AREA OF LAND SHALL BE EXPOSED AT ANY ONE TIME DURING CONSTRUCTION.
 - SITE CONSTRUCTION ACTIVITIES SHALL START WHENEVER POSSIBLE AT THE NEAREST POINT UPSTREAM OF THESE SILT TRAPS AND PROCEED TO ACTIVITIES FURTHER UPSTREAM.
 - WHEN LAND IS EXPOSED DURING DEVELOPMENT, THE PERIOD OF EXPOSURE SHALL BE KEPT TO A MINIMUM, INSTALLING PERMANENT AND FINAL VEGETATION, PAVING, STRUCTURES, ETC., AT THE EARLIEST POSSIBLE OPPORTUNITY.
 - CONSTRUCTION EQUIPMENT SHALL NOT UNNECESSARILY CROSS LIVE STREAMS EXCEPT BY MEANS OF BRIDGES, CULVERTS OR OTHER APPROVED MEANS.
 - SEDIMENT CONTROL MEASURES INSTALLED IN LIVE STREAMS SHOULD GENERALLY BE MADE OF STONE AND MUST BE SPECIFICALLY DESIGNED, TAKING INTO ACCOUNT THE SIZE OF DRAINAGE BASIN ANTICIPATED, STREAM FLOWS AND STREAM VELOCITIES.
 - NO CONSTRUCTION ACTIVITIES WITHIN OR NEAR LIVE STREAMS (CREATION OF PONDS, REALIGNMENT OF STREAM CHANNELS, INSTALLATION OF LARGE CULVERTS, ETC.) SHALL BEGIN UNTIL APPROPRIATE MEASURES FOR TEMPORARILY DIVERTING STREAM FLOW PAST THE WORK SECTION AND REQUIRED DOWNSTREAM SEDIMENT CONTROLS ARE IN PLACE. IN GENERAL, THESE SEDIMENT CONTROLS ARE TO BE REMOVED ONLY WHEN ALL CONSTRUCTION ACTIVITY UPSTREAM HAS BEEN SATISFACTORILY COMPLETED AND THE STREAM FLOWS CLEAR.

- H. NOTES ON SITE STABILIZATION**
- ALL TOPSOIL TO BE STRIPPED FROM THE AREA BEING DEVELOPED, SHALL BE STOCKPILED NOT LESS THAN 50 FEET FROM ANY BODY OF SURFACE WATER AND SHALL BE IMMEDIATELY SEEDED WITH MANHATTAN RYE GRASS.
 - ON ALL EMBANKMENT FILL SLOPES, TOPSOIL SHALL BE STRIPPED AT LEAST FIVE (5) FEET WIDER THAN REQUIRED FOR THE EMBANKMENT TOE OF SLOPE. A PROTECTIVE BERM OF TOPSOIL SHALL BE LEFT IN THIS AREA, RUNNING PARALLEL TO THE CONTOURS FOR THE PURPOSE OF RESTRICTING DRAINAGE RUNOFF. THE TOPSOIL BERM SHALL BE SEED AS REQUIRED FOR STOCKPILES.
 - IN ADDITION TO THE ABOVE, FURTHER EROSION AND SILTATION CONTROL MEASURES INCLUDING, BUT NOT LIMITED TO SILT TRENCH SILT TRAPS, STAKED HAYBALES OR BRUSH CHECKDAMS, SHALL ALSO BE EMPLOYED WHERE APPROPRIATE.
 - ALL CUT SLOPES AND EMBANKMENTS FILLS ARE TO BE IMMEDIATELY LAID BACK AND STABILIZED AS FOLLOWS:
 - GRADED TO FINISHED SLOPES
 - SCARIFIED
 - TOPSOILED WITH NOT LESS THAN FOUR (4) INCHES OF SUITABLE TOPSOIL MATERIAL
 - SEEDING WITH FOLLOWING GRASS MIXTURE (BY WEIGHT) OR APPROVED EQUAL:
 - 45 % KENTUCKY BLUE GRASS
 - 45 % CREEPING RED FESCUE
 - 10 % PERENNIAL RYE GRASS
- SEED SHALL BE APPLIED AT THE RATE OF NOT LESS THAN TWO (2) POUNDS PER 1000 SQUARE FEET
- MULCHED WITH NOT LESS THAN ONE (1) INCH AND NOT MORE THAN THREE (3) INCHES OF STRAW AT TWO (2) TONS/ACRE AND ANCHORED IN A SUITABLE MANNER, WHERE SLOPES EXCEED 1:3, SUITABLY ANCHORED NETTING SUCH AS TENEX N30 OR APPROVED EQUAL SHALL BE UTILIZED.

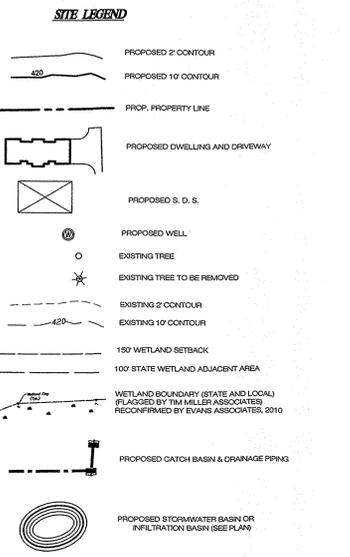
STORMWATER MAINTENANCE PROGRAM

RESPONSIBLE PARTIES

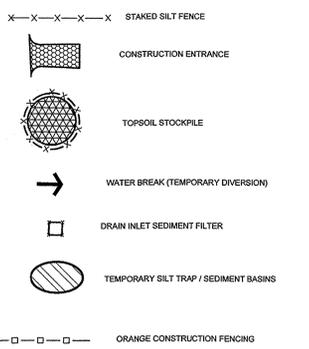
SHORT TERM / DURING CONSTRUCTION	LONG TERM / AFTER CONSTRUCTION
D. HIGGINS, S. HAFT AND E. MOSS 184 SILVERMINE GROUP 45 BENDER WAY POUND RIDGE, NEW YORK 10576	INDIVIDUAL HOMEOWNERS T.B.D. HOMEOWNERS ASSOCIATION (MAINTENANCE OF STORMWATER FACILITIES)

- SHORT TERM / CONSTRUCTION MAINTENANCE PROGRAM**
- REFERENCE IS HEREBY MADE TO DRAWINGS EC AND D-1 FOR EROSION CONTROL PROGRAM, NOTES AND DETAILS.
 - ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSPECTED ON A BI-WEEKLY BASIS AND/OR AFTER SIGNIFICANT RAINFALL EVENTS. THE FOLLOWING CHECKLIST SHALL BE USED AS A GUIDELINE FOR INSPECTION AND MAINTENANCE:
 - ALL STAKED SILT FENCE SHALL BE INSPECTED AND EXCESS SEDIMENTATION REMOVED TO STOCKPILE AREAS. AREAS OF SIGNIFICANT SEDIMENT ENTRAPMENT SHALL BE BACKED-UP WITH A ROW OF STAKED HAYBALES.
 - ALL TEMPORARY SEDIMENT TRAPS, WATER BREAKS, DRAINAGE STRUCTURES AND DETENTION BASINS SHALL BE INSPECTED WEEKLY AND AFTER HEAVY RAINS AND EXCESS SEDIMENTATION REMOVED TO STOCKPILE AREAS. DETENTION BASINS SHALL BE CLEARED TO ORIGINAL DEPTH WHEN SEDIMENT HAS ACCUMULATED UP TO WITHIN 6" OF THE LOW LEVEL OUTLET IN ORDER TO INSURE PROPER HYDRAULIC FUNCTIONING. ALL OTHER DRAINAGE STRUCTURES SHALL BE CLEAN WHEN FILLED TO 1/2 OF INTENDED CAPACITY.
 - IMMEDIATELY PRIOR TO ISSUANCE OF THE FIRST CERTIFICATE OF OCCUPANCY, ALL DRAINAGE STRUCTURES AND FACILITIES SHALL BE BROUGHT TO THEIR PROPER FUNCTION AND USE AND CLEANED TO THE LINE AND GRADES SHOWN ON THESE DRAWINGS.
 - ALL ASPECTS OF THE ROADWAY AND DRAINAGE SYSTEM SHALL BE FULLY BONDED TO ENSURE PROPER COMPLIANCE WITH THE APPROVED PLANS.

- LONG TERM ROADS AND DRAINAGE MAINTENANCE**
- AS RECOMMENDED BY BIBBO ASSOCIATES, L.L.P., THE ULTIMATE MAINTENANCE AND MAINTENANCE SCHEDULE WILL BE THE RESPONSIBILITY OF THE HOMEOWNERS ASSOCIATION.
 - IT IS RECOMMENDED THAT ALL ASPECTS OF THE DRAINAGE AND ROADWAY SYSTEM BE INSPECTED AND MAINTAINED EVERY SIX MONTHS. INSPECTIONS AND MAINTENANCE SHOULD BE SCHEDULED FOLLOWING THE WINTER MONTHS (MARCH OR APRIL) AND DURING THE FALL (OCTOBER OR NOVEMBER).
 - THE INSPECTION AND MAINTENANCE OF THE FACILITIES SHOULD INCLUDE THE FOLLOWING:
 - INSPECT CATCH BASIN SLUICES AND GRATES, DETENTION SYSTEM CAPACITIES, VELOCITY DISSIPATOR INLET OUTLETS, AND ALL ROADWAYS FOR EXCESS SEDIMENT AND DEBRIS. ANY APPRECIABLE SEDIMENT WHICH ADVERSELY AFFECTS THE FUNCTION OF A GIVEN STRUCTURE SHOULD BE REMOVED TO AN APPROVED DISPOSAL AREA FOR POSSIBLE RECLAMATION. SAID INSPECTIONS AND PROPOSED MAINTENANCE WORK SHOULD BE MADE IN THE PRESENCE AND IN CONSULTATION WITH THE TOWN ENGINEER. ANY NOTED AREAS OF CHRONIC SEDIMENTATION OR EROSION SHALL BE BROUGHT TO THE ATTENTION OF THE TOWN ENGINEER AND DESIGN ENGINEER FOR A LONG TERM DESIGN SOLUTION.
 - DETENTION AREA PLANTINGS SHALL BE INSPECTED ON A YEARLY BASIS (DURING THE SPRING GROWING SEASON) IN THE PRESENCE OF THE TOWN ENGINEER. THE PLANT HEALTH AND MORTALITY RATE SHALL BE CLOSELY MONITORED AND PLANTING SHOULD BE REPLACED AND/OR SUPPLEMENTED AS NECESSARY.



EROSION CONTROL LEGEND



NOTE: AREAS DESIGNATED FOR SEWAGE TREATMENT AND STORMWATER INFILTRATION ARE TO BE PROTECTED FROM CONSTRUCTION TRAFFIC

APPROVED BY RESOLUTION OF THE LEWISBORO TOWN PLANNING BOARD.

CHAIRMAN	DATE
SECRETARY	DATE
TOWN ENGINEER	DATE

APPROVED FOR FILING IN THE WESTCHESTER COUNTY CLERK'S OFFICE, DIVISION OF LAND RECORDS

ERIC MOSS, MEMBER SILVERMINE GROUP	DATE
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APPROVED BY RESOLUTION OF THE LEWISBORO TOWN PLANNING BOARD.

CHAIRMAN _____ DATE _____

SECRETARY _____ DATE _____

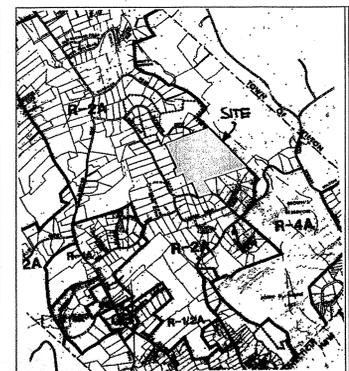
TOWN ENGINEER _____ DATE _____

APPROVED FOR FILING IN THE WESTCHESTER COUNTY CLERK'S OFFICE, DIVISION OF LAND RECORDS

ERIC MOSS, MEMBER SILVERMINE GROUP _____ DATE _____

SITE DATA

- TOTAL AREA OF PARCEL: 55.9 Ac ±
- OWNER: RIDGEVIEW DESIGNER BUILDERS & D. HIGGINS, S. HAFT AND E. MOSS 45 BENDER WAY POUND RIDGE, NEW YORK 10576
- APPLICANT: D. HIGGINS, S. HAFT AND E. MOSS aka SILVERMINE GROUP 45 BENDER WAY POUND RIDGE, NEW YORK 10576
- ZONING DISTRICT: R-2A RESIDENTIAL
- TAX I.D. #: SHEET 48, BLOCK 10057, LOT 15
- SURVEYOR: DONNELLY LAND SURVEYING 1929 COMMERCE STREET YORKTOWN HEIGHTS, N.Y.
- SURVEY LAST UPDATE: NOV, 2003



The freshwater boundary as represented on these plans accurately depicts the limits of Freshwater Wetland F-1 as delineated by Evans Associates Environmental Consulting Inc. on December 2, 2010

DEC Staff: *[Signature]* Surveyor: Timothy S. Allen P.E.

Date: 1/13/2011

Wetland boundary delineations as validated by the New York State Department of Environmental Conservation remain valid for 10 years unless existing natural activities, area hydrology, or land use practices change (e.g., agriculture to residential). After 10 years the boundary must be revalidated by DEC staff. Revalidation may include a new delineation and survey of the wetland boundary.

All proposed construction, grading, filling, excavating, clearing or other regulated activity in the freshwater wetland or within 100 feet of the wetland boundary as depicted on this plan requires a permit from the NYS Department of Environmental Conservation under Article 24 of the Environmental Conservation Law (Freshwater Wetlands Act) prior to commencement of work.

TREE TYP.

MA	MAPLE
BE	BEECH
BB	BLACK BIRCH
OA	OAK
TU	TULIP
AS	ASH
YB	YELLOW BIRCH
EL	ELM
HI	HICKORY

SOIL LEGEND

USDA SOIL CLASSIFICATION

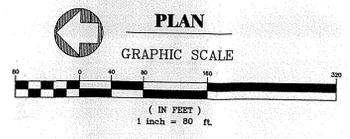
SYMBOL	DESCRIPTION	HYD. SOIL TYPE
ChB	CHARLTON	B
ChC	CHARLTON	B
ChB	CHARLTON STONY	B
ChC	CHARLTON CHATFIELD	B
ChD	CHATFIELD CHARLTON	B
HrF	HOLLIS	C
LcB	LEICESTER	C
LeB	LEICESTER	C
Pa	PALMS MUCK	D
Sh	SUN	D

SITE LEGEND

- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- LAND WITH SLOPES > 15% HAVING A MINIMUM LENGTH (DOWN-SLOPE) OF 25 FEET
- EXISTING WETLAND AS FLAGGED BY TM MILLER ASSOCIATES CONFIRMED BY EVANS ASSOCIATES
- 150' WETLAND SETBACK
- 100' STATE WETLAND ADJACENT AREA
- EX PROPERTY LINE

SHEET INDEX

SHT #	DWG #	TITLE
1	EX-1	EXISTING CONDITIONS
2	PP-1	PRELIMINARY PLAT
3	ZON	ZONING CONFORMANCE
4	CP-1	CONSTRUCTION PLAN I
5	CP-2	CONSTRUCTION PLAN II
6	EC-1	EROSION CONTROL PLAN
7	PH-1	PHASING PLAN
8	RP-1	PROFILES AND DETAILS
9	D-1	MISCELLANEOUS DETAILS
10	D-2	ADDITIONAL DETAILS
11	SW-1	STORMWATER MANAGEMENT
12	SW-2	STORMWATER MANAGEMENT
	MP-1	OVERALL WETLAND IMPACT & MITIGATION PLAN
	MP-2	MITIGATION PLANTING PLAN
	MP-3	MITIGATION PLANTING PLAN



UNAUTHORIZED ALTERATIONS AND ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 2005 (2) OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW.

EVANS ASSOCIATES ENVIRONMENTAL CONSULTING, INC. 205 Amity Road, West Nyack, NY 10994-1000 T: (203) 393-0690 F: (203) 393-0196

DATE: 05-09-05

REVISION

06-16-11	Conservation Plan
09-01-12	Review / Response
11-10-14	Review / Response
2-17-15	Review / Response
7-20-15	Review / Response

ENGINEERING CONSULTANT:

BIBBO ASSOCIATES, L.L.P.
 200 WEST 10TH STREET
 SOMERS, NEW YORK 10589
 TEL: (914) 277-9805



ENVIRONMENTAL CONSULTANT:

EVANS ASSOCIATES ENVIRONMENTAL CONSULTING, INC.
 205 Amity Road, West Nyack, NY 10994-1000
 T: (203) 393-0690 F: (203) 393-0196



DWG. TITLE: EXISTING CONDITIONS MAP CONSERVATION SUBDIVISION

PROJECT NAME: SILVERMINE PRESERVE SILVERMINE DRIVE & LOCKWOOD ROAD TOWN OF LEWISBORO, NEW YORK

Dwn. by: _____
 Checked by: _____
 Doc. ID: _____
 EAEC Proj. No.: 809

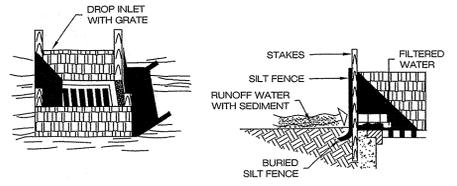
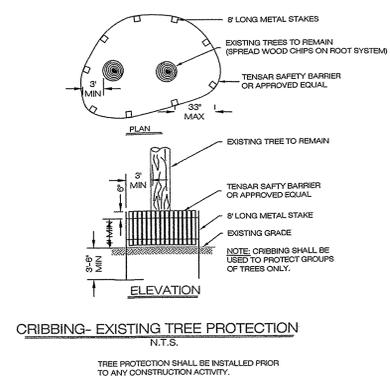
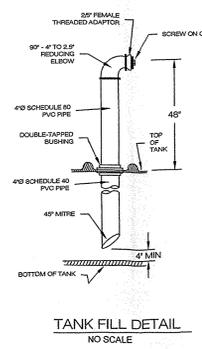
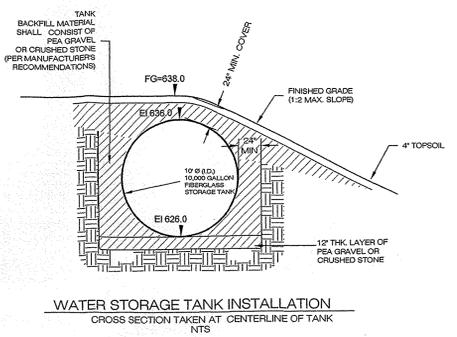
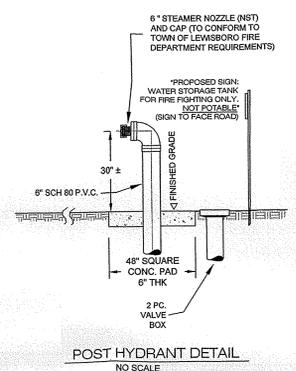
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SHEET 1 OF 12

REVISION

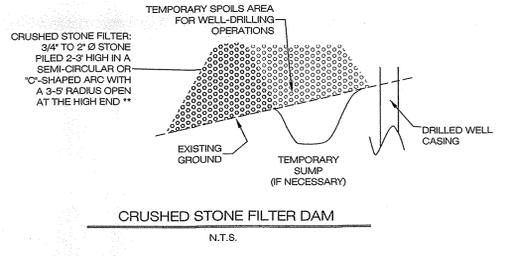
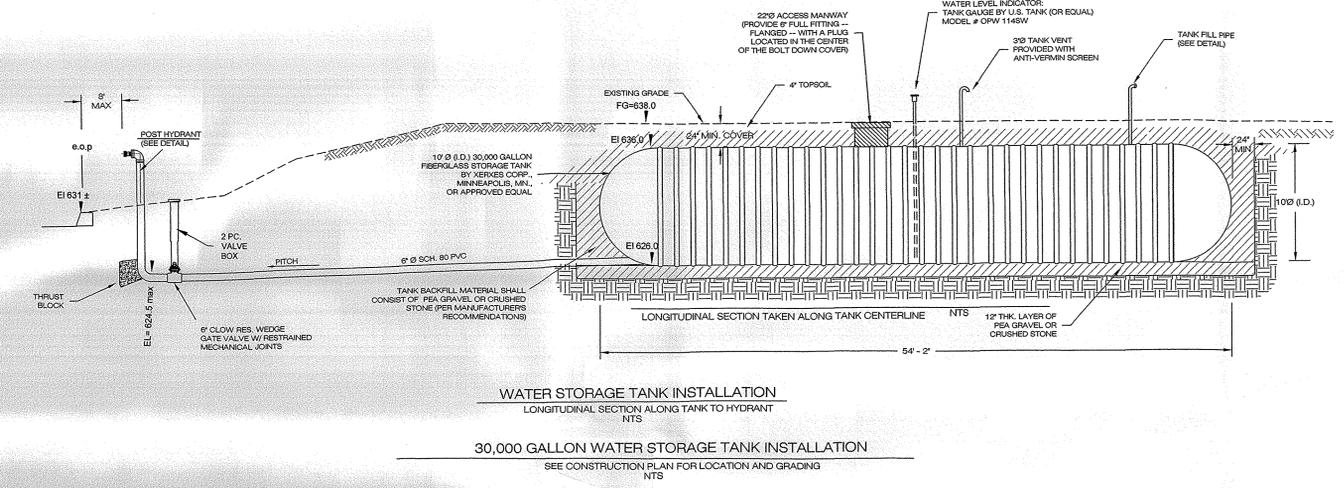
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CHAIRMAN	DATE
SECRETARY	DATE
TOWN ENGINEER	DATE
APPROVED FOR FILING IN THE WESTCHESTER COUNTY CLERK'S OFFICE, DIVISION OF LAND RECORDS	
ERIC MOSS, MEMBER SILVERMINE GROUP	DATE

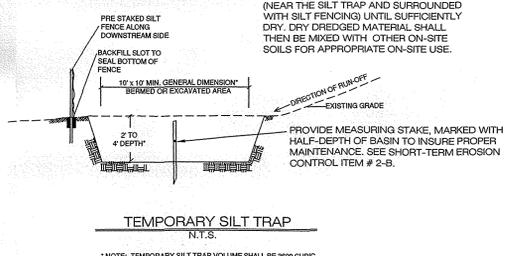
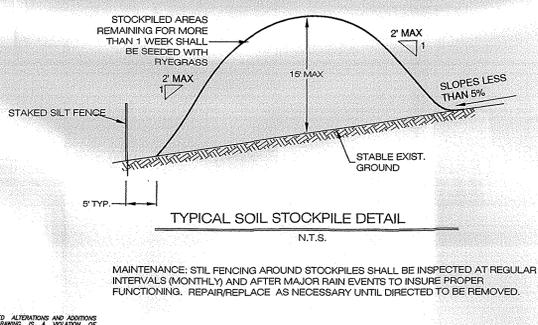
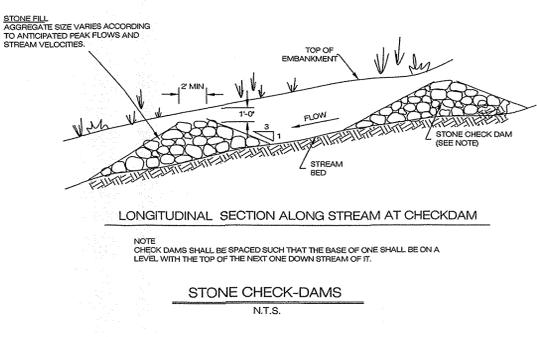
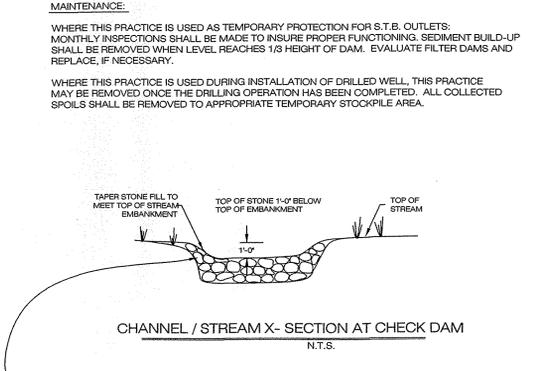
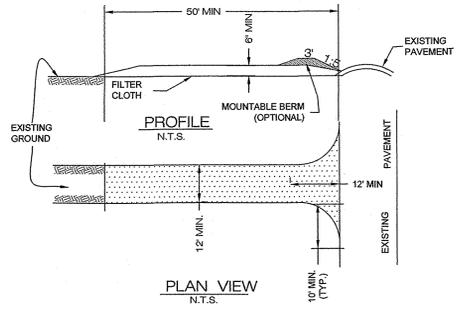
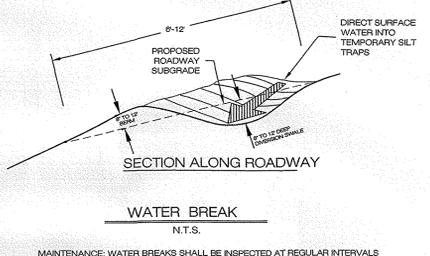
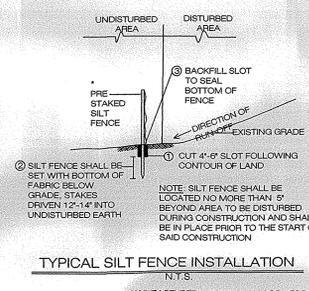


SPECIFIC APPLICATION
THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPES NO GREATER THAN 5% WHERE SHEET OR OVERLAND FLOWS (NOT EXCEEDING 0.5 cfs) ARE TYPICAL. WHERE SLOPES OF FLOWS ARE GREATER OR WHERE CONCENTRATED FLOWS ARE ANTICIPATED, USE HORIZONTAL BRACES ACROSS STAKES AND SURROUND SILT FENCE WITH CRUSHED STONE.

MAINTENANCE: DRAIN INLET SEDIMENT FILTERS SHALL BE INSPECTED AFTER MAJOR RAIN EVENTS TO INSURE PROPER FUNCTIONING. REPAIR OR REPLACE AS NECESSARY UNTIL DIRECTED TO BE REMOVED.



** IF FILTER DAM IS TO BE USED TO PROVIDE TEMPORARY PROTECTION FOR OUTLET STRUCTURES OF S.T.B.'s, STONE SHALL BE PLACED IN A 1/2" SHAPE AT LEAST 3 TO 6" FROM OUTLET STRUCTURE AND SHALL EXTEND TO THE BASIN EMBANKMENT.



- CONSTRUCTION SPECIFICATION**
1. STONE SIZE- USE 2" STONE, OR RECYCLED CONCRETE EQUIVALENT.
 2. LENGTH- NOT LESS THAN 50' (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY.)
 3. THICKNESS- NOT LESS THAN SIX (6) INCHES.
 4. WIDTH- TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
 5. FILTER CLOTH- WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
 6. SURFACE WATER- ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 6:1 SLOPES WILL BE PERMITTED.
 7. MAINTENANCE- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACTED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
 8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE & WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
 9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.
- STABILIZED CONSTRUCTION ENTRANCE DETAIL**
N.T.S.

