

January 11, 2015

Supervisor Andy Stewart
Councilman Denis Troy
Councilman Thomas Diviny
Councilman Tom Morr
Councilman Paul Valentine

Town of Orangetown
26 Orangeburg Rd
Orangeburg, NY 10962

RE: Hillside Commercial Park

Dear Supervisor and Members of the Orangetown Town Board,

Route 304 LLC, the developer of the Hillside project, has submitted a site plan to the Planning Board expecting final site plan approval on January 14th. The Planning Board should outright reject this plan because no documentation appears in the file proving that the developer holds a valid permit from the Army Corps of Engineers (ACE).

Seven years ago, in January 2007, the developer had a wetland delineation performed on the Hillside property; he received a Nationwide Permit from the ACE in 2008. BOTH the wetland delineation and the permit have now expired. As mandated by law, the developer is required to perform a new wetland delineation AND apply for a new Army Corps permit. We have FOILED their documents and can find no records proving they have acquired a new Army Corps permit and no records proving they have performed a new wetland delineation.

There is a high probability the hydrology of the Hillside property has changed. Since 2007 Orangetown has experienced multiple 50 and 100-year storms and two hurricanes, Irene and Sandy. Trees have fallen on the property causing water to stand in places not previously wet. These areas MUST now be taken into consideration in the wetland calculation of the site.

If Route 304 LLC did apply for a new Army Corps permit, they were REQUIRED to perform a new wetland delineation. So, where is it? And if a new delineation was performed, WHO did it and WHEN? A common trick to report smaller wetland acreage is to perform a delineation in the winter. If this developer wanted to report the true wetland acreage on the Hillside property he would have performed the delineation in spring or summer – during the active growing season.

At the January 6, 2015 Town Board meeting, you voted to authorize the Building Department and Zoning Board to select outside air pollution experts to review the Anellotech application. Can this same consideration NOT be given to the Hillside property?

Route 304 LLC used a landscape architect, Robert Torgersen, to perform the wetland delineation in the winter of 2007 (January). He was the same person that performed the wetland delineation on

Bradley Corporate Park in 1996. In 2001 the Army Corps rejected his mark-out as too small and added three additional sites to that wetland delineation. Odd, that Route 304 LLC would use the same “expert” on the Hillside property don’t you think?

Attached is a report written in March, 2009 by a third-party wetlands expert. The facts outlined support our suspicion of a flawed 2007 wetland delineation and provide enough evidence for the Planning Board to call for a new wetland evaluation..

We believe the 2007 wetland delineation is indefensible and request that you convey this belief to the Planning Board. Given the January 6th ruling, the Town Board may direct the Building Department to select a third-party expert to conduct a new wetland delineation – in the growing season – to arrive at a fair reading of the wetland acreage on the Hillside property.

The size of the wetland is hugely important on the Hillside property because the developer is .01 acre away from mandatory mitigation on site. That is 435.3 square feet – that is roughly 21’ x 21’ – that could be the size of your living room. If the 2007 delineation underreported the wetland acreage then the developer will have destroyed wetlands illegally.

Over the last seven years we have presented solid and justifiable facts regarding the environmental disregard and insensitive design of the Hillside project, yet you refuse to hold the developer and his attorney accountable in any way, shape or form. You claim to have no influence over the Planning Board but residents believe otherwise. When there are projects that are beneficial for political gain or loss, those projects are moved along or killed.

Make no mistake; Pearl River residents living near the Hillside project are angry. We are angry enough to call for new Town Board representation and look forward to this fall’s election. The Hillside Commercial Park project may prove disastrous for more people than just those living on the “poor” side of town.

RUSH members will be present, in force, at the January 14th Planning Board meeting. Will you be there to hear our comments?

We look forward to your response.

Sincerely,

Members of RUSH, Residents United to Save Hillside

HILLSIDE COMMERCIAL PARK
Water Quality Issues and Concerns
March 2009

The project site is located to the east of Route 304 between Hillside Avenue and Crooked Hill Road in Town of Orangetown, Rockland County, NY. The property is undeveloped, primarily wooded, containing emergent wetland systems. A portion of the property (approximately 25%) lies within the 100-year floodplain of Muddy Creek. The proposed facility includes an office, warehouse and mini-storage facility. A driveway would connect the development with Hillside Avenue. The total project area is 10.23 acres.

Several concerns have been raised upon review of the environmental and drainage documentation. The goal of this memo is to draw attention to discrepancies in both the project design and environmental analysis, as well as to prompt the following actionable items:

1. Reevaluate the wetland boundary as it is determined on the basis that: (a) the delineation was completed at an inappropriate time with regard to the growing season, and (b) work by the consultant has been inaccurate in previous, similar studies
2. Address the direct discharge of untreated stormwater runoff to a natural wetland
3. Nominate the 2-acre wetland for “Unusual Local Importance” under New York State Department of Environmental Conservation (NYSDEC) Freshwater Wetlands Act, based on critical flood control function

Wetland Delineation

According to the site plans and Environmental Impact Analysis, the wetland delineation was completed on January 12, 2007. A routine wetland determination performed in compliance with the US Army Corps of Engineers (USACE) 1987 Wetland Delineation Manual requires the observation of specific indicators that are present during the growing season, as defined by the county soil survey¹. According to the Natural Resources Conservation Service (NRCS), the growing season for Rockland County is approximately April through October². This places the delineation performed at the Hillside site outside of the growing season by several months.

