

January 23, 2015

Barney M. Molloy
Planning Board Chairman
Village of Cold Springs
85 Main Street
Cold Spring, New York 10516

Re: Third Preliminary Site Plan Review
Butterfield Redevelopment Site
NYS Route 9D, Cold Spring, NY

File: 1593.001.001

Dear Chairman Molloy:

Barton & Loguidice, D.P.C. (B&L) has completed a third preliminary level technical review of the following reports and information for the Butterfield Redevelopment Site located at 1756 NYS Route 9D as prepared by Site Design Consultants. We have prepared the following site plan review comments based on the following information provided to date:

The following items were received on January 12th, 2015:

1. "Site/Subdivision Plan Prepared for Butterfield Redevelopment Project" prepared by Site Design Consultants dated January 9, 2015.
2. "Stormwater Management Plan prepared for Butterfield Redevelopment Project" prepared by Site Design Consultants dated October 2014, revised January 2015.
3. "Blasting Mitigation Plan" from the Butterfield Redevelopment EAF Part 3 dated November 15, 2013.
4. "Engineer's Report Butterfield Redevelopment Project NYS Route 9D and Paulding Avenue" prepared by Site Design Consultants dated January 9, 2015.
5. "Tree assessment and protection plan for copper beech located on the Butterfield Redevelopment site in Cold Spring, NY," letter report prepared by SavATree Consulting Group dated November 14, 2013.
6. Architectural Plans – Prepared by the Sullivan Architectural Group, dated October 22, 2014.

The following items were received on January 22nd, 2015:

1. Revised Plan Sheet "E-1 – Easement Plan" prepared by Site Design Consultants dated January 9, 2015.
2. Revised Plan Sheet "C 101 – Site/Subdivision Plan" prepared by Site Design Consultants dated January 9, 2015.
3. Revised Plan Sheet "C 103 – Erosion & Sediment Control Plan" prepared by Site Design Consultants dated January 9, 2015.
4. Revised Plan Sheet "C 104 – Grading Plan" prepared by Site Design Consultants dated January 9, 2015.





5. Revised Plan Sheet "C-105 – Utility Pan" prepared by Site Design Consultants dated January 9, 2015.
6. Revised Plan Sheet "C 106 – Grading and Utility Plan" prepared by Site Design Consultants dated January 9, 2015.
7. Revised Plan Sheet "C 301 –Driveway Profiles" prepared by Site Design Consultants dated January 9, 2015.
8. Revised Response to B&L Comments Narrative/Letter prepared by Site Design Consultants dated January 9, 2015.

Based on our review of the above referenced documents, we offer the following comments:

General Comments:

1. For future submissions please include a revision date. Sheets submitted after submission package reflect the same revision date. Please differentiate. Some of the provided sheets have a revision date of 1-9-14 which should be 1-9-15. Most are accurate.
2. The concerns for adequate routes for handicap travel along project sidewalks was to include some signage to direct handicapped pedestrians, particularly at area near Building 2 and Lahey Pavilion where walk transitions to a walk too steep for wheelchairs and related. At the last Planning board meeting there was discussion for provision of signage to direct route to the walk on the north side of Building 2 and avoid the steep part paralleling Butterfield Road. Please provide signage.

Technical Submission Comments:

Plans

1. Sheet C-102 (Existing conditions and Demolition Plan):
 - a. Show existing water service abandonments referenced in Engineers Report on plan with specific fittings and need to coordinate with village water Department.
2. Sheet C-103 (Erosion & Sediment Control Plan):
 - a. Sizing calculations for the proposed temporary sediment traps have some issues. The table provided with the sizes do not match the resultant volumes. Are these traps sized for 3,600 CF per tributary drainage area and computed as defined in the NYSDEC Blue Book for Standard Specifications For Sediment Trap?
3. Sheets C-104, C-105 and C-106 (Grading Plan, Utility Plan and Utility & Grading Plan):
 - a. It was discussed that signs will be used to clearly provide ADA access routes to all buildings at or below a 5% grade. From the revised plans it is hard to ascertain how this is being accomplished. Indicate on plans where ADA signs will be located. Include means of hanging signs. Indicate the materials for the sign post detail (C-502).