ENGINEERING CONSULTANT:
BIBBO ASSOCIATES, L.L.P.
ENGINEERS AND PLANNERS
MULTI-PURPOSE DESIGN
283 ROUTE 100, SUITE 203
SOMERS, NEW YORK
TEL: (914) 277-8656

ENVIRONMENTAL CONSULTANT:
EVANS ASSOCIATES
ENVIRONMENTAL CONSULTING, INC.
205 Amity Road
T. (203) 393-0190
F. (203) 393-0196

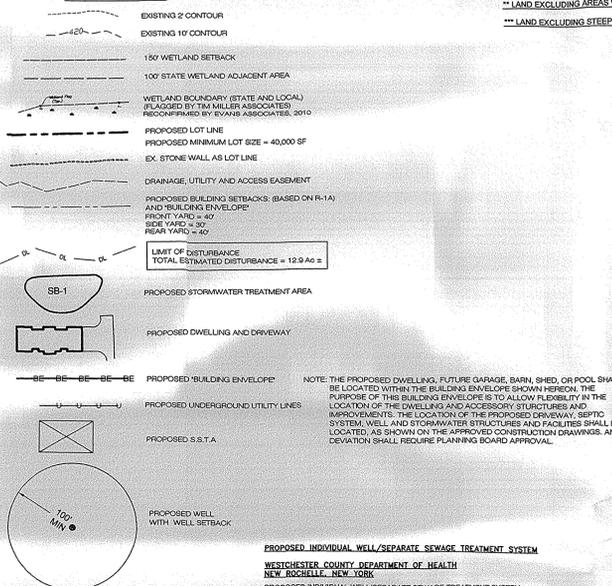
MISCELLANEOUS DETAILS
PROJECT NAME: SILVERMINE PRESERVE
SILVERMINE DRIVE & LOCKWOOD ROAD
TOWN OF LEWISBORO, NEW YORK

Dwg. by: _____
Checked by: _____
Doc. ID: _____
EAEC Proj. No.: 809
Dwg. No.: _____

ZONING CONFORMANCE: CONSERVATION SUBDIVISION

	REQUIRED	PROVIDED											
		LOT#1	LOT#2	LOT#3	LOT#4	LOT#5	LOT#6	LOT#7	LOT#8	LOT#9	LOT#10	LOT#11	LOT#12
FRONT YARD + FROM STREET CENTER LINE	65'	n/a	n/a	n/a	n/a	146.4'	76.1'	90.9'	296.4'	65.4'	65.1'	n/a	n/a
+ FROM FRONT LOT LINE	40'	60'	338.7'	211.9'	166.2'	121.4'	51.1'	65.9'	231.9'	40.4'	40.0'	68.2'	163.9'
SIDE YARD	30'	192.5'	40.8'	30.2'	30.7'	37.9'	30.9'	31.8'	30.7'	31.8'	30.7'	65.7'	48.9'
REAR YARD	40'	54.7'	67.4'	66.2'	69.8'	85.9'	50.4'	47.7'	63.0'	168.1'	126.1'	48.2'	82.7'
BUILDING COVERAGE	12%	3.2%	6.9%	6.2%	6.4%	5.9%	6.5%	4.7%	4.5%	6.5%	6.9%	7.0%	6.4%
BUILDING HEIGHT	2.5 STORIES	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
35' MAX.	<35'	<35'	<35'	<35'	<35'	<35'	<35'	<35'	<35'	<35'	<35'	<35'	<35'
LOT WIDTH	150' DIA. CIRCLE	160'	160'	160'	150'	160'	150'	150'	150'	150'	150'	150'	150'
LOT DEPTH	300' MAX.	732'	455.4'	327.1'	293'	256.2'	179.8'	219.4'	283.1'	190.4'	190.4'	323'	323'
ACTUAL LOT AREA	MIN 1 AC.	1.97 AC +/- (SEE NOTE 1)	0.86 AC +/- (SEE NOTE 1)	1.03 AC +/- (SEE NOTE 1)	1.0 AC +/- (SEE NOTE 1)	1.08 AC +/- (SEE NOTE 1)	0.99 AC +/- (SEE NOTE 1)	1.35 AC +/- (SEE NOTE 1)	1.43 AC +/- (SEE NOTE 1)	0.89 AC +/- (SEE NOTE 1)	0.92 AC +/- (SEE NOTE 1)	0.91 AC +/- (SEE NOTE 1)	1.07 AC +/- (SEE NOTE 1)
MIN LOT AREA REQ'D*	2.44 AC +/-	1.52 AC +/- (SEE NOTE 1)	1.09 AC +/- (SEE NOTE 1)	1.0 AC +/- (SEE NOTE 1)	1.0 AC +/- (SEE NOTE 1)	1.0 AC +/- (SEE NOTE 1)	0.99 AC +/- (SEE NOTE 1)	1.35 AC +/- (SEE NOTE 1)	1.43 AC +/- (SEE NOTE 1)	0.89 AC +/- (SEE NOTE 1)	0.92 AC +/- (SEE NOTE 1)	0.91 AC +/- (SEE NOTE 1)	1.07 AC +/- (SEE NOTE 1)
MIN LOT AREA PROVIDED**	1.58 AC (SEE NOTE 1)	0.82 AC +/- (SEE NOTE 1)	1.0 AC +/- (SEE NOTE 1)	1.0 AC +/- (SEE NOTE 1)	1.0 AC +/- (SEE NOTE 1)	1.0 AC +/- (SEE NOTE 1)	0.99 AC +/- (SEE NOTE 1)	1.35 AC +/- (SEE NOTE 1)	1.43 AC +/- (SEE NOTE 1)	0.89 AC +/- (SEE NOTE 1)	0.92 AC +/- (SEE NOTE 1)	0.91 AC +/- (SEE NOTE 1)	1.07 AC +/- (SEE NOTE 1)
STREET FRONTAGE	20'	20'	20'	20'	20'	20'	20'	20'	20'	20'	20'	20'	20'
CONTIGUOUS BUILDABLE AREA***	35,000 SF MIN.	68,729 SF +/-	35,840 SF +/-	39,721 SF +/-	42,362 SF +/-	44,407 SF +/-	39,881 SF +/-	57,097 SF +/-	58,315 SF +/-	41,859 SF +/-	40,075 SF +/-	40,510 SF +/-	43,680 SF +/-

SITE LEGEND



* REQUIRED LOT AREA BASED ON LOT DEPTH 500± FEET
** LAND EXCLUDING AREAS WITH LESS THAN 1/8% THE REQUIRED LOT WIDTH
*** LAND EXCLUDING STEEP SLOPES (>15%) WETLANDS PER §220-10E(2)(a) OF THE AMENDED ZONING CODE

PROPOSED INDIVIDUAL WELL/SEWAGE TREATMENT SYSTEM

WESTCHESTER COUNTY DEPARTMENT OF HEALTH
NEW ROCHELLE, NEW YORK
PROPOSED INDIVIDUAL WELL/SEWAGE TREATMENT SYSTEM
WESTCHESTER COUNTY DEPARTMENT OF HEALTH
NEW ROCHELLE, NEW YORK
APPROVED PURSUANT TO CHAPTER 87A, ARTICLE X, SECTIONS 87A-901 AND 87A-1001 AND ARTICLES 14 AND 15 OF THE WESTCHESTER COUNTY SANITARY CODE SUBJECT TO THE PROVISION OF INDIVIDUAL WELL WATER SUPPLY AND SEWAGE TREATMENT FACILITIES TO SERVE EACH HABITABLE BUILDING HEREAFTER CONSTRUCTED. THESE FACILITIES ARE TO BE INSTALLED IN ACCORDANCE WITH LAND IMPROVEMENT PLANS AND SPECIFICATIONS APPROVED BY AND FILED IN THIS OFFICE PRIOR TO THE CONSTRUCTION OF SUCH BUILDING.
EACH PURCHASER OF PROPERTY SHOWN HEREON SHALL BE FURNISHED A TRUE COPY OF THIS PLAN SHOWING THIS ENDORSEMENT, ANY EASEMENTS, CHANGES, ADDITIONS OR ALTERATIONS OF ANY KIND, EXCEPT THE ADDITION OR SIGNATURES OF OTHER APPROVING AUTHORITY AND THE DATE THEREOF MADE ON THIS PLAN AFTER THIS APPROVAL, SHALL INVALIDATE THIS APPROVAL.
APPROVED BY THE ASSISTANT COMMISSIONER OF HEALTH ON BEHALF OF THE DEPARTMENT OF HEALTH

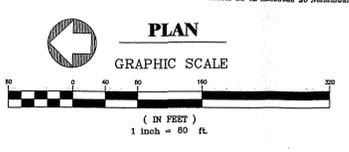
APPROVED BY RESOLUTION OF THE LEWISBORO TOWN PLANNING BOARD:
CHAIRMAN: DATE:
SECRETARY: DATE:
APPROVED FOR FILING IN THE WESTCHESTER COUNTY CLERK'S OFFICE, DIVISION OF LAND RECORDS
ERIC MOSS, MEMBER SILVERMINE GROUP DATE:

- NOTES:
- THERE SHALL BE NO FURTHER SUBDIVISION OF THE LOTS SHOWN ON THIS PLAN.
 - THE DRAINAGE EASEMENTS (OR THE DRAINAGE DISCHARGE POINTS) SHOWN HEREON ESTABLISH THE PERPETUAL RIGHT TO DISCHARGE STORMWATER RUNOFF FROM THE PRIVATE ROAD AND COMMON DRIVE AND FROM THE SURROUNDING AREA ONTO AND OVER THE AFFECTED PREMISES BY MEANS OF PIPES, CONCRETE OR OTHERS, OR A COMBINATION THEREOF, TOGETHER WITH THE RIGHT OF THE HOLDER OF THE TITLE TO THE PRIVATE ROAD OR COMMON DRIVE, OR HIS REPRESENTATIVES, TO ENTER SAID PREMISES FOR PURPOSES OF MAKING SUCH INSTALLATIONS AND DOING SUCH MAINTENANCE WORKS AS SAID HOLDER OF THE TITLE MAY DEEM NECESSARY TO ADEQUATELY DRAIN THE COMMON DRIVE AND SURROUNDING AREA.
 - ALL PHASES OF THE CONSTRUCTION OF THE NEW ROAD AND COMMON DRIVEWAY AND DRAINAGE IMPROVEMENTS MUST BE INSPECTED BY THE TOWN CONSULTING ENGINEER. THE OWNER IS RESPONSIBLE TO NOTIFY THE TOWN ENGINEER OF THE CONSTRUCTION SCHEDULE AND DATE WHEN INSPECTIONS WILL BE REQUIRED.
 - PRIOR TO THE ISSUANCE OF ANY INDIVIDUAL BUILDING PERMIT, THE NEW ROAD AND COMMON DRIVEWAY AND DRAINAGE IMPROVEMENTS SHALL BE SUBSTANTIALLY COMPLETED TO THE SATISFACTION OF THE TOWN CONSULTING ENGINEER.
 - PRIOR TO THE ISSUANCE OF ANY INDIVIDUAL CERTIFICATE OF OCCUPANCY, AN AS-BUILT PLAN OF THE COMMON DRIVEWAY AND DRAINAGE IMPROVEMENTS SHALL BE PREPARED BY A LICENSED SURVEYOR AND SUBMITTED TO THE TOWN CONSULTING ENGINEER, AND THE COMMON DRIVEWAY AND DRAINAGE IMPROVEMENTS SHALL BE DEEMED "COMPLETE" TO THE SATISFACTION OF THE TOWN CONSULTING ENGINEER.
 - ALL SITE UTILITY FACILITIES AND LINES (ELECTRIC, TELEPHONE, CABLE, SEWER AND WATER) SHALL BE INSTALLED UNDERGROUND.
 - ANY FUTURE OIL STORAGE TANK FACILITIES, IF UTILIZED, SHALL BE RESTRICTED TO THE CONFINES OF THE PRINCIPAL BUILDING BASEMENT, GARAGE OR A FOUNDATION VAULT.
 - NO WORK, INCLUDING, BUT NOT LIMITED TO, REGRADING, DISPOSITION OR EXTRACTION OF MATERIALS OR VEGETATION, OR PHYSICAL ALTERATION IN, UPON, OR WITHIN 100 FEET (AS MAY BE AMENDED FROM TIME TO TIME) OF SITE WETLANDS, WATERCOURSES OR WATER BODIES, EXCEPT AS AUTHORIZED BY A DULY ISSUED WETLANDS ACTIVITY PERMIT SHALL BE PERMITTED.
 - PRIOR TO THE COMMENCEMENT OF ANY SITE WORK OR CONSTRUCTION ACTIVITY, EROSION AND SEDIMENTATION CONTROLS SHALL BE INSTALLED AND SHALL BE SUBJECT TO CONTINUAL MAINTENANCE AND ADDITIONAL CONTROLS AS MAY BE REQUIRED BY THE BUILDING INSPECTOR, WETLANDS INSPECTOR, TOWN CONSULTING ENGINEER, OR THEIR AUTHORIZED AGENTS. A NEW YORK STATE LICENSED SURVEYOR IS REQUIRED TO LOCATE AND FIELD DELINEATE THE LIMITS OF EASEMENT AREAS AND REGULATED WETLANDS BUFFER AREAS PRIOR TO ANY RELATED SITE CLEARING, DISTURBANCE, EXCAVATION, OR CONSTRUCTION.
 - STORMWATER DRAINAGE SHALL BE CONTROLLED AT ALL TIMES DURING AND AFTER CONSTRUCTION TO PREVENT EROSION OF THE SITE AREA AND TO PREVENT SEDIMENTATION UPON AREAS ADJACENT TO THE CONSTRUCTION SITE, PARTICULARLY OFF-SITE LOCATIONS AND WETLANDS/WATERCOURSES, AND WETLAND BUFFER AREA RESOURCES. SILT FENCING, ANTI-TRACKING MEASURES AND ALL OTHER REQUIRED EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE REGULARLY INSPECTED AND MAINTAINED IN AN ORDERLY AND FUNCTIONING MANNER. ADDITIONAL SUPPLIES OF SILT FENCING SHALL BE KEPT ON THE SITE DURING CONSTRUCTION FOR USE AS NEEDED.
 - ANY SUBSTANTIAL CHANGE IN THE LOCATION OF HOUSES, DRIVEWAYS AND STORMWATER CONTROL IMPROVEMENTS OR UTILITIES AS SHOWN ON THE FINAL CONSTRUCTION PLANS SHALL REQUIRE THE PRIOR REVIEW AND APPROVAL OF THE PLANNING BOARD.
 - ALL DISTURBED AREAS SHALL BE REGRADED AND COVERED WITH A MINIMUM OF FOUR (4) INCHES OF TOPSOIL, THEN SEEDED OR PLANTED WITH TREES, SHRUBS OR OTHER PERENNIAL GRASS/COVERS. REGRADED AREAS SHALL NOT EXCEED A SLOPE OF 1:2; AND SAID SLOPES SHALL BE STABILIZED UTILIZING JUTE NETTING (OR EQUIVALENT) OR SHRUB PLANTINGS.
 - REFER TO DRAWING "ZON" FOR NOTATIONS REGARDING "BUILDING ENVELOPE".
 - IT IS CURRENTLY PROPOSED THAT THE OPEN SPACE PARCEL SHALL BE OWNED IN COMMON THROUGH A HOME-OWNERS ASSOCIATION. ACCESS TO THIS OPEN SPACE WILL BE AVAILABLE TO THE PUBLIC, WITH CERTAIN RESTRICTIONS, AT LOCATIONS TO BE DETERMINED BY THE PLANNING BOARD AND DESIGNATED ON THE FINAL PLANS.
 - THE APPLICANT'S ENGINEER, TOWN ENGINEER AND TOWN HIGHWAY SUPERINTENDENT SHALL SURVEY THE EXISTING CONDITIONS OF LOCKWOOD ROAD IN THE AREA ADJACENT TO THE PROPOSED NEW ROAD ENTRANCE. THEIR COMMENTS / RECOMMENDATIONS SHALL BE REVIEWED WITH THE PLANNING BOARD AND, IF REQUIRED BY THE BOARD, NOTATIONS SHALL BE PLACED ON THE FINAL CONSTRUCTION PLANS REGARDING ANY NECESSARY IMPROVEMENTS TO THIS AREA.

SPECIAL NOTES:

- AS THE PROPOSED ROAD IS TO BE PRIVATELY OWNED AND MAINTAINED, OPEN DEVELOPMENT AREA APPROVAL OF THE TOWN BOARD IS REQUIRED.
- IN ORDER THAT CERTAIN LOTS (1, 2, 3, 6, 9, 10 & 11) PRESERVE EXISTING STONE WALLS AS LOT LINES, APPROVAL FROM THE TOWN BOARD IS ALSO REQUIRED FOR VARIANCE FROM THE DIMENSIONAL REQUIREMENTS OF § 200-88 AND § 200-89 (REGS) OF THE TOWN CODE. REFER TO DRAWING "ZON" FOR SPECIFIC INSTANCES WHERE APPROVAL IS REQUIRED.
- DURING CONSTRUCTION, SOME EXISTING STONE WALLS WILL BE REMOVED TO MAKE WAY FOR THE PROPOSED SITE IMPROVEMENTS. STONE FROM THESE WALLS SHALL BE RELOCATED ALONG NEW LOT LINES. ALL EXISTING STONE WALLS SHALL BE PRESERVED AS LOT LINES WHERE INDICATED ON THIS PLAN.

AREA IN LOTS	13.55 Ac
AREA IN ROADS	1.55 Ac
AREA IN OPEN SPACE	40.80 Ac
TOTAL AREA OF PROPERTY	55.90 Ac



The freshwater boundary as represented on these plans accurately depicts the limits of Freshwater Wetland P-1 as delineated by Evans Associates Environmental Consulting Inc. on December 2, 2010
DEC Staff: *[Signature]*
Date: 1/3/2011
Surveyor: Timothy S. Allen P.E.
SEAL: *[Signature]*
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DATE: 05-09-05

REVISION

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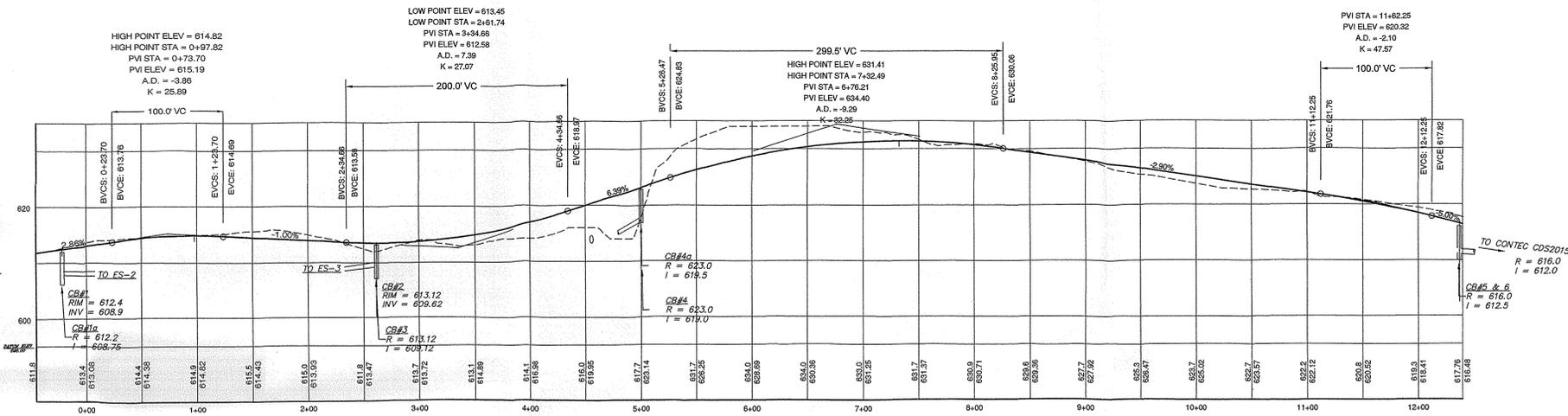
ENGINEERING CONSULTANT:
BIBBO ASSOCIATES, L.L.P.
CONSULTING ENGINEERS AND PLANNERS
225 ROUTE 100, SUITE 203
SOMERS, NEW YORK
TEL: (914) 277-5805

ENVIRONMENTAL CONSULTANT:
EVANS ASSOCIATES
ENVIRONMENTAL CONSULTING, INC.
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Somers, NY 10589
T: (203) 393-0690
F: (203) 393-0196

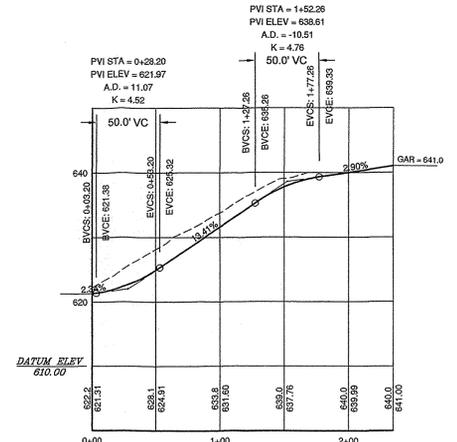
DWG. TITLE:
**PRELIMINARY PLAN
CONSERVATION SUBDIVISION**
PROJECT NAME:
SILVERMINE PRESERVE
SILVERMINE DRIVE & LOCKWOOD ROAD
TOWN OF LEWISBORO, NEW YORK

Dwn. by:
Checked by:
Doc. ID:
EAEC Proj. No.: 809
DWG. NO.:
PP-1
SHEET 2 OF 12

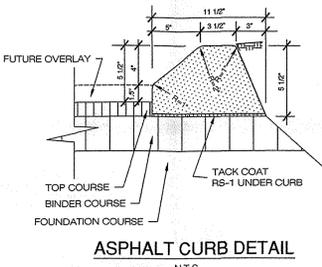
REVISION	
06-16-11	Conservation Plan
09-01-12	Review / Response
11-10-14	Review / Response
2-17-15	Review / Response
7-20-15	Review / Response



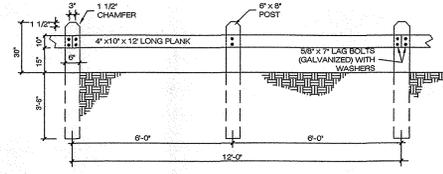
ROAD PROFILE
SCALE HORIZONTAL: 1" = 50'
VERTICAL: 1" = 10'



LOT 4 PROFILE
SCALE HORIZONTAL: 1" = 50'
VERTICAL: 1" = 10'

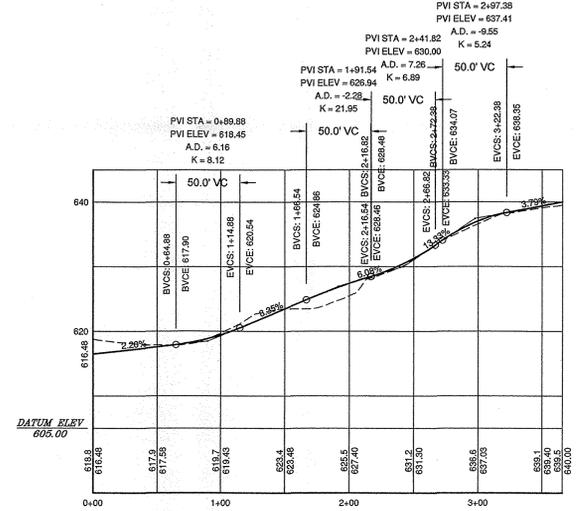


ASPHALT CURB DETAIL
N.T.S.

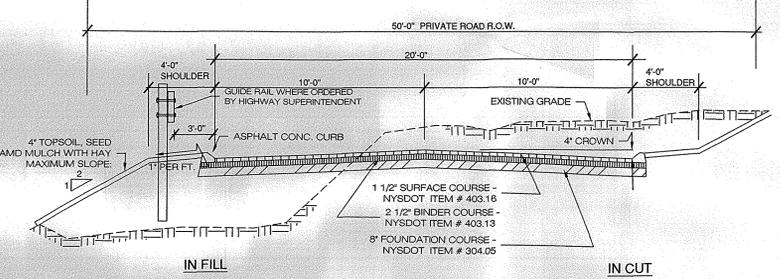


TIMBER GUIDE RAIL
N.T.S.

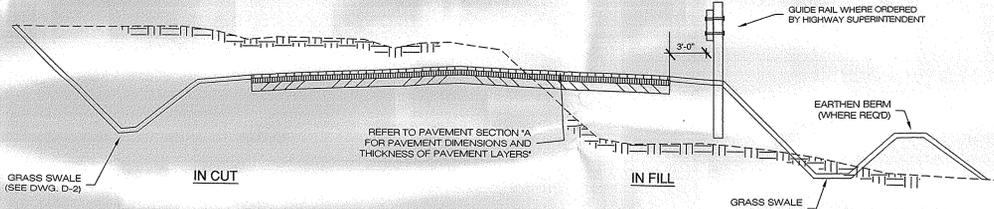
- SEE PLAN FOR PROPOSED LOCATION
- POSTS AND PLANKS TO BE "KOSMOS" PRESSURE-TREATED HEMLOCK OR SOUTHERN YELLOW PINE.



COMMON DRIVE TO LOT 3 PROFILE
SCALE HORIZONTAL: 1" = 50'
VERTICAL: 1" = 10'



PRIVATE ROAD PAVEMENT SECTION "B"
CROWN WITH CURBING BOTH SIDES OF ROAD
N.T.S.

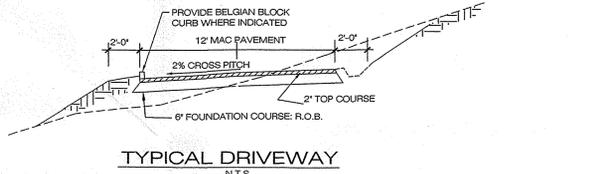


PRIVATE ROAD PAVEMENT SECTION "C"
CROWN WITH SWALES ON BOTH SIDES
(NO CURB)
N.T.S.

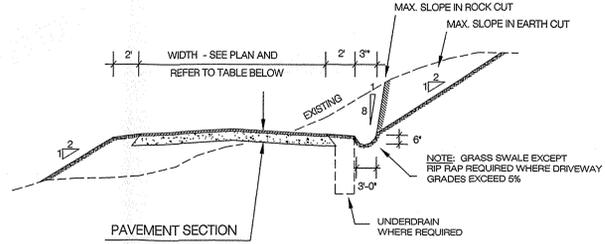
PAVEMENT NOTES:

1. ALL ITEMS MUST CONFORM TO N.Y.D.S.D.O.T. SPECIFICATIONS.

2. MAIN ROAD STA. START	MAIN ROAD STA. END	APPLY SECTION
0+37	6+80	"B"
6+80	END	"C"



TYPICAL DRIVEWAY
N.T.S.



PAVEMENT SECTION

NO. OF LOTS SERVED	WIDTH	PAVING SECTION
1	12'	2" TOP, 6" R.O.B.
2	14'	1 1/2" TOP, 2 1/2" BINDER, 6" R.O.B.
3	16'	1 1/2" TOP, 2 1/2" BINDER, 6" R.O.B.

DRIVEWAY SECTION DETAIL

NOTE: DRIVEWAY MAY BE CROSS-PITCHED. REFER TO CONSTRUCTION PLANS FOR GRADING AND DRAINAGE

APPROVED BY RESOLUTION OF THE LEWISBORO TOWN PLANNING BOARD.

CHAIRMAN	DATE
SECRETARY	DATE
TOWN ENGINEER	DATE

APPROVED FOR FILING IN THE WESTCHESTER COUNTY CLERKS OFFICE, DIVISION OF LAND RECORDS

ERIC MOSS, MEMBER SILVERMINE GROUP	DATE
------------------------------------	------

ENGINEERING CONSULTANT:
BIBBO ASSOCIATES, L.L.P.
CONSULTING ENGINEERS AND PLANNERS
286 ROUTE 106, SUITE 203
SOMERS, NEW YORK
TEL: (914) 277-8866



TIMOTHY S. ALLEN, P.E.