The timing of a delineation is vital to the accuracy of the results. Field work should be scheduled when wetland hydrology is likely to be present and vegetation is identifiable and communities are apparent. Site photographs in **Exhibit 1** demonstrate notable differences in hydrology features and vegetative cover with regard to seasonal timing.

¹ See 1987 Corps of Engineers Wetlands Delineation Manual, online edition
<http://www.mvn.usace.army.mil/ops/regulatory/wlman87.pdf>

² See Rockland County Soil Survey, online edition
<http://www.wcc.nrcs.usda.gov/cgibin/getwetco.pl?state=ny>

Performing a delineation in the full presence of hydrology and vegetation indicators could yield a different boundary or perhaps addition area to the existing boundary. The current delineation concludes that the proposed facility would impact 0.09 acre of wetlands, under the 0.1 acre threshold to allow work under Nationwide Permit 39 – Commercial and Institutional Developments. If, upon reevaluation, the boundary is determined to be larger than reported, an Individual Permit would be required.

The wetland delineation was performed by Robert G. Torgersen, LA, CPESC. Similar work completed by Mr. Torgersen for a previous project was determined to be inaccurate upon evaluation by federal experts; the revised boundary was 0.5 acre larger than initially reported.

In the Matter of Bradley Corporate Park, Supreme Court of the State of New York Appellate Division: Second Judicial Department:

“On February 27, 1996, Robert Torgersen, who was a "landscape architect" hired by the petitioner Bradley Corporate Park to perform work in connection with certain expansion at its corporate park in Rockland County, flagged what he believed to be the freshwater wetland’s boundary. According to his boundary lines, there were 5.075 acres of wetlands. On May 31, 1996, the United States Army Corps of Engineers (hereinafter the ACOE), which regulates "Federal" freshwater wetlands, sent representatives to the corporate park to verify the freshwater wetland’s boundary. The ACOE’s representatives determined that there were actually 5.535 acres of wetlands and expanded certain portions of Torgersen’s boundary.”³

The inappropriate timing of the field work, paired with a previous miscalculation by the consultant, could warrant a reevaluation of the site with regard to the location of the jurisdictional boundary.

It is worth noting that the field work for the Bradley Corporate Park project was also completed outside the growing season.

Drainage and Flooding

According to the Drainage Analysis, revised January 18, 2008 (**Exhibit 2**):

“The topography of the property features a downward slope from east to west.”

“Under existing conditions, the project site drains in two directions. The majority of the project site drains to the larger wetland on the southerly part of the property.”

³ See <http://www.courts.state.ny.us/courts/ad2/calendar/webcal/decisions/2007/D14587.pdf>

“Under proposed conditions, the project site will continue to drain in two directions, but the area draining to the north will be reduced and the area draining to the south will be increased.”

“To offset the increased runoff associated with the increase in impervious surfaces, a stormwater detention basin will be constructed to the north of the existing wetlands.”

While, according to the report, “the basin has been sized to provide zero net increase in runoff leaving the site in the southerly direction”, runoff originating at any point to the south of the drainage basin will flow to the southwest, and directly into the larger wetland. Because the basin has been designed on the north side of the project site (at a higher elevation), it would be impossible for the natural flow of stormwater to be directed to the basin from the southern portion of the site. The proposed facility design including wetland boundaries is enclosed as **Exhibit 3**.

Stormwater runoff from the designed warehouse and parking facility would contain numerous pollutants. In addition, the volume and velocity of the flow would be increased due to the increase of impervious surfaces. The untreated runoff would enter the wetland without a buffer zone and would cause degradation to the quality of the wetland.

In correspondence dated November 14, 2007 to the Town of Orangetown Planning Board (**Exhibit 4**), Thomas Vanderbeek comments:

“A significant portion of the proposed impervious areas drains directly to the southerly wetland without water quality and quantity controls. The runoff from these areas must be treated and controlled. Conversations with the applicant’s design engineer revealed that due to design constraints, i.e. elevations and wetlands, it is difficult to provide the conventional stormwater management practices (SMP’s) which are acceptable to NYSDEC. During these discussions, alternative practices were discussed and may be incorporated in to the design.”

In order for the wetland to continue to provide the critical function of flood protection, maintaining the health of the system is important. The implementation of a buffer zone would allow the wetland to maintain its function, but the proposed design does not account for this transitional area.

Water leaving the drainage basin would be treated with filters, but in order for the runoff to be conveyed through this system before reaching the wetland, the flow would need to be redirected to the north.

NYSDEC Freshwater Wetlands Act

The NYSDEC Freshwater Wetlands Act protects wetlands 12.4 acres in size and greater. The state’s natural wetlands are considered valuable ecological resources that act as

wildlife habitat, open space, water resources and, perhaps most applicable to the Hillside site, flood control.

The Hillside wetland is within the 100-year floodplain of Muddy Creek and upstream from downtown Pearl River, NY, an area prone to flooding.

According to Part 664.7 (c) of the New York Codes, Rules, and Regulations (NYCRR)⁴, a wetland less than 12.4 acres in size may qualify for protection under the FWA if it is considered of unusual local importance. The commissioner may designate a wetland as having unusual local importance if the feature demonstrates Class I characteristics. Under Part 664.5 (a):

“A wetland shall be a Class I wetland if it has any of the following seven enumerated characteristics:

...(5) it is tributary to a body of water which could subject a substantially developed area to significant damage from flooding or from additional flooding should the wetland be modified, filled, or drained (664.6(d)(1)).”