- b. Provide sewer easement map with metes and bounds when available from surveyor. Sanitary sewer easement along sanitary sewer between SMH 4 and SMH-5 is still too close to easement edge and also the sidewalk, curb and building landscaping. Consider moving sanitary sewer out further from building 2 or moving edge of easement closer to building. The moving of the sewer is preferred as hold harmless agreements would be necessary for the Village to enable them to excavate and maintain the infrastructure in the future without having to fund numerous areas of surface improvements. Asphalt replacement would be typical but the front of the building improvements can easily be spared future disturbances by moving the sanitary sewer another 5 to 7 ft. north.
- c. Please clearly identify the lead size for the hydrant along Route 9D to be an eight-inch main and only reduce to 6-inch for the hydrant valve close to the hydrant to maximize deliverable water. Indicate the location of the reducer close to the hydrant valve at around 3-ft. from the hydrant
- d. Does footing drain from building 3 connect to CB-7? Please check route, elevations, slopes, depths and potential utility conflicts for all footing drains to ensure contractor can install as intended. This need for greater detail and verifying intent also applies to any shop drawings produced for the concrete drainage structures to know all pipe entries, their orientation and elevations and related so they can cast appropriately and avoid costly core drilling later.
- e. Provide additional spot elevations of top and bottom of curb to ensure design intent is followed in construction, particularly at road connections to route 9D.
- f. The large grassed area in the northeast side of the project will flow towards the sidewalk/bench area during significant storm events or frozen watershed conditions when infiltration cannot prevent overland flow. There does not appear to be any provisions for piping that flow under the sidewalk area and there is a concern for icing. Please clarify intent.

4. Sheet C-301 (Profiles):

- a. The Butterfield Road profile has been flattened at its connection to Route 9D but has not gone through NYSDOT final review to our knowledge. Please finalize that DOT process as it may affect final Road grading. Please provide a stationing of grade changes.
- b. A trench drain has been added to the building 6 profile but no inverts or indication what it discharges to or how. Please add elevation, materials, slope and route for discharge.

5. Sheet 401 (Landscape Plan):

- a. The color of the split face block for the refuse enclosures should be coordinated with the retaining walls and plaza pavers on the site to complement the architectural finishes/appearance of the buildings. HDRB input is anticipated.



Water & Sewer Engineering Report:

1. PEG report concludes need for domestic water pumps for upper floors. Please confirm. That will need to be followed up with during building design and approval phase.
2. Under water supply section change $\frac{3}{4}$ -inch water services for three residential homes to 1-inch to match plans.

Water

1. Coordinate with Village of Cold Spring for the metering system to be same as their remote read system. Our assumption is the Village would be billing the site owner for water and sewer service via sub-accounts set up for each building but that needs to be determined if not already. Please add proposed intent in water & Sewer Engineering Report.

Sewer

1. DOT indicated a requirement for directional bore rather than open cut. Please provide the Village and TDE with details when furnished to NYSDOT. Comment not yet addressed.
2. Sheet C-504 (Storm-Sanitary Details):
 - a. Indicate gravity sewer lateral clean-out locations on the plans. One shown for Building 1 and Lahey Pavilion is noted but has not for buildings 4, 5 and 6.

Storm Water

1. Although provided flow arrows have somewhat aided in reviewing the stormwater management system, there are still many discrepancies between the provided documents, plans and details for the stormwater management system. It is recommended to have a meeting with the TDE to discuss the stormwater management systems.
2. Sheet G-2 (E&SC Notes):
 - a. Note 7 under the "Standard Sequence Notes for All Phases" states "... install erosion control blankets where shown on the." Please complete the note. Comment response indicates this was revised.
 - b. "Final Site Stabilization and Completion of New Construction" notes 12 and 13 should indicate that the SWPPP Monitoring Professional shall approve final/ permanent/ completed stabilization. Comment response indicates this was revised.
3. Sheet C-105 (Utility Plan) & Sheet C-106 (Grading and Utility Plan):
 - a. Please label all stormwater structures shown on the utility plans. Include unique labels for each of the pretreatment chambers which correspond to the provided detail labeling. The stormwater management report narrative, profiles and modeling include reference to bypass structures however, no "bypass" structures could not be located on the utility



plans. It appears the bypass structures may be labeled as DMH's on the plan. Please provide consistent labeling between documents.

