December 16, 2014

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

Re: Second 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 second 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 December 5, 2014:

1. "Site/Subdivision Plan Prepared for Butterfield Redevelopment Project" prepared by Site Design Consultants dated October 22, 2014, revised December 3, 2014.
2. "Scenario: Post-Development 1" Bentley PondPack routing diagram, dated December 4, 2014.
3. "Butterfield Redevelopment [SWPPP excerpt]" revised pages 9 and 10, prepared by Site Design Consultants.
4. "Blasting Mitigation Plan" from the Butterfield Redevelopment EAF Part 3 dated November 15, 2013.
5. "Engineer's Report Butterfield Redevelopment Project NYS Route 9D and Paulding Avenue" prepared by Site Design Consultants dated December 3, 2014.
6. "Site Design Consultants – Field Inspection Report" prepared by Site Design Consultants dated October 10, 2014.
7. "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.

The following items were received on December 9, 2014:

1. "Test Pit Locations" prepared by Site Design Consultants dated October 22, 2014, revised December 3, 2014.
2. "Figure 5.1 Pre-Developed Watershed Map" prepared by Site Design Consultants dated October 22, 2014, no revision date.
3. "Figure 5.2 Post-Developed Watershed Map" prepared by Site Design Consultants dated October 22, 2014, no revision date.

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

General Comments:

1. The proposed stormwater conveyance and treatment system is still unclear. A revised SWPPP was not included with this submission and some of the information presented in the plans and documents is incomplete/ missing. Please see subsequent stormwater comments. It is suggested that the applicant and TDE set up a meeting to discuss the stormwater system.

Technical Submission Comments:

Plans

1. Sheet G-1 (Notes):
    a. The note sheets include references to the "Town" these should be changed to "Village."

2. Sheet C-102 (Existing conditions and Demolition Plan)
    a. Include existing pavement to be replaced as a removal on the demolition plan.
    b. Indicate that the existing Butterfield Hospital is known to contain asbestos on the plans.
    c. Existing 54" Beech tree should have an area around it delineated as no equipment or activity allowed to protect its root structure and potential for damage. Clearly show a minimum distance from the tree from which the contractor should avoid/ delineate. Please include the language from the second page of the "Tree Assessment and Protection Plan" dated November 14, 2013 from SavATree on the plan set. It is suggested that the plans clearly outline how to protect the Beech tree and consequences of damage.

3. Sheet C-103 (Erosion & Sediment Control Plan):
    a. Provide the sizing calculations for the proposed temporary sediment traps.
    b. Please add the concrete washout pit to the legend and provide multiple washout pit locations as there are several entrances and locations of concrete work.

4. Sheets C-104, C-105 and C-106

   a. There is concern for the grade of the sidewalks along Butterfield Road being well over 5% and in some areas above typical slopes for handicap ramps. These walks have handicap ramps leading to them and concern is for winter conditions and handicap access. Indicate locations of proposed handicap ramp landings. It was indicated 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. A sign schematic was provided for the proposed sign. 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. Handicap stalls for Building 2 are located along a section of Butterfield Road with grades in excess of 5%. Why aren't these stalls located closer to the building entrance and on grades at or below 5%?

   c. Please include all metes and bounds and existing easements on the site plan. Only about half of the existing easement metes and bounds are shown. Provide metes and bounds for the proposed easements on the provided E-1 sheet. Provide easements for the proposed hydrants and maintain 10 feet on either side of the utility alignments. Sanitary sewer adjacent to building 2 falls within 2 feet of the proposed driveway easement edge.

   d. Changes in the direction of the water main should not be made over top/ under any other utility. Please revise.

   e. Please clearly identify the lead size for the hydrant along Route 9D. Indicate the location of the reducer. Will there be a gate valve adjacent to the hydrant?

   f. Location of handicap stalls for building 3 should be located adjacent to the elevators or above grade.

   g. Provide handicap parking adjacent to the existing to remain Lahey Pavilion.

h. Indicate location of water services for the three residential lots. Include the service size on the plans.

i. Please indicate location of sewer from Building 3. Consideration should be given to connecting proposed buildings laterals to SMH #1 rather than wying into the sewer beyond the manhole.

5. Sheet C-301 (Profiles)

a. Show existing utilities that are crossed on the provided road profiles. Include any utilities at Route 9D. Show and call out trench drain location on "Driveway to Bldg 6 Profile."