The state recognizes the importance of transitional areas that border wetland boundaries. These are critical to proper wetland health, and the impact to or removal of this zone reduce the quality and impair the functions of the wetland.

By nominating the Hillside wetland for protection under FWA, any activity within 100 ft. of the delineated area would require permitting through NYSDEC. In addition, a buffer zone would be implemented to protect the transitional area.

Any citizen may nominate a wetland as being of unusual local importance.

⁴ See <http://www.dec.ny.gov/regs/4612.html#13472>

Exhibit 1. Site photographs taken during various seasons.



February



May



Exhibit 2
Drainage Analysis, Revised January 18, 2008
(Methodology Section)

METHODOLOGY

The Hillside Commercial Park property is comprised of three existing tax lots (68.11-1-39, 68.11-1-40 and 68.16-1-1) totaling 10.23 acres. The property is located on the easterly side of New York State Route 304, at the intersection with Hillside Avenue. The parcel is vacant and wooded, and includes a wetland of approximately 2 acres on its southwesterly corner and a smaller wetland of approximately 0.1 acre near its northwesterly corner. The topography of the property features a downward slope from east to west, toward the wetlands adjacent to Route 304.

The property also includes a delineated 100 year floodplain associated with Muddy creek. Muddy Creek, a County regulated stream, runs southerly adjacent to the southbound lanes of Route 304. The stream crosses Route 304 through a concrete box culvert at the intersection of Hillside Avenue, where it continues to flow southerly adjacent to the northbound lanes of Route 304. The delineated 100 year floodplain of Muddy Creek includes a backwater area that generally surrounds the southerly wetland on the project site. The backwater is created by flow backing through the small box culvert or overtopping Hillside Avenue and flowing down into the wetland. According to the Federal Emergency Management Agency flood insurance rate maps for the Town of Orangetown, the 100 year floodplain elevation on the project site is elevation 225.0. Because of the floodplain on the project site, the project also falls under the jurisdiction of the Rockland County Drainage Agency; and a permit will be required.

Under existing conditions, the project site drains in two directions. The majority of the project site drains to the larger wetland on the southerly part of the property. The southerly wetland then drains through a small box culvert under Hillside Avenue and discharges into Muddy Creek. The northerly portion of the project site drains to the smaller wetland near the northwesterly corner of the property. That wetland then drains through a 24 inch diameter corrugated metal pipe under Route 304 and into Muddy Creek.

The proposed project features the construction of a new mini-storage facility on the southerly part of the property, and a new warehouse/office building on the northerly part of the property. The existing lot lines will be disclaimed, and a new two lot subdivision will be created. A driveway from Hillside Avenue will provide access to both of the facilities. There will be no direct access from Route 304.

Under proposed conditions, the project site will continue to drain in two directions, but the area draining to the north will be reduced and the area draining to south will be increased. The large majority of the project site will drain to the larger wetland on the southerly part of the property. The southerly wetland then drains through a small box culvert under Hillside Avenue and discharges into Muddy Creek. The remaining area from the northerly portion of the site will drain to the smaller wetland near the northwesterly corner of the property.

The proposed project will increase the impervious surfaces on the property by adding buildings, driveways and paved parking areas. To offset the increased runoff associated with the increase in impervious surfaces, a stormwater detention basin will be constructed to the north of the existing wetlands. The basin has been sized to provide zero net increase in runoff leaving the site in the southerly direction, and it reduces peak discharges for rainfall events having recurrence intervals ranging from 1 to 100 years. Discharges from the site to the northerly wetland are reduced by the reduction in contributing drainage area from the site.

The outflow from the detention basin will be discharged to the existing wetland, which provides additional, natural stormwater detention and filtering. The proposed detention basin has been designed to collect as much runoff from proposed impervious surfaces as possible. Roof leaders will direct runoff from the roofs of the proposed mini-storage and warehouse buildings to the detention basin, and runoff from the majority of the parking lot and driveways will be discharged to the detention basin from the stormwater collection system.

The detention basin has also been designed to provide water quality and quantity controls as required by the New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit for Stormwater Discharges from Construction. The design incorporates sizing for Water Quality Volume Control (WQv), Channel Protection Storage Volume (CPv), Overbank Flood Control (Qp) and Extreme Storm Flood Control (Qf). These four components of the water quality sizing criteria are further described as follows:

