

**EXPANDED ENVIRONMENTAL ASSESSMENT FORM
PART III**

**Butterfield Redevelopment
VILLAGE OF COLD SPRING, NY**

1.0 PROJECT DESCRIPTION

Introduction

Butterfield Realty, LLC is the owner of property located at the intersection of NYS Route 9D and Paulding Avenue within the Village of Cold Spring, Putnam County, NY. Refer to Figure 1-1. The property is the site of the former Julia L. Butterfield Hospital. The subject property is shown on the Village Tax maps as lot 49.5-3-45.

This Environmental Assessment Form (EAF) examines an amendment to the Village Zoning code proposed to create a new sub-district to the B-4 District. The existing B-4 district will remain, and a new sub-district will be named B-4A, Medical and Health Care Facility Mixed Use District. The B-4A zone will permit "Senior Citizen Housing", "Municipal and other Governmental uses", "Retail Stores", "Business and Professional Offices", "Banks", and mixed uses consisting of two or more permitted uses. In addition to the proposed zone amendment, the zoning designation of that portion of the site which fronts along Paulding Avenue presently zoned B-4 will be rezoned to R-1.

A conceptual site plan has been developed as a result of charrettes with local citizens and Village officials conducted in 2012. This concept plan was prepared by Ray Curran, an advisor to the Village of Cold Spring. It was done at a level of detail which allows consideration of the impacts of the proposed zone amendment and a subsequent subdivision and site plan development. Complete engineering and further supporting documentation will be submitted at the time of site plan review.

EAF Parts 1, 2 and 3 have been prepared to describe the potential environmental effects of the proposed action. EAF Part 3 includes narrative and appendices that evaluate the relevant issues of concern identified by the Village and its consultant, GreenPlan, in the Part 2 and identify appropriate measures to minimize potential impacts. This EAF Part 3 and accompanying documentation also addresses comments from the Village Board of Trustees and the Village Planning Board with regard to the proposed Butterfield Redevelopment project.

This EAF has been prepared in accordance with Section 8-0101 of New York State Environmental Conservation Law and the regulations promulgated by the New York State Department of Environmental Conservation thereunder which appear at 6 NYCRR Part 617 (known as the New York State Environmental Quality Review Act, "SEQRA", or "SEQR"). The purpose of this document is to assist the Village of Cold Spring and other potential regulatory agencies (SEQR "involved agencies") in making a determination whether the proposed action would avoid any potentially significant environmental impacts. While some of the information and graphics in this document are conceptual in nature, the analyses, illustrations, and maps provided herein have been advanced in sufficient detail to assess the extent of potential environmental impacts.

1.1 Description of the Proposed Action

The subject site is presently zoned B-4, Designated Medical and Health Care Facility. It presently supports a medical office building, known as the Lahey Pavilion, and the remains of the former Butterfield Hospital which is vacant and dilapidated. It is one of the two properties in the Village with this zoning designation. The other property is located across NYS Route 9D, opposite the Butterfield site and is fully developed.

The proposed amendment to the Zoning Code of the Village of Cold Spring would add a new sub-district to the B-4 zoning district. Butterfield Realty seeks an amendment to the Zoning Code and Map of the Village of Cold Spring to change the zoning designation of the majority of the property from B-4 to B-4A, Medical and Health Care Facility Mixed Use District. A small area along Paulding Avenue would be remapped from B-4 to R-1. A draft of the proposed local law for the B-4A Mixed Use District prepared by the Village Attorney is included in Appendix A.

As illustrated in Figure 1-3, the Concept Site Plan includes a 15,000 square foot office/retail building located immediately off US Route 9D (Building 1), a 17,500 square foot office/retail building (Building 2), and 55 market rate senior condominium units, plus one superintendent unit, all located in close proximity to the Village center (Buildings 3 through 6). A Community Center for Butterfield residents has been included to join buildings 4 and 5 to building 6 in order to foster social interaction and a sense of community. The building connection is on the second floor which allows for enclosed parking underneath the building. The project also includes continued use of the existing 11,500 square foot Lahey Pavilion for medical office space. There are existing cell phone antennas on the Butterfield Hospital building which will be relocated on site. In order to minimize visual impacts, it is envisioned that the cell antennas will be incorporated in the architecture of a cupola or clock tower to be located on the roof of Building 3, subject to review during site plan review. The project also includes subdivision of the land abutting Paulding Avenue to create conforming lots for the construction of three single family residences designed to be consistent with the existing single family residential neighborhood on Paulding Avenue.

Representative architectural renderings of the proposed buildings are included in Appendix B. Visual studies of the site proposal in relation to its immediate surroundings are also presented in Appendix B. Site Profile illustrations were prepared that show the position and bulk of the proposed buildings along a section line taken through the property from three positions (refer to the Key Map of the site profile locations). The site profiles are drawn to scale. Profile AA presents a "slice" from Route 9D through the proposed buildings on the project site to Paulding Avenue. Profile BB presents a west-to-east profile from Grove Court through the project site to Route 9D, and Profile CC presents another west-to-east profile taken through Route 9D at its intersection with Paulding Avenue on the right side of the Figure. The profiles show the relative building elevations and heights, and demonstrate how the buildings are stepped and separated on the site such that views, or "lines of sight," from the street will look past or over some buildings thereby revealing (rather than obstructing) landscape elements beyond the site -- nearby trees or even the distant horizon when looking west. Thus the appearance of the site will be altered by this proposal, however the visual context of the project is anticipated to "fit" within broader landscape setting.