6. Sheet C-302 (Profiles)

a. The proposed Sewer Main Profile indicates use of N12 PVC. This is incorrect. Please revise.

b. On the provided Water Main Profile, please include labels for the location of the tees, tapping sleeves and location of gate valves.

c. The Water Main Profile shows the water main crossing a sanitary sewer at station 4+80. This is labeled as a storm sewer on the plan set. Please revise.

d. The Water Main Profile indicates that the gate valve near station 0+05 is to be installed along an 18.79% grade. How?

e. Indicate how grade changes in water main are to occur. Indicate vertical bends required. If utilizing deflections do not exceed 4 degrees per pipe joint. Please elaborate on the provided General Water Main Note #13. Indicate that if pipe bends are to exceed 4 degrees then a fitting shall be used. Fittings should include thrust restraint.

Water & Sewer Engineering Report:

1. The report indicates that a maximum fire flow of 450 gpm is required. The report should clearly document that the Village system is capable of providing the necessary flows. Please state in the report the current average daily demand, peak demand, permitted capacity and current production rate for the Villages water system. State the average daily sewage flow, peak and permitted treatment capacity for the Villages sewer system. Clearly show, through the use of numbers, that the Village's existing systems can service the project.

2. Provide calculation of the estimated sewage and water usage. The 10 States Standards excerpts can be replaced with a calculation sheet with reference to the standard.

3. Is the existing 2 inch water service for the Lahey Pavilion to remain? The service is not shown on the demolition plan but the utility plans show a new water service and fire service.

4. The water service and fire service sizes are inconsistent between the Engineer's Report and the plans. The plans indicate that all of the proposed water services are 3" and all fire services are 6". Please clarify. Are both services to be metered? General Water Main Note 4 on sheet G-1 indicates only water services will be metered.

5. Please update the report to reflect use of CL 52 DIP rather than CL 54 DIP.

6. Indicate that the easements will be 20 feet wide, not 15 feet.

7. Provided report from Peterson Engineering Group indicates that the preliminary analysis of the water system within each building does not meet the 35 psi minimum pressure. How will this be mitigated?

Water

1. Sheet C-503

    a. Details provided on this sheet indicate that the water main will be class 54 ductile iron. Please update the details for consistency with the plans.

    b. Where will water meters for the proposed buildings be located? Outside of building?

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.

2. Sheet C-504

    a. Indicate gravity sewer lateral clean-out locations on the plans.

Storm Water

1. Sheet G-2 (E&SC Notes)

    a. General Erosion Control Note – Note 10 – Include that the contractor shall receive approval from the SWPPP Monitoring Professional for final site stabilization prior to removal of erosion and sediment control measures.

    b. Please submit an updated NOI which reflects changes and comments as a result of stormwater revisions. Question #5 specifically asks "Do you plan to disturb more than 5 acres of soil at any one time?" Response indicates yes, however, comment responses and construction sequence indicate that each phase of the project will be less than 5 acres.

    c. The note sheets include references to the "Town" these should be changed to "Village."

    d. The "Maintenance Schedule" lists a wheel cleaner. Is this the stabilized construction entrance? Please provide consistent labeling.

    e. Note 7 under the "Standard Sequence Notes for All Phases" states "… install erosion control blankets where shown on the." Please complete the note.

    f. "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.

2. Sheet C-103 (E&SC Plan)

    a. Please indicate where the earthwork and sidewalk along the north-western property line fall into the proposed construction sequence. It appears that the retaining wall along this northwestern property line would require a temporary construction easement. Please verify.

3. Sheets C-104 to C-106

    a. How is water conveyed to the proposed ADS pretreatment system #3? Only one pipe connection is shown which appears to be the roof drain from building 6.

    b. It is hard to ascertain where the storm sewers connect to the proposed ADS pretreatment system 2B. Please clearly identify connection locations. The provided details for the pretreatment system show connection locations. Please indicate these locations on the utility plans.

    c. The schedule provided on sheets C-105 and C-106 showing utility inverts is missing information. Please provide a row for each structure with all inverts in and out listed within the same row. Most of the infiltration systems, pretreatment and rain water harvesting inverts are missing from the table. Include footing drain information in the provided tables.