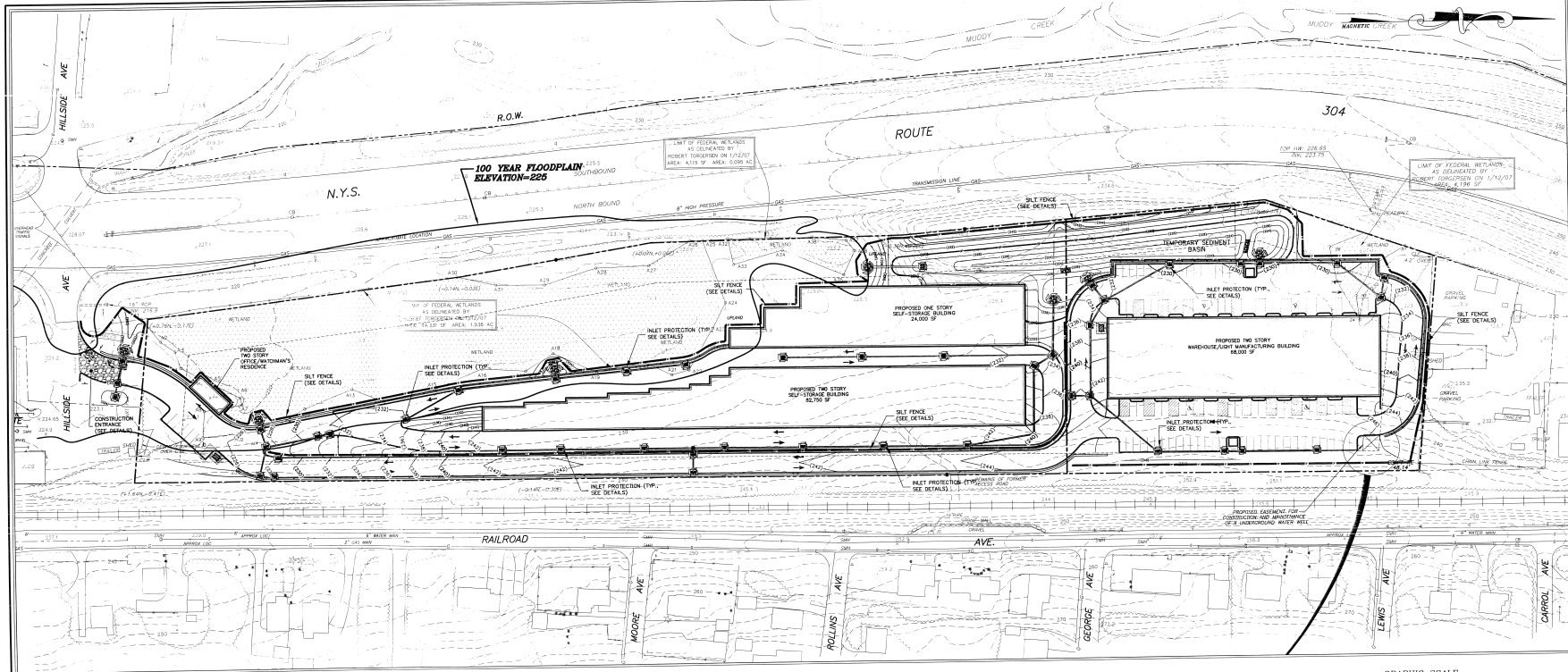
- The Water Quality Volume (WQv) is designed to improve water quality by capturing and treating 90% of the average annual stormwater runoff volume. The WQv is directly related to the amount of impervious cover on a project site. 50% of the required water quality volume is provided in a permanent pool and 50% is provided in extended detention to be released over a 24 hour period.
- The Channel Protection Storage Volume (Cpv) is designed to protect stream channels from erosion. The CPv is accomplished by providing 24 hour extended detention of the one-year, 24 hour storm event.
- The purpose of Overbank Flood Control (Qp) is to prevent an increase in the frequency and magnitude of out-of-bank flooding generated by urban development. Overbank Flood Control is accomplished by attenuating the post development 10 year, 24 hour peak discharge rate from the site to the pre-development rate.
- The purpose of Extreme Flood Control (Qf) is to prevent an increased risk of flood damage from large storm events, to maintain the boundaries of the pre-development 100 year floodplain, and to protect the physical integrity of stormwater management practices. Extreme Flood Control is accomplished by attenuating the post development 100 year, 24 hour peak discharge rate from the site to the pre-development rate.

The required Water Quality Volume and Channel Protection Storage Volume were calculated in accordance with the procedure outlined in the *New York State Stormwater Management Design Manual*. The Overbank Flood Control and Extreme Storm Flood Control are provided by controlling the peak discharge from the project site for the 10 year and 100 year storms to pre-development rates.

This hydrologic analysis utilized the U.S. Army Corp of Engineers HEC-1 computer program to generate, route and combine runoff hydrographs for storms having 1-, 2-, 10-, 25-, and 100-year recurrence intervals. Runoff hydrographs were generated by utilizing SCS hydrographs to match discharges as calculated using the TR-55 graphical peak discharge method for each drainage subarea.

The attached tables summarize the results of the stormwater detention and analyses. Also attached are backup calculations, input data, and HEC-1 computer output.

Exhibit 3
Proposed Facility Design

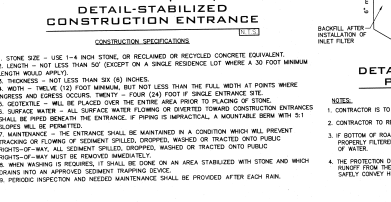
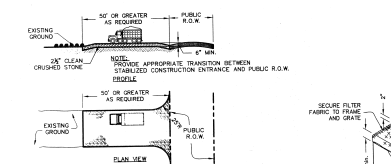