ENVIRONMENTAL CONSULTANT:
EVANS ASSOCIATES
ENVIRONMENTAL CONSULTING, INC.
205 Army Road
Lewisboro, NY 10834
P: (203) 393-0190
F: (203) 393-0196

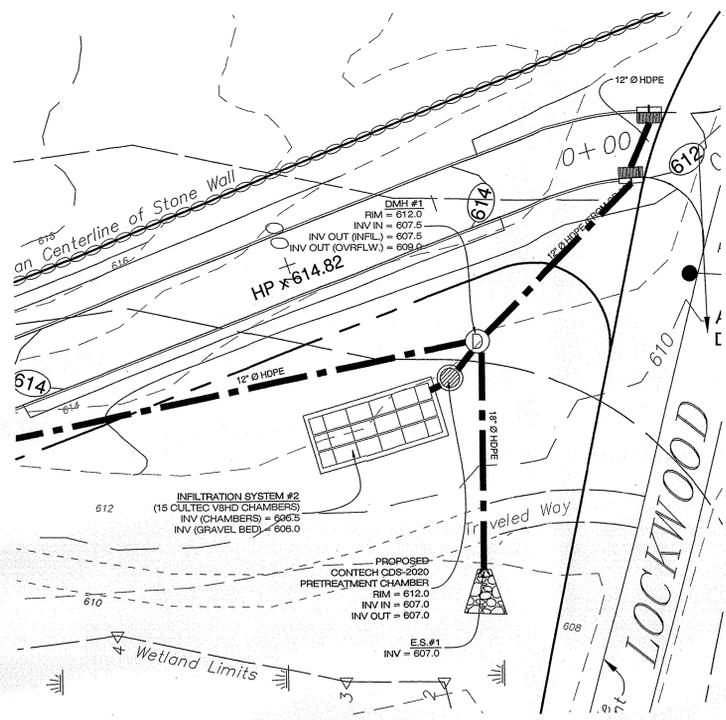


DWG. TITLE:
PROFILES AND DETAILS
PROJECT NAME:
SILVERMINE PRESERVE
SILVERMINE DRIVE & LOCKWOOD ROAD
TOWN OF LEWISBORO, NEW YORK

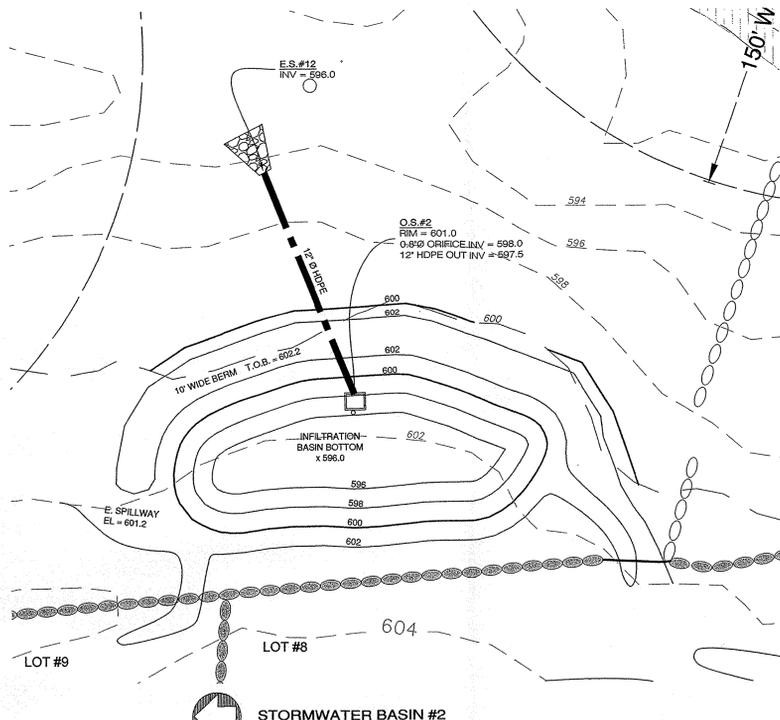
Dwn. by:
Checked by:
Doc. ID:
EAEC Proj. No.: 809
DWG. NO.:

REVISION

05-16-11	Conservation Plan
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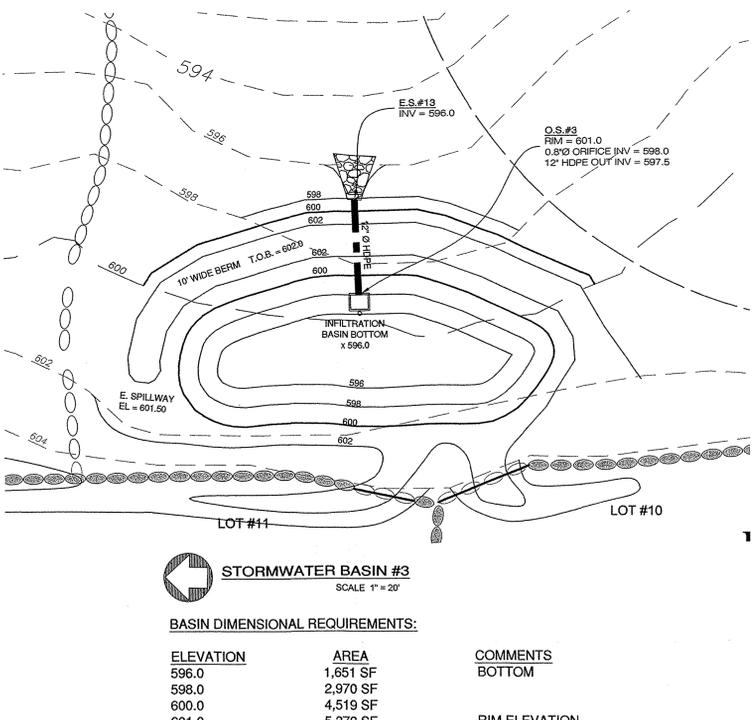
INFILTRATION SYSTEM #2
SCALE 1" = 20'



STORMWATER BASIN #2
SCALE 1" = 20'

BASIN DIMENSIONAL REQUIREMENTS:

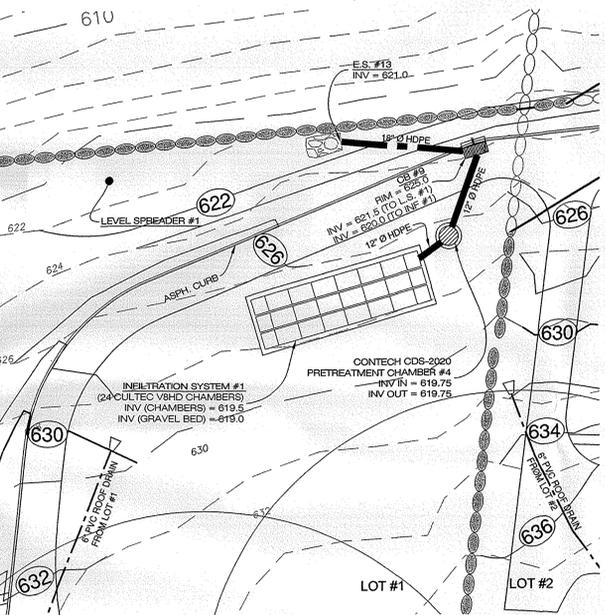
ELEVATION	AREA	COMMENTS
596.0	1,651 SF	BOTTOM
598.0	2,970 SF	
600.0	4,519 SF	
601.0	5,378 SF	RIM ELEVATION
602.0	6,294 SF	



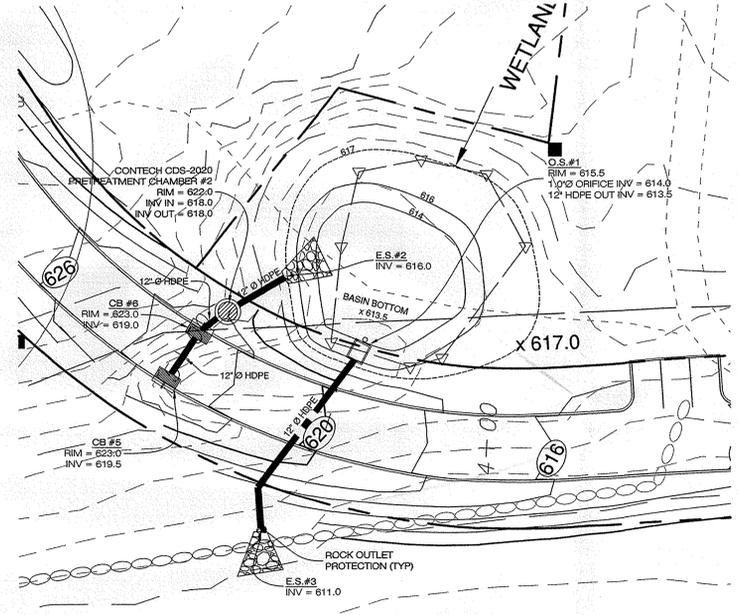
STORMWATER BASIN #3
SCALE 1" = 20'

BASIN DIMENSIONAL REQUIREMENTS:

ELEVATION	AREA	COMMENTS
596.0	1,651 SF	BOTTOM
598.0	2,970 SF	
600.0	4,519 SF	
601.0	5,378 SF	RIM ELEVATION
602.0	6,294 SF	BERM ELEVATION



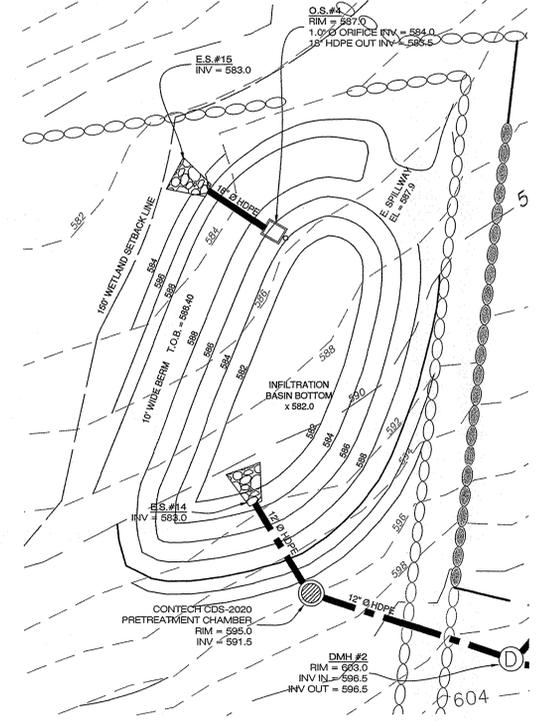
INFILTRATION SYSTEM #1
SCALE 1" = 20'



STORMWATER BASIN #1 (EXISTING WETLAND)
SCALE 1" = 20'

BASIN DIMENSIONAL REQUIREMENTS:

ELEVATION	AREA	COMMENTS
613.5	218 SF	BOTTOM OF BASIN
614.0	1,670 SF	
616.0	2,673 SF	
617.0	4,584 SF	



STORMWATER BASIN #4
SCALE 1" = 20'

BASIN DIMENSIONAL REQUIREMENTS:

ELEVATION	AREA	COMMENTS
582.0	2,062 SF	BOTTOM
584.0	3,442 SF	
586.0	5,063 SF	
587.0	5,959 SF	RIM ELEVATION
588.0	6,912 SF	

APPROVED BY RESOLUTION OF THE LEWISBORO TOWN PLANNING BOARD.

CHAIRMAN	DATE
SECRETARY	DATE
TOWN ENGINEER	DATE

APPROVED FOR FILING IN THE WESTCHESTER COUNTY CLERK'S OFFICE, DIVISION OF LAND RECORDS

ERIC MOSS, MEMBER	DATE
SILVERMINE GROUP	

ENGINEERING CONSULTANT:
BIBBO ASSOCIATES, L.L.P.
ENGINEERS AND PLANNERS
MILL POND OFFICES
283 ROUTE 100, SUITE 203
SOMERS, NEW YORK
TEL: (914) 277-9888



ENVIRONMENTAL CONSULTANT:
EVANS ASSOCIATES
ENVIRONMENTAL CONSULTING, INC.
205 Amity Road
P.O. Box 108
Leicester, NY 14645
Tel: (203) 393-0890
Fax: (203) 393-0196

STORMWATER MANAGEMENT
PROJECT NAME: SILVERMINE PRESERVE
SILVERMINE DRIVE & LOCKWOOD ROAD
TOWN OF LEWISBORO, NEW YORK

Dwn. by:
Checked by:
Doc. ID:
EAEC Proj. No.: 809
DWG. NO.:

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UNDESIGNED ALTERATIONS AND ADDITIONS BY THE USER ARE A VIOLATION OF SECTION 203 (3) OF THE NEW YORK STATE EGRESS LAW
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Application No.: 50-15 WP
Fee: 0 Date: 8/19/15

TOWN OF LEWISBORO
WETLAND PERMIT APPLICATION

Town Offices @ Orchard Square, Suite L (Lower Level), 20 North Salem Road, Cross River, NY 10518
Phone: (914) 763-3060
Fax: (914) 533-0097

Project Information

Project Address: 76 TWIN LAKES Rd. So. SALEM N.Y.
Sheet: 34B Block: 11831 Lot(s): 41

Project Description (identify the improvements proposed within the wetland/wetland buffer and the approximate amount of wetland/wetland buffer disturbance): DRY Hydrant Installation
DRAWINGS + SPECS ATTACHED

Owner's Information

Owner's Name: Nancy + Paul Sutera Phone: 763-5101
Owner's Address: 76 TWIN LAKES Rd. So. SALEM Email: OSEA/eta 200 @ opt online. net

Applicant's Information (if different)

Applicant's Name: South Salem Fire District Phone: 914 588 8270
Applicant's Address: 1190 Rt 35 So. SALEM NY 10590 Email: _____

Authorized Agent's Information (if applicable)

Agent's Name: MICHAEL J. LOMBARDI Phone: 914 588 8270
Agent's Address: 1190 Rt 35 So. SALEM NY 10590 Email: LUMBO10@optimum.net

To Be Completed By Owner/Applicant

1. What type of Wetland Permit is required? (see §217-5C and §217-5D of the Town Code)
 Administrative Planning Board
2. Is the project located within the NYCDEP Watershed? Yes No
3. Total area of proposed disturbance: < 5,000 s.f. 5,000 s.f. - < 1 acre ≥ 1 acre
4. Does the proposed action require any other permits/approvals from other agencies/departments? (Planning Board, Town Board, Zoning Board of Appeals, Building Department, Town Highway, ACARC, NYSDEC, NYCDEP, WCDOH, NYSDOT, etc): Identify all other permits/approvals required: _____

Note: Initially, all applications shall be submitted with a plan that illustrates the existing conditions and proposed improvements. Said plan must include a line which encircles the total area of proposed land disturbance and the approximate area of disturbance must be calculated (square feet). The Planning Board and/or Town Wetland Inspector may require additional materials, information, reports and plans, as determined necessary, to review and evaluate the proposed action. If the proposed action requires a Planning Board Wetland Permit, the application materials outlined under §217-7 of the Town Code must be submitted, unless waived by the Planning Board. The Planning Board may establish an initial escrow deposit to cover the cost of application/plan review and inspections conducted by the Town's consultants.

For administrative wetland permits, see attached Administrative Wetland Permit Fee Schedule.

Owner/Applicant Signature: Paul Sutera Date: 8-19-15

Applicant Michael J. Lombardi
FIRE COMMISSIONER

AFFIDAVIT OF OWNERSHIP

STATE OF New York)
COUNTY OF Westchester) ss:

Paul J. Sutera, being duly sworn, deposes and says that

she/he resides at 76 Twin Lakes Rd, So. Salem NY

in the County of: Westchester

State of: New York

And that she/he is (check one) (1) the owners, or (2) the _____ Title

of _____
name of corporation, partnership or other legal entity

which is the owner, in fee of all that certain lot, piece or parcel of land situated, lying and being in the Town of Lewisboro, New York, aforesaid and known and designated

on the Tax Map in the Town of Lewisboro as Lot Number 41

Block 11831 on sheet 34B

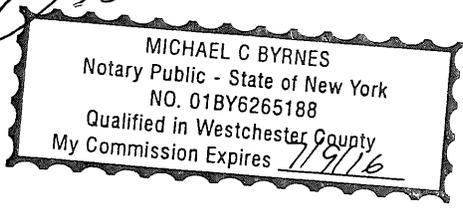
For (check one):

- SKETCH PLAN REVIEW PRELIMINARY SUBDIVISION PLAT FINAL SUBDIVISION PLAT
- SITE DEVELOPMENT PLAN SPECIAL USE PERMIT WAIVER OF SITE PLAN PROCEDURES
- WETLAND PERMIT STORMWATER PERMIT FILING WITH WESTCHESTER COUNTY CLERK

Signed Paul J. Sutera

Sworn to before me this 22 day of August, 2015

Michael C. Byrnes
Notary public (affix stamp)



TAX PAYMENT AFFIDAVIT REQUIREMENT

Under regulations adopted by the Town of Lewisboro, the Planning Board may not accept any application unless an affidavit from the Town of Lewisboro Receiver of Taxes is on file in the Planning Board office. The affidavit must show that all amounts due to the Town of Lewisboro as real estate taxes and special assessments on the total area encompassed by the application, together with all penalties and interest thereon, have been paid.

Under New York State law, the Westchester County Clerk may not accept any subdivision map for filing unless the same type of affidavit from the Town of Lewisboro Receiver of Taxes is submitted by the applicant at the time of filing.

INSTRUCTIONS

The applicant is to complete the information box below and on the opposite side and return to:
Receiver of Taxes, Town of Lewisboro, Town House, Main Street, South Salem, New York 10590

For Planning Board applications, the Receiver of Taxes will return this form and the affidavit to the Planning Board office. For filing actions with the Westchester County Clerk, Division of Land Records, the Receiver of Taxes will return this form and the affidavit to the applicant by mail if a stamped and self-addressed envelope is submitted with this form.

IF ANY TAXES ARE FOUND TO BE DUE ON THE PROPERTY RELATING TO THE APPLICATION, THEN THAT APPLICATION CAN NOT BE ACCEPTED BY THE PLANNING BOARD UNTIL THE TAXES ARE PAID.

TO BE COMPLETED BY APPLICANT

(PLEASE TYPE OR PRINT)

South Salem Fire District
name of applicant

DRY HYDRANT
project name

property description:
▶ tax sheet 34B
▶ block 11831
▶ lot 41

property assessed to:
▶ name NANCY + PAUL SUTERA
▶ address #76 TWIN LAKES ROAD
SOUTH SALEM NY 10590

application type (check one):

- SKETCH PLAN REVIEW PRELIMINARY SUBDIVISION PLAT FINAL SUBDIVISION PLAT
 SITE DEVELOPMENT PLAN SPECIAL PERMIT USE WAIVER OF SITE PLAN PROCEDURES
 WETLANDS PERMIT FILING WITH THE WESTCHESTER COUNTY CLERK

NO OUTSTANDING TAXES ARE DUE:

[Signature]
receiver of taxes

8/20/2015
date

Lewisboro Planning Board
Town of Lewisboro
P.O. Box 725
Cross River, NY 10518

Dear Neighbors,

I am writing to support the request of Mike Lombardi, our fire commissioner, that you approve our request for a dry hydrant at #76 twin lakes road, South Salem. The Sutera's have been approached to use their property and they agreed.

There have been two fires at that end of the block which is far from existing hydrants. I would ask that you schedule your review of the location as early as practical. Assuming you find the site acceptable, we would like to proceed with the project before winter. In particular, we would like the project to go before the planning board in September.

Thank you very much for your consideration.
Allan Gottlieb
secretary,
The Two Lakes Club

Dry Hydrant Construction

#76 Twin Lakes Road (Lake Oscaleta)

- 1.) All Temporary silt fencing and orange safety fencing shall be installed by the contractor prior to any excavation work. Upon conclusion of the project all such fencing shall be removed by the contractor.
- 2.) All piping, 45 degree elbows, couplings, adaptors, and under water strainers shall be schedule 40 pvc or greater. All shall be joined with appropriate under water use pvc type cement according to manufactures specifications to ensure all joints are air tight. The pvc glue must be applied and attached to the pipe/fittings and dried prior to being submerged in the water.
- 3.) The piping shall have a minimum inside diameter ID of eight (8) inches. Except for, the (8) eight inch to six (6) inch pvc adaptor, and the six 6 inch female fire department connection which will have a six 6 inch threaded plug and attaching cable at the end of the dry hydrant.
 - a. From the shoreline of the pond out to the precast concrete block anchors the dry hydrant pipe must be level not pitched.

NOTICE: All piping placed in Lake Oscaleta shall be gray in color.

- 4.) **Excavation:** Contractor shall be responsible to provide all labor, materials, equipment and services required for excavation. This shall include but is not limited to all trench work, erosion control, base materials, specified concrete installation, backfilling, removal of brush & trees from the job sight.
 - a. Contractor shall take precautions during excavation to minimize impacting the wet lands. This shall include but is not limited to sheeting, shoring, & bracing under any excavation equipment operating in the wet lands.
 - b. **Trench Depth:** Contractor will make every effort to minimize the width of the trench. The top of the eight 8 inch pvc pipe shall be 18 inches deep from grade.
 - c. Base materials under piping shall conform to the barrel of the pvc pipe. From the shoreline of the lake to the road end of the dry hydrant pipe there must be a stable and adequate sub base, a six inch bed of 3/8 cleaned gravel shall be used as a base.
- 5.) **Thrust Block:** At the 45 degree bend in the pvc pipe under the ground a concrete thrust block shall be installed. The location is indicated in drawing A-1.
 - a. **Mix Design:** Portland Type I (ASTM C 150) Class F Cement for thrust block used where indicated in drawing. 1 part -Type 1 Portland Cement/ 2 parts - fine aggregate ASTM C 33 / 3 parts - coarse aggregate with a max. size of (3/4") ASTM C 33. Concrete strength: 3,000 psi compressive strength at 28 days.

b. Concrete shall be mixed sufficiently wet to permit it to flow under the pipe forming a continuous bed. When tamping concrete care shall be taken not to disturb the grade, line of the pipe or damage the joint.

(see attached concrete thrust block table for thrust block size)

6.) **Under Water Anchors** shall consist of four pre cast concrete blocks 2) **Deep Water Anchors** 16" L X 16" W X 16" H. & 2) **Shallow Water Anchors** 24" L X 24" W X 8" H

a. **Mix Design:** 1 part - Type II Portland Cement (ASTM C 150) / 2 Parts - Sand (ASTM C 33) / 3 Parts - Gravel (ASTM C 33) Concrete strength: 3,000 psi compressive strength at 28 days.

b. **Fastening Hardware:** The 8 inch pvc pipe shall be bolted to the concrete anchor using stainless steel fastening materials. Two (2) 5/8 threaded rods embedded in the pre cast concrete block will receive one eight 8 inch pipe bracket. The bracket will be fastened to the threaded rod using one flat washer, one lock washer, and one bolt for each threaded rod. Extra rod shall be cut off three 3 inches from the bolt head.

(see attached 8 1/2" X 11" anchor detail drawing / receipts for materials used is required)

7.) **Concrete Anchor Placement:** A total of four anchors in the lake is required. #1 First Shallow Water Anchor will be placed close to the shoreline set on a gravel base. #2. Second Shallow Water Anchor in the 30 ft. range from the shore. #3 Third will be a Deep Water Anchor in the 60 ft. range. #4 Deep Water Anchor placed two feet in from the beginning of the strainer. **Adjustments in the field for the anchor placement is permitted but must be approved prior to installation.** A floating buoy/marker attached to each concrete anchor is required for boater & swimmer safety.

8.) **Dry Hydrant Placement:** The dry hydrant end at the roadway shall be 18" to 24" inches above grade. The hydrant head shall be oriented facing straight to the centerline of the roadway not at an angle. (no exceptions)

9.) **PVC Pipe Color:** Above ground pvc pipe shall be painted red with latex base outdoor paint. A yellow reflective stripe around the hydrant end for night time detection is required. The pvc pipe in the lake shall be painted gray and dried with the appropriately rated latex paint or already be gray in color prior to its installation in the lake.

10.) **Front Brace:** A front brace/collar support will be attached to the front of the dry hydrant & embedded in concrete 4 ft. deep. The contractor shall use 8 Inch sono tube and quickcrete 5000 cement. This shall be painted red using appropriate outdoor paint. (see drawing A-2 for detail)

11.) **Yellow Protective Bollards:** Six (6) Inch diameter yellow bollard guards shall be installed in the ground to protect the hydrant. Galvanized six 6 inch steel pipe filled with concrete must be primed and painted (safety) yellow use outdoor paint for galvanized application only. The posts must be embedded in four 4 feet deep holes in the ground lined with 10 inch sono tube filled with concrete. The spacing shall be four (4) feet wide from the center of the dry hydrant. Bollards shall be 36 inches in height. Rounded metal caps shall be installed on top of the posts and a horizontal brace shall be attached to the post for fire department hard suction support. The use of quickcrete 5000 is required. (see drawing A-2 for detail)

Areas in table have been derived using a water pressure of 225 psi (15.5 bars) and a soil resistance of 2000 pounds per square foot (1.0 bars). The values include a 1.5 safety factor. NFPA 24

CONCRETE THRUST BLOCKS, MINIMUM AREA OF BEARING						
Pipe Size	90° Bend		45° Bend		Tees, Plugs, Caps, & Hydrants	
	ft ²	m ²	ft ²	m ²	ft ²	m ²
4	2	0.19	2	0.19	2	0.19
6	5	0.46	3	0.28	4	0.37
8	8	0.74	5	0.46	6	0.56
10	13	1.21	7	0.65	9	0.84
12	18	1.67	10	0.93	13	1.21

CONCRETE THRUST BLOCKS, MINIMUM AMOUNT OF CONCRETE	
Size of Fitting	Cubic Yards
3"-8"	3/4
10"-12"	1 1/2

THRUST @ 225 PSI WATER PRESSURE FOR FITTINGS			
Pipe	90° Bend	45° Bend	Dead End
4	2,559	1,385	1,810
6	5,288	2,862	3,739
8	9,097	4,923	6,433
10	13,685	7,406	9,677
12	19,353	10,474	13,685

Water Pressure > 100 psi MULTIPLY Table by Ratio of Pressure ... 150 psi/100 psi = 1.5 Factor
2007 NFPA 24

Minimum Thrust Block Size

$$A_b = (h)(b) = T (S_f) / S_b$$

(h) = block height, (b) = block width

T = thrust force table,

S_f = safety factor (1.5)

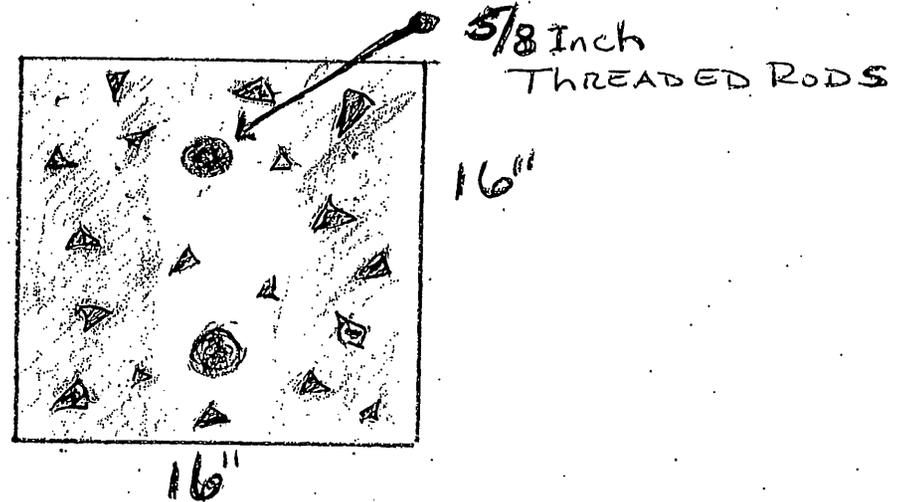
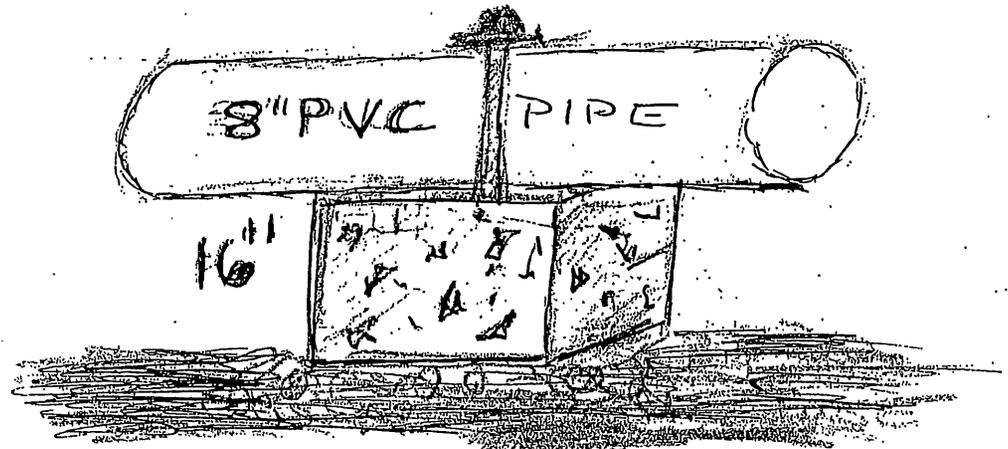
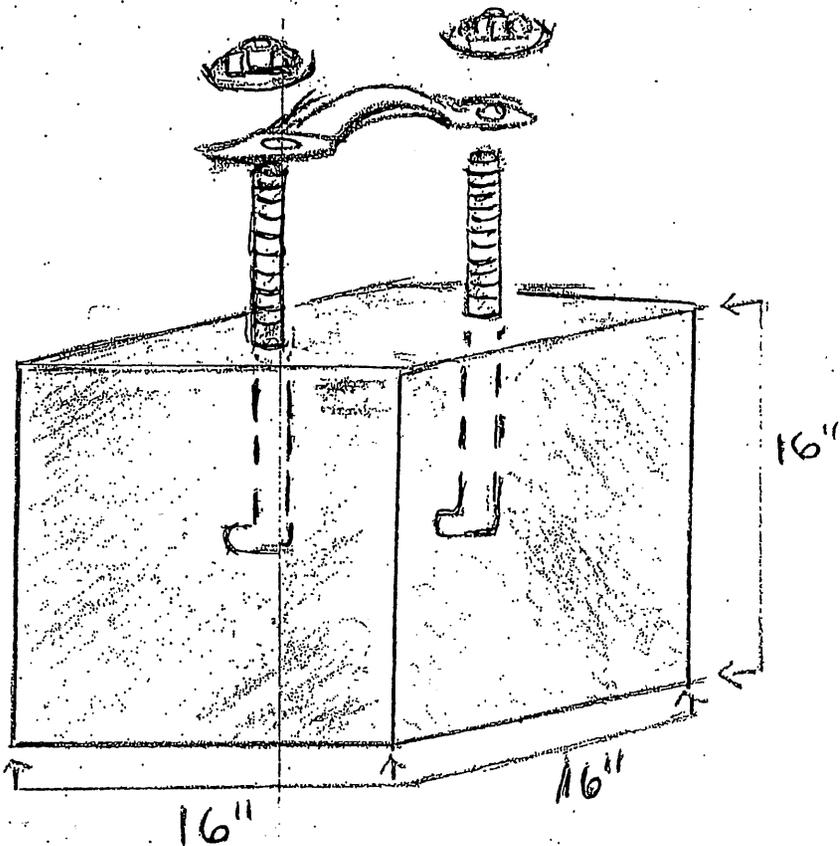
S_b = soil bearing from table

SOIL	BEARING lb/ft ²
SOFT CLAY	1,000
SAND	4,000
SAND CLAY	6,000
HARD CLAY	9,000

ROD NUMBER - DIAMETER COMBINATIONS				
Pipe Size	5/8 in.	3/4 in.	7/8 in.	1 in.
4	2	_____	_____	_____
6	2	_____	_____	_____
8	3	2	_____	_____
10	4	3	2	_____
12	6	4	3	2

Table derived using pressure of 225 psi (15.5 bars) and design stress of 25,000. 2007 NFPA 24 Table 10.8.3.1.2.2