- b. The provided Drainage Rims and Inverts table on sheets C-105 and C-106 does not correspond to the routing information shown on the plans, inverts shown on the profiles and information provided in the Stormwater Management Report. Much of the stormwater drainage system requires clarification. Additionally, the table needs to be expanded to reflect structures with multiple inlets/ outlets. Below are some examples and items which require clarification:
 - i. Comment response indicates that infiltration system #3 receives flow from building 6 roof drain, trench drain and catch basin 15. Is the building 6 roof drain connected to the footing drain or trench drain discharge? Footing and roof drain invert/ routing information needs to be included on the structures tables and included on the profiles. FD from building 6 directs flows to CB 15. CB 15 indicates downstream node is DMH 6A. From the plans the CB 15 discharge pipe appears to be directed to the pretreatment chamber. Please clarify.
 - ii. Comment response indicates building 2 RD's discharge to the pretreatment system #1 and rainwater harvesting #2. Will stormwater collected be directed through FD shown discharging from building 2 to infiltration 1? The FD is directed to the infiltration system directly. Please clarify plans to indicate directing runoff to the pretreatment system. It appears the rain water harvesting (RWH) system labels have been switched from previous submissions. Please verify all documents reflect the switch.
 - iii. DMH5 receives drainage from RWH#1 and from an unlabeled DMH receiving discharge, presumably from infiltrator system 2A. Only one structure listed on the table indicates the downstream node is DMH5 – RWH#2 (which is located adjacent to building 3 and does not contribute to DMH5). DMH5 indicates discharge to existing CB3. The invert out of DMH5 is 115.54 and is conveyed through a pipe 36.52 feet long @ 11.25%. The resultant invert into existing CB3 would be 111.43. The existing CB3 invert out (A) is 115.5. Please revise.
 - iv. The table indicates DMH 6A receives flow from CB15 and discharges to infiltration system #3. However, the plans indicate connection to the pretreatment system, infiltration system #3 and DMH 6.
 - c. What is the bottom elevation of the bioretention practice? Grading seems to indicate that the 136 contour passes through the practice. Contour lines/ grading around this area needs to be evaluated. The 138 contour appears to end at the sidewalk and passes over the 136 contour. DI 3 indicates discharge to bioretention area (per discharge rim and invert table). With the provided invert out of 131.5 and discharge pipe of 78 feet @ 9.1% the resultant invert is 124.85 into the bioretention area. Please clarify.
4. Sheet C-302 (Profiles)
- a. Profiles provided appear to follow the proposed drainage courses however; inverts, slopes, and lengths do not match those listed on the Drainage Rims and Inverts table on



sheet C-105. Perhaps the profile or the table was not updated? Please include the discharge to the infiltration systems on the profiles. Please review all structure information and update the tables and profiles.

- b. Please show the connection from DMH 5 to the existing CB3.
 - c. Please show CB 4 on the infiltration system #3 profile; currently shows CB3.
 - d. Please review and revise titles for the profiles. Many are mislabeled as to what features are shown (DI versus CB).
5. Sheet C-505 (Crystal Stream Technologies Details)
 - a. Provided crystal stream technologies details are included at a scale which is very difficult to read. Please enlarge details for review.
6. Sheet C-506 (Stormwater Management Details)
 - a. Please include the bottom elevation of the bioretention practice, along with the WQv elevation, 1, 10 and 100 year elevation section. Include inverts for the stone and chambers. What is the means of pretreatment for the bioretention area? Please update the detail to reflect features used. Please remove underdrain from the detail as it appears one will not be included. Please indicate that the 12 inch gravel jacket is a minimum from the bottom of the filter to the top of the chambers.
 - b. D-1 – Bypass structure detail – Please include additional detail including sump depth, type of cover and weir wall thickness. Please include the inverts into the structure on the table.
 - c. The table provided on this sheet titled “Stormwater Management System Rims and Inverts” does not correspond to information provided on the utility plan. System inverts and pipe sizes differ from those on the plans. Please clarify.
 - d. SWM-1 Stormtech SC -740 Chamber System Plan View Detail - indicate the size of the HDPE underdrain pipes. What are underdrains directed? Indicate on the plans.
7. The post development drainage map does not appear to have been updated from the previous submission with the exception of delineation between DA 2 and DA 3. Areas listed have not changed. Several comments previously included on comment letters have not been addressed. The map does not appear to be fully reflective of what is shown on the utility and grading plans.
 - a. Building 1 RD’s direct flow to DMH 7 which is part of DA 1; DA 1 limits near bioretention area/ sidewalk are confusing and include a portion of the bio-retention area.
 - b. The stormwater management report indicates water from the residential lots is directed via roof drains to a drainage swale behind building 4/5/6. This swale could not be located on the plans. Narrative indicates DA 7 includes the building 6 roof and directs flows to the bioretention area. There is a sidewalk to the northeast of the bioretention area which would restrict/ prevent flow from DA 7/ Gateway Park from reaching the bioretention