SOIL EROSION AND SEDIMENT CONTROL NOTES

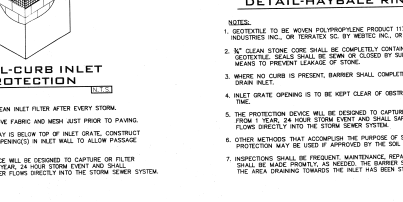
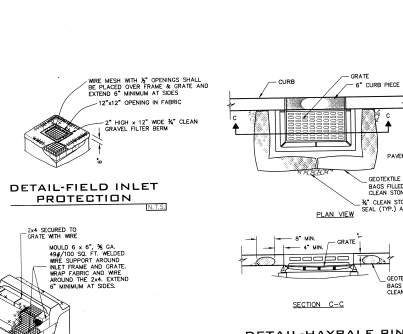
- 1. SEPARATION OF WORK**
PROVIDE ALL MEANS NECESSARY TO INSTALL, MAINTAIN AND REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN ON THE DRAWINGS AND AS REQUIRED TO MINIMIZE THE EROSION AND UNEXPECTED TRANSPORT OF SOIL FROM NEIGHBORING AREAS.
- 2. QUALITY ASSURANCE**
A. GENERAL
1. RETAIN IN ACCORDANCE WITH THE DRAWINGS OR NEW YORK STATE, CODEBOOKS FOR URBAN EROSION & SEDIMENT CONTROL, AUGUST 2002 (IN FULL COMPLIANCE), WHICHEVER IS STRICTER.
2. SLOPE AND MAINTENANCE OF ALL SLOPES SHALL BE SUCH THAT ALL STORM WATER RUNOFF FROM DISTURBED AREAS IS DIVERTED TO SOIL EROSION AND SEDIMENTATION CONTROL FACILITIES.
3. SOIL EROSION AND SEDIMENTATION CONTROL PLAN SHALL BE MADE WITHOUT APPROVAL OF THE OWNER'S REPRESENTATIVE.
4. NO MORE THAN 3 ACRES OF SOIL, NOT PROTECTED BY EROSION AND SEDIMENTATION CONTROL MEASURES, SHALL BE DISTURBED AT ANY ONE TIME.
5. THE CONTRACTOR SHALL COMPLY WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS RELATIVE TO THE PREVENTION AND MAINTENANCE OF POLLUTION.
6. THE CONTRACTOR SHALL FURNISH ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES TO MITIGATE UNFORESEEN SITUATION.
7. PRODUCE SLOOPEPLAN
8. EROSION AND SEDIMENTATION MEASURES SUCH AS HAIRLES AND MATS SHALL BE MAINTAINED AT SITE FOR USE IN STABILIZING DISTURBED AREAS UNTIL SUCH TIME AS PERMANENT VEGETATION IS ESTABLISHED.
9. WORK SCHEDULE
A. GENERAL
1. INITIAL AND REVERSE MEASURES AS NOTED IN THE "CONSTRUCTION SEQUENCE" NARRATIVE AND PLANS THE MEASURES SHALL BE MAINTAINED UNTIL PERMANENT PROTECTION OF THE CONTRIBUTING WATERSHED IS APPROVED BY THE OWNER'S REPRESENTATIVE. ALL STORM DRAINAGE OUTLETS SHALL BE STABILIZED, AS REQUIRED, BEFORE THE DISCHARGE POINTS BECOME OPERATIONAL.
2. INSPECTIONS
INSPECTION SHALL BE AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A 24 HOUR OR GREATER STORM EVENT. STABILIZED AREAS WILL BE INSPECTED MONTHLY UNTIL THE ENTIRE SITE IS STABILIZED. INSPECT DAILY SEDIMENT BARRIERS LOCATED DOWNDRIVE OF ROCK SPRING-BLASTING ACTIVITIES.
3. MAINTENANCE
COMPLETE MAINTENANCE WITHIN 7 CALENDAR DAYS OF DETERMINING ITS NEED.
4. STABILIZATION/PLANTING
TEMPORARILY OR PERMANENTLY STABILIZED WITHIN 24 HOURS AFTER THE END OF CONSTRUCTION ACTIVITIES IN AN AREA UNLESS THERE IS SHORT CYCLE OF CONSTRUCTION ACTIVITIES WILL REBEGIN WITHIN 31 DAYS.
5. PRODUCTS AND EXCLUSION
A. STABILIZED CONSTRUCTION ENTRANCE
COMPLETE MAINTENANCE WITHIN 7 CALENDAR DAYS OF DETERMINING ITS NEED.
B. SILT FENCE
SILT FENCE FABRIC SHALL BE MAINTAINED AT LEAST 18 INCHES ABOVE GROUND. A MINIMUM 36 INCHES LONG AND 12 INCHES WIDE. METAL POSTS SHALL BE STAKED 7 AND 3 SECTION MARKING NOT LESS THAN ONE POUND PER LINEAR FOOT. METAL POSTS SHALL BE STAKED 14-18 INCHES WITH A MAXIMUM 24 HOUR HIGH OPENING AND SECURELY ATTACHED TO FENCE POSTS. FENCE POSTS SHALL EXTEND A MINIMUM OF 18 INCHES INTO THE GROUND.
C. DUST CONTROL
DUST CONTROL MEASURES SHALL BE MAINTAINED AT LEAST 100 FEET OF AN UNINHABITED DWELLING AS NECESSARY TO PROVIDE DUST CONTROL. CONFORM TO ALL LOCAL AND STATE REGULATIONS GOVERNING THESE ACTIVITIES.
D. CONSTRUCTION VEHICLES
WASH DOWN ALL CONSTRUCTION VEHICLES AND COVER WITH TARPOLARS AS NECESSARY TO PREVENT HEAVY TRANSPORT OF SEDIMENT OFF-SITE. COVER MUST OPERATE FROM WASH DOWN OPERATIONS TO A SEDIMENT TRAP.
E. ROCK REMOVAL
ROCK SPRING SHALL BE USED WHEREVER POSSIBLE IN PLACE OF BLASTING OPERATIONS MADE DURING TEST BLASTING SHALL BE USED IN THE DEVELOPMENT OF A CONTROLLED ROCK REMOVAL PROGRAM.
F. REMEDIATION FOR ROCK STOWING
MATERIALS SHALL NOT BE STOWED ON STEEP SLOPES, DRAINAGE SWALES, WETLAND AREAS OR WETLAND RETIENAC AREAS. STOWED MATERIALS SHALL BE SURROUNDED WITH SILT FENCE AND RE-ESTABLISHED FOLLOWING COMPLETION OF CONSTRUCTION ACTIVITIES.
G. MAINTENANCE
A. REPAIR OR REPLACE ALL DAMAGED EROSION AND SEDIMENT CONTROL MEASURES.
B. STABILIZED CONSTRUCTION ENTRANCE: TOP DRESS WITH ADDITIONAL AGGREGATE AS REQUIRED TO PREVENT TRACKING OF SEDIMENT OFF OF THE SITE.
C. SILT FENCE: REMOVE CAPTURED SEDIMENT WHEN DEPTH EXCEEDS 1/3 THE HEIGHT OF THE FENCE.