Project Description

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The Project Sponsor proposes to construct 55 units of market rate senior housing plus one superintendent unit. Figure 1-3 shows the location of the proposed senior housing (Buildings 3 through 6). It is anticipated that a total of approximately 31 units may be constructed in Buildings 4,5,6 and approximately 25 units may be constructed in Building 3. The Senior residential buildings will contain a mix of efficiency, one and two bedroom units. The actual number of units and the proposed bedroom counts will be finalized prior to site plan approval and will comply with the stipulations noted on the Concept Site Plan. All units will be market rate "for sale" condominiums, projected to sell for approximately \$299,000 to \$375,000, depending upon market conditions. The units may be rented by the applicant until such time as they are sold.

Ownership of the units will be deed restricted such that one owner/occupant must be 55 years of age or older and no permanent residents under the age of 18 will be permitted. Guests under the age of 18 would be permitted for a maximum stay of three months. Occupancy by rental tenants would be bound by these same restrictions. Monitoring of these restrictions will be the responsibility of the Homeowners Association.

The proposed concept plan will be in full conformance with Sections 134-18(E) and 134-16 G (3) of the Village Code which relate to off street parking and Senior housing requirements respectively. It is anticipated approximately 218 parking spaces will be located on-site in a combination of indoor and outdoor parking as the market rate senior residences include areas of underground parking. As shown in Table 1-1, the total on-site parking calculation of 221 spaces includes a space for each of the three single family houses to be located on Paulding Street. There are 35 existing parking spaces in the vicinity of the Lahey Pavilion, which will continue to service that building. These spaces have also been included in the total parking count of 221 spaces provided.

Table 1-1 Parking					
Land use	Parking Code	Code Requirement Spaces	Shared Parking Reduction	Required Parking	Provided
Building 1 6,000 sf ground floor	1 space per 150 sf	40	20%	32	58 (40* & 18 shared)
Building 1 6,000 sf upper floor	1 space per 300 sf	20	20%	16	
Building 2 7,000 sf ground floor	1 space per 150 sf	47	20%	38	69 (43 & 25 shared)
Building 2 10,500 sf upper floor	1 space per 300 sf	35	20%	28	
Lahey Pavilion	Existing	35	--	35	35
Non-Residential Parking		177	20%	149	163
Building 3 - 25 units	1 space per unit	25	0%	25	25
Building 4,5,6 - 30 units	1 space per unit	31	0%	31	31
Multi Family Parking		56		56	56
Single Family		3	0%	3	3
Single Family Parking		3		3	3
TOTAL PARKING				208	221
* 12 spaces of Building 1 parking located under Building 6					
** Shared Parking split between Building 1 and Building 2					

The community charrette recommended parking along US Route 9D consistent with the Village's existing streetscape. Parking along US Route 9D is not necessary to meet the applicable parking requirements for the project. Any parking along US Route 9D, is beyond the scope of the proposed project. Were the village to pursue it, it would be subject to review and approval of the NYS DOT.

There are three existing site access points along US Route 9D and a single access from Paulding Avenue. It is anticipated that the site access locations along US Route 9D will remain in generally the same locations for the proposed development. The existing site access at Paulding Avenue will be removed and replaced by three single family driveways for the proposed residential lots along Paulding Avenue. There are existing sidewalks along both US Route 9D and Paulding Avenue which will remain or be relocated as part of the Village sidewalk system. Loading Docks and Dumpster locations are shown in Figure 1-4.

The applicant intends to preserve the approximately 43,600 sf open lawn area designated on the Concept Plan as "Gateway Park", located along the southern perimeter at Paulding Avenue. The preservation of this area represents approximately 67 percent of the existing lawn area which has historically been used by the public for sledding, farmers market, carnivals, pick-up games and exercising dogs. This applicant may offer an easement to the Village to enable use of the "Gateway Park" area by the community. This would be worked out with Village officials during site plan review.

A landscape and lighting plan will be developed for submission at the time of site plan application which will demonstrate significant landscape treatments of the site and preservation of some of the existing trees. A separate report on measures to protect the well known large copper beech tree located in the center of the site is included as Appendix K.

As can be seen in the representative building elevations included in Appendix B, the Butterfield applicant intends to use earth tone materials and colors for the building exteriors, and architectural styling designed to complement the historic character of the Village of Cold Spring.

It is premature to prepare HOA documents or an operations and management plan. However, there will be multiple associations formed to manage aspects of the subject project. A master association will manage landscaping, security lighting, snow removal and interior infrastructure such as common roads and stormwater management facilities. Individual associations may be formed to address the needs of the residents of the senior housing and the common elements of that use such as parking areas, lights, common interior spaces, community center, etc. Details of these responsibilities will be set forth in the applicable documents at the time of site plan approval or as a condition thereto.

1.2 History of the Proposed Action

Redevelopment of the Butterfield site has a long, significant and well documented history spanning more than five years. A chronology of this history has been included as Appendix G.