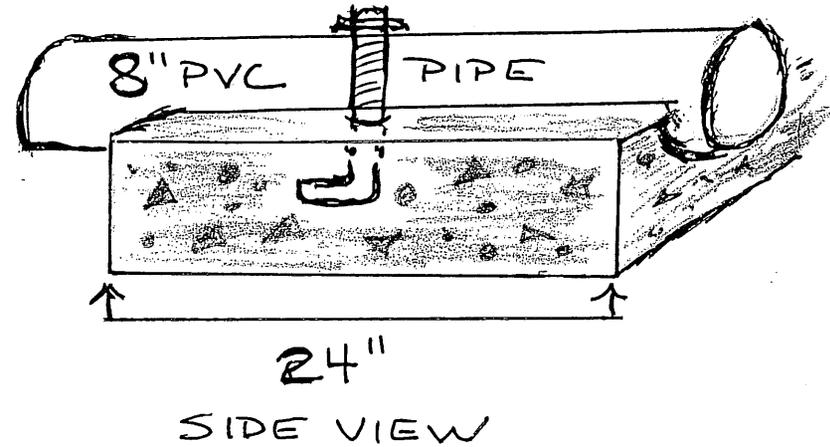
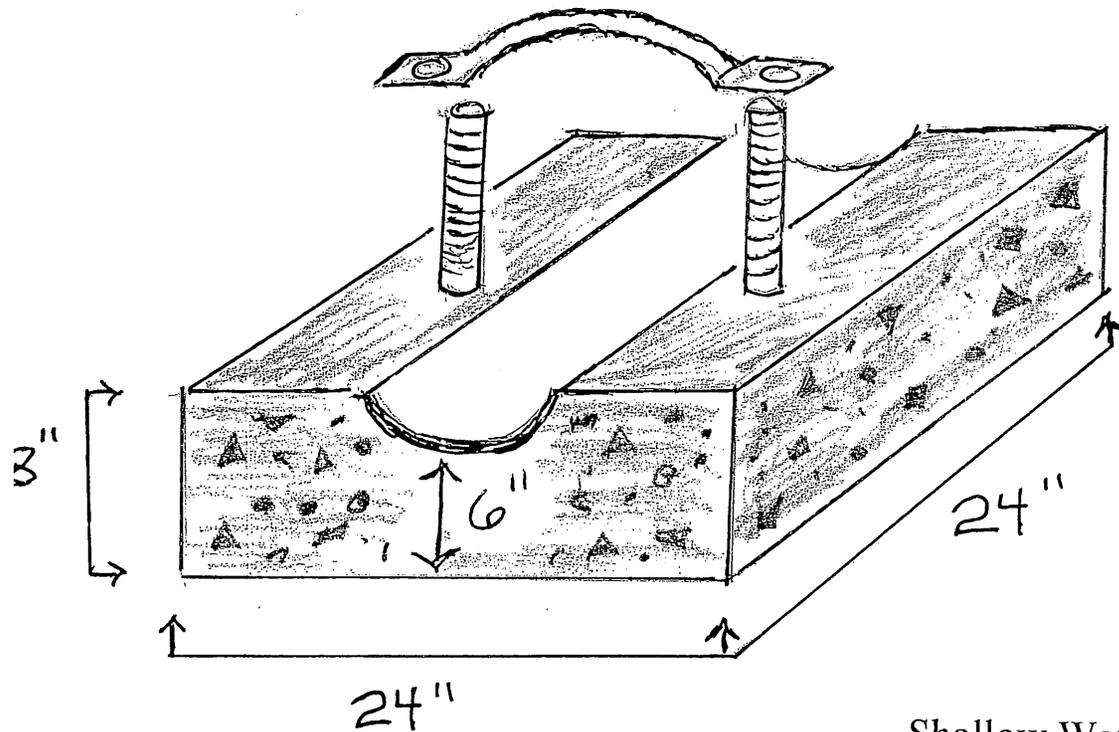
CONCRETE ANCHOR DETAIL



- (2) 5/8 Inch Threaded Rod Stainless Steel
- (2) Stainless Steel flat washers
- (2) Stainless Steel lock washers
- (2) Stainless Steel bolts
- (1) Stainless Steel bracket for 8 inch pipe

CONCRETE ANCHOR

DETAIL



Shallow Water Anchors

- (2) 5/8 Inch Threaded Rod Stainless Steel
- (2) Stainless Steel flat washers
- (2) Stainless Steel lock washers
- (2) 5/8 Inch Stainless Steel bolts
- (1) Stainless Steel bracket for 8 inch pipe

Dry Hydrant

For

South Salem Fire District

Location: #76 Twin Lakes Road (Lake Oscaleta)

South Salem NY 10590

Material List

170' 8" PVC Pipe Schedule 40 PVC

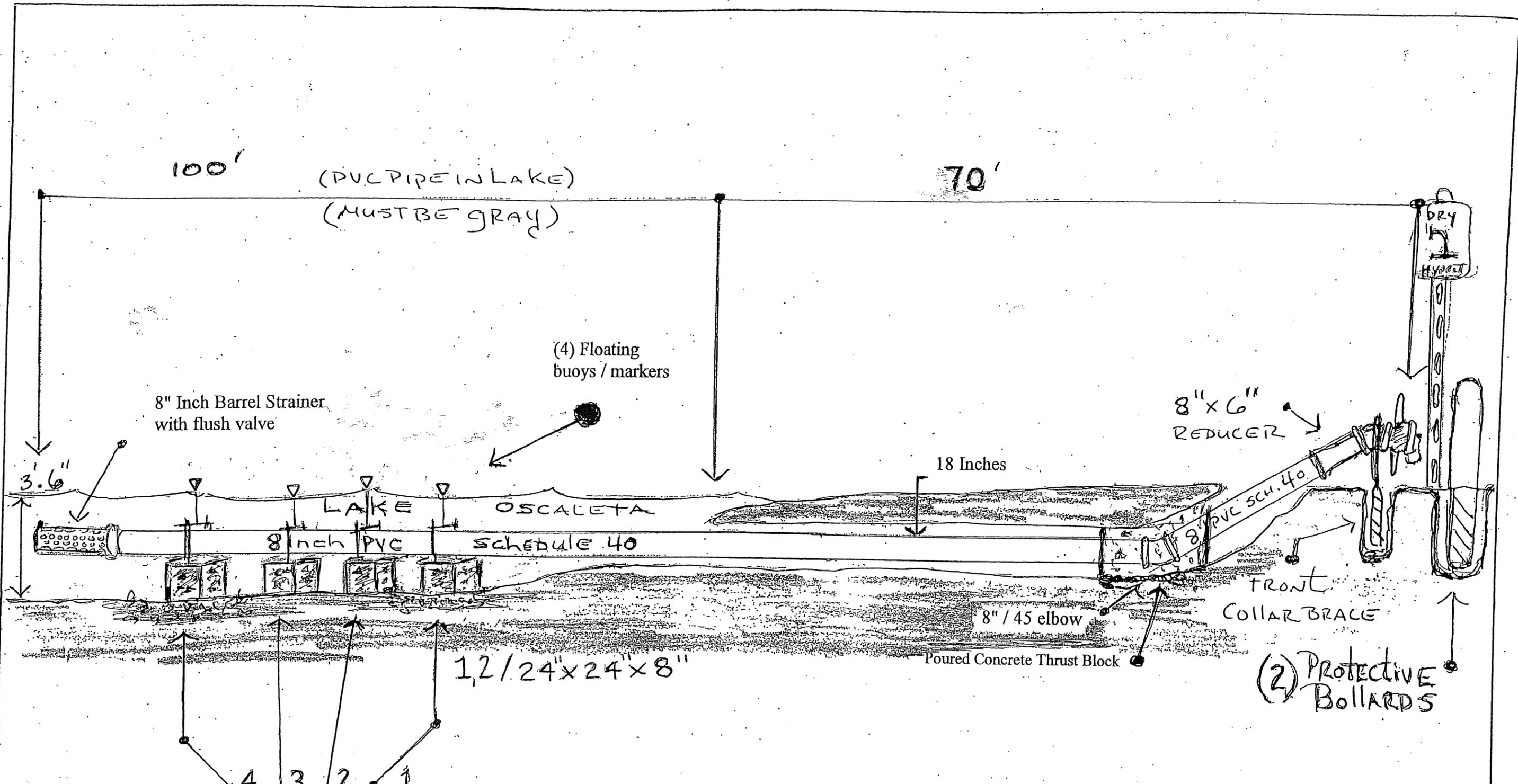
2 8" 45 (degree) Elbow Slip x Slip Fitting Schedule 40 PVC

1 6" Female Adaptor (Fire Dept. Connection) with end plug

1 8" Barrel Strainer with back flush

1 8" X 6" Reducer

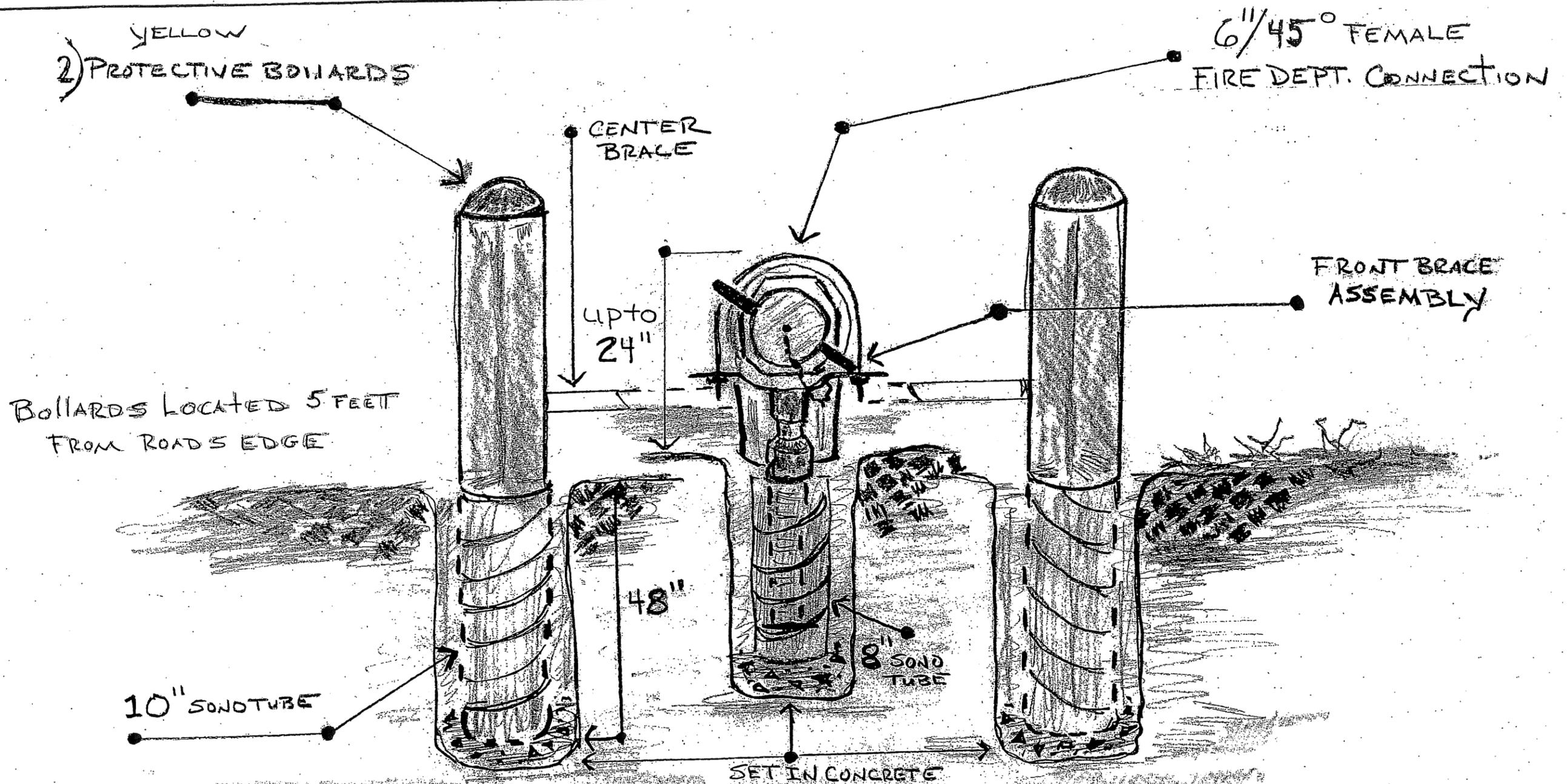
(see specifications for the complete list of required materials)



(FOUR) PRECAST
CONCRETE
Block/ANCHOR
3, 4/16" x 16" x 16"

Drawing not to scale

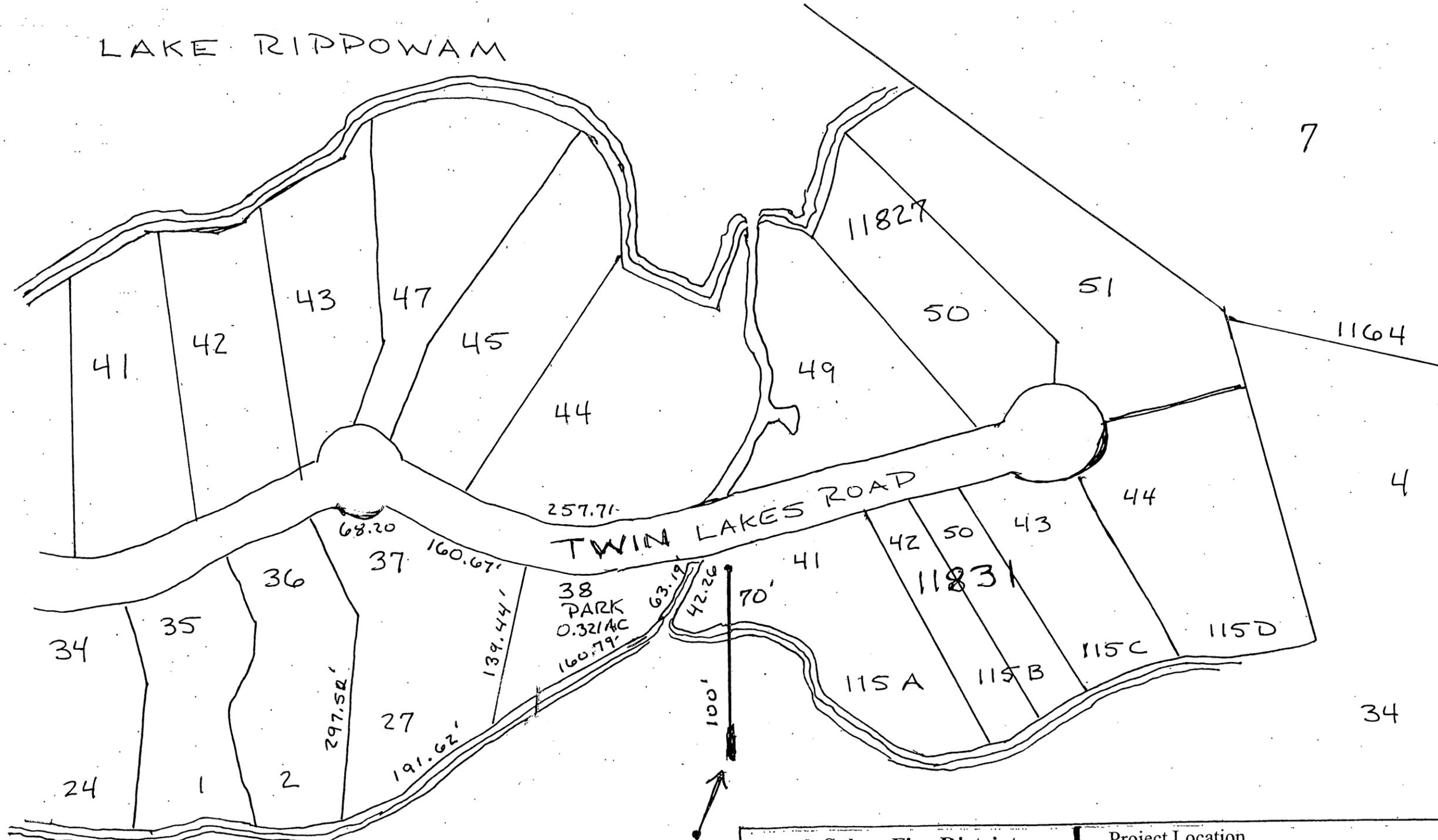
<p>South Salem Fire District Dry Hydrant Project Sketch/drawings Michael J Lombardi Date: August 20, 2015</p>	<p>Project Location Nancy and Paul Sutera #76 Twin Lakes Road South Salem NY 10590 Lot 41 Block 11831 Sheet 34 B</p>	<p>Page A-1</p>
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South Salem Fire District
 Dry Hydrant Project
 Sketch/drawings
 Michael J Lombardi
 Date: August 20, 2015

Project Location
 Nancy and Paul Sutera
 #76 Twin Lakes Road
 South Salem NY 10590
 Lot 41 Block 11831 Sheet 34 B

LAKE RIPPOWAM



LAKE OSCALETA

DRY HYDRANT

South Salem Fire District
Dry Hydrant Project
 Sketch/drawings
 Michael J Lombardi

Date: August 20, 2015

Project Location

Nancy and Paul Sutera
 #76 Twin Lakes Road
 South Salem NY 10590
 Lot 41 Block 11831 Sheet 34 B

Page/

A-3

MEMORANDUM

TO: Chairman Jerome Kerner, AIA and
Members of Lewisboro Planning Board

CC: Judson Siebert, Esq.

FROM: Jan K. Johannessen, AICP 
Joseph M. Cermele, P.E., CFM 
David J. Sessions, RLA, AICP 
Town Consulting Professionals

DATE: September 23, 2015

RE: David & Judy Kelly
57 South Shore Drive
Sheet 33D, Block CAMP, Lot 1

Project Description

The subject property is located at 57 South Shore Drive, within the R-2A Zoning District, and currently contains a single-family residence, detached garage, gravel driveway, well, septic holding tank, dock, and other accessory residential improvements. The applicant is proposing renovations to the existing residence, including additions totaling 678 s.f. and a new detached garage totaling 540 s.f. (1,218 s.f. total). The subject property contains frontage on Lake Waccabuc and the proposed building additions and a small portion of the detached garage, are located within the Town's 150-foot regulated wetland buffer.

SEQRA

The proposed action is a Type II Action and is categorically exempt from the State Environmental Quality Review Act (SEQRA).

Required Approvals

1. A Wetland Activity Permit and Town Stormwater Permit is required from the Planning Board.
2. A public hearing is required to be held on the Wetland Activity Permit.
3. Land disturbance will exceed 5,000 s.f. within the NYC East of Hudson Watershed and, therefore, coverage under the New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-15-002) is required.

Comments:

1. We note that the proposed stormwater practice would be required regardless of whether the improvements were proposed within the wetland buffer and, therefore, the Planning Board has historically not considered this wetland mitigation; a wetland mitigation plan should be provided.
2. A detailed planting plan for the site and rain gardens should be provided.
3. The plan calls for a series of rain gardens to mitigate the increased stormwater runoff generated by the project. The applicant shall provide hydrologic design calculations demonstrating that the peak discharge rate from the 25-year storm event has been mitigated. This office will review the drainage plan following submission of this report.
4. The applicant shall submit the NYSDEC Notice of Intent (NOI) and MS4 SWPPP Acceptance Form for review.
5. Soil testing for the stormwater practice must be conducted and witnessed by this office.
6. It is recommended that the septic holding tank be pumped down and inspected; an inspection report should be provided for review.
7. The existing conditions survey referenced on the site plan should be submitted for review.
8. A zoning table comparing the existing and proposed condition to the requirements of the underlying R-2A Zoning District, to the extent applicable, should be included on the plan. It is recommended that the Building Inspector review the plan for zoning compliance.

9. The site plan shall identify the number of existing and proposed bedrooms.
10. Please identify that the existing gravel driveway will be removed and restored to lawn area.
11. At a minimum, the following construction details shall be provided:
 - Stabilized rock outfall (stone velocity dissipater)
 - Gravel driveway
 - Retaining wall
 - Drainage inlets, if proposed
 - Identify the diameter of proposed drainage pipe
 - The rain garden detail is not legible and shall be revised accordingly; this generic detail shall be modified to be site specific

In order to expedite the review of subsequent submissions, the applicant should provide annotated responses to each of the comments outlined herein.

Plan Reviewed, prepared by J. D. Barrett & Associates, LLC, dated August 31, 2015:

- Proposed Site Plan

Plans Reviewed, prepared by Jerome Kerner AIA Architect, dated August 24, 2015:

- Existing Floor Plans Demolition (A-101)
- Floor Plans (A-102)
- Elevations (A-104)

Documents Reviewed:

- Letter, prepared by J.D. Barrett & Associates, LLC, dated August 31, 2015
- Wetland Permit Application
- Stormwater Permit Application

JKJ/JMC/DJS/dc

August 31, 2015

Town of Lewisboro Planning Board
20 Cross River Plaza at Orchard Square
Suite L
Cross River, NY 10518

**Re: Kelly Residence – Additions and Renovations
57 South Shore Drive (The Camp)**

Dear Members of the Planning Board (PB):

On behalf of Mr. & Mrs. Kelly, we submit the following information in support of a Wetland Permit and Stormwater Permit to allow the renovation and additions to their home. We provide nine copies of the following information:

- This explanatory **Cover Letter**, prepared by J.D. Barrett & Associates, LLC, dated August 31, 2015.
- A completed **Wetland Permit Application**, prepared by J. Kerner, AIA, dated August 31, 2015.
- A completed **Stormwater Permit Application**, prepared by J. Kerner, AIA, dated August 31, 2015.
- **Plans** prepared by Jerome Kerner, AIA, dated August 24, 2015, including:
 - Existing Floor Plans and Demolition, A-101
 - Floor Plans, A-102
 - Elevations, A-104
- A **Site Plan**, prepared by J.D. Barrett & Associates, LLC, dated August 31, 2015.

Overview

The D&J Kelly property is located at the west end of South Shore Drive and enjoys lake frontage on Lake Waccabuc. Currently, the property consists of a residence and detached garage, landscaped yard and docks on the south shore of Lake Waccabuc. The majority of the property falls within the 150' wetland setback to Lake Waccabuc. The property is serviced with an on-site domestic well, electrical service and an underground septic holding tank that is periodically cleaned by a septic tank cleaning company. The latter site feature is typical of the properties located in "The Camp". The Kelly's have resided at 57 South Shore Drive for approximately 30 years. They hope to renovate and slightly expand the house so they can continue their enjoyment of the home and property with their family and grandchildren.

Proposed Plan

At this time, the Kelly's would like to renovate their home with improvements to the existing house, plus approximately 1218 SF of new additions. The proposed house additions are noted on the Site Plan in yellow shading and labeled as "West and Southeast Addition". The house and associated additions occur at the outer edge of the 150' wetland buffer. Also proposed is a new 18' x 30' two-car garage to replace the existing two car garage and a realigned driveway. The western bay of the garage structure shall be a shed with side-loaded doors for storage of yard and lake equipment. The garage and driveway are located outside the 150' wetland buffer.

Grading and Erosion Control Plan

The property slopes gently from south to north toward Lake Waccabuc. A grading plan has been prepared to allow the existing overland flows to continue to drain around the house and new garage. A new stonewall (2'-3' high) is proposed on the southern edge of the property opposite the garage to help direct stormwater around the new garage and house. Gentle swales on either side of the house will allow overland flows to continue to drain in a northward direction. Perimeter silt fencing is proposed down slope of the work area to contain erosion and sediment during construction. An anti-tracking pad will be established at the driveway entry point. Soil piling is proposed in the area where the existing garage will be demolished. Excess subsoil from the footing installations and partial new basement in the house will be removed from the site. All topsoil will be stripped and stored on site for use with final landscaping.

Drainage Plan

The project will generate additional impervious areas as a result of the building additions. The areas shown on the plan in yellow shading with a dot pattern indicate the new areas where stormwater runoff will need to be managed. We estimate approximately 1218 SF of new impervious areas will require management. It is proposed that a rain garden system be developed along the western property line to manage the stormwater runoff. A series of roof gutters and leaders will convey the runoff to the rain gardens. Once the rain gardens are constructed with the appropriate soil mixes, the gardens will be planted with native plants adapted to rain gardens to provide a natural system for stormwater management and treatment and an aesthetic amenity to the property.

Planting Plan

Following construction of the improvements, the property will be reclaimed to a landscaped setting. It is envisioned that foundation plantings will be installed around the house, garage and deck. Plantings shall consist of small trees, shrubs and groundcovers. Rain garden plantings are also proposed along the western property to vegetate the rain gardens and also help them blend it into the natural landscape behind the rain gardens and create a natural hedgerow in the area.

Potential Wetland Impacts are Minimal

We believe that this project will have minimal potential for impacts to Lake Waccabuc. We note that the additions to the house occur approximately 100' from the Lake's edge, all of which is vegetated with trees, shrubs and turf, which shall remain in place during and after construction. In addition, the house area is positioned approximately 18' higher in elevation than the Lake, hence, there is substantial vertical and (vegetated) horizontal distance separating the proposed work area from Lake Waccabuc.

During construction, potential impacts from uncontrolled erosion and sedimentation can be an issue on any construction project upstream from a wetland or water body. However, by installing erosion control measures down slope of proposed earthwork and excavations, as is proposed, will serve to contain any potential sedimentation travelling toward the Lake. In addition, diverting of storm flows around open excavations, as is proposed on this plan, serves to protect excavated areas or bare soil from erosion and sedimentation, as well. It is also proposed that excess subsoil be transported off site as soon as practical to limit the stockpiling of soil on site for the shortest period of time possible. Once construction is complete, the site areas will be reclaimed to a fully vegetated, landscaped setting providing long-term protection from erosion and sedimentation and protection to Lake Waccabuc.

Summary

It is our hope that the enclosed information which we have provided will be helpful to the PB's understanding and review of the project. We look forward to discussing the project with the PB at the September 2015 PB meeting.

Please let us know if additional information is required. We appreciate the PB's consideration for this project.

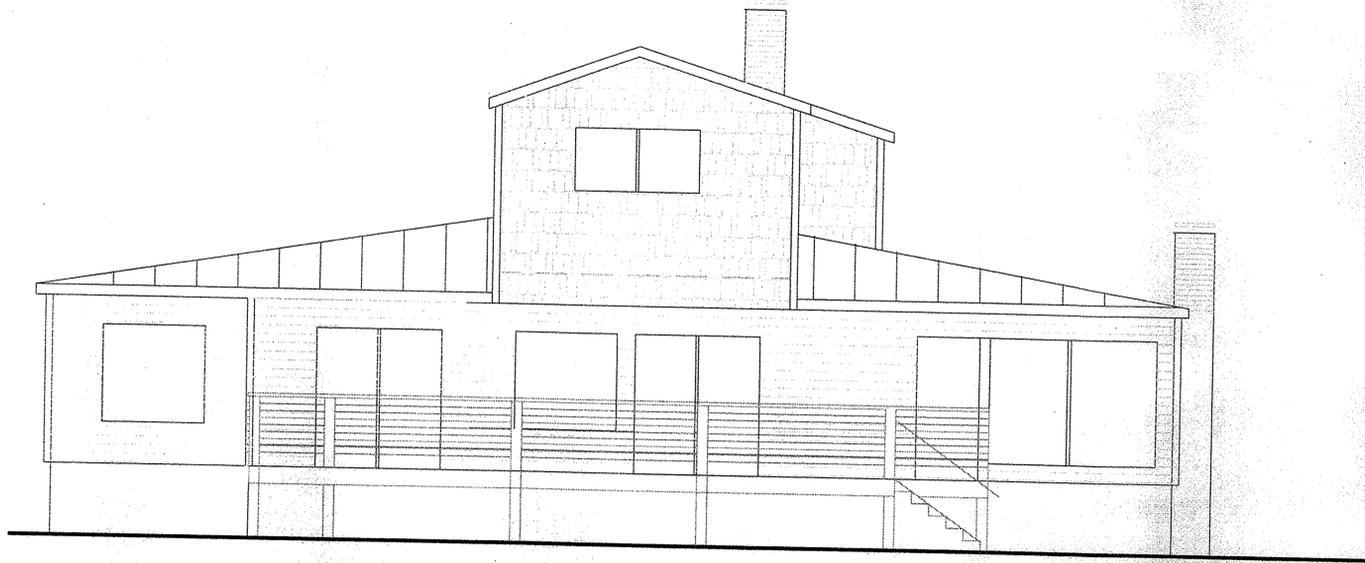
Sincerely,



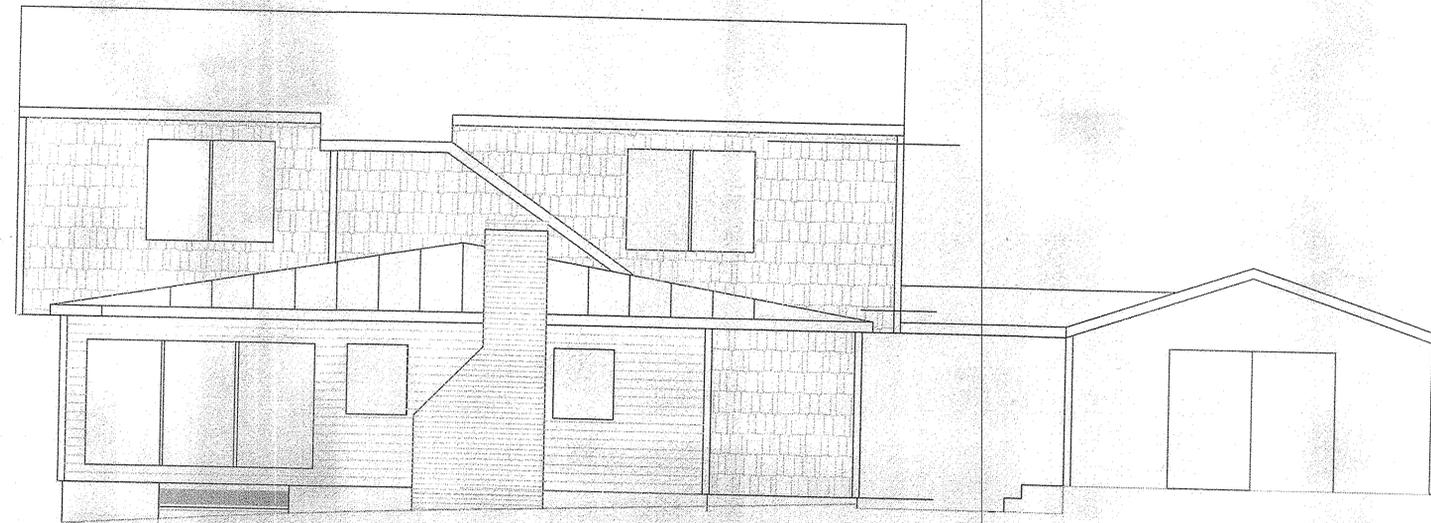
Jeri D. Barrett, R.L.A.
JDB:lj

Enc.