SOIL EROSION AND SEDIMENT CONTROL - CONSTRUCTION SEQUENCE

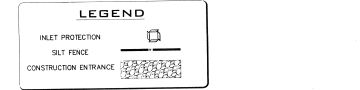
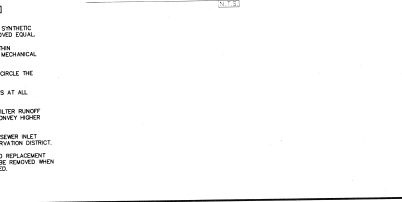
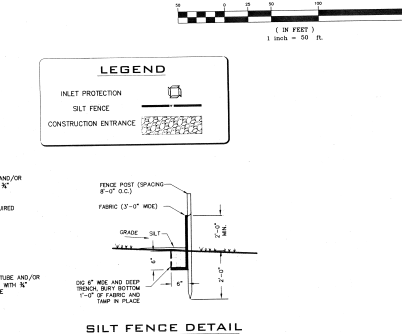
1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE PRIOR TO ANY GRADING OPERATIONS AND INSTALLATION OF PROPOSED STRUCTURES OR UTILITIES.
2. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL REMAIN IN PLACE AND BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETED AND/OR FINISHED.
3. DISTURBANCE AREA SHALL BE LIMITED TO NO MORE THAN FIVE (5) ACRES AT ANY TIME.
4. INITIAL STABILIZED CONSTRUCTION ENTRANCE AS INDICATED ON PLAN.
5. INITIAL SILT FENCE AND/OR INLET PROTECTION BARRIERS DOWN SLOPE OF ALL AREAS TO BE DISTURBED AND DOWN SLOPE OF ALL AREAS DESIGNATED FOR TOPSOIL STOCKPILING.
6. CONSTRUCT BARRIERS TEMPORARILY STABILIZED. SUBSEQUENT SEDIMENTATION BARRIERS AND PILES AS NECESSARY TO DIRECT CONTOUR TO TEMPORARILY STABILIZED AREAS.
7. CLEAR EXISTING BULKHEAD WALLS AND EXISTING STRUCTURES FROM AREAS TO BE FILLED OR EXCAVATED. STRIP AND STOCKPILE TOPSOIL FROM THE AREA TO BE DISTURBED. SEED STOCKPILES TOPSOIL WITH TEMPORARY GRAASS COVER.
8. VERTICAL EXCAVATION AND FILL FOR ACCESS ROADS TO NORTHERLY PARCELS TO BE FILLED TO GEODED GRADE.
9. ANY DISTURBED AREAS TO REMAIN BANK SHOULD BE SEeded WITH TEMPORARY GRASS.
10. INITIAL UNDERDRAINAGE AND FILL FOR ACCESS ROADS TO NORTHERLY PARCELS. GRATES OF CURB AND FIELD INLETS SHOULD BE LEFT AT ELEVATIONS WHICH PERMIT FUTURE COLLECTION OF SURFACE RUNOFF.
11. INITIAL CURB AND FIELD INLETS AND OTHER COURSES OF PAVED AREAS. RAISE GRATES OF THE CURB AND FIELD INLETS ACCORDINGLY.
12. COMPLETE THE GRADING FOR BUILDINGS AND PARKING LOTS.
13. INITIAL SURFACE COURSE OF PAVEMENT, RAISE GRATES OF CURB AND FIELD INLETS TO FINAL ELEVATION.
14. UPON COMPLETION OF CONSTRUCTION, ALL DISTURBED AREAS ARE TO BE SEeded. ALL TEMPORARY DEVICES SHALL BE REMOVED AND THE AFFECTED AREAS REGRADED, PLANTED OR TREATED IN ACCORDANCE WITH THE APPROVED SITE PLAN.



DETAIL-FIELD INLET PROTECTION



DETAIL-HAYBALE RING



- NOTES:**
1. GEOTEXTILE TO BE HENKE HYPOPLINE PRODUCT 117F, BY SYNTHETIC INDUSTRIES INC. OR SERATEX SC BY WETBEC INC. OR APPROVED EQUAL.
 2. 1/2" CLEAN STONE SHALL BE BENEATH OR COLLECTED BY DRAINAGE MECHANICAL SECTORS TO BE SEVEN LEAVES OF STONE.
 3. WHERE NO CURBS IS PRESENT, BARRIER SHALL COMPLETELY ENCLOSE THE DRAIN INLET.
 4. INLET GRATE OPENING IS TO BE KEPT CLEAR OF OBSTRUCTIONS AT ALL TIMES.
 5. INLET PROTECTION DEVICE WILL BE DESIGNED TO CAPTURE OR FILTER RUNOFF FROM 1 YEAR, 24 HOUR STORM EVENT AND SHALL SAFELY CONVEY EXCESS FLOODS DIRECTLY INTO THE STORM SEWER SYSTEM.
 6. OTHER METHODS THAT ACCOMPLISH THE PURPOSE OF STORM SEWER INLET PROTECTION MAY BE USED IF APPROVED BY THE SOIL CONSERVATION DISTRICT.
 7. INSPECTIONS SHALL BE FREQUENT MAINTENANCE, REPAIR, AND REPLACEMENT SHALL BE MADE PROMPTLY, AS NEEDED. THE BARRIER SHALL BE REMOVED WHEN THE AREA DRAINING TOWARDS THE INLET HAS BEEN STABILIZED.