In March of 2012 the project was proposed as a mixed use project which included affordable senior residential housing, some market rate senior housing, in addition to proposed retail and municipal office space. Upon review of the project by the Village Board, and as a result of public comment, a public Community Design Workshop Charrette was convened on April 14, 2012.

The Draft Report on Community Design Workshop, April 23, 2012, included in Appendix H, details the following recommendations as a result of the Charrette;

- Preserve a portion of the Butterfield Lawn as open Space Gateway to the Village.
- Provide public space for local use such as community center.
- Establish a traditional pedestrian-oriented streetscape and layout - hide parking.
- Preserve Village scale and character of new development.
- Permit mixed-uses.
- Reflect existing Village Architecture.
- Plan the Grove in conjunction with Butterfield
- Create tax positive uses.
- Facilitate pedestrian access to Foodtown area.
- Prevent gated neighborhoods and cul-de-sacs.

Each of these recommendations has been incorporated into the project design, with the exception of development of the Grove property, which was excluded based upon the request of the Village Board.

In addition to the recommendations of the Community Design Workshop, the concept plan was reviewed by the Village Board, their planning consultant's GreenPlan, and the Planning Board. As a result of the Village's recommendations the following elements are included on the currently proposed conceptual site plan, refer to (Figure 1-3);

- ◆ Single Family Development is now proposed along Paulding Avenue, including rezoning to R-1.
- ◆ All Senior Residential Housing is now market rate housing.
- ◆ The Butterfield project creates tax positive uses including retail, office and senior housing.
- ◆ Approximately 67 percent of the existing Butterfield Lawn area will be set aside as open space, to be known as "Gateway Park" and will continue to act as a Gateway to the Village and serve community recreational uses.
- ◆ The project has potential to include a public space for local use such as a community center.
- ◆ The layout establishes a traditional pedestrian oriented streetscape and layout.
- ◆ The Buildings will be designed to preserve Village scale and character and to reflect existing Village Architecture.
- ◆ The project provides for municipal office space and uses such as a U.S. Post Office, Putnam County office space or a municipal sponsored Community Center.

1.3 Construction Sequence

It is anticipated that SEQRA reviews will be completed in 2013 and the Village Board will hold public hearings and make a zoning decision in the first quarter of 2014. Once a zoning decision is made the applicant will make a formal application for site plan approval with the Planning Board in the first half of 2014. Assuming site plan review can be accomplished in four months or less, given the amount of review and work accomplished to date, construction start could occur in the fall of 2014.

Construction is expected to last approximately 24 to 36 months. It is anticipated that the project sponsor would initially build some or all of the office/retail space first and then focus on the

residential development. However, construction will be driven by market conditions and it is possible that there may be overlap between construction of the commercial and residential portions of the project. Mitigation measures are described below to mitigate short term construction impacts to the extent practicable.

The following construction sequence describes in general terms the project construction;

1. Protect areas beyond the limit of disturbance by installing temporary silt fencing.
2. Install tree preservation measures to protect the Copper Beech tree and applicable trees along NYS Route 9D.
3. Construct stabilized construction entrances, including stone tracking pads.
4. Perform clearing and grubbing activities.
5. Install erosion control measures appropriate to each phase of work, including silt fencing, inlet protection, temporary berms, swales, and temporary sediment traps.
6. Perform grading, excavation and related operations, stockpile soil in approved areas.
7. Construct drainage system improvements, roadway improvements and street utilities.
8. Construct retail buildings and driveways.
9. Construct residential buildings and driveways.
10. During construction, all areas being disturbed will either be paved, seeded, sodded, or planted as specified in a timely manner to prevent unnecessary erosion.
11. Remove all temporary control measures.
12. Remove accumulated sediments from permanent storm water management facilities.

Steps 1 through 7 involve construction of the roads and stormwater management facilities and would be completed prior to construction of the individual buildings. Construction of the buildings would then follow a similar sequence of construction: install erosion controls, strip and store topsoil, grading, construction of utilities and buildings, and permanent stabilization. The project will be constructed in phases to limit disturbance on the site. Phase one will consist of building the infrastructure for the roads and drainage facilities - these areas will be stabilized as per the identified erosion control measures in advance of constructing the buildings. Phase two will consist of construction of the two office/retail buildings. Phase three will consist of construction of the multi-family units plus the community building.

An Erosion Control Plan will be included as part of the Site Plan Drawings, and will depict the various measures provide temporary and permanent stabilization of disturbed areas in accordance with New York State Department of Environmental Conservation best management practices ("BMPs"). As the redevelopment project will take place in substantially the same areas as the existing development and will generally follow the existing topographic contours, it is not anticipated that a significant amount of earth work will be required.

As a result of implementation of the identified mitigation measures, listed above, short term construction impacts shall be mitigated to the maximum extent practicable.