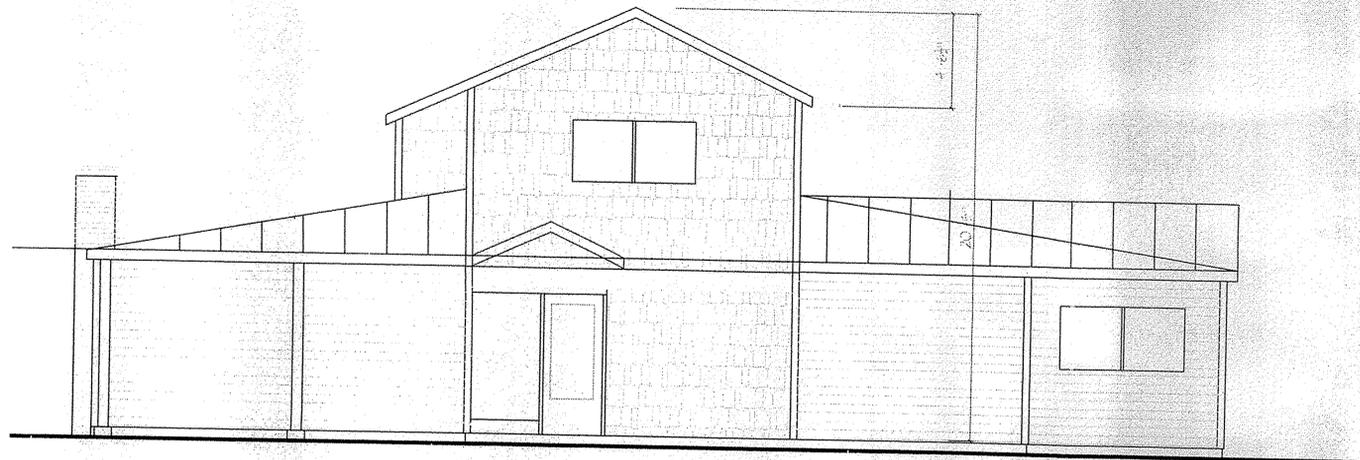
Cc: Mr. & Mrs. Kelly
Jerome Kerner, AIA



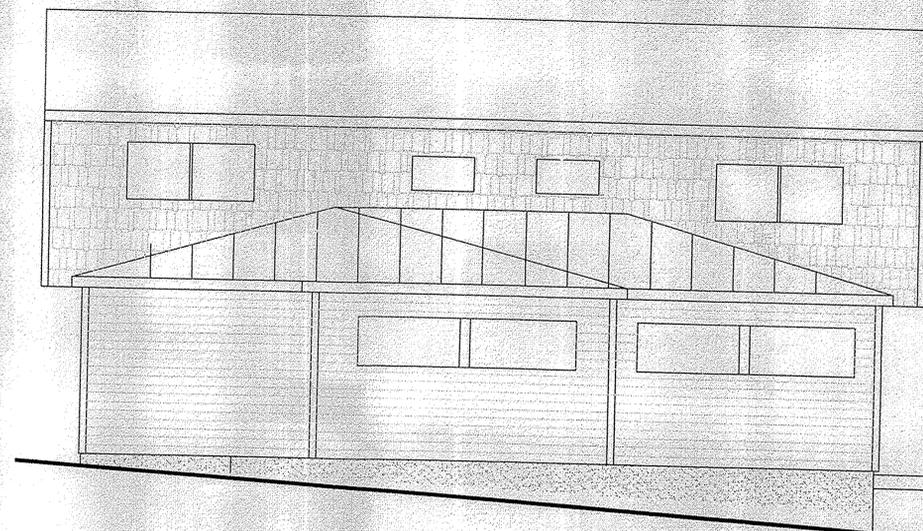
NORTH ELEVATION



WEST ELEVATION



SOUTH ELEVATION



EAST ELEVATION

ISSUED FOR PERMIT

JEROME KERNER AIA ARCHITECT
 96 BOUTON ROAD SOUTH SALEM NY 10590
 914 783 6911

PROJECT / LOCATION:
D&J KELLY RESIDENCE
 South Salem, NY

DRAWING TITLE:
ELEVATIONS

ARCHITECT SEAL & SIGNATURE:

DATE **AUGUST 24, 2015**

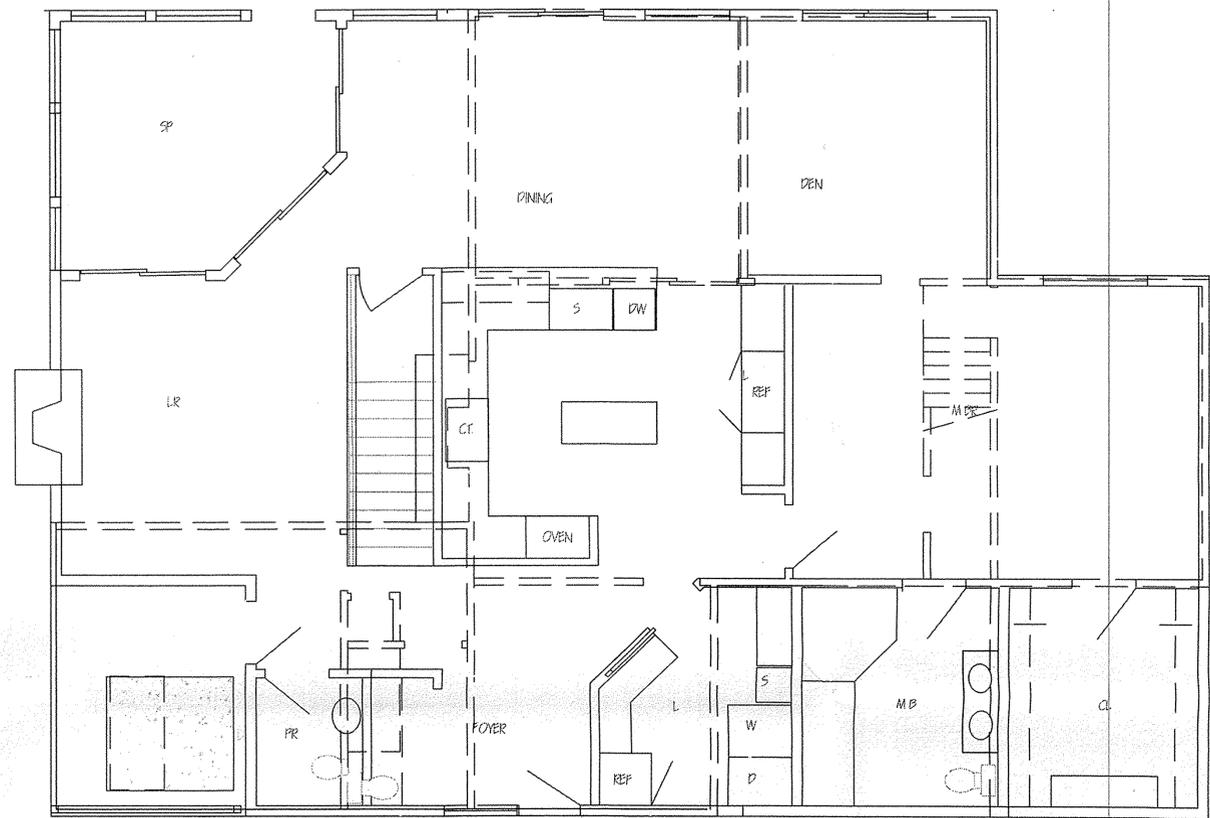
SCALE: **Refer to Dwg.**

DRAWING NO.:

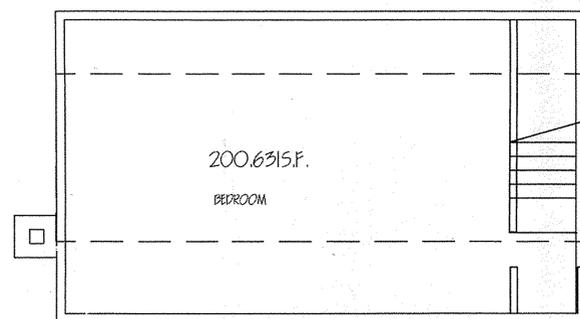
A-104



EXISTING GROUND FLOOR PLAN



EXISTING GROUND FLOOR PLAN



EXISTING SECOND FLOOR PLAN

ISSUED FOR PERMIT

JEROME KERNER AIA ARCHITECT
 96 BOUTON ROAD SOUTH SALEM NY 10590
 914 763 6911

PROJECT LOCATION:
D&J KELLY RESIDENCE
 South Salem, NY

DRAWING TITLE:
EXISTING FLOOR PLANS DEMOLITION

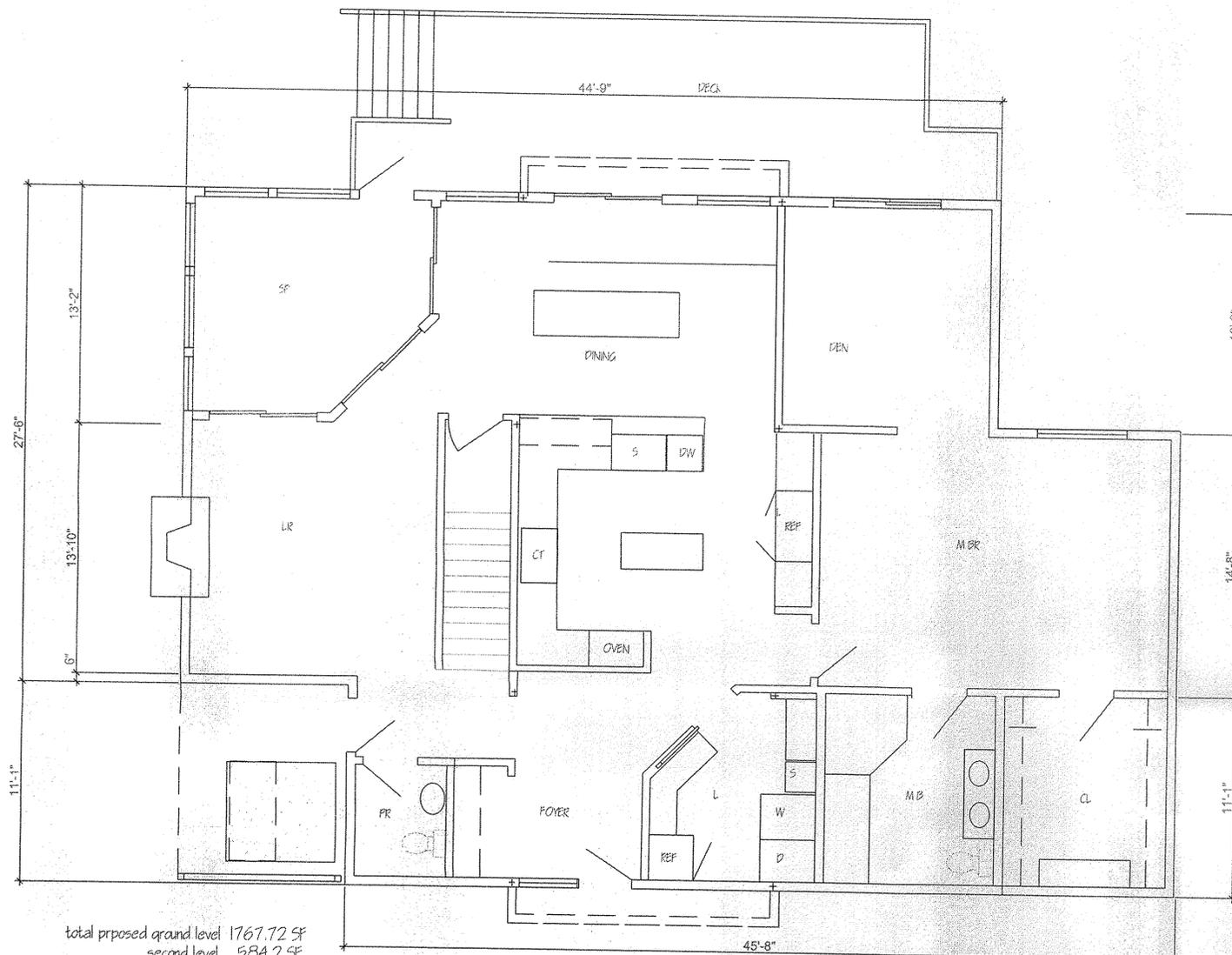
ARCHITECT SEAL & SIGNATURE:

DATE: **AUGUST 24, 2015**

SCALE: **Refer to Dwg.**

DRAWING NO.:

A-101

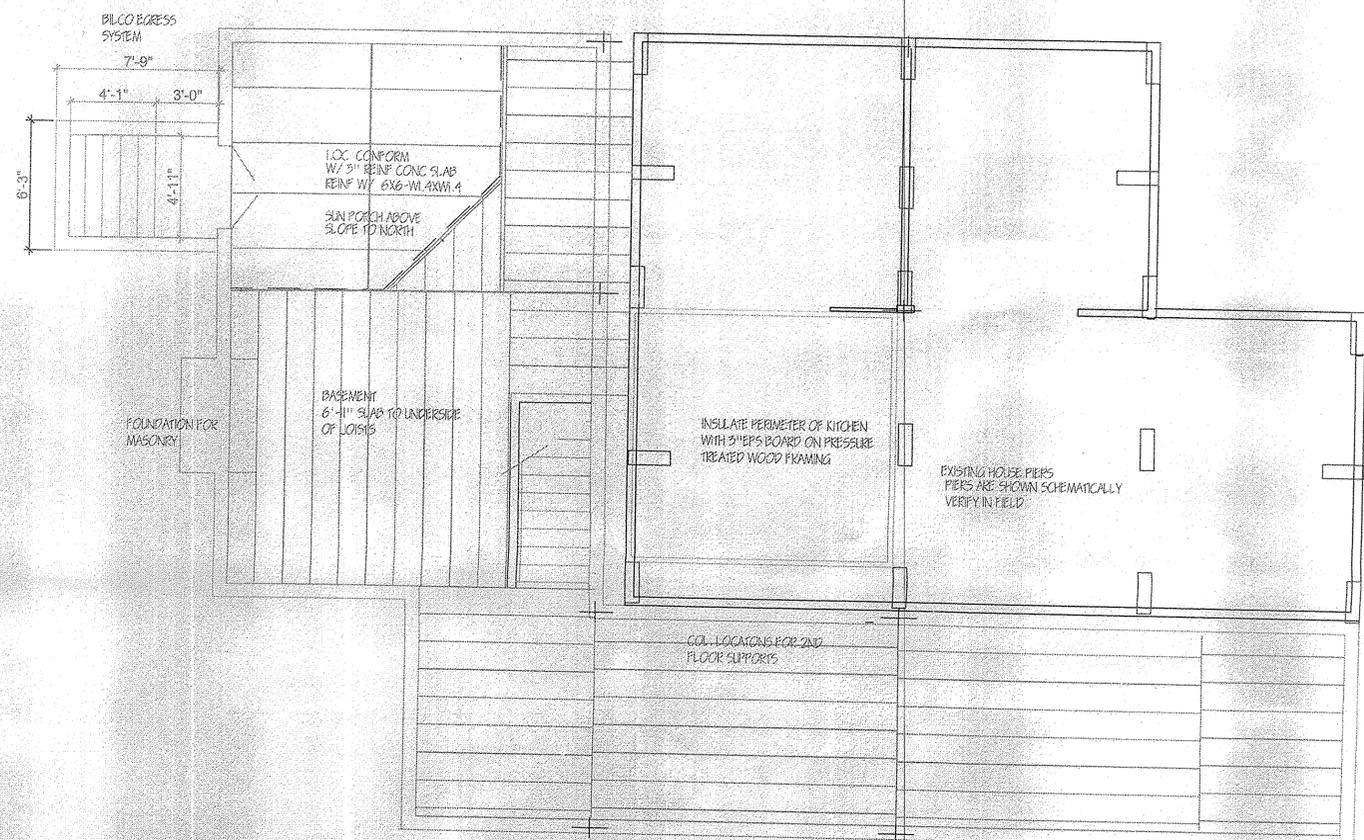


total proposed ground level 1767.72 SF
 second level 584.2 SF
TOTAL PROPOSED 2352 SF.

total existing ground level 1,183.0 SF
 second level 200.0 SF
 total existing (3 bed room) 1,383.0 SF

TOTAL PROPOSED 2376 SF.
NET ADDITION 996 SF.

GROUND FLOOR PLAN



FOUNDATION/ FLOOR FRAMING

SCALE 1/4"=1'-0"

ISSUED FOR PERMIT

JEROME KERNER AIA ARCHITECT
 96 BOUTON ROAD SOUTH SALEM NY 10590
 914 763 6911

PROJECT LOCATION:
D&J KELLY RESIDENCE
 South Salem, NY

DRAWING TITLE:
FLOOR PLANS

ARCHITECT SEAL & SIGNATURE:	DATE: August 24 2015
	SCALE: Refer to Dwg.
	DRAWING NO: A-102

Application No.: 53-15WP
Fee: 255. Date: 2/3/15
200. 2/3/15

TOWN OF LEWISBORO WETLAND PERMIT APPLICATION

Town Offices @ Orchard Square, Suite L (Lower Level), 20 North Salem Road, Cross River, NY 10518
Phone: (914) 763-3060
Fax: (914) 533-0097

Project Information

Project Address: 57 SOUTH SHORE DR. SOUTH SALEM 10590
33D
Sheet: 466 Block: 1175 Lot(s): 741

Project Description (identify the improvements proposed within the wetland/wetland buffer and the approximate amount of wetland/wetland buffer disturbance): ADDITION TO RESIDENCE ± 700 S.F. RAIN GARDEN FOR STORM DRAINAGE ± 1,000 S.F.

Owner's Information

Owner's Name: DAVID & JUDY KELLY Phone: 203-253-1181
Owner's Address: 57 SOUTH SHORE DR. Email: THRLAKEADV@AOL.COM

Applicant's Information (if different)

Applicant's Name: _____ Phone: _____
Applicant's Address: _____ Email: _____

Authorized Agent's Information (if applicable)

Agent's Name: JERI BARRETT RVA. Phone: 203-372-5805
Agent's Address: 109 SPORT HILL RD EASTON CT 06612 Email: JERI@JD BARRETT.COM

To Be Completed By Owner/Applicant

1. What type of Wetland Permit is required? (see §217-5C and §217-5D of the Town Code)
 Administrative Planning Board
2. Is the project located within the NYCDEP Watershed? Yes No
3. Total area of proposed disturbance: < 5,000 s.f. 5,000 s.f. - < 1 acre ≥ 1 acre
4. Does the proposed action require any other permits/approvals from other agencies/departments? (Planning Board, Town Board, Zoning Board of Appeals, Building Department, Town Highway, ACARC, NYSDEC, NYCDEP, WCDOH, NYSDOT, etc): Identify all other permits/approvals required: BUILDING DEPT.

Note: Initially, all applications shall be submitted with a plan that illustrates the existing conditions and proposed improvements. Said plan must include a line which encircles the total area of proposed land disturbance and the approximate area of disturbance must be calculated (square feet). The Planning Board and/or Town Wetland Inspector may require additional materials, information, reports and plans, as determined necessary, to review and evaluate the proposed action. If the proposed action requires a Planning Board Wetland Permit, the application materials outlined under §217-7 of the Town Code must be submitted, unless waived by the Planning Board. The Planning Board may establish an initial escrow deposit to cover the cost of application/plan review and inspections conducted by the Town's consultants.

For administrative wetland permits, see attached Administrative Wetland Permit Fee Schedule.

Owner/Applicant Signature: [Signature] Date: 2/1/2015

11-155W

Application No.: ~~0207504~~
Fee: ~~855~~ 150. Date: 9/15/15

TOWN OF LEWISBORO STORMWATER PERMIT APPLICATION

Town Offices @ Orchard Square, Suite L (Lower Level), 20 North Salem Road, Cross River, NY 10518
Phone: (914) 763-5592
Fax: (914) 763-3637

Project Information

Project Address: 57 SOUTH SHORE DR. SOUTH SALEM 10590
330 Camp
Sheet: 306 Block: 11176 Lot(s): #1

Project Description (describe overall project including all proposed land development activities):
ADDITION TO RESIDENCE - NEW GARAGE - RAIN GARDEN

Owner's Information

Owner's Name: DAVID & JUDY KELLY Phone: 203-253-7881
Owner's Address: 57 SOUTH SHORE DR. Email: THRLAKEADV@AOL.COM

Applicant's Information (if different)

Applicant's Name: _____ Phone: _____
Applicant's Address: _____ Email: _____

Authorized Agent's Information

Agent's Name: JEKI BARRETT FLA. Phone: 203-372-5805
Agent's Address: 109 SPORTWILL RD EASTON CT 06612 Email: JEKIC@JD.BARRETT.COM

To Be Completed By Owner/Applicant/Agent

- The approval authority is? (see §189-5 of the Town Code)
 Town Engineer and SMO Planning Board
- Is the project located within the NYCDEP Watershed? Yes No
- Total area of proposed disturbance: < 5,000 s.f. - < 1 acre ≥ 1 acre
- Will the project require coverage under the NYSDEC General Permit for Stormwater Discharges from Construction Activity? Yes No Requires post-construction stormwater practice
- Does the proposed action require any other permits/approvals from other agencies/departments (Wetland Inspector, Planning Board, Town Board, Zoning Board of Appeals, Building Department, Town Highway, ACARC, NYSDEC, NYCDEP, WCDOH, NYSDOT, etc): Identify all other permits/approvals required: WILSON DEP

Note: The applicant, owner and/or agent is responsible for reviewing and complying with Chapter 189, "Stormwater Management and Erosion and Sediment Control," of the Town Code. This application must be submitted with all applicable plans, reports and documentation specified under §189-8, "SWPPP requirements," of the Town Code; all SWPPP's shall be prepared in conformance with Chapter 189 and shall be prepared by a qualified professional, as defined therein. The provision for obtaining a Town Stormwater Permit is in addition to the requirement of obtaining coverage under the SPDES General Permit for Stormwater Discharges from Construction Activity, if applicable.

Owner/Applicant Signature: [Signature] Date: 9/11/2015

MEMORANDUM

TO: Chairman Jerome Kerner, AIA and
Members of Lewisboro Planning Board

CC: Judson Siebert, Esq.

FROM: Jan K. Johannessen, AICP *JK*
Joseph M. Cermele, P.E., CFM *JM*
David J. Sessions, RLA, AICP *DS*
Town Consulting Professionals

DATE: September 23, 2015

RE: Warren Kemp & Angie Ahn
30 Sullivan Road
Sheet 12, Block 11360, Lot 5

Project Description

The subject property is located on 30 Sullivan Road, within the R-4A Zoning District, and contains a single-family residence, detached garage, gravel driveway, septic system and well. The applicant is proposing renovations and additions to the residence, including a ±300 s.f. building addition, deck, patio, pergolas, entry walk, and wetland and stormwater mitigation. The subject property contains wetlands that are jurisdictional to both the Town and the New York State Department of Environmental Conservation (NYSDEC) and the improvements are proposed within the regulated wetland buffer area.

SEQRA

The proposed action is a Type II Action and is categorically exempt from the State Environmental Quality Review Act (SEQRA).

Required Approvals

1. A Wetland Activity Permit and Town Stormwater Permit is required from the Planning Board.
2. A public hearing is required to be held on the Wetland Activity Permit.
3. The applicant has obtained a Freshwater Wetland Adjacent Area General Permit (GP-0-13-001) for work proposed within the NYSDEC 100-foot wetland adjacent area.

Comments:

1. This office finds the proposed wetland mitigation plan, coupled with the stormwater drainage plan, acceptable and we are satisfied that these two (2) measures will adequately off-set any impact created by the proposed action.
2. This office has walked the property and has confirmed the wetland boundary line, as shown on the submitted plans.
3. The wetland mitigation area is noted on the plan as "No-Mow Conservation Easement". The applicant should clarify whether a conservation easement is being proposed over the no-mow zone. If so, the easement area must be illustrated on a survey, described by metes and bounds, and an easement document to be filed in the County Clerk's Office must be submitted for review.
4. Given the reconfiguration of bedrooms and use of the second floor of the garage as living space, we recommend that the applicant provide a letter from either the Building Inspector or Westchester County Department of Health (WCDH) confirming that the proposed action does not constitute an increase in bedroom count.
5. It is recommended that that the Building Inspector review the plans for zoning compliance; the applicant should coordinate with the Building Inspector.
6. The existing non-compliant drainage features located within the driveway and which discharge untreated stormwater directly to the wetland shall be shown to be removed or, alternatively, the pipe could be capped and the inlet and pipe filled with concrete.
7. Existing drainage features, if any, associated with the garage should be identified on the plan.

8. A two (2) inch minimum cover is required over all drain pipes located within the driveway.
9. Each infiltration system should be equipped with an emergency overflow that discharges to a protected outlet.
10. The NYSDEC Wetland Validation Block provided on the survey should be endorsed as appropriate.

In order to expedite the review of subsequent submissions, the applicant should provide annotated responses to each of the comments outlined herein.

Plans Reviewed, prepared Cross River Architects, LLC:

- Site Plan (SP/1), dated September 1, 2015
- Stormwater Drainage Plan (SP/2), dated September 1, 2015
- Storm Drain Details (SP/3), dated September 1, 2015
- Wetland Mitigation (WM/1), dated September 1, 2015
- Proposed 1st Floor Plan (A/1), dated August 31, 2015
- Proposed 2nd Floor Plan (A/2), dated August 31, 2015
- North & South Elevations (A/3), dated August 31, 2015
- East & West Elevations of House & Barn (A/4), dated August 31, 2015

Documents Reviewed:

- Narrative
- Wetland Report, prepared by Environmental Design Consulting
- Short Environmental Assessment Form, dated August 28, 2015
- Wetland Permit Application
- Planning Board Application
- Survey of Property

JKJ/JMC/DJS/dc

Narrative

Project - Kemp Residence Addition and Alteration

Owners - Warren Kemp and Angie Ahn
Property – 30 Sullivan Road, Lewisboro, NY
Zone - R2A
Tax Designation - Sheet 12, Block 11360, Lot ~~X~~ 5
Lot Area – 2.272 acres, 98,982 sf

Existing Conditions

The referenced site is located on the southerly side of Sullivan Rd approximately 800 feet from the intersection with North Salem Rd (NYS Rt119). On the site currently exists a two story framed single family residence of 4,300 sf and a 600 sf two story framed barn which is unfinished inside. The barn is currently being used for storage of typical garden items. The house is set back from the center line of the street 211.42'+/-. The current house and property meet all current zoning requirements, however, much of the house and all of the barn sit in the required 150' wetland buffer area. The house is 20'-6" tall from the average grade to the mean roof slope. Previous to this application there was a 1 story pool enclosure and a two story sunroom and screened porch added to the back and right side of the house.

The property is accessed from Sullivan Road via a gravel driveway. There is a stream and NYSDEC wetland running through the southeast corner of the property. The wetland has been flagged and the flag locations approved by the Town Wetland Consultant and the NYSDEC Wildlife Biologist. The property has a gradual slope from the north to the southeast. The front of the property is forested, while the back and sides have gardens and grass. There are also gardens between the driveway and the front of the house. The property is well maintained. The property to the east and behind the subject property is NYS DEC Wetland F-6. The property to the west is residential.

Overhead electric, telephone and cable services enter the property to single utility pole located in the northeast side of the property. From the utility pole to the house the services run underground. The current services are sufficient for the proposed work.

The existing SSDS system is located in the back of the house and was designed for 4 bedrooms. The system consists of a 1200 gal concrete septic tank and 260 lf of fields. No change is proposed to the SSDS.

Proposed Work

The Owners of the property are proposing to add a two story addition with a footprint of 304 sf to the east side of the existing residence which would sit over a portion of the existing gravel driveway. The addition would be designed to create a larger Master Bathroom and Closet areas which are quite undersized in this house. They would also like to add a new office area on the first floor since both Owners often work from home.

The scope includes finishing the second floor of the barn for entertainment space and using the first floor of the barn for a garage.

Also proposed are a 712 sf raised deck and stairs with a 140 sf bluestone patio below the deck. The deck will allow a second story connection between the house and the barn as well as access to the back yard. Two pergolas are proposed, one for the south side of the house addition and the other for the west side of the barn. A 65 sf bluestone walk will lead from the driveway to the new entrance at the NE corner of the house.

The mass and style of the additions would match the existing house. The exterior materials will largely match the existing.

Deep and Percolation Tests

Two percolation tests and two deep tests were dug on August 19, 2015. The Town Engineer witnessed the percolation tests and deep test pits on August 20, 2015. In the location of DT1 and DT2 as shown on the site drawings, the test pit revealed the following soil types:

DT1

- 0 – 4” Topsoil
- 4” – 3’ 8” Sandy soil, trace loam, some small gravel
- 3’ 8” – 6’ 0” Sandy gravel. Some uneven ledge at 6’ 0” and deeper

No water encountered.

DT2

- 0 – 4” Topsoil
- 4” – 4’ 0” Sandy soil, trace loam, some small gravel
- 4’ 0” – 6’ 0” Sandy gravel.

No water encountered.