    d. It appears that stormwater collected from the building 2 roof drains discharges to four separate locations. Please indicate the high points/ show flow arrows and indicate where the stormwater will be directed. Dispersion of the stormwater into four separate locations and ultimately multiple treatment systems should be clearly shown on the watershed mapping.

    e. A bio-retention area was shown as in the Butterfield Square in previous submissions. Was this eliminated? Stormwater calculations and narrative shall be updated to reflect the removal.

    f. Provide information regarding the pipe shown leaving the bioretention areas and connecting to the northern existing CB along Route 9D.

g. Connection from DMH5 to existing CB 3 will not drain to existing CB 3 as indicated. Provided pipe slope and length produce an invert below the existing outlet invert from existing CB 3.

4. Sheet C-302 (Profiles)

a. The stormwater system profiles provided on sheet C-302 do not correctly reflect the storm systems shown on the utility plan. The invert elevations for the structures on the profiles do not match the inverts listed in the table on sheet C-105. Inverts elevations could not be verified with the provided length and slopes. Please clarify. Where is infiltration 5 inflow – this is the label for one of the stormwater profiles? Some of the structures listed on the profiles are nonexistent (for example: DI 11, 135 & 15) or are included in the profile but are not part of the system shown (for example, DI-2 discharges to DMH-2 not DI-3). Please clarify profiles. Provide additional profiles for the remaining stormwater treatment systems.

b. Are elevation values along the horizontal axis of the profiles on sheet C-302 supposed to be the existing and proposed elevations?

5. Sheet C-501

a. The provided cement truck washout pit detail notes indicate that deposited material may be buried on site. Deposited material should be removed from the site and disposed of properly.

b. Please include the size and type of material to be used within the water bar detail.

3. Sheet C-504 (Storm-Sanitary Details)

a. Add a note to trench details regarding trench and jobsite safety must comply with prevailing laws for safety and is the exclusive responsibility of the contractor to the sewer main/ sewer service trench detail.

b. Butyl joint filler is called out for use on the catch basins and manholes. Pipe connections to catch basins and storm manholes shall be mudded with non-shrink grout. Pipe

connections to sanitary manholes shall be made watertight with a precast boot. Please revise.

c. Please provide the concrete cradle detail noted on the sewer main/ sewer service trench detail.

d. Storm pipe bedding detail note 1 indicates the use of compacted existing subsoil when laid above ground water. Existing subgrade is too inconsistent. Indicate the use of ¾-inch stone.

e. Please provide additional labeling on the trench drain box detail. Indicate the size of the circular opening on the end section. Indicate the type of grating and spacing of the grating.

4. Sheet C-505 (Stormwater Management Details)

a. Overall the stormwater system is very difficult to follow. Stormwater routing is unclear from the plans, details, previously provided SWPPP documents and updated pages 9 and 10 of the SWPPP narrative. Include WQv, 1 year, 10 year and 100 year peak elevations on profiles/details, an updated routing diagram and clearly identify within the narrative the complete extent of the proposed stormwater system. Comment responses indicated that a table has been provided which includes the peak elevations of the rain water harvesting and infiltrators during the analyzed rainfall events. The table could not be located on the referenced sheet C-505.

b. The provided SWM-1 Stormtech SC -740 Chamber System Plan View Detail indicates inverts which do not appear applicable to the site. Indicate the size of the HDPE underdrain pipes. What are underdrains directed? Indicate on the plans.

c. The provided SWM-5 Stormtech SC-740 Chamber Detention System Inlet/Outlet Detail shows inlet and outlet structures for the proposed treatment system. These structures are not included on the plans. Please clarify. If it is intended to have a structure at the inlet and outlet of the Stromtech systems please include the structure and all pertinent information on the plans, including the proposed inverts.

d. The provided Typical Bioretention Detail indicates that the planting media shall be 2.5 feet deep and a 12 inch gravel jacket between the bottom of the filter fabric and the top of the chambers. What is the remaining material between the chambers and the bottom of the planting soil? Provided information indicates the chamber invert is 8.5 feet below grade. Indicate the type and manufacturer of the filter fabric.

e. Rip-Rap Apron/ Energy Dissipator Detail indicates a rip-rap apron length of 2 feet. How was this length determined?