BROOKER ENGINEERING, LLC
PROFESSIONAL ENGINEERS
100 WEST 14TH AVENUE, SUITE 200
ROCKLAND COUNTY, NEW YORK 10956
TEL: 845.339.1000 FAX: 845.339.1001
WWW.BROOKERENGINEERING.COM

NO.	DATE	DESCRIPTION
1	09/28/07	ISSUE FOR PERMIT
2	12/13/07	FOR REVIEW COMMENTS
3	01/22/08	FOR REVIEW COMMENTS
4	09/08/08	FOR REVIEW COMMENTS

HILLSIDE COMMERCIAL PARK
TOWN OF ORANGETOWN
ROCKLAND COUNTY, NEW YORK

SOIL EROSION & SEDIMENT CONTROL

Drawn by: **S.S.**
Checked by: **S.S.**
Original Date: **09/28/07**
Last Revised Date: **09/08/08**

Scale: 1" = 50'

4

Exhibit 4

Correspondence: November 14, 2007 to the Town of Orangetown Planning Board

**Hillside Commercial Park
Prepreliminary/Preliminary/Final Subdivision**

Lots 68.11-1-39 and 40 and 68.16-1-1, Hillside Ave, Pearl River, NY 14 November 2007

GHV Job No. 1040, Task 07-05A

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14 November 2007

GHV Job No. 1040

Task 07-05A

Ms. Cheryl Coopersmith, Chief Clerk
Town of Orangetown Planning Board
Greenbush Road
Orangeburg, NY 10962

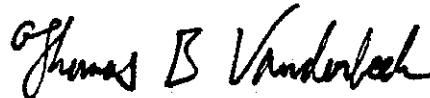
**re: Hillside Commercial Park
Drainage Review
Prepreliminary/Preliminary/Final
Subdivision and Site Plan
Lots 68.11-1-39 and 40 and 68.16-1-1
Hillside Avenue, Pearl River, NY**

Dear Ms. Coopersmith:

This is the first time we have seen this project and the information provided is not sufficient to recommend Planning Board approval of drainage at this time. The drainage documents should be revised and resubmitted pursuant to the attached comments/conditions.

Please call if you have any questions or require further information.

Very truly yours,



Thomas B. Vanderbeek, P.E.
President

Attached: 4 pages

DRAINAGE REVIEW

This is the first review of this submission

Documents Received

Drainage Analysis Prepared for: Hillside Commercial Project, August 2007, prepared by Brooker Engineering

Planset, Plans Prepared for Hillside Commercial Park, Rev. 0, all sheets dated August 2007, consisting of 12 sheets, prepared by Brooker Engineering.

<i>Title</i>	<i>No.</i>
Title Sheet	7
Layout Plan	1
Grading and Utility Plan (1 of 2)	2
Grading and Utility Plan (2 of 2)	3
Off-site Utility Plan	3-A
Soil Erosion and Sediment Control	4
Landscaping and Lighting Plan	5
Road "A" Profiles	6
Road "B" Profiles	7
Drainage Profiles	8
Construction Details (1 of 2)	9
Construction Details (2 of 2)	10

New Comments

Comments on Planset

- 1 An existing conditions plan should be added to the plan set.
- 2 The detention basin appears to have been designed without a sediment forebay. The New York State Stormwater Management Design Manual (SMDM) requires that forebays be provided and sized for 10% of the Water Quality Volume (WQv). As designed the stormwater pond would require a 60 day review and approval by the New York State Department of Environmental Conservation (NYSDEC).
- 3 There is a proposed spot elevation of 229.9 at the south end of the detention basin. This provides less than the required one foot of freeboard on the detention pond as the 100 year storm elevation noted on the Detention Basin Outlet Structure Detail is 229.1. The design should provide a minimum of one foot of freeboard.
- 4 Pond benches in accordance with the requirements on page 6-12 and 6-13 of the SMDM should be incorporated into the design. However, it is noted that the width of

the site limits the amount of space available. It may be possible to provide a fence around the perimeter of the pond, in lieu of the safety benches. However, this would constitute a 60 day review and approval by the NYSDEC.