1.4 Approvals Required - Involved Agencies

<u>Agency</u>	<u>Approvals Required</u>
Village of Cold Spring Board of Trustees J. Ralph Falloon, Mayor Cold Spring Village Hall 85 Main Street Cold Spring, NY 10516	Zoning Law Amendment
Village of Cold Spring Planning Board Barney Molloy, Chairman Cold Spring Village Hall 85 Main Street Cold Spring, NY 10516	SEQRA Lead Agency SEQRA Determination Subdivision Approval Site Plan Approval
Village of Cold Spring Building Department William Bujarski, Building Inspector Cold Spring Village Hall 85 Main Street Cold Spring, NY 10516	Building Permit
Village of Cold Spring Architectural Historic District Review Board Cold Spring Village Hall 87 Main Street Cold Spring, NY 10516	Certificate of Appropriateness
Putnam County Health Department County Office Building 40 Glenida Avenue Carmel, NY 10512	Approval of new Water and Putnam Sewer Connection
Putnam County Department of Planning Putnam County Office Building 40 Glenida Avenue Carmel, NY 10512	Referral under Section 239M of the GML
Regional Permit Administrator NYS Department of Environmental Conservation, Region 3 21 South Putt Corners Road New Paltz, NY 12561	SWPPP Approval Stormwater Discharge
NYS Department of Transportation, Region 8 Eleanor Roosevelt State Office Building 4 Burnett Boulevard Poughkeepsie, NY 12603	NYS DOT Work Permit NYS Route 9D Curb Cuts Parking along US Route 9D

1.4 Interested Agencies

Town of Philipstown - Planning Board
Michael Leonard, Chairman
238 Main Street
Cold Spring, NY 10516

Town of Philipstown
Town Clerk
238 Main Street
Cold Spring, NY 10516

Village of Nelsonville
Village Clerk
258 Main Street
Nelsonville, NY 10516

New York State Office of Parks, Recreation and Historic Preservation
Ms. Ruth Pierpont
Pebbles Island Resource Center
P.O. Box 189
Waterford, NY 12188-0189
Attn: Bill Krattinger
(518) 237-8643 X3265

Office of Communities and Waterfronts
NY Department of State - Suite 1010
One Commerce Place, 99 Washington Avenue
Albany, NY 12231-0001
518-474-6000

LTG David Huntoon, Jr. - Superintendent
West Point Military Academy
Building 600
West Point, NY 10996
(845) 938-3507

Village of Cold Spring Police Department
Chief George Kane
83 Main Street
Cold Spring, NY 10516

Chief - Cold Spring Fire Company No. 1
154 Main Street
Cold Spring, NY 10516

Haldane Central Schools
Dr. Villanti - Superintendent
15 Craigsides Drive
Cold Spring, NY 10516

2.0 ECONOMIC, DEMOGRAPHIC AND COMMUNITY SERVICE RESOURCES

2.1 Economic and Demographic Resources

As discussed, the proposed project is a mixed use redevelopment of the Butterfield Hospital Site situated on Route 9D in the Village of Cold Spring. The project will include private roads and appurtenances. The residences would be served by public sewer and water.

The subject site is presently zoned B-4, Designated Medical and Health Care Facility. It presently supports a medical office building and the remains of the former Butterfield Hospital which is vacant and dilapidated.

Butterfield Realty seeks an amendment to the Zoning Code and Map of the Village of Cold Spring to change the zoning designation of most of the approximately 5.7 acre site (tax parcel 49.5-3-45) from B-4 to B-4A, Medical and Health Care Facility Mixed Use District, and a smaller area along Paulding Avenue from B-4 to R-1.

The new sub-district B-4A zone will permit "Senior Citizen Housing", "Municipal and other Governmental uses", "Retail Stores", "Business and Professional Offices", "Banks", Personal Service Shops, and 'Mixed Uses consisting of two or more permitted uses".

The proposed zoning permits "Senior Citizen Housing" as allowable residential use. Any change to either the existing B-4 zone or the proposed B-4A zone to allow non-senior housing would be a separate action subject to review and recommendation of both the Village Board and the Planning Board, would be subject to public hearings and would need to go through the SEQRA process to evaluate all impacts and implications related to such a change.

As shown in Figure 1-3, a Concept Site Plan has been developed to a level of detail which allow consideration of the impacts of the proposed zone amendment and a subsequent subdivision and site plan development. As Figure 1-3 shows, the conceptual site plan includes a 15,000 square foot municipal office/partial retail building (Building 1), a 17,500 square foot office/partial retail building (Building 2), and 55 market rate senior condominium units plus one superintendent unit (Buildings 3 through 6). In addition, the project includes continued use of the existing 11,500 square foot Lahey Pavilion for medical office space. The project also includes the subdivision to create conforming lots for the construction of three single family residences in the northernmost portion of the site.

The Project Sponsor proposes to construct 55 units of market rate senior housing plus one superintendent unit. Figure 1-3 shows the location of the proposed senior housing (Buildings 3 through 6). It is anticipated that a total of approximately 31 units may be constructed in Buildings 4,5,6 and approximately 25 units may be constructed in Building 3. The Senior residential buildings will contain a mix of efficiency, one and two bedroom units. For the purpose of this analysis the project is envisioned to include 34 one bedroom units and 22 two bedroom units. The actual number of units and the proposed bedroom counts will be finalized prior to site plan approval and will comply with the stipulations noted on the Concept Site Plan. The units are projected to sell for approximately \$299,000 to \$375,000, depending upon market conditions. All units will be market rate and/or rental condominiums restricted to persons 55 and older.