5. Sheet C-506 & C-507

   a. Please label the details in the center of the sheet.

   b. Are baffles within the pretreatment chambers proposed? Indicate how these will be cleaned out. What prevents the system from short circuiting? For example, infiltrator system #1's inlet and outlet are on the same stick of pipe within 30 feet of one another. What prevents collected sediments from washing through the chambers?

   c. Clearly label the two #2 infiltrator systems with a corresponding "A" or "B."

   d. The provided notes indicate that the "detention systems are subject to greater leakage than typical single run storm sewer applications and therefore are not appropriate for applications requiring long-term fluid containment or hydrostatic pressure…" Is there a reason this type of system was chosen for rainwater harvesting and pretreatment?

6. Description provided in the SWPPP narrative does not include all of the identified catchment areas shown within the Post Developed Watershed Map. The provided post developed watershed map does not appear to have changed from the previous submission. Drainage areas shown on the post development watershed mapping do not appear to reflect the drainage systems shown on the utility plans. Roof runoff from the residential homes is hard piped however the drainage area delineation does not appear to reflect this (watershed 5/7). Similarly, roof drains from building 2 convey flows to both drainage areas 1 and 2. There are several inconsistencies between the previously provided SWPPP stormwater calculations and the 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 previously provided calculations reflect a length of 535 feet. There are

several other values listed on the mapping which are inconsistent with the calculations. Please update the post development map and stormwater calculations to reflect all of the stormwater features and conveyances on site.

7. Please clearly identify that the water well to be used for irrigation is non-potable water on the plans. Change symbology for irrigation lines – use of the same symbol for potable water services is confusing. Include signs with the irrigation system that indicate that the water is non-potable.

8. Test Pit Data - Additional test pit information was provided, including the inverts of the tests performed. Please provide a date on the Site Design Consultants – Soil Inspection Report form at the bottom. Comment response indicates that the test pit data will be updated in the SWPPP Report. When is an updated copy of the SWPPP expected?

9. Provided "Scenario: Post-Development 1" routing diagram does not appear to be consistent with the systems presented on the plans. How will DA-7 convey flows to the bioretention area? Overland flow of stormwater is impeded by the proposed sidewalk. DA-6 appears to discharge to rain water harvester #1, not #2 as shown. Identify infiltrator 2A versus 2B on the diagram. RWH1 appears to be routed to an infiltrator which is not reflected. Please clarify.

Site Access and Details:

1. Please include a truck maneuvering plan. Indicate how dumpster pickup will be accomplished. Location of refuse containers appear to difficult to access.

Landscaping:

1. Sheet L-401

    a. The applicant has done a good job of responding to comments and concerns and developed a very attractive and functional plan. Screening at the wall in front of the Lahey Pavilion is accomplished by a mix of spruce trees, arborvitaes and flowering ornamental trees. Existing trees to remain have been clearly identified, planting bed are shown with an edging treatment.

    b. Are the trees along the northwest property line existing or proposed?

c. Could the dumpster northwest of Lahey be screened on either site? Unidentified plants are currently shown behind the dumpster.

d. Same question as #2 for the dumpster show between Lahey and building #1.

2. L-402

a. Lighting levels appear appropriate, given the historic district proximity, but may not meet minimum safety standards. If LED lighting is proposed, the levels may be appropriate, other types (HPS, MH, etc.) may not be sufficient at <0.5 fc. Conversely there appears to be excessive light where it may not be needed in some areas (for example 4.2 fc directly below a fixture between Lahey and building 1). It might be desirable to consider higher mounting higher wattage for parking lots and use of the 12' mounting for pedestrian areas. There appears to be several opportunities to light parking areas and other spaces with wall mounted lighting between buildings, is this under consideration?

b. Will there be separate pedestrian-level lighting? The lights shown at the benches and fieldstone wall in front of the gateway park should be less intense, pedestrian level.

c. Pedestrian level lighting should be added to the walkway connecting the project to Paulding Avenue.

d. Lighting near Route 9D should be coordinated with the existing street lights.

e. Lights shown north of building 4, 5 lighting the courtyard appear to be unnecessary and may flood the back yards of the proposed residences? Consider changing the location, lighting pattern or use building mounted instead.

f. Provide more details about the fixture type, etc. for the lights.

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

Very truly yours,

BARTON & LOGUIDICE, D.P.C.

Charles A. Voss, AICP
Sr. Land Use Planner

CAV/klk/tms