area. Please provide a means of flowing around/ under the sidewalk to prevent creating icy conditions along this walkway. What is the intent of directing the grassy area/ park runoff to the bioretention area? The runoff reduction volume table (Appendix H of Stormwater Management Report) indicates 1 acre is directed to the bioretention practice which is the area listed for DA 7 on the post development drainage map. DA 7 does not include building 6 which is shown having a RD directed to the bioretention practice. Please clarify.

- c. The runoff reduction table indicates 0.74 acres directed to rain barrel/ cistern practices. Presumably this was concluded by adding DA 3 and DA 6. The utility plan shows building 3 (DA 6) contributing flow to CB 7, CB 11 and RWH 2. Please clarify the drainage areas on the post development mapping, utility plan and calculations.
 - d. Areas shown on the post development mapping are inconsistent with the total water quality calculations included as Appendix H in the stormwater management report. Please update mapping and calculations.
 - e. There are several inconsistencies between the provided stormwater calculations and the flow path slopes and lengths provided on the post development mapping, for example, the channel flow pipe label along Route 9D indicates a length of 53 feet while the post development modeling reflects a length of 535 feet. There are several other values listed on the mapping which are inconsistent with the calculations.
8. The post development routing map from the modeling should reflect what is shown on the plans. DA 3 is directed to RWH1 and overflows to infiltration 2A. RWH2 discharges to 2B bypass.

Site Access and Details:

1. The applicants have made a concerted effort to address the Planning Board's concerns regarding slope and grading where the proposed Butterfield Road driveway entrance intersects Route 9D on the southwest side of the site. Based on input from the Board, the applicants have addressed this issue by re-grading the proposed slopes in an attempt to lessen the slope and flatten out the grades in this immediate area. Given the existing slope constraints, proximity and elevation of the existing Lahey Pavilion, and proposed location to Building 2, the new slope and grade designed by the applicant's engineer appear to satisfy the Board's intent. The latest design calls for reducing the slope of the driveway from 7% to 5% for the first 100+/- feet, then slightly increase the slope by about 1% for the next 100 feet to achieve the elevation necessary to reach the existing Lahey Pavilion grades. The net affect along the first 150 feet of the Butterfield Road driveway is a moderate reduction in the slope/grade, which should make this portion of Butterfield Road less hazardous to vehicle movements in winter snow and ice conditions. It should also be noted that massive excavation and cutting of the site along the Butterfield Road profile would be necessary to further reduce the driveway grade to anything less than what is now proposed by the applicant. Excavation and soils removal of that scale would severely interfere with the structural integrity of the Lahey Pavilion and Building 2 foundations, the depth of the existing water main that runs along this portion of the site, and overall grading of the entire southwestern portion of the site.
2. All proposed new or modified existing driveway entrances and curb cuts onto NYS Route 9D should be reviewed and approved by New York State Department of Transportation (DOT) prior



to final site plan approval. The applicant should contact the DOT to arrange a meeting with the Regional Engineer to review the site plans now that building and driveway entrance locations are established by the Planning Board. Copies of all meeting notes and correspondence with the DOT should be provided in the next submission for review by B&L and the Planning Board.

3. The applicant should contact the Village of Cold Spring Fire Department to arrange for a meeting with the Chief to review the access and internal driveways for accessibility of emergency vehicles now that building and driveway entrance locations are established by the Planning Board. Copies of all meeting notes and correspondence with the Fire Department should be provided in the next submission for review by B&L and the Planning Board.
4. Where proposed Butterfield Road intersects Route 9D on the southwest side of the site, please provide a striped pedestrian crosswalk that connects the sidewalk on the north side of Route 9D to the sidewalk on the south side of Route 9D near the point with Chestnut Street. Confirm with NYS DOT that no additional pedestrian amenities or crosswalks are required in this location.

If you have any questions, please feel free to contact our office.

Very truly yours,

BARTON & LOGUIDICE, D.P.C.

A handwritten signature in black ink that reads "Charles A. Voss". The signature is written in a cursive, flowing style.

Charles A. Voss, AICP
Sr. Land Use Planner

CAV/klk