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Ownership of the units will be deed restricted such that one owner/occupant must be 55 years of age or older and no permanent residents under the age of 18 will be permitted. Guests under the age of 18 would be permitted for a maximum stay of three months. Occupancy by rental tenants would be bound by these same restrictions. Monitoring of these restrictions will be the responsibility of the Homeowners Association.

Demographic multipliers published by the Rutgers University Center for Urban Policy Research (CUPR) were used to project the future population of the Butterfield Redevelopment project. As shown in Table 2-1, Based upon the age restricted nature of this development, a multiplier of 1.8 persons per two bedroom unit and 1.0 person per one bedroom unit has been used to project the senior population for the Butterfield Redevelopment project. By comparison, 2010 U.S. Census Data indicate that the average household size for all housing types in the Village of Cold Spring is 2.21 persons, and the average family size is 2.9 persons.

Table 2-1 Population Projections					
Senior Market Rate Units					
Unit Type	Number of Units	Population Multiplier	Population	School Age Children Multiplier	School Age Population
1 Bedroom	34	1	34	0	0
2 Bedroom	21	1.8	37.8	0	0
2 Bedroom Superintendent	1	2.55	2.55	0.51	0.51
Single Family Homes					
3 Bedroom	3	2.95	8.85	0.58	1.74
TOTAL	59		83		3

Source: Rutgers University Center for Urban Policy Research, June 2006.

Based upon the residential multipliers, approximately 83 persons are projected to reside in the proposed housing. Due to the age restrictions, there will be no school age children associated with the senior housing. A total of three students are projected to live in the single family residential housing on Paulding Avenue and in the superintendent's household.

It is anticipated that a number of the Butterfield residents may be existing Village residents who move to Butterfield, in which case the housing vacated by those persons moving would be reoccupied by new residents in a manner similar to the normal turnover of housing stock in a community.

Current and Projected Assessed Value

The Butterfield Hospital site is contained on Village tax parcel 49.5-3-45. The current assessed value of the total project site is \$1,200,000. According to a review of the 2013 tax bills for the subject parcel, the total annual property taxes generated by the project site and paid to the Village of Cold Spring are \$12,528. The municipal taxes paid to the Town of Philipstown are \$2,934. The municipal taxes paid to Putnam County are \$7,002. Thus, the total municipal taxes paid are \$22,465 while the annual property taxes paid to the school district are \$40,044.

The New York State Office of Real Property Services (NYSRPS), Section 339-y of the Condominium Act requires that each condominium unit, together with its common interest, be

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assessed as one parcel, and provides that the sum of the assessments of all the units cannot exceed the valuation that the condominium as a whole would have if it were assessed as a single parcel. Thus, in New York State, condominium units are assessed generally at a lower value than fee simple units and the assessment is based on the income value of the property.

Based upon the income value of the market rate senior housing as described above, the total value of the senior housing is estimated to be \$10,968,407. In order to provide a conservative analysis, the project was assumed to include 7,000 square foot of retail space, 15,000 square foot of municipal office space, 10,500 square foot of general office space and 11,500 square foot of existing medical office space. Based upon the income value of these components, the total value of the commercial component is estimated to be \$10,809,224. The three single family homes on Paulding Avenue are estimated to have a combined market value of \$1,575,000. Thus the combined market value of the proposed project is \$23,352,631. Using the current 2013 equalization rate of 49.1 percent, the total Assessed Value of the project used for this analysis is \$11,466,142.

Current and Projected Revenues

Table 2-2 compares the revenues generated presently by the property to the revenues to be generated after the Butterfield Redevelopment project is complete. Revenues are based on 2013 tax rates (2012-2013 tax rate for the Haldane Central School District).

According to the Village of Cold Spring annual budget, the Village's tax rate includes Village governmental services, Justice Court, police services, fire protection services, street maintenance, public parking, lighting and parks & recreation.

As presented in Table 2-2, annual revenues to the Village of Cold Spring would be approximately \$119,706. Revenues to the Town of Philipstown would total \$28,037. The project-generated annual revenues to Putnam County would be approximately \$66,908 annually.

Table 2-2 Current & Projected Taxes Generated by Butterfield Development			
Taxing Authority	Current Taxes (\$)	Butterfield Redevelopment Projected Taxes Total (\$)	Net Increase Between Current & Projected Taxes (\$)
Putnam County	\$7,002	\$66,908	--
Total Putnam County Tax Revenue	\$7,002	\$66,908	\$59,906
Town of Philipstown paid by Village Residents	\$2,606	\$24,901	--
JBL Library Tax	\$328	\$3,136	--
Total Town of Philipstown	\$2,934	\$28,037	\$25,102
Village of Cold Spring	\$12,136	\$115,957	--
Fireman Service Award	\$393	\$3,749	--
Total Village of Cold Spring	\$12,528	\$119,706	\$107,178
Total Municipal	\$22,465	\$214,651	\$192,186
Haldane Central School District	\$40,044	\$382,628	\$342,583
TOTAL	\$62,509	\$597,279	\$534,770
Notes:			
⁽¹⁾ Tax Rate per \$1,000 of Assessed Valuation.			
Municipal taxes are based upon Village of Cold Spring 2013 Tax Rates.			
Haldane Central School Tax Rates are for the 2012-2013 school year.			