In the locations as shown on the site drawings PT1 and PT2 revealed the following percolation rates.

PT1 - 12" dia x 36" deep hole

<u>Run</u>	<u>Start</u>	<u>Stop</u>	<u>Elapsed time</u>	<u>Water level drop</u>
1 / 1	12:41	12:48	7 minutes	5"
1 / 2	12:51	1:02	11 minutes	5"
1 / 3	1:10	1:27	17 minutes	5"

Percolation Rate = 3 minutes / inch

PT2 - 12" dia x 36" deep hole

2 / 1	12:17	12:32	15 minutes	5"
2 / 2	12:44	1:01	17 minutes	5"
2 / 3	1:10	1:27	17 minutes	5"

Percolation Rate = 3 minutes / inch

Drainage

The roof of the house is drained to three existing splash blocks. Some moisture near these splash blocks is evident on the inside of the house. The roof of the one story pool enclosure has a drip edge without gutters. In two locations on the south side of the house, the end caps of the gutters have been removed and stormwater cascades out of the end of the gutter. It is our intent to collect all the stormwater from the existing house and the 304 sf addition and drain the water to two stormwater drainage systems located on the property more than 100' away from the wetland. The stormwater systems were designed to accommodate a 25 year storm or 6" of rainfall in 24 hours. Stormwater System 1 was designed to accept runoff from 1576 sf of roof area and 2625 sf of parking area runoff, for a total of 4,201 sf or 2100 cf / day of stormwater.

Stormwater System 2 was designed to accept 1819 sf of roof area, or 909 cf / day of stormwater.

There is currently a catch basin in the southeast corner of the driveway that discharges approx. 15' away from the edge of the wetland. The DEC Biologist has requested that a solid lid be added and the pipe be blocked to prevent direct discharge into the wetland area, effectively closing the catch basin. Because the catch basin is within 50' of the wetland, the catch basin and pipe cannot be removed by DEC regulation. There is a 6"

pipe, presumed to be a footing drain, discharging in the same area. Once the stormwater runoff is collected and removed from the vicinity of the foundation, the footing drain will cease to run. A new catch basin will be installed in the existing gravel parking area, leading to Stormwater System 1, to offset the closing of the existing catch basin. The gravel parking area is 2625 sf. Therefore, we are adding 1313 cf / day to Stormwater System 1. The total area mitigated in System 1 is 4201 sf. The total area mitigated in System 2 is 1819 sf for a total area mitigated of 6020 sf totaling 3010 cf of stormwater per day.

By Town and NYS DEC requirements, we are only required to mitigate the new impervious areas totaling 509 sf (304 sf addition, 65' entrance walk and 140 sf bluestone patio), or 255 cf / day. We anticipate the deck and patio below draining into the grass area behind the house. Note that the barn roof has no gutters and none are planned.

The Stormwater Calculations are as follows:

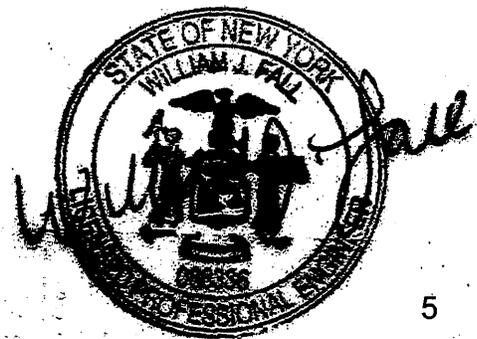
Stormwater Mitigation Design SYSTEM 1 for

Existing Roof Surfaces Draining to EAST – 1576 sf
Existing Gravel Parking Area 2625 sf

TOTAL IMPERVIOUS – 4201 SF

1. Design Storm – 25yrs. of Rainfall in 24 hrs = 6" of Rainfall
2. Impervious surfaces to be collected – 4201 sf
3. 3 min percolation rate in 1'0" dia. perc hole:
(sandy and sandy gravel soil types)
4. Determine area of percolation (Ap) in perc hole:
 - a. surface area of cylinder-1'0" (Ac)
 $Ac = \pi \times d \times h$
 $Ac = 3.14 \times 1' \times 2.5' = 7.85sf$
 - b. bottom area (Ab)
 $Ab = \pi \times r^2 = 3.14 \times 0.5^2 = 0.785 sf$
 - c. $Ap = Ac + Ab = 7.85 + 0.785 = 8.635sf$
5. Determine volume of percolation (Vp)
 $Vp = Ab \times h = 0.785 sf \times 3"/12" \text{ per ft.} = 0.196 cf$
5. Soil Percolation Rate (Sr)
 $Sr = \text{volume} / \text{area} / \text{time}$
 $Sr = 0.196 sf / 8.635 sf / 3 \text{ min} = 0.0075$
 $Sr = 0.00075 \times 60 \text{ min} \times 24 \text{ hrs} = 10.895cf/sf/day$
 $Sr = 10.895 - 25\% \text{ clogging factor} = 8.17cf/sf/day$
6. Calculate Required Storage Volume (Vs)
Required storage for 100 yr storm = 6" of rainfall
Total Impervious Area Collected = 1576 sf
 $Vs1 = \text{area} \times \text{rate} = 4201 \times 6" / 12 "/ft = 2100 cf$
7. Calculate volume stored by drywell type (Vw)
 - a. Vw = Cultec 100HD recharger surrounded by 1' of gravel.
(100HD is an 8' long x 3' wide x 12.5" high semicircular plastic stormwater recharger)
Vw = per catalog- Cultec 100HD surrounded by 12" stone gravel = 68.96 cf storage per unit
8. Calculate 24 hr percolation volume (Vp) for each recharger
(Vp = Side surfaces of drywell x soil percolation rate (Sp))
 - a. $Vp = \text{Cultec 100HD} \times SR = 8' \times 3' \times 8.17 cf/sf/day$
 $Vp = 196 cf/day^*$
9. Calculate 24 hr volume for Cultec 100HD recharger surrounded by 12' of gravel
 $Vt = \text{volume of recharger (Vw)} + \text{perc volume (Vp)}$
 $Vt = 39 + 196 = 235 cf/day$
11. Calculate total 24 hr. volume provided (Vt_{prov})
 - a. Total Volume of Retention provided (Vt_{prov})
Assume 4 rechargers - $(9 \times Vt_1) = 9 \times 235 = 2115 cf/day$
Volume required = 2100 cf/day
24 hr. volume provided exceed 24 hr. volume required.

Design Passes using 9 Cultec 100HD rechargers.



Stormwater Mitigation Design SYSTEM 2 for

Existing Roof Surfaces Draining to WEST – 1819 sf Total Impervious

1. Design Storm – 25yrs. of Rainfall in 24 hrs = 6" of Rainfall
2. Impervious surfaces to be collected – 1819 sf
3. 3 min percolation rate in 1'0" dia. perc hole:
(sandy and sandy gravel soil types)
4. Determine area of percolation (Ap) in perc hole:
 - a. surface area of cylinder-1'0" (Ac)
 $Ac = \pi \times d \times h$
 $Ac = 3.14 \times 1' \times 2.5' = 7.85 \text{ sf}$
 - b. bottom area (Ab)
 $Ab = \pi \times r^2 = 3.14 \times 0.5^2 = 0.785 \text{ sf}$
 - c. $Ap = Ac + Ab = 7.85 + 0.785 = \underline{8.635 \text{ sf}}$
5. Determine volume of percolation (Vp)
 $Vp = Ab \times h = 0.785 \text{ sf} \times 3' / 12" \text{ per ft.} = 0.196 \text{ cf}$
5. Soil Percolation Rate (Sr)
 $Sr = \text{volume} / \text{area} / \text{time}$
 $Sr = 0.196 \text{ sf} / 8.635 \text{ sf} / 3 \text{ min} = 0.0075$
 $Sr = 0.00075 \times 60 \text{ min} \times 24 \text{ hrs} = 10.895 \text{ cf/sf/day}$
 $Sr = 10.895 - 25\% \text{ clogging factor} = 8.17 \text{ cf/sf/day}$
6. Calculate Required Storage Volume (Vs)
Required storage for 100 yr storm = 6" of rainfall
Total Impervious Area Collected = 1819 sf
 $Vs1 = \text{area} \times \text{rate} = 1819 \times 6" / 12 \text{ "/ft} = 909 \text{ cf}$
7. Calculate volume stored by drywell type (Vw)
 - a. Vw = Cultec 100HD recharger with 18" gravel below
(100HD is an 8' long x 3' wide x 12.5" high semicircular plastic stormwater recharger)
Vw = per catalog- Cultec 100HD with 18" stone gravel base = 38.81 cf storage per unit
8. Calculate 24 hr percolation volume (Vp) for each recharger
(Vp = Bottom surfaces of drywell x soil percolation rate (Sp))
 - a. $Vp = \text{Cultec 100HD} \times SR = 8' \times 3 \times 8.17 \text{ cf/sf/day}$
 $Vp = 196 \text{ cf/day}^*$
9. Calculate 24 hr volume for Cultec 100HD recharger surrounded by 12' of gravel
 $Vt = \text{volume of recharger (Vw)} + \text{perc volume (Vp)}$
 $Vt = 39 + 196 = \text{cf/day} = 235 \text{ cf / day}$
11. Calculate total 24 hr. volume provided (Vt_{prov})
 - a. Total Volume of Retention provided (Vt_{prov})
Assume 4 rechargers - $(4 \times Vt_1) = 4 \times 235 = 940 \text{ cf/day}$
Volume required = 909 cf/day
24 hr. volume provided exceed 24 hr. volume required.

Design Passes using 4 Cultec 100HD rechargers.



Area of Disturbance

Area of Disturbance	Area from Wetland (in sf)				
	0 – 50 ft.	50 ft – 100 ft	100 – 150 ft.	>150 ft.	Total
Building addition plus 5 ft. outside foundation, including 65 sf entrance walk	0	594	0	0	594
Bluestone patio on 8" stone dust (under deck)		140			140
Piers for deck, stairs and pergolas (15- 12" dia. piers at 4 sf each)	0	60	0	0	60
Stormwater System #1, including trenching	0	140	675	250	1065
Stormwater System #2, including trenching	0	60	300	655	1015
Topsoil stock pile	0		200		200
Total Area of Disturbance	0	994	1175	905	3074

Because the area of disturbance is below 5000 sf a Town of Lewisboro Stormwater Permit is not required. Further, total disturbance between the 50' wetland buffer and the 100' wetland buffer is under 1000 sf, which will allow the DEC to issue a GP-0-13-001, Freshwater Wetland Adjacent Area General Permit.

Wetland Mitigation

Refer to Kemp Residence - Additions and Alterations Residence Wetland Report prepared by Bruce Donohue dated August 31, 2015.

Proposed Construction Sequence

1. Pre-construction on-site meeting of all involved parties, including but not limited to: owner or contractor responsible for erosion and sediment controls (E&SC) installation and maintenance, owner's environmental specialist responsible for E&SC weekly inspections and reports, building inspector, representatives of other permitting agencies, eg. NYSDEC
2. Field delineation of limits of disturbance.
3. Field marking of trees to remain within the limits of disturbance.
4. Field mark and fence septic field area.

5. Installation of tree protection, eg. trunk armor and drip line fencing.
6. Installation of down slope hay bales and silt fence.
7. Tree and brush removal.
8. Plug outflow orifice of drain in corner of driveway.
9. Construct temporary sediment traps and associated diversion structures.
10. Grub
11. Strip & stockpile topsoil from excavation areas as appropriate.
12. Excavate foundation.
13. Stock pile excavated material and install E&SC's (seed & fence or tarp).
14. Pour footings and foundation
15. Backfill foundation.
16. Install stormwater mitigation systems.
17. Extend roof leaders and footing drain lines to designated discharge point.
18. Construct addition and deck.
19. Install landscape materials, eg. walks, patio, plant materials and fencing.
20. Spread topsoil, rake, seed and mulch.
21. Remove all E&SC's once site has fully stabilized.

Conclusion

The proposed use and proposed construction meet the area zoning requirements set forth in the Lewisboro Zoning Ordinance. The proposed additions are modest compared to the existing structures. The proposed use shall not adversely affect the use and enjoyment of adjacent properties by generating excessive noise, vibration, light, glare, odors or any other form of pollution, nuisance or public safety concern. The proposed use will be served adequately by the existing essential services such as streets and highways, off street parking, police and fire protection, storm water drainage, refuse disposal, water and sewer facilities, schools and other services. In addition, the use shall not cause excessive traffic congestion or delays, obstruct access to adjacent properties or imperil the safety of motorists, pedestrians, or bicyclists. The proposed use is consistent with the area. The storm drainage systems as designed far exceed the requirements of the Town and NYSDEC. The design of the addition matches the character of the existing structures. Construction work is anticipated to start within 1 month of issuance of the Town or Lewisboro Wetland Permit, the NYSDEC Freshwater Wetland Adjacent Area General Permit GP-0-13-001 and the Town Building Permit and be completed with a 6 month construction schedule.

For these reasons we ask that the Lewisboro Planning Board review the attached application for a Wetland Permit and issue the permit upon completion of their review.

End of Narrative

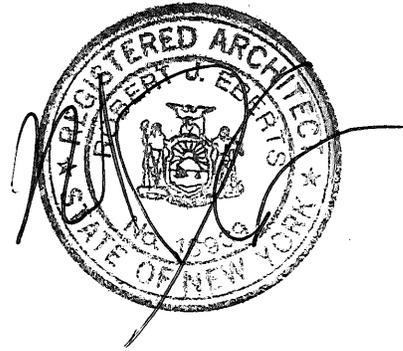
Prepared by:

Robert J. Eberts, RA Principal
Cross River Architects, LLC

Drainage Design Prepared by:

William J. Fall, PE

Wetland Mitigation Design by
Bruce Donohue, LA
Environmental Design Consulting





Environmental Design Consulting

Bruce M. Donohue, Landscape Architect, BLA, MLA, MS Ecology
13 Promised Road Westport CT 06880

tel: 203-226-0386 fax: 203-221-0528 email: brucedonohue@gmail.com

Wetland Report

Kemp Residence – Additions and Alterations

30 Sullivan Road, Lewisboro, N.Y.

Wetlands Identification

NRCS soils mapping of this site indicates the presence of two hydric soils. Sun loam is located along the intermittent stream in the SE corner of the property. Palms muck is located at the south end of the site. The upland soil is moderately well drained Sutton loam. Soils are shown in Fig. 1.

On-site investigation to delineate the wetlands was made July 6, 2015. Soils were first investigated in well defined wetlands east of intermittent stream:

- Surface layer: 0-8", dark brown loam (7.5 YR 3/2)
- Subsoil layer: 8-12+", gray-brown silty loam with mottles (5GY 6/1)

Much of the lawn area well away from the stream appeared to be disturbed or fill material. Consequently, the deep test pit #2 for the stormwater management system was used to characterize the Sutton loam upland soil.

- Surface layer: 0-3", dark brown, sandy loam (10YR 3/4)
- Subsurface layer: 3-17", brown sandy loam with some gravel (7.5YR 3/3)
- Subsoil: 17-56", yellow brown sandy gravelly loam with stones (5YR 4/4)

Vegetation on either side of the flagged wetlands was examined and representative lists of Wetland Vegetation and Upland Vegetation were made. These are shown as Table 1 and Table 2, respectively. The bulk of the upland vegetation and some of the wetland vegetation is developed lawn and ornamental trees and shrubs. The NE portion of the property and extending across the Sullivan Rd. frontage is second growth mixed hardwoods with non-native ornamental species along the driveway entrance. The mid-succession development of this woodland is indicated by the presence of Black Cherry and Red Cedar, early woodland succession species with little shade tolerance. The lack of large canopy species also is indicative of the mid- succession level of woodland development. The introduction of landscape species is demonstrated by the presence of Norway Spruce, Weeping Willow, Winged Euonymus and Andromeda near the entrance gate and along the driveway. Invasive species are also a significant element of the lower strata of the developing woodland structure. Apparently Winged Euonymus was an intentional introduction to the property at its entrance and along the drive. It now appears throughout the property. Japanese Barberry, Multiflora Rose and Japanese Stiltgrass are also found throughout. Oriental Bittersweet, Privet and Garlic Mustard contribute to this list of invasive species.

Wetland plants inventoried indicate the presence of a Red Maple Swamp. This area occupies the SE corner of the property and is on the edge of a wetter Scrub Shrub wetland. This is a DEC wetland F-6 and is a Class 1 wetland. The on-site wetland area is dominated by Red Maple in the canopy, Hornbeam and young Red Maple in the understory, and Winterberry, Spicebush and Glossy Buckthorn at the shrub level. Ferns are predominant in the herbaceous/ground

cover level. Invasives are a significant element at all of the lower levels. Winged Euonymus, Japanese Barberry, Japanese Honeysuckle, and Multiflora Rose together compose a large portion of the somewhat sparse shrub level. There are several large patches of ground cover that area almost exclusively Japanese Stiltgrass.

The overall condition of the existing on-site Red Maple Swamp wetland is good. A key element of this drier lobe of DEC wetland F-6 is the intermittent stream passing through it. The principal stream receives runoff from unpaved Sullivan rd. It continues approximately 2,000 ft. north of Sullivan Rd. A second, smaller intermittent watercourse joins near the SE corner of the on-site barn. This is the outflow from a small pond on the adjoining property.

During and immediately following major rainfall events this stream carries a substantial flow. As the watercourse enters this site it has a substantial decrease in its gradient. This combined with apparently unstable banks has produced erosion and heavy sediment deposits near the southern property line.

Potential Impacts of Proposed Site Development

No disturbance to wetlands or within 50 ft. is proposed

All construction of addition, deck, patio and walks will be located on existing driveway or lawn areas.

The only site disturbance not on developed land will be the installation of Stormwater System #1. This will require trenching for the drain pipe and stormwater infiltrators. Native/natural vegetation will be preserved and protected as feasible. This will be a short term temporary disturbance.

The stormwater runoff management to be installed will have positive impacts on the adjacent wetlands. The existing area drain located in the SE corner of the driveway parking area will be rendered non-functional. Currently, it discharges directly into the adjacent wetlands before entering the intermittent stream without benefit of water quality treatment. Its discharge is erosive, contributing to the downstream sediment deposition.

The principal stormwater management will be the diversion of all roof runoff into two beds of sub-surface Cultec® infiltrators. These are designed to infiltrate 100% of a 25 yr. storm, or 6" rainfall in a 24 hr. period. This system will intercept 3,010 cu. Ft. of surface runoff preventing it from contributing to erosive high stream flows. Infiltration of this runoff will provide two additional benefits. Typical residential pollutants will be intercepted and neutralized before reentering the groundwater system. Infiltrated water becomes available to exfiltrate into the adjacent wetlands and watercourse between rainfall runoff events. This will tend to decrease the non-flow periods of this intermittent stream.

Mitigation of Proposed Site Development

Stormwater runoff retention above the required amount will provide the benefits to the adjacent wetlands as described above. Treatment is required for the 509 sf. of new impervious surface. The required capacity for the stormwater treatment system is 255 cf/day. The proposed system will provide an additional infiltration of 2,755 cf/day, more than 10 times the required volume.

The existing driveway/parking area drain currently discharging into the wetlands will be rendered non-functional. Rather than allowing water ponding at this location to overflow into the wetland and intermittent stream, a new catch basin will be installed. This will direct collected runoff to Stormwater System #1 for treatment and infiltration

Streambank Stabilization

The west bank of the intermittent stream paralleling the wetland line will be vegetatively stabilized. There are several points along the watercourse that appear to be slumping into the stream. There are other areas that appear to be actively providing sediment load to the stream. These areas will be planted with a selection of small container grown stoloniferous shrubs, plugs and live stakes. These are shown on the Wetland Mitigation plan. Containers will be no larger than 3 gal. size. All planting holes will be dug by hand. Any excess soil will be removed from wetland regulated areas. Only native species will be used.

Stream and Water Quality Protection

A 20 ft. conservation easement will be established along the western stream bank. This will be a no-mow area so that a broad range of herbaceous and woody vegetation can become reestablished. This will create a permanent vegetated filter strip between the managed landscape areas and the stream. Monuments will be established to identify this easement. They will be placed at 50± ft. intervals. This easement and monuments are shown on the Wetland Mitigation plan.

Figure #1

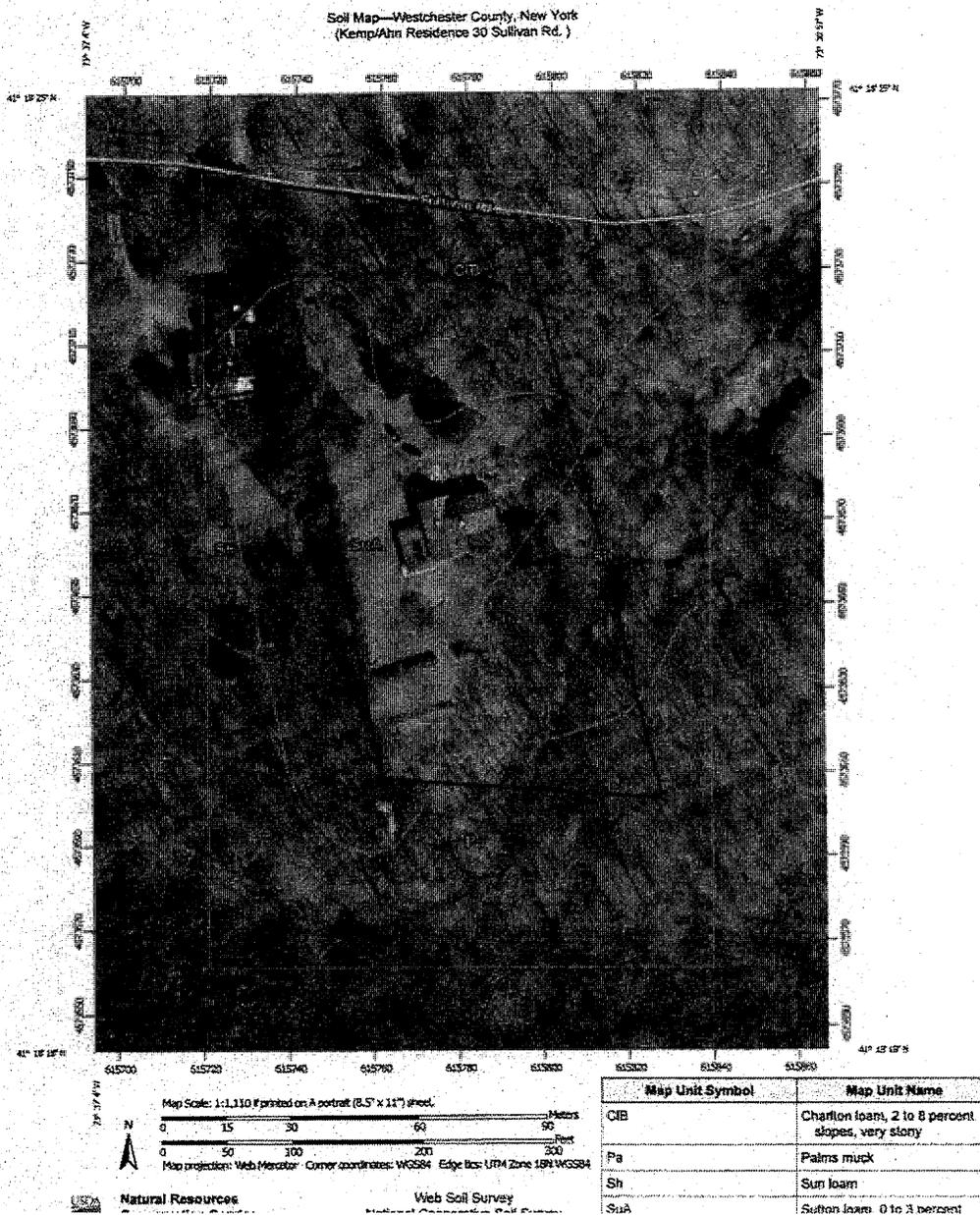


Table #1.

Wetland Vegetation

Level	Common Name	Wetland Status	Predominance	Invasive
Canopy	American Beech	FACU		
	Swamp White Oak	FACW+		
	Red Maple	FAC	X	
	Sweet Birch	FACU		
Understory	American Hornbeam	FAC		
	American Elm	FAC		
	Green Ash	FACW		
Shrub	Japanese Barberry	FACU		X
	Multiflora Rose	FACU		X
	Winged Euonymus	NI	X	X
	Winterberry	FACW+	X	
	Privet	FACU		X
	Glossy Buckthorn	FAC		
	Japanese Honeysuckle	FAC-		
	Spicebush	FACW-		
	Japanese Barberry	FACU	X	X
	Raspberry	NI		
Herbaceous	Japanese Stiltgrass	NI	X	X
	Meadow Rue	FACW+		
	Skunk Cabbage	OBL		
	Sensitive Fern	FACW		
	Sweet Birch	FACU		
	Solomon's Seal	FACU		
	Touch-me-not	FACW		
	Royal Fern	OBL		
	Garlic-mustard	FACU-		X
	Massachusetts Fern	FACW	X	
Vines	Summer Grape	FACU		
	Poison Ivy	FAC	X	
	Virginia Creeper	FACU		

Table #2

Upland Vegetation

Level	Common Name	Wetland Status	Predominance	Invasive
Canopy	White Ash	FACU		
	Red Maple	FAC	X	
	Sweet Birch	FACU		
	Black Cherry	FACU		
	Shagbark Hickory	FACU-	X	
	Black Oak	NI		
	Weeping Willow	FACW-		
	Tulip Poplar	FACU		
	White Oak	FACU-		
Understory	American Hornbeam	FAC		
	Green Ash	FACW		
	Red Cedar	FACU		
	Sugar Maple	FACU-		
	American Beech	FACU		
	Canadian Hemlock	FACU		
	Arbor Vitae	FACW		
	Norway Spruce	NI		
Shrub	Japanese Barberry	FACU		X
	Multiflora Rose	FACU		X
	Winged Euonymus	NI	X	X
	Shadbush Serviceberry	FAC		
	Privet	FACU		X
	Glossy Buckthorn	FAC		
	Japanese Honeysuckle	FAC-		
	Raspberry	NI		
	Chestnut Oak	NI		
	Blackberry sp.	?		
	Andromeda	NI		
Herbaceous	Japanese Stiltgrass	NI	X	X
	Meadow Rue	FACW+		
	Solomon's Seal	FACU		
	Touch-me not	FACW		
	Royal Fern	OBL		
	Garlic-mustard	FACU-		
	Christmas Fern	FACU-		
	Massachusetts Fern	FACW		
Vines	Summer Grape	FACU		
	Poison Ivy	FAC	X	
	Virginia Creeper	FACU	X	
	Oriental Bittersweet	NI		X

Short Environmental Assessment Form

Part 1 - Project Information

Instructions for Completing

Part 1 - Project Information. The applicant or project sponsor is responsible for the completion of Part 1. 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.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

Part 1 - Project and Sponsor Information							
Name of Action or Project: Kemp Residence Addition and Alteration							
Project Location (describe, and attach a location map): 30 Sullivan Rd., Lewisboro located on the southerly side of Sullivan Rd. 800 Feet east of (Rt. 121) North Salem Rd.							
Brief Description of Proposed Action: 304 sf proposed addition to existing residence, 712 sf proposed deck and stair, 140 sf proposed patio below deck, 376 sf proposed pergola, 65 sf entrance walk, Storm drainage system							
Name of Applicant or Sponsor: Robert Eberts, Cross River Architects, LLC		Telephone: 914-763-5887 E-Mail: rje@crarch.com					
Address: PO Box 384							
City/PO: Cross River		State: NY	Zip Code: 10518				
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%;">NO</th> <th style="width: 50%;">YES</th> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table>	NO	YES	<input type="checkbox"/>	<input checked="" type="checkbox"/>
NO	YES						
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
2. Does the proposed action require a permit, approval or funding from any other governmental Agency? If Yes, list agency(s) name and permit or approval: Town of Lewisboro Building Permit issued by Lewisboro Building Dept. and Wetlands Permit issued by Lewisboro Planning Bd., NYSDEC Freshwater Wetland Adjacent Area General Permit GP-0-13-001 from NYSDEC.			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%;">NO</th> <th style="width: 50%;">YES</th> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table>	NO	YES	<input type="checkbox"/>	<input checked="" type="checkbox"/>
NO	YES						
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
3.a. Total acreage of the site of the proposed action? 2.2 acres b. Total acreage to be physically disturbed? 0.1 acres c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 2.2 acres							
4. Check all land uses that occur on, adjoining and near the proposed action. <input type="checkbox"/> Urban <input checked="" type="checkbox"/> Rural (non-agriculture) <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential (suburban) <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Agriculture <input type="checkbox"/> Aquatic <input type="checkbox"/> Other (specify): _____ <input type="checkbox"/> Parkland							

<p>18. Does the proposed action include construction or other activities that result in the impoundment of water or other liquids (e.g. retention pond, waste lagoon, dam)? If Yes, explain purpose and size: _____ _____ _____</p>	<p>NO</p> <p><input checked="" type="checkbox"/></p>	<p>YES</p> <p><input type="checkbox"/></p>
<p>19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility? If Yes, describe: _____ _____ _____</p>	<p>NO</p> <p><input checked="" type="checkbox"/></p>	<p>YES</p> <p><input type="checkbox"/></p>
<p>20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste? If Yes, describe: _____ _____ _____</p>	<p>NO</p> <p><input checked="" type="checkbox"/></p>	<p>YES</p> <p><input type="checkbox"/></p>
<p>I AFFIRM THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE</p> <p>Applicant/sponsor name: <u>Robert Eberts, Cross River Architects</u> Date: <u>08/28/2015</u></p> <p>Signature: _____</p>		

Application No.: _____
Fee: _____ Date: _____

**TOWN OF LEWISBORO
WETLAND PERMIT APPLICATION**

Town Offices @ Orchard Square, Suite L (Lower Level), 20 North Salem Road, Cross River, NY 10518
Phone: (914) 763-3060
Fax: (914)533-0097

Project Information

Project Address: 30 Sullivan Rd. Lewisboro, NY

Sheet: 12 Block: 11360 Lot(s): 2 3

Project Description (identify the improvements proposed within the wetland/wetland buffer and the approximate amount of wetland/wetland buffer disturbance): 304 sf Building Addition, 65 sf bluestone entry walk, 140 sf bluestone patio, 975 sf Stormwater System 1 and 2, 60 sf Piers for deck and pergolas, 200 sf topsoil stockpile area

Owner's Information

Owner's Name: Warren Kemp and Angie Ahn Phone: (914) 301-5475

Owner's Address: 30 Sullivan Rd. North Salem, NY 10560 Email: warren@alinear.net

Applicant's Information (if different)

Applicant's Name: _____ Phone: _____

Applicant's Address: _____ Email: _____

Authorized Agent's Information (if applicable)

Agent's Name: Robert Eberts, Cross River Architects, LLC Phone: 914-763-5887

Agent's Address: PO Box 384, Cross River, NY 10518 Email: rje@crarch.com

To Be Completed By Owner/Applicant

1. What type of Wetland Permit is required? (see §217-5C and §217-5D of the Town Code)
 Administrative Planning Board
2. Is the project located within the NYCDEP Watershed? Yes No
3. Total area of proposed disturbance: < 5,000 s.f. 5,000 s.f. - < 1 acre ≥ 1 acre
4. Does the proposed action require any other permits/approvals from other agencies/departments? (Planning Board, Town Board, Zoning Board of Appeals, Building Department, Town Highway, ACARC, NYSDEC, NYCDEP, WCDOH, NYSDOT, etc): Identify all other permits/approvals required: NYSDEC Freshwater Wetland Adjacent Area General Permit GP-0-13-001, Building Permit from Lewisboro Bldg Dept.