- 5 In accordance with page 6-14 of the SMDM, a pond buffer shall be provided that extends 25 feet outward from the maximum water surface elevation of the pond. As noted in comment 4 above, the dimensions of the site are such that providing the 25 foot buffer would greatly limit development of the site. That said, a 60 day review and approval will be necessary if the buffer is not provided.
- 6 According to the SMDM, "Maintenance responsibility for a pond and its buffer shall be vested with a responsible authority by means of a legally binding and enforceable maintenance agreement that is executed as a condition of plan approval." As portions of the proposed detention basin are located on both of the proposed lots, an easement will be necessary. In addition, a note should be added to the Layout Plan indicating the party responsible for maintenance of the pond.
- 7 Maintenance access must be provided to the pond and depicted on the plans.
- 8 There is an elevation of 405.5 on Section B-B of the Detention Basin Outlet Structure Detail. Please revise.
- 9 Roof leader connections to the storm drainage system must be indicated on the Grading and Utility Plans.
- 10 Proposed storm drain pipes range in size from 12" diameter to 24" diameter. Please provide sizing calculations.
- 11 There is a catch basin located at the lowpoint of Route 304 (approx. elevation 225.0). It is unclear whether this catch basin drains to the north (toward Muddy Creek) or to the south (toward the site). The outlet pipe for this catch basin and other associated piping should be indicated on the plans.
- 12 The report notes that the property includes a delineated 100 year floodplain associated with Muddy Creek. The delineated floodplain should be added to the plans.
- 13 The erosion control manual noted in the SOIL EROSION AND SEDIMENT CONTROL NOTES is outdated. All references to the manual should be revised to the latest edition, New York State Standards and Specifications for Erosion and Sediment Control, August 2005.
- 14 Construction phasing should be added to the Soil Erosion and Sediment Control Plan to ensure that no more than 5 acres is disturbed at one time. If more than 5 acres is to be disturbed at any time, a waiver will be required from the NYSDEC.

- 15 Where will runoff be directed during construction? Will the proposed detention basin be utilized as a temporary sediment basin?
- 16 The applicant should consider the use of a field inlet at the south end of the proposed retaining wall between the existing railroad and proposed drive.

Comments on SWPPP/Drainage Report/Calculations

- 17 A significant portion of the proposed impervious areas drain directly to the southerly wetland without water quality and quantity controls. The runoff from these areas must be treated and controlled. Conversations with the applicant's design engineer revealed that due to design constraints, i.e. elevations and wetlands, it is difficult to provide the conventional stormwater management practices (SMP's) which are acceptable to NYSDEC. During these discussions, alternative practices were discussed and may be incorporated into the design. It is important to note that the use of alternative practices will be subject to a 60 day review and approval by NYSDEC.
- 18 The drainage report indicates that the southerly wetland drains through a small box culvert under Hillside Avenue and discharges into Muddy Creek. It appears that the box culvert is not indicated on the plans, although a "filled" concrete structure is indicated. It is assumed that this structure is the upstream end of the box culvert. If the outlet is blocked off, how will runoff exit the site? Repairs/ maintenance may be necessary at the outlet. We have been advised by the design engineer that new data has been collected.
- 19 The drainage analysis has been performed for the 2, 10, 25 and 100 year storm events. It is a requirement of the SMDM that 24 hour extended detention of the post-developed 1-year, 24 hour storm event (Stream Channel Protection Volume requirement, C_{p_v}) be provided. These calculations should be added to the report.
- 20 Large scale existing and proposed conditions drainage maps are required to verify the limits of each drainage subarea and Tc flow paths. Contours and other features are not legible on the 8 ½ X 11 maps provided within the report. Also, the full limits of subarea 4 should be depicted.
- 21 A soils map should be added to the report for verification of curve numbers.
- 22 Rip-rap sizing calculations should be performed in accordance with the New York State Standards and Specifications for Erosion Control (SSEC) and included in the report to ensure that exit velocities are non-erosive. Outlet protection details should be revised to reflect this information.

- 23 In addition to the 100-year storm elevation (which is currently shown), the WQv, 1- and 10-year storm elevations should be added to the Detention Basin Outlet Structure detail.
- 24 WQv calculations indicate an area of 10.21 acres and a percent impervious area equal to 0.13%. The total area of proposed buildings taken from the plans is approximately 4 acres, suggesting an impervious area of 40% (not including roads and parking areas). The calculations should be revised. The pond storage provided may need to be increased in order to provide the necessary WQv and storm attenuation volumes required by the design.
- 25 Forebay calculations are provided in the report but forebays are not included on the plans.
- 26 A 3 inch diameter orifice is provided on the Detention Basin Outlet Structure detail. The calculations in the report indicate an orifice size of 3.2 inches for the WQv-ED release rate. It is stated on page 6-16 of the SMDM that the WQv-ED pipe should be sized one pipe size greater than the calculated design diameter.
- 27 We are still undergoing a detailed review of the routing calculations.

Closure

We reserve the right to modify these comments should the submittals be modified.

Thomas B. Vanderbeek, P.E.
NY License No. 061448

TRANSMISSION VERIFICATION REPORT

TIME : 11/14/2007 10:46
NAME : GHV CONSULTING LLC
FAX : 8453577460
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SER. # : BR0L4J142441

DATE, TIME	11/14 10:45
FAX NO./NAME	93571896
DURATION	00:00:48
PAGE(S)	06
RESULT	OK
MODE	STANDARD ECM

Greater Hudson Valley Engineering & Land Surveying, P.C.
233 Lafayette Avenue, Suite M-1, Suffern, NY 10901

FACSIMILE TRANSMISSION COVER PAGE

For fax reply, dial 845-357-7460. Any transmission problems, please call 845-357-7450.

To: Cheryl Coopersmith	From: Tom Vanderbeek
Company: Orangetown Planning	Date: 10/2/07
Phone: 359-8410/8526 fax	Job No.: 1040, Task 07-05A
Total Number of Pages Including This Cover Page: 6	

MESSAGE: Drainage Review Attached

The drainage documents should be revised and resubmitted pursuant to the attached comments/conditions.