Annual revenues to the Haldane Central School District would be approximately \$382,628. The net *increase* between the current tax revenues generated by the site and paid to the School District and the total future project-generated revenues to the school district are projected to be approximately \$342,583.

Table 2-2 also indicates the net increase in revenues to each jurisdiction which in total is projected to be more than \$500,000 annually.

Any increase in the retail portion of the project above the 7,000 square feet used for this analysis would result in increased assessed valuation and result in slightly higher taxes being generated. If the maximum amount of retail development were to occur (up to 13,000 square feet) the increased assessed value, would increase to \$11,788,885 and would result in taxes that are approximately three percent higher than the values listed above.

Costs Associated with the Proposed Project

An approximate estimate of costs to the Village of Cold Spring associated with the proposed residential development may be determined by obtaining a reasonable composite of current costs on a per capita basis and multiplying this amount by the anticipated population of the proposed project.

Through a review of the Village's operating budget, the amount of expenditures can be derived and, by dividing the population into the amount of expenditures, the per capita cost can be determined. To estimate the portion of the per capita cost which is paid for by property tax revenues (as opposed to other forms of income to the Village), the per capita cost is multiplied by the proportion that property tax revenue comprises of the overall income stream.

This generalized methodology estimates the overall costs. The incremental costs which would be applicable to this project are anticipated to be substantially lower. Certain fixed costs would not actually be affected by an increase in population. For example the Mayor's salary or the cost of running Village Hall are expenses that are paid by the Village Budget, but would not be expected to increase based on an increase in population. It is also noted that commercial and other land uses in the Village place demand on the various Village and other governmental services which contributes to the per capita costs being overstated. Based on these factors the generalized methodology projects a conservative estimate of the revenues above costs.

In this instance, the adopted 2012-2013 municipal budget for the Village of Cold Spring amounts to \$2,651,754. The total amount to be raised by taxes is \$1,424,869. The tax levy represents 53.7 percent of the total municipal budget.

According to the US Census data, the 2010 estimated service area population for the Village is 2,013 persons. Dividing the budget to be raised by taxes by the population results in a per capita Village municipal expenditure per person of \$708.

As described earlier, the proposed project would add approximately 83 persons to the population of the Village. It should be noted that not all Village costs will increase based upon this modest increase in population, thus the municipal costs are conservatively overstated. Based on a per capita cost of \$708, the additional costs to the Village of Cold Spring are projected to be up to approximately \$58,750. As presented in Table 2, the revenues to the Village from the proposed Butterfield Development would amount to a total of \$119,706, thus, **after** covering the cost of municipal services, the project will result in an annual net benefit to the Village of more than \$60,000.

Using similar methodologies, the Tax levy paid to the Town of Philipstown by Village residents amounts to \$2,191,592. The total municipal per capita cost of Village residents to the Town is estimated to be \$217, thus the additional costs to the Town of Philipstown as a result of the Butterfield Redevelopment are projected to be approximately \$18,190. As presented in Table 2, the revenues to the Town from the proposed project would amount to a total of \$28,037 resulting in a net benefit **after** covering costs of more than \$10,000 annually.

The proposed Butterfield Redevelopment will generate a total of \$382,628 in annual property revenues to the school district. The proposed redevelopment project will generate \$342,583 above current taxes. As previously stated, this will result in a substantial net benefit to tax

payers of more than \$325,000 annually to the Haldane school district as no school age children will be living in the senior residential development.

Table 2-3 presents a summary of the conservatively anticipated revenues compared to the generalized estimate of costs of the proposed Butterfield Redevelopment project. The net positive revenues after considering the generalized costs to the Village, Town and the School District is an annual amount of \$431,596 to all taxing jurisdictions.

There are no payment in lieu of taxes (PILOT) or other tax abatement programs anticipated in connection with the proposed Butterfield Redevelopment project.

Table 2-3 Revenue & Cost Summary: Butterfield Mixed Use Redevelopment Project			
Jurisdiction	Projected Taxes (\$)	Projected Costs (\$)	Net Tax Revenue
<i>Putnam County</i>	\$66,908	(\$32,287)	\$34,621
<i>Village of Cold Spring</i>	\$119,706	(\$58,750)	\$60,956
<i>Town of Philipstown</i>	\$28,037	(\$18,011)	\$10,026
<i>Haldane Central Schools</i>	\$382,628	(\$56,635)	\$325,993
Total	\$597,279	(\$165,683)	\$431,596

Source: Tim Miller Associates, Inc., 2013

Water & Sewer User Fees

The Village of Cold Spring is contained in it's own water and sewer district. The Butterfield site is located in the Village of Cold Spring water and sewer districts, and has been paying taxes to the benefit of these districts for over 20 years. In addition to the taxes paid, the Village charges user fees based on a flat fee structure plus user fees based on the volume of water used. These taxes and fees are the revenue source the Village uses to cover the cost of the water and sewer infrastructure and service provided.