Note: Initially, all applications shall be submitted with a plan that illustrates the existing conditions and proposed improvements. Said plan must include a line which encircles the total area of proposed land disturbance and the approximate area of disturbance must be calculated (square feet). The Planning Board and/or Town Wetland Inspector may require additional materials, information, reports and plans, as determined necessary, to review and evaluate the proposed action. If the proposed action requires a Planning Board Wetland Permit, the application materials outlined under §217-7 of the Town Code must be submitted, unless waived by the Planning Board. The Planning Board may establish an initial escrow deposit to cover the cost of application/plan review and inspections conducted by the Town's consultants.

For administrative wetland permits, see attached Administrative Wetland Permit Fee Schedule.

Owner/Applicant Signature: _____

Date: 8.31.15

TOWN OF LEWISBORO PLANNING BOARD

PO Box 725, 20 North Salem Road, Cross River, NY 10518

Email: planning@lewisborogov.com

Tel: (914) 763-5592

Fax: (914) 763-3637

Affidavit of Ownership

State of: New York

County of: Westchester

Warren Kemp, being duly sworn, deposes and says that he/she

resides at 30 Sullivan Rd.

in the County of Westchester, State of New York

and that he/she is (check one) the owner, or the _____
of _____
Title

Name of corporation, partnership, or other legal entity

which is the owner, in fee of all that certain log, piece or parcel of land situated, lying and being in the
Town of Lewisboro, New York, aforesaid and know and designated on the Tax Map in the Town of
Lewisboro as:

Block 11360, Lot 115, on Sheet 12


Owner's Signature

Sworn to before me this

31st day of August, 2015


Notary Public - affix stamp

AMANDA HARRISON
Notary Public - State of New York
NO. 01BA6301194
Qualified in Westchester County
My Commission Expires Apr 14, 2018

TOWN OF LEWISBORO PLANNING BOARD

PO Box 725, 20 North Salem Road, Cross River, NY 10518

Email: planning@lewisborogov.com Tel: (914) 763-5592

Site Development Plan/Subdivision Plat Application - Check all that apply:

Waiver of Site Development Plan Procedures

Site Development Plan Approval

Special Use Permit Approval

Subdivision Plat Approval

Step I

Step I

Step I

Step II

Step II

Step II

Step III

Project Information

Project Name: Kemp Residence Addition

Project Address: 30 Sullivan Rd.

Gross Parcel Area: 2.272 Ac. Zoning District: R-2A Sheet(s): 12 Block (s): 11360 Lot(s): 5

Project Description: 304 sf proposed addition to existing residence, 712 sf proposed deck of deck, 140 sf proposed patio, 365 sf proposed portico, 65 sf proposed entrance walk and construction of a storm drainage system.

Is the site located within 500 feet of any Town boundary?

YES

NO

Is the site located within the New York City Watershed?

YES

NO

Is the site located on a State or County Highway?

YES

NO

Does the proposed action require any other permits/approvals from other agencies/departments?

Town Board

ZBA

Building Dept.

Town Highway

ACARC

NYSDEC

NYCDEP

WCDH

NYSDOT

Town Wetland

Town Stormwater

Other _____

Owner's Information

Name: Warren Kemp and Angie Ahn

Email: warren@alinear.net

Address: 30 Sullivan Rd. North Salem, NY 10560

Phone: (914) 301-5475

Applicant's Information (if different)

Name: _____ Email: _____

Address: _____ Phone: _____

Authorized Agent's Information

Name: Robert Eberts, Cross River Architects

Email: rje@crarch.com

Address: PO Box 384, Cross River, NY 10518

Phone: 914-763-5887

THE APPLICANT understands that any application is considered complete only when all information and documents required have been submitted and received by the Planning Board. The applicant further understands that the applicant is responsible for the payment of all application and review fees incurred by the Planning Board.

THE UNDERSIGNED WARRANTS the truth of all statements contained herein and in all supporting documents according to the best of his/her knowledge and belief, and authorizes visitation and inspection of the subject property by the Town of Lewisboro and its agents.

APPLICANT'S SIGNATURE _____

DATE _____

OWNER'S SIGNATURE _____

DATE 8.31.15

TOWN OF LEWISBORO PLANNING BOARD

PO Box 725, 20 North Salem Road, Cross River, NY 10518

Email: planning@lewisborogov.com

Tel: (914) 763-5592 Fax: (914) 763-3637

Tax Payment Affidavit Requirement

This form must accompany all applications to the Planning Board.

Under regulations adopted by the Town of Lewisboro, the Planning Board may not accept any application unless an affidavit from the Town of Lewisboro Receiver of Taxes is on file in the Planning Board office. The affidavit must show that all amounts due to the Town of Lewisboro as real estate taxes and special assessments on the total area encompassed by the application, together with all penalties and interest thereon, have been paid.

Under New York State law, the Westchester County Clerk may not accept any subdivision map for filing unless the same type of affidavit from the Town of Lewisboro Receiver of Taxes is submitted by the applicant at the time of filing.

This form must be completed by the applicant and must accompany all applications to the Planning Board. Upon receipt, the Planning Board Secretary will send the form to the Receiver of Taxes for signature and notarization. If preferred, the applicant may directly obtain the signature of the Receiver of Taxes and notarization prior to submission.

To Be Completed by Applicant (Please type or print)

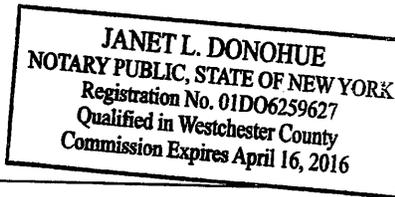
Warren Kemp	Kemp Residence Addition
_____ <i>Name of Applicant</i>	_____ <i>Project Name</i>
<u>Property Description</u>	<u>Property Assessed to:</u>
Tax Block(s): 11360	Warren Kemp and Angie Ahn
Tax Lot(s): # 5	Name 30 Sullivan Rd.,
Tax Sheet(s): 12	Address North Salem, NY 10560
	City _____ State _____ Zip _____

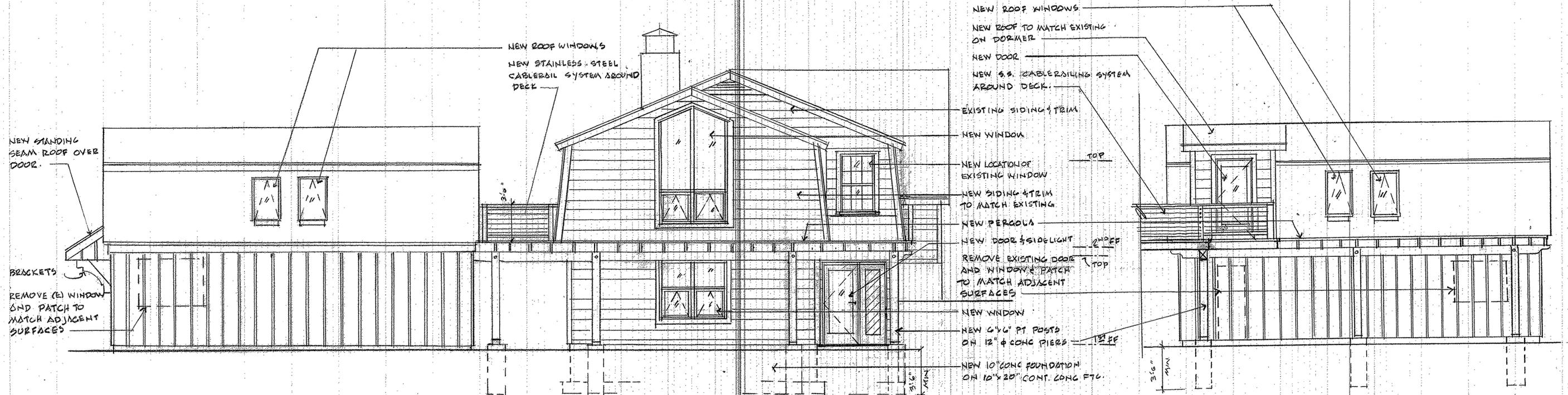
The undersigned, being duly sworn deposes and says that a search of the tax records in the office of the Receiver of Taxes, Town of Lewisboro, reveals that all amounts due to the Town of Lewisboro as real estate taxes and special assessments, together with all penalties and interest thereon, affecting the premises described below, have been paid.

Signature - ^{Deputy} Receiver of Taxes: Diane Crocker Date 8/27/15

Sworn to before me this 27 day of August, 2015

Janet L. Donohue
Signature - Notary Public (affix stamp)





EAST ELEVATION OF BARN
1/4" = 1'-0"

EAST ELEVATION OF HOUSE
1/4" = 1'-0"

WEST ELEVATION OF BARN
1/4" = 1'-0"

REMOVE EXISTING WINDOWS AND PATCH TO MATCH ADJ. SURFACES

WEST ELEVATION OF HOUSE
1/4" = 1'-0"

NORTH ELEVATION OF BARN
1/4" = 1'-0"

- NEW ROOF WINDOWS
- NEW ROOF TO MATCH EXISTING ON DORMER
- NEW DOOR
- NEW S.S. CABLE RAILING SYSTEM AROUND DECK
- EXISTING SIDING & TRIM
- NEW WINDOW
- NEW LOCATION OF EXISTING WINDOW
- NEW SIDING & TRIM TO MATCH EXISTING
- NEW PERGOLA
- NEW DOOR & SIDELIGHT
- REMOVE EXISTING DOOR AND WINDOW & PATCH TO MATCH ADJACENT SURFACES
- NEW WINDOW
- NEW 6"x6" PT POSTS ON 12" DIA. CONC. PIERS
- NEW 10" CONC. FOUNDATION ON 10"x20" CONT. CONC. FTG.

- NEW DECK (PERGOLA BEYOND) WITH STAINLESS STEEL CABLE RAILING SYSTEM
- NEW DORMER TO ACCOMMODATE 2ND FLOOR DOOR. ROOFING & SIDING SHALL MATCH EXISTING
- NEW END CAP ON GUTTER & (N) LEADER
- NEW WINDOW
- NEW STANDING SEAM METAL ROOF OVER ICE & SNOW SHIELD PROVIDE NEW GUTTERS & LEADERS
- NEW UPWARD ACTING SECTIONAL GARAGE DOOR
- NEW 6"x6" PT POST ON 12" DIA. CONC. PIER
- REMOVE EXISTING SKYLIGHTS AND REINSTALL ON BUILT UP CURB & NEW COPPER FLASHING

CROSS RIVER ARCHITECTS, LLC

ROBERT J. EBERTS R.A., PRINCIPAL

P.O. BOX 384
19 NO. SALEM RD. 2ND FL.
CROSS RIVER, N.Y. 10513

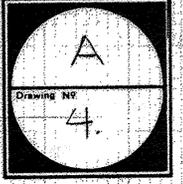
914.763.5887
FAX 914.763.8409



CONSULTANTS:			
NO.	BY	REVISION	DATE

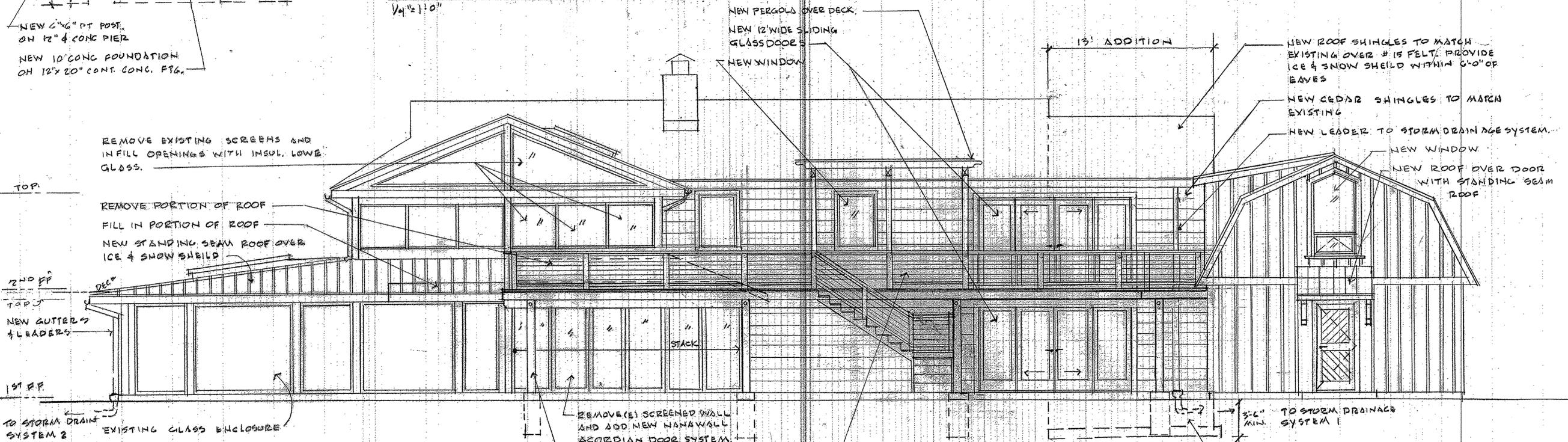
CONSULTANTS:			
NO.	BY	REVISION	DATE

PROJECT:	KEMP RESIDENCE ADDITION & ALTER		
	30 SULLIVAN RD. LEWISBORO, N.Y.		
TITLE:	EAST & WEST ELEVATIONS OF HOUSE & BARN		
SCALE:	1/4" = 1'-0"	DATE:	3/1 AUG 15
PROJECT NO.:		DRAWN BY:	





PROPOSED NORTH (FRONT) ELEVATION
 1/4"=1'-0"



PROPOSED SOUTH (REAR) ELEVATION
 1/4"=1'-0"

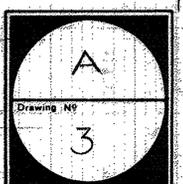
CROSS RIVER ARCHITECTS, LLC
 ROBERT J. EBERTS R.A., PRINCIPAL
 P.O. BOX 384
 19 NO. SALEM RD. 2ND FL.
 CROSS RIVER, N.Y. 10518
 914.763.5887
 FAX 914.763.8409

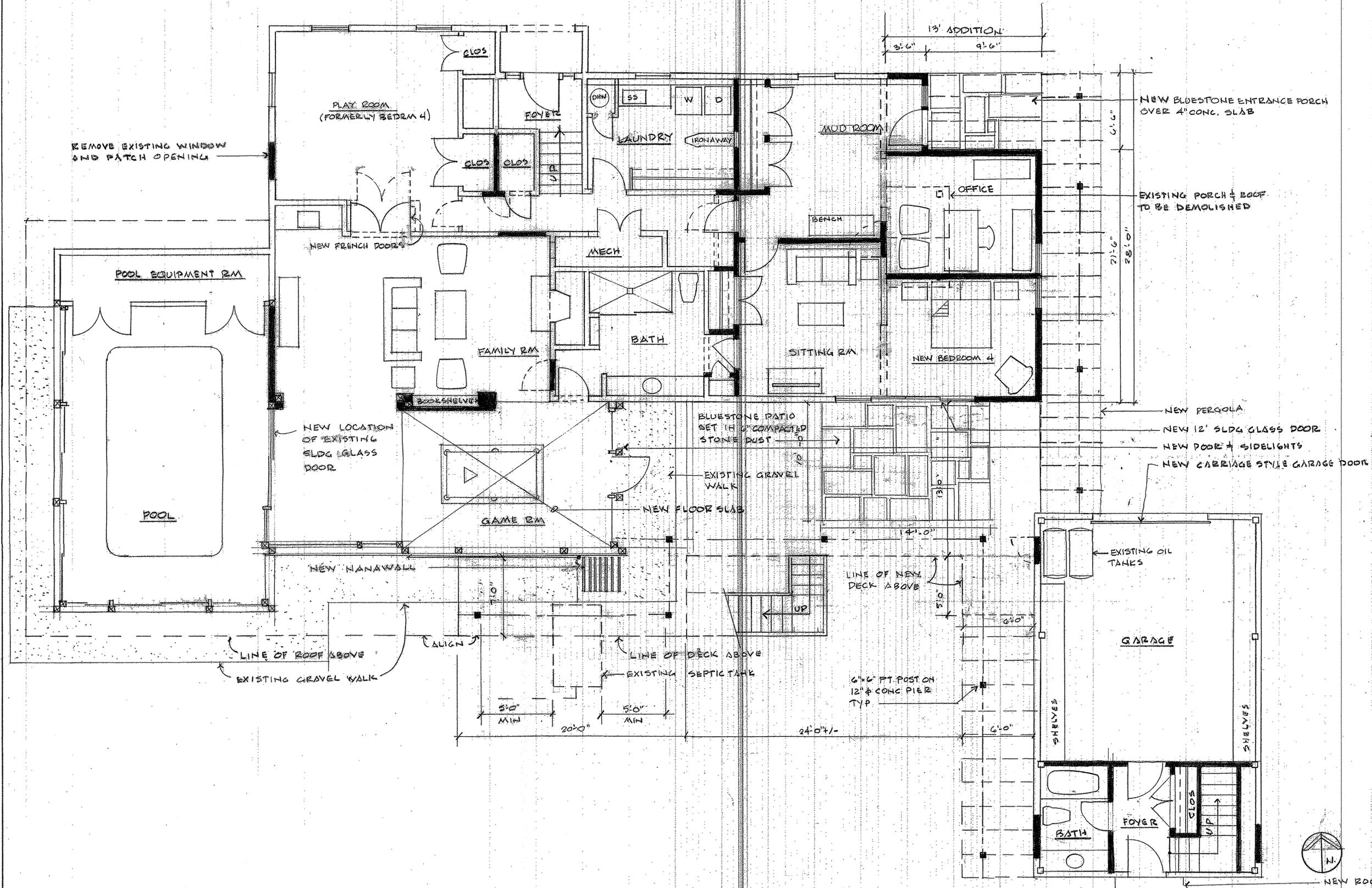


CONSULTANTS:			
NO.	BY	REVISION	DATE

CONSULTANTS:			
NO.	BY	REVISION	DATE

PROJECT:	KEMP RESIDENCE ADDITION & ALTER		
	30 SULLIVAN RD. LEWISBORO, NY		
TITLE:	NORTH & SOUTH ELEVATIONS		
SCALE:	1/4"=1'-0"	DATE:	31 AUG 15
PROJECT NO.:		DRAWN BY:	





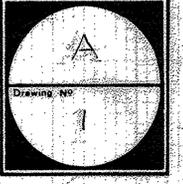
CROSS RIVER ARCHITECTS, LLC
 ROBERT J. EBERTS R.A., PRINCIPAL
 P.O. BOX 384
 19 NO. SALEM RD, 2nd FL.
 CROSS RIVER, N.Y. 10516
 914.763.5887
 FAX 914.763.8409

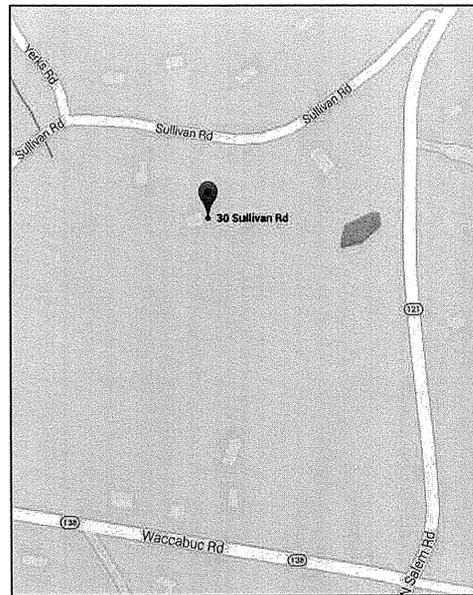


CONSULTANTS	
NO.	BY
REVISION	DATE

CONSULTANTS	
NO.	BY
REVISION	DATE

PROJECT:	KEMP RESIDENCE ADDITION/ALTER 30 SULLIVAN RD. LEWIS BORO, NY		
TITLE:	PROPOSED 1ST FLOOR PLAN		
SCALE:	1/4"=1'-0"	DATE:	31 AUG 15
PROJECT NO.		DRAWN BY:	





LOCATION MAP

Area of Disturbance

Disturbance	Area from Wetland (in sf)				
	0 - 50 ft.	50 ft - 100 ft	100 - 150 ft.	>150 ft.	Total
Building addition plus 5 ft. outside foundation, including 65 sf entrance walk	0	594	0	0	594
Bluestone patio on 8" stone dust (under deck)		140			140
Piers for deck, stairs and pergolas (15- 12" dia. piers at 4 sf each)	0	60	0	0	60
Stormwater System #1, including trenching	0	140	675	250	1065
Stormwater System #2, including trenching	0	60	300	655	1015
Topsail stock pile	0		200		200
Total Area of Disturbance	0	994	1175	905	3074

SITE DATA:

OWNER: WARREN KEMP AND ANGIE AHN
 ADDRESS: 30 SULLIVAN RD
 TAX LOT DESIGNATION: SHEET 12, BLOCK 11360, LOT # 5
 ZONE: R2A
 USE: 1 FAMILY RESIDENTIAL

	REQUIRED	EXISTING	PROPOSED
MINIMUM LOT SIZE:	2 ACRES	2.272 ACRES	NO CHANGE
WIDTH CIRCLE (FT)	200Ø	200Ø	NO CHANGE
MINIMUM YARDS FRONT			
FROM CENTERLINE OF STREET:	75 LF.	221.03± LF.	214.40 LF.
FROM FRONT LOT LINE:	50 FT.	199.42± FT.	202.40 FT.
SIDE (BARN):	40 FT.	43.20 FT.	NO CHANGE
SIDE (HOUSE):	40 FT.	47.90 FT. / 79.86 FT.	48.06 FT. / 61.18 FT.
REAR:	30 FT.	193.67± FT.	NO CHANGE

BUILDING HEIGHT:	STORIES:	FEET:	PROPOSED
	2½	2	2
	35	20.5	19.5

MAXIMUM BUILDING COVERAGE:	PROPOSED CONSTRUCTION
9%	ADDITION TO EXISTING RESIDENCE:
	PROPOSED DECK AND STAIR:
	PROPOSED PATIO (UNDER DECK):
	PROPOSED PERGOLAS (2):
	PROPOSED WALK AT ENTRANCE:
	304 SF
	712 SF
	140 SF
	365 SF
	65 SF

TOTAL NEW IMPERVIOUS AREA:	TOTAL IMPERVIOUS AREA MITIGATED BY STORM DRAINAGE SYSTEM #1	TOTAL IMPERVIOUS AREA MITIGATED BY STORM DRAINAGE SYSTEM #2	TOTAL IMPERVIOUS AREA MITIGATED:
ADDITION (PATIO & ENTRANCE WALK)			509 SF
	4,201 SF		4,201 SF
	1,819 SF		1,819 SF
		6,120 SF	6,120 SF

SITE LEGEND

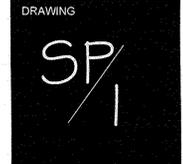
- EXISTING CONTOUR
- - - PROPERTY LINE
- - - EDGE OF WETLAND
- - - WETLAND BUFFER
- - - EXISTING STREAM
- - - UTILITY EASEMENT
- - - SILT FENCE AND HAY BALES
- - - TREE PROTECTION FENCE LINE
- ▨ EXISTING GRAVEL DRIVEWAY
- ▨ PROPOSED BLUESTONE PATIO
- ▨ PROPOSED DECK
- ▨ PROPOSED TRELLIS
- PT PERC TEST
- DT DEEP TEST

REVISIONS

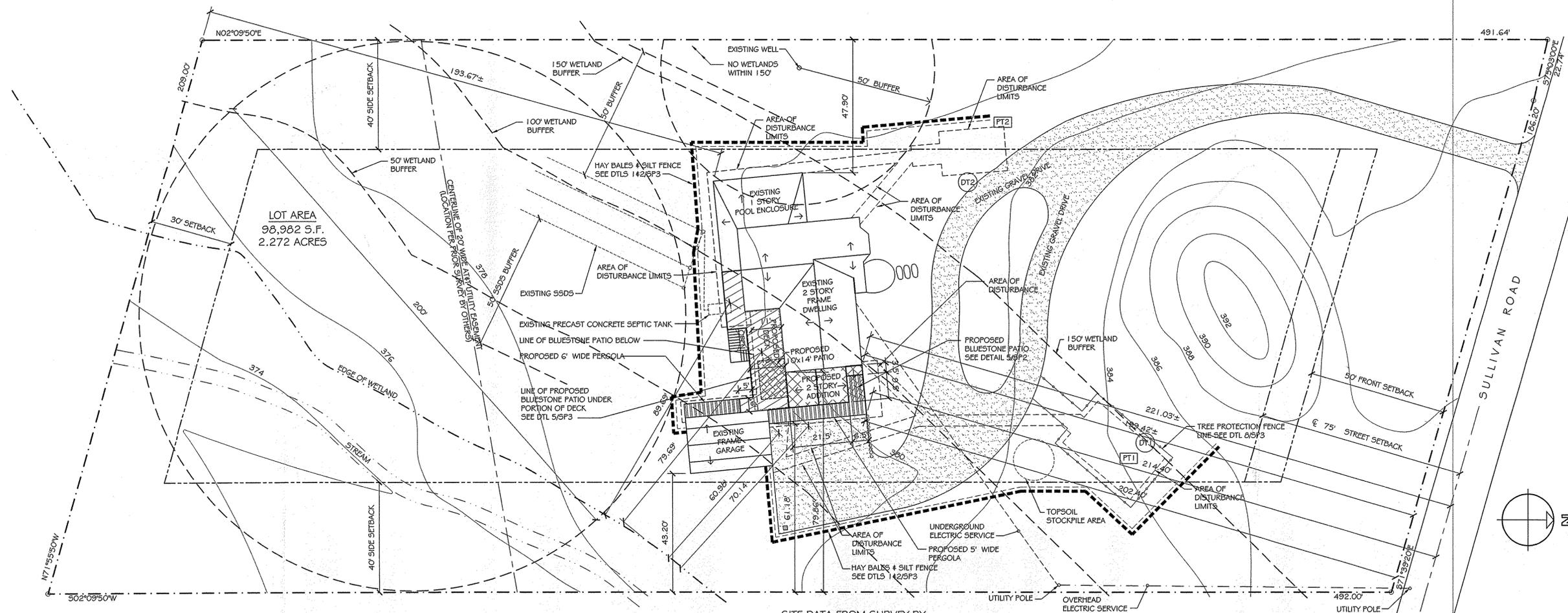


CROSS RIVER ARCHITECTS, LLC
 ROBERT J. EBERTS R.A., PRINCIPAL
 P.O. BOX 384
 19 NO. SALEM RD. 2ND FL.
 CROSS RIVER, N.Y. 10518
 914.763.5887
 FAX 914.763.8499

PROJECT: KEMP RESIDENCE ADDITION & ALTERATION
 30 SULLIVAN ROAD
 NORTH SALEM, NY
 TITLE: SITE PLAN
 DATE: SEPTEMBER 1, 2015
 SCALE: 1" = 20'
 PROJ. #:



LOT 5
 MAP ENTITLED "SULLIVAN WOODS"
 FILES AS MAP NO. 20713



SITE DATA FROM SURVEY BY:

DAVID L. O'DELL, PLS
 12 COLLIER DRIVE EAST
 CARMEL, NY 1512
 DATED: AUGUST 28, 2015
 2' CONTOURS SHOWN TAKEN FROM WESTCHESTER GIS MAP
 SSDS AND WELL LOCATIONS ARE FROM THE WESTCHESTER COUNTY HEALTH DEPT AS-BUILT FILING
 EDGE OF WETLAND FLAGGED BY BRUCE DENOGUE ON JULY 6, 2015

LANDS DESCRIBED IN LIBER 11646 AT PAGE 31
 #30 SULLIVAN ROAD
 TOWN OF LEWISBORO
 WESTCHESTER COUNTY, NEW YORK
 DATED: AUGUST 22, 2001

WETLAND CONSULTANT
 BRUCE M. DONOHUE, LS
 ENVIRONMENTAL DESIGN
 CONSULTING
 13 PROMISED RD.
 WESTPORT, CT 06880
 203-226-0386

STORM DRAINAGE CONSULTANT
 WILLIAM J. FALL, PE
 75 PENNYBROOK LN.
 CARMEL, NY 10512
 845-661-2969
 williamfall@verizon.net

N/F
 GREENSPAN AND WOLF

SITE PLAN
 SCALE: 1" = 20'

CULTEC STORMFILTER® T-80 WATER QUALITY UNIT SPECIFICATIONS

GENERAL
CULTEC STORMFILTER® T-80 MAY BE USED AS A STORMWATER FILTRATION UNIT, HOLDING TANK OR GATCHBASIN.