The proposed Butterfield Redevelopment project will be connected to the Village's infrastructure and will use water and sewer. Residences currently pay a quarterly flat fee of \$56.25 per unit plus a metered usage fee of \$3.05 per 1,000 gallons of water usage. Similarly each residence pays a quarterly flat fee of \$69.03 per unit for sewer service plus \$1.125 per 1,000 gallons of metered water for sewer service. As shown in Table 2-4, it is projected that the project will use approximately 14,602 gallons per day of water and generate approximately 12,280 gallons per day of sewage.

Table 2-4 Butterfield Redevelopment Domestic Water and Sewer Demand					
Senior Market Rate Units					
Unit Type	Number of Units	NYS DEC Wastewater Generation Rate (per unit)	Wastewater Generated	Water Demand Rate +10% of Wastewater (per unit)	Water Demand
1 Bedroom	34	150 gpd	5,100 gpd	165 gpd	5,610 gpd
2 Bedroom	22	300 gpd	6,600 gpd	330 gpd	7,260 gpd
3 Bedroom	3	400 gpd	1,200 gpd	440 gpd	1,320 gpd
Sub-total			12,900 gpd		14,190 gpd
20% Savings for use of water conservation fixtures			-2,580 gpd		-2,838 gpd
Total Residential Demand			9,680 gpd		11,352 gpd
Non Residential increase	32,500 sf	0.08 gpd	2,600 gpd	0.1 gpd	3,250 gpd
TOTAL DEMAND			12,280 gpd		14,602 gpd

NYS DEC Ten State Standards; Table prepared by TMA 2013.

Table 2-5 illustrates the projected Sewer fees to be paid to the Village by the Butterfield project, based upon the projected wastewater generation described above.

Table 2-5 Butterfield Redevelopment Sewer Usage Fees						
Senior Market Rate Units						
Number of Units	Quarterly Flat Fee/Unit	Total Butterfield Sewer Flat Fee	Quarterly Wastewater Generated (gpd)	Quarterly Wastewater Generated (Total)	Usage Fee/1,000 gallons	Total Quarterly Sewer Fees
59	\$69.30	\$4,019.40	9,680 gpd	871,200 gallons	\$1.125	\$5,000
Increase in Office and Retail Space						
16*	\$69.30	\$1,107.20	2,600 gpd	234,000	\$1.125	\$1,370
TOTAL QUARTERLY SEWER FEES						\$6,370

*Assumes an average of 2,000 square foot per business.
Cold Springs Village Clerk ; Table prepared by TMA 2013.

Table 2-6 illustrates the projected Water Usage fees to be paid to the Village by the Butterfield project, based upon the projected usage's described above.

Table 2-6 Butterfield Redevelopment Water Usage Fees						
Senior Market Rate Units						
Number of Units	Quarterly Flat Fee/Unit	Total Butterfield Water Flat Fee	Quarterly Water Demand (gpd)	Quarterly Water Demand (Total)	Usage Fee/1,000 gallons	Total Quarterly Sewer Fees
59	\$56.25	\$3,262.50	11,352 gpd	1,021,680 gallons	\$3.050	\$6,379
Increase in Office and Retail Space						
16*	\$56.25	\$900.00	3,250 gpd	292,500 gallons	\$3.050	\$1,792
TOTAL QUARTERLY WATER FEES						\$8,171
Assumes an average of approximately 2,000 square foot per business in the 32,500 square foot increase in office/retail space.						
Cold Springs Village Clerk ; Table prepared by TMA 2013.						

A review of the information presented in tables 2-4, 2-5 and 2-6 indicates that the Butterfield project will pay an estimated \$25,480 in sewer fees and an estimated \$32,684 in water fees to the Village on an annual basis. Since the water and sewer infrastructure already exists to serve the Village, the increase in user fees will result in a fiscal benefit to the Village.

Age Restricted versus Non-Age Restricted Comparison

The Applicant was asked to assess what the impact of non-age restricted housing would be in the unlikely event that the project is built but unable to be successful as a senior project.

It should be noted that a future change from age restricted housing to non-age restricted housing would require a legislative amendment to the B-4A zone once enacted. Any such application would be subject to SEQRA, and any potential significant impacts not studied during the review of this Project would need to be addressed in a subsequent environmental review. There would be transparency and an opportunity for public comment as with any rezoning petition.

Table 2-7 below provides a comparison of the Butterfield redevelopment project under the proposed B-4A zoning amendment to a theoretical non age-restricted use of the site post development.

As can be seen in Table 2-7 there would be no increase in traffic. The Traffic Analysis included in this EAF, provided a conservative analysis of trip generation using the maximum rates for Senior Housing. Trip generation for non age-restricted condos would result in a lower number of trips from the project than those values used in the Traffic Analysis. Thus no traffic impacts would be expected.

Non age-restricted housing would result in an increase in population from 83 persons to 102 persons. The non age-restricted project would however remain fiscally positive. The net benefit to the Village would decrease from \$60,956 to \$47,507.

Non age-restricted housing would generate school age children, potentially up to 8 students, based upon a demographic multiplier of 0.14 students per unit as published by the Rutgers University Center for Urban Policy Research. The non age-restricted project would however remain fiscally positive. The net benefit to the School District would decrease from \$325,993 to \$193,844.

A non age-restricted housing project would be unlikely to produce significant adverse impacts as a result of 19 additional persons, including eight additional school age children. The Butterfield Redevelopment project would still generate significant tax revenue for both the Village and the Haldane School District.