- CHAMBER PARAMETERS**
1. THE CHAMBERS SHALL BE MANUFACTURED BY CULTEC, INC. OF BROOKFIELD, CT (203-775-4416 OR 1-800-428-5832).
 2. THE CHAMBER SHALL BE FORMED OF BLACK POLYETHYLENE.
 3. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC STORMFILTER® T-80 SHALL BE 26.38 INCHES (670 mm) TALL, 31 INCHES (787 mm) WIDE AND 42 INCHES (1067 mm) LONG.
 4. THE CHAMBER SHALL HAVE A 12.5 INCH (318 mm) DIAMETER ACCESS OPENING LOCATED AT THE TOP OF THE UNIT.
 5. MAXIMUM INLET OPENING ON THE CHAMBER ENDWALL IS 4 INCHES (100 mm).
 6. THE NOMINAL STORAGE VOLUME OF THE STORMFILTER™ T-80 SHALL BE 90 gal / unit (340.7 l/unit).
 7. THE STORMFILTER® T-80 CHAMBER SHALL HAVE 5 CORRUGATIONS.
 8. THE STORMFILTER® T-80 SHALL HAVE A MAXIMUM FILTERING CAPACITY OF 301.4 gpm (1141 l/min).
 9. THE CHAMBER SHALL BE DESIGNED FOR NON-TRAFFIC APPLICATIONS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.
 10. THE CHAMBER SHALL BE MANUFACTURED IN AN ISO 9001:2008 CERTIFIED FACILITY.

FILTER FRAME BAG SPECIFICATIONS

GENERAL
CULTEC'S FILTER ENCLOSURES, MANUFACTURED FROM A MULTIPURPOSE NONWOVEN GEOTEXTILE OF 100% POLYPROPYLENE PLASTIC STAPLE FIBERS FORMED INTO A RANDOM NETWORK, NEEDLEPUNCHED AND HEATSET FOR DIMENSIONAL STABILITY, ARE DESIGNED TO FIT COLLAPSIBLE METAL FRAMES.

FILTER FRAME BAG PARAMETERS

1. THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
2. THE FILTER ENCLOSURES ARE CONSTRUCTED FROM MULTIPURPOSE NONWOVEN GEOTEXTILE OF 100% POLYPROPYLENE PLASTIC STAPLE FIBERS FORMED INTO A RANDOM NETWORK, NEEDLEPUNCHED AND HEATSET FOR DIMENSIONAL STABILITY.
3. THE FILTER BAG SHALL HAVE A NOMINAL AREA OF 2.74 FT² (0.255 m²).
4. THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE.
5. THE GEOTEXTILE SHALL HAVE A GRAB TENSILE STRENGTH VALUE OF 160 LBS (0.71 kN) PER ASTM D4632 TESTING METHOD.
6. THE GEOTEXTILE SHALL HAVE AN GRAB TENSILE ELONGATION VALUE OF 50% PER ASTM D4632 TESTING METHOD.
7. THE GEOTEXTILE SHALL HAVE A TRAPEZOID TEAR VALUE OF 60 LBS (0.27 kN) PER ASTM D4533 TESTING METHOD.
8. THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE VALUE OF 410 LBS (1.82 kN) PER ASTM D6241 TESTING METHOD.
9. THE GEOTEXTILE SHALL HAVE A AOS VALUE OF 70 U.S. SIEVE (.212 mm) PER ASTM D4751 TESTING METHOD.
10. THE GEOTEXTILE SHALL HAVE A PERMITTIVITY VALUE OF 1.5 SEC-1 PER ASTM D4491 TESTING METHOD.
11. THE GEOTEXTILE SHALL HAVE A WATER FLOW VALUE OF 110 gpm/ft² (4480 lpm/m²) PER ASTM D4491 TESTING METHOD.

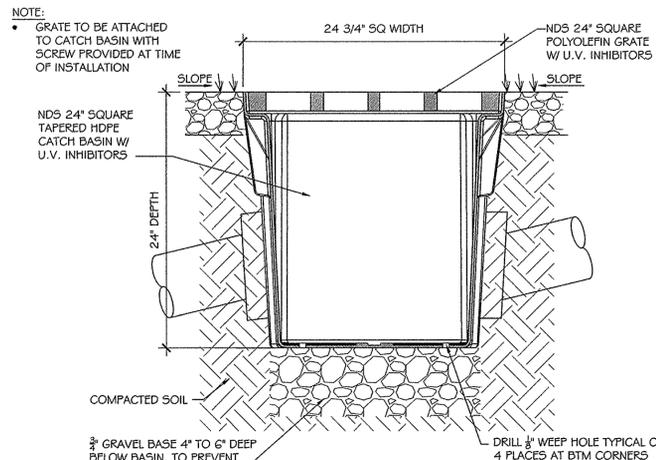
FILTERING SPECIFICATIONS

1. THE FILTER REMOVES MORE THAN 70% OF THE TOTAL SUSPENDED SOLIDS TYPICALLY PRESENT IN STORMWATER RUN OFF.
2. CONTINUOUS FILTRATION CAPABILITY FOR CLEAN FILTERS IS RATED AT 0.67 CFS (0.019 m³/s).
3. TREATMENT CAPABILITY IS APPROXIMATELY 301.4 gpm (1141 l/min).

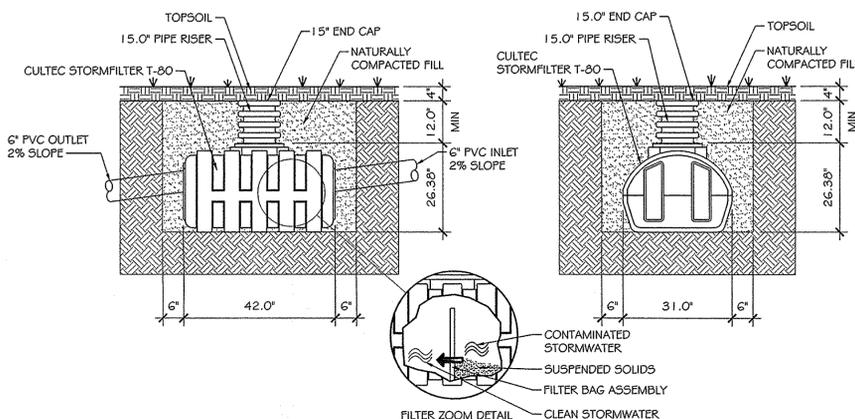
MAINTENANCE PROCEDURES

THE CULTEC STORMFILTER T-80 SHOULD BE INSPECTED AND CLEANED AS NECESSARY, USUALLY AT THE START OF SPRING AND AT THE END OF FALL.

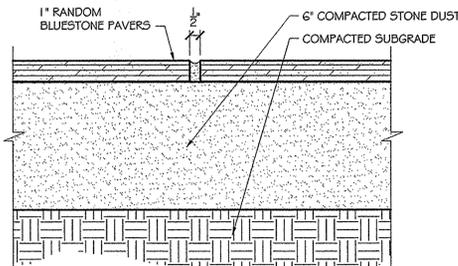
1. CLEAN AND INSPECT ALL ROOF LEADERS, CATCH BASINS, DRAINS, AND OTHER INLET STRUCTURES UPSTREAM OF THE STORMFILTER T-80.
2. REMOVE THE 15.0" (375 mm) END CAP LOCATED AT THE TOP OF THE MAINTENANCE ACCESS RISER PIPE.
3. REMOVE THE 12.5" (318 mm) REMOVABLE LIP FROM THE TOP OF THE STORMFILTER T-80.
4. OPEN THE FILTER BAG ASSEMBLY AND SLIDE THE LOCKING SLEEVE AWAY FROM THE CENTER OF THE FRAME TO LET THE FRAME COLLAPSE.
5. REMOVE FILTER BAG ASSEMBLY FROM THE STORMFILTER.
6. CLEAN OR REPLACE FILTER BAG AS NECESSARY. BAG CAN BE CLEANED USING A COMMON GARDEN HOSE. IF THE FILTER BAG IS WORN, DAMAGED, OR CANNOT BE CLEANED, CONTACT CULTEC, INC. FOR A NEW FILTER BAG.
7. CLEAN OUT ANY LEAVES, STICKS, OR OTHER LARGE DEBRIS FROM STORMFILTER. MAKE SURE TO WEAR GLOVES AND SAFETY GLASSES.
8. VACUUM ANY DIRT, SEDIMENT, AND SMALL DEBRIS FROM BOTTOM OF STORMFILTER USING A WET/DRY VAC.
9. REINSTALL FILTER BAG ASSEMBLY.
10. OPEN METAL FRAME AND SLIDE LOCKING SLEEVE BACK TO THE CENTER OF THE FRAME.
11. REPLACE 12.5" (318 mm) REMOVABLE LIP AT THE TOP OF THE STORMFILTER T-80.
12. REPLACE 15.0" (375 mm) END CAP AT THE TOP OF THE MAINTENANCE ACCESS RISE PIPE.



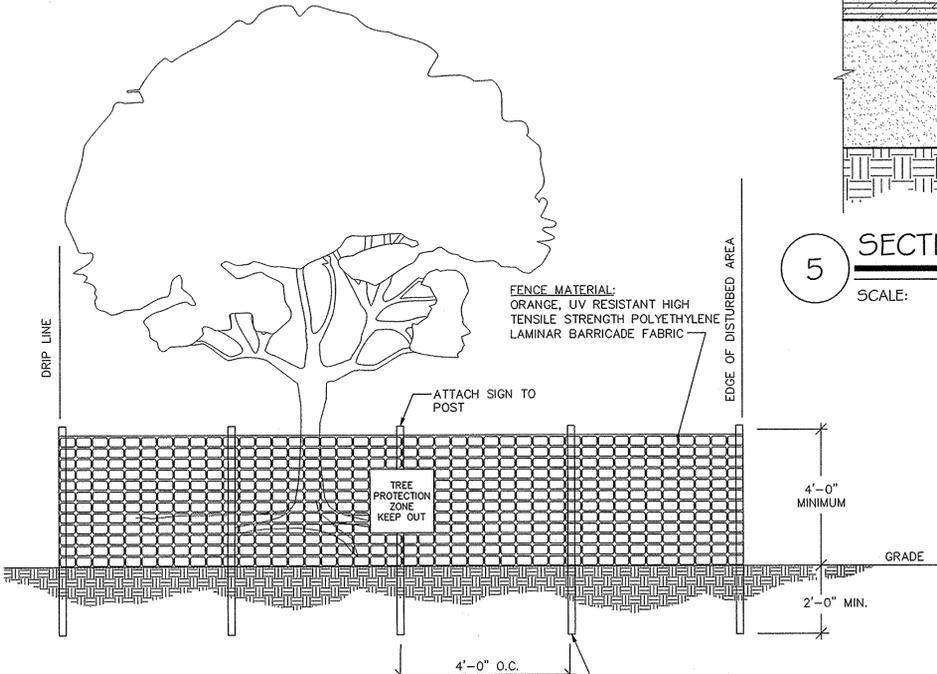
7 NDS 24" SQ CATCH BASIN TYPICAL INSTALLATION
SCALE: NTS



6 CULTEC STORMFILTER T-80 TYPICAL CROSS SECTION
SCALE: NTS

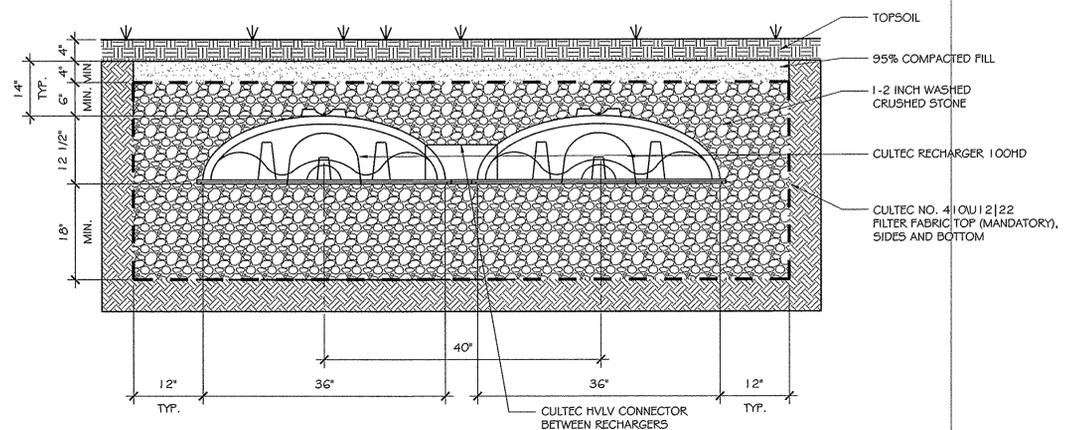


5 SECTION @ BLUESTONE PATIO
SCALE: 3" = 1'-0"

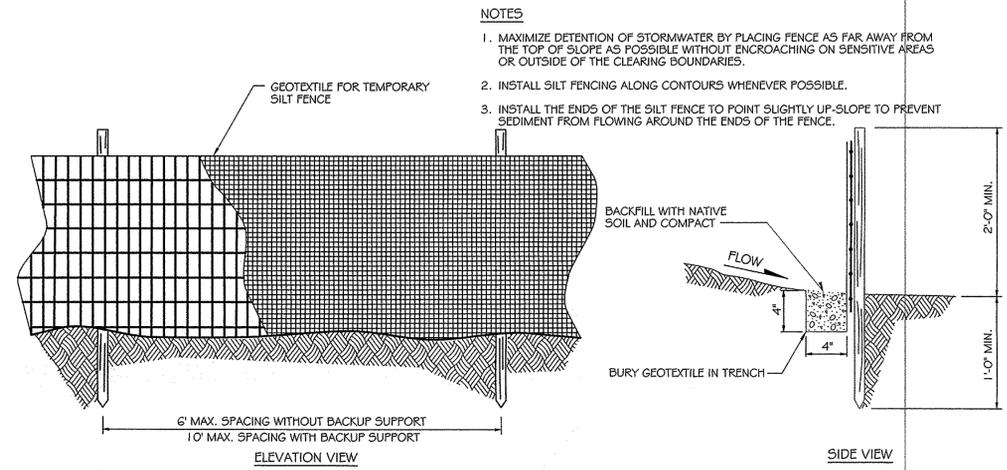


8 TREE PROTECTION FENCE
SCALE: NTS

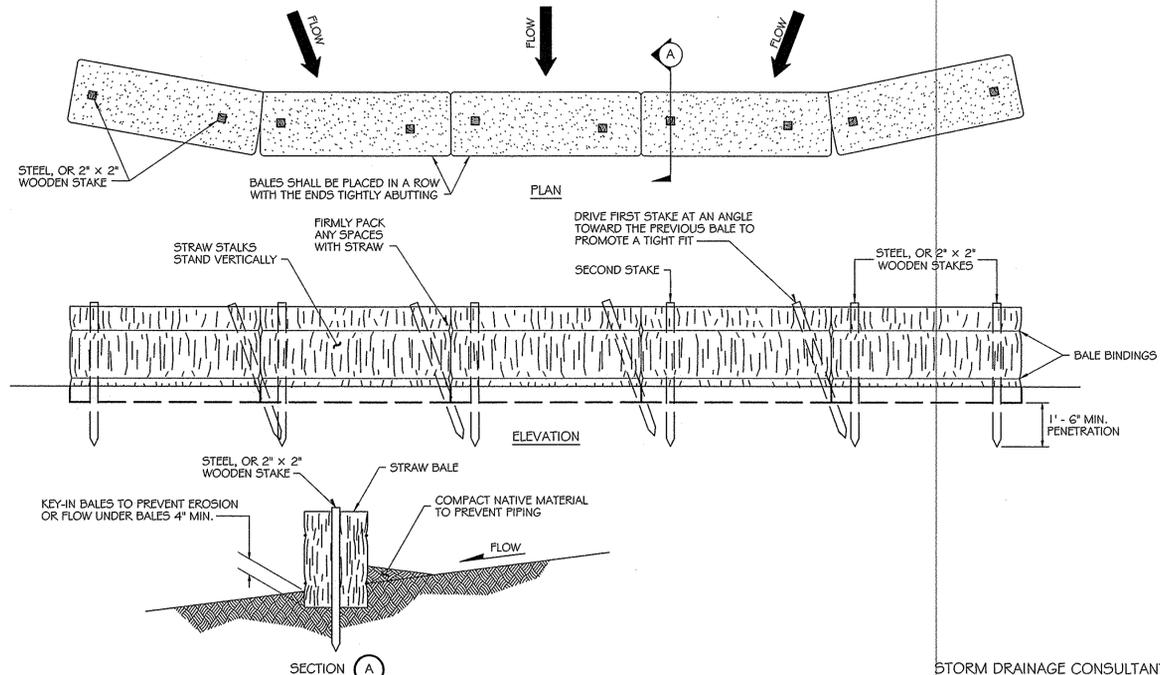
- NOTES:**
1. ALL PLANTS DESIGNATED TO BE SAVED SHALL BE PROTECTED BY FENCING, AS ILLUSTRATED.
 2. INSTALL TREE PROTECTION FENCE AT TREE DRIP LINE OR AT EDGE OF DISTURBED AREA, AS SHOWN ON PLANS, PRIOR TO COMMENCEMENT OF CONSTRUCTION.
 3. SPACE TREE PROTECTION ZONE SIGNS A MINIMUM OF ONE EVERY 300 FEET. THE SIZE OF EACH SIGN MUST BE A MINIMUM OF 2' x 2' AND BE VISIBLE FROM BOTH SIDES OF THE FENCE. THE SIGN MUST CONTAIN THE FOLLOWING LANGUAGE IN BOTH ENGLISH & SPANISH: "TREE PROTECTION ZONE, KEEP OUT".
 3. THERE SHALL BE NO STORAGE OF MATERIAL WITHIN THE BOUNDARIES OF THE TREE PROTECTION FENCING.
 4. TREE PROTECTION FENCING SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT.



4 RECHARGER DETAIL
SCALE: NTS



2 SILT FENCE DETAIL
SCALE: NTS



1 STRAW BALE BARRIER
SCALE: NTS

3 NOT USED
SCALE: NTS

NO.	DATE	REVISIONS



CROSS RIVER ARCHITECTS, LLC
ROBERT J. EBERTS R.A., PRINCIPAL
P.O. BOX 384
19 NO. SALEM RD. 2ND FL.
CROSS RIVER, N.Y. 10518
914.763.8887
FAX 914.763.8409

PROJECT: **KEMP RESIDENCE ALTERATION**
30 SULLIVAN ROAD
NORTH SALEM, NY
TITLE: **STORM DRAIN DETAILS**
DATE: **SEPTEMBER 1, 2015**
SCALE: **AS NOTED**
PROJ. #
DRAWING

STORM DRAINAGE CONSULTANT
WILLIAM J. FALL, PE
75 PENNYBROOK LN.
CARMEL, NY 12512
845-661-2939
williamfall@venzon.net



CULTEC 100HD INSTALLATION SPECIFICATIONS:

- EXCAVATE AND LEVEL THE AREA PER ENGINEERS DRAWINGS. REFER TO PLAN VIEW AND CROSS-SECTION DETAILS AND EXCAVATE BED TO ACCOMMODATE CHAMBERS AND MANIFOLD SYSTEM. BE SURE TO ALLOW FOR A MINIMUM 12 INCH STONE BORDER AROUND THE PERIMETER OF THE SYSTEM AND UNFORESEEN OVERAGES IN YOUR EXCAVATION CALCULATIONS.
- REMOVE ANY STANDING WATER AND MAINTAIN POSITIVE DRAINAGE OF THE SITE THROUGHOUT THE INSTALLATION. DEWATERING PROCEDURES MUST BE USED IF NECESSARY.
- PREPARE THE SUB-GRADE SOIL FOR THE CHAMBER BED AS SPECIFIED BY THE ENGINEERS DRAWINGS.
- PLACE CULTEC NO. 410 NON-WOVEN FILTER FA (OR EQUIVALENT - SEE TABLE 3, PAGE 21) ON THE EXCAVATED BED BOTTOM AND PERIMETER SIDEWALLS. FILTER FABRIC IS REQUIRED ON THE SIDES AND OVER THE TOP OF THE SYSTEM. IT IS ALSO RECOMMENDED ON THE SYSTEM BOTTOM. OVERLAP THE FILTER FABRIC BY AT LEAST 24 INCHES WHERE THE FABRIC EDGES MEET.
- DISPERSE A LEVEL BASE OF 10 2 INCH DIAMETER WASHED, CRUSHED STONE OVER THE ENTIRE AREA OF THE BED BOTTOM (SEE TABLE 4, PAGE 21 FOR STONE REQUIREMENTS). REFER TO THE ENGINEERS DRAWINGS FOR SUB-GRADE SOIL PREPARATION AND REQUIRED STONE FOUNDATION THICKNESS.
- COMPACT THE STONE BASE TO ACHIEVE A FLAT, LEVEL SURFACE. VIBRATORY ROLLERS MAY ONLY BE USED ON THE STONE BASE PRIOR TO THE INSTALLATION OF CHAMBERS. USE OF VIBRATORY ROLLERS IS STRICTLY PROHIBITED ON ALL OTHER BACKFILL LAYERS.

INTERLOCK MODEL RHD TO EHD USING THE PATENTED OVERLAPPING RIB CONNECTION

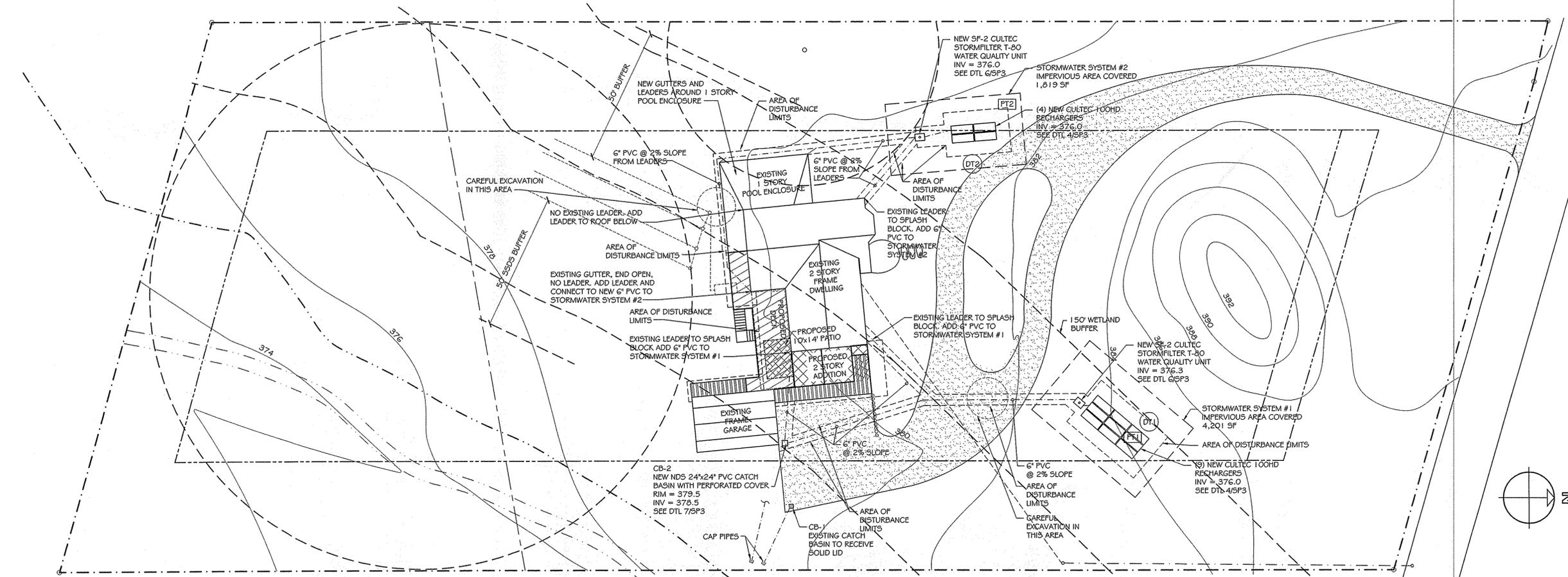
- START EACH ROW WITH A MODEL RHD.
- USE MODEL EHD TO CONTINUE THE LENGTH OF YOUR ROW.
- END YOUR ROW BY USING A MODEL EHD.
- CONNECT ROWS USING CULTEC HVLV CONNECTOR.

NOTES:

- PROTECT ALL TREES TO REMAIN WITHIN 25 FT OF AREA OF DISTURBANCE WITH POLYETHYLENE SNOW FENCE AROUND DRIP LINE.
- DO NOT EXCAVATE UNTIL ALL UNDERGROUND LINES ARE MARKED CLEARLY BY CALLING.
- INSTALL ALL EROSION AND SEDIMENTATION CONTROLS PRIOR TO ANY WORK. THESE SHALL BE MAINTAINED UNTIL ALL EXTERIOR WORK HAS BEEN COMPLETED THROUGH FIRST CUTTING OF GRASS.
- INSTALL STORM FILTER UNITS, RECHARGERS, CATCH BASIN AND PIPING IN STRICT ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.
- FILL TRENCHES AND EXCAVATIONS AS QUICKLY AS POSSIBLE. DO NOT LEAVE ANY TRENCH OPEN OVER THE WEEKEND.

SITE LEGEND

- EXISTING CONTOUR
- - - - - PROPERTY LINE
- - - - - EDGE OF WETLAND
- - - - - WETLAND BUFFER
- - - - - EXISTING STREAM
- - - - - UTILITY EASEMENT
- ▬▬▬▬ SILT FENCE AND HAY BALES
- TREE PROTECTION FENCE LINE
- ▨ EXISTING GRAVEL DRIVEWAY
- ▩ PROPOSED BLUESTONE PATIO
- ▧ PROPOSED DECK
- ▦ PROPOSED TRELLIS
- PT1 PERC TEST
- DT1 DEEP TEST



1 SITE PLAN
SCALE: 1"=20'

REVISIONS

No.	Date	Description



CROSS RIVER ARCHITECTS, LLC
ROBERT J. EBERTS P.A., PRINCIPAL
P.O. BOX 384
19 NO. SALEM RD 2nd FL
CROSS RIVER, N.Y. 10518
914.763.5387
FAX 914.763.8409

PROJECT: **KEMP RESIDENCE ADDITION & ALTERATION**
30 SULLIVAN ROAD
NORTH SALEM, NY
TITLE: **STORMWATER DRAINAGE PLAN**
DATE: **SEPTEMBER 1, 2015** SCALE: **1" = 20'**
PROJ. #

WETLAND CONSULTANT
BRUCE M. DONOHUE, LS
ENVIRONMENTAL DESIGN
CONSULTING
13 PROMISED RD.
WESTPORT, CT 06880
203-226-0386

STORM DRAINAGE CONSULTANT
WILLIAM J. FALL, PE
75 PENNYBROOK LN.
CARMEL, NY 10512
845-661-2969
williamfall@venzon.net



Site Design Consultants

Civil Engineers • Land Planners

September 16, 2015

Mr. Jerome Kerner, Planning Board Chairman
Members of the Planning Board
Cross River Shopping Center at Orchard Square
Suite L – Lower Level
20 North Salem Road
Cross River, NY 10518

Re: Shelby White
195 and 199 Elmwood Road
Resolution dated November 18, 2014
Cal. #6-14 P.B. and Cal. # 65-14 W.P.

Dear Chairman Kerner and Members of the Planning Board:

We are providing this letter as a request for another extension of time for resubmission of approval regarding the above referenced Planning Board Resolution for Shelby White granting Final Subdivision Plat Approval - Lot Line Change, and Wetland Activity Permit. This Resolution and last time extension requires a final approval by September 29, 2015 and since the subdivision plat has not yet been approved, we are requesting a time extension to keep this project current.

In accordance with Condition no. 9 of the Resolution, on September 15 we submitted the revised Short EAF, two sets of Site Plans, and the Surveyor's Plat as a "check set" for the Town's final review prior to submitting the mylar and additional prints required by the Town.

Kindly place this item on the agenda for the September 29, 2015 Planning Board Meeting for a time extension. Please let us know if you have any questions, or advise us of additional information that may need to be provided to support this request. Thank you.

Sincerely,


Joseph C. Riina, P.E.

Cc: S. White

JCR/cm/ sdc 13-26

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