Table 2-7 Butterfield Redevelopment Multifamily Housing Impact Comparisons			
Area of Concern	Age-Restricted	Non Age-Restricted	Difference
Residential Units	55	55	0
Population	83	102	19
School Age Children	1	9	8
Residential Trips (AM peak hour)	15	13	(2)
Residential Trips (PM peak hour)	31	18	(13)
Residential Trips (SAT peak hour)	18	16	(2)
Net Benefit to Village	\$60,956	\$47,507	(\$13,449)
Net Benefit to School District	\$325,993	\$193,844	(\$132,149)

2.2 Community Facilities and Services

2.2.1 Existing Conditions

Police Protection

The Cold Spring Police Department provides police protection services to properties within the 5 square mile area that comprises the Village of Cold Spring. The police department headquarters is located at 10 Main Street Cold Spring, NY, approximately 1 miles west of the project site.

The Cold Spring Police Department employs 13 police officers who provide 24-hour per day coverage. The department handles approximately 1,200 service calls per year with a service area of approximately 3,500 people. The area that the Town of Philipstown police covers is approximately 5 square miles. There are presently 3.7 police officers per 1,000 residents.

Typical response time to the Butterfield redevelopment site would be approximately one to three minutes.

Fire Protection

The Cold Spring Fire Company No. 1 is located in the Village of Cold Spring, Putnam County New York. They protect 3500 people living in an area of 5 square miles. The Fire Station is located at 154 Main Street, Cold Spring. The service area is primarily a residential area.

The Cold Spring Fire Company has a total of 125 men and woman who are all volunteers and are led by Chief Matt Steltz and President Michael Bowman. The Company responds to approximately 150 calls per year providing fire protection to the residents of the Villages of Cold Spring, Nelsonville and the Philipstown/Cold Spring Fire District.

The company has four main pieces of equipment, the newest a 2010 Smeal Pumper/Tanker/Rescue, a 2003 Chevrolet Silverado 4 wheel drive Brush Truck, a 2001 Smeal 1250 gallon/minute Pumper and a 2005 Polaris Ranger and Rescue Ops Trailer.

Ambulance Services

The Philipstown Ambulance Corps provides emergency ambulance service to the project area. Average response time is between three and five minutes. The Corps has approximately 25 active volunteers and supplemental paid staff providing coverage 24/7. The corps has two fully equipped New York State Certified ambulances, and responds to approximately 600 calls per year. The ambulance station is located at 14 Cedar Street in Cold Springs, less than 2 miles from the Butterfield Site.

2.2.2 Potential Impacts and Mitigation

As described earlier in this section, the Butterfield Redevelopment project is expected to accommodate 83 residents, including 74 seniors and 9 residents in the three single family homes. Based on multipliers described later in this chapter, at three employees per 1,000 foot of space, it is estimated that the 32,500 square foot of new retail/office space could result in approximately 98 employees.

Police Protection

Based on planning standards contained in the Development Impact Assessment Handbook, model factors for police protection recommend two (2) police personnel per 1,000 persons which further breaks down to 1.5 police personnel per 1,000 persons for residential uses and 0.5 police personnel per 1,000 persons for nonresidential uses. Based on this standard, 83 persons would increase police staffing needs by less than one tenth of a police officer which is not likely to have a significant impact on the Village's police personnel ratio of 3.7 personnel per 1,000 residents. Police protection for up to 100 new employees is a negligible impact based on the standards described above.

A Study funded by FEMA and prepared by the Lacey Fire Department, WA (included as Appendix N for reference), studied the impacts of aging demographics on any increased need for emergency services. The Study reports that it can be expected that calls for emergency services may double in populations in the age range 65 to 84 and may triple in populations over 85 compared to traditional standards. Given that the residents of Butterfield will be active adults over 55 years of age, a projection of 2.5 times the number of emergency service calls would provide a conservative analysis. Based on this increased standard 83 persons may increase the police staffing needs by less than 0.25 officers which is still not likely to have a negative impact on the Village Police Force.

Fire Protection

Based on planning standards published in the Development Impact Assessment Handbook, approximately 1.65 fire department personnel per 1,000 population is recommended to provide adequate fire protection service. After multiplying this standard to account for the senior demographic described above, Up to 83 new residents would generate demand for approximately one third of an additional fire department personnel. The proposed roads within the project will be designed in accordance with Village specifications and can adequately accommodate emergency service vehicles. Fire hydrants will be installed according to Village standards.

Ambulance Services

Based on planning standards contained in the Development Impact Assessment Handbook, approximately 36.5 calls per 1,000 population are made annually. As discussed, senior populations may triple this call volume. Based on this revised standard, the additional 83 residents would increase EMS calls by approximately 9 calls annually on average. The proposed project would not have a significant impact on emergency medical services.

Solid Waste Disposal

The per household rate for solid waste generation according to the Urban Land Institute's Development Impact Handbook, is .00175 tons per person per day. The proposed development projects an increase in population by 83 persons, resulting in an estimated solid waste generation of 4.4 tons per month.

Dumpsters and solid waste storage areas are proposed for the multifamily residential buildings and the recreational complex. All refuse storage areas would be screened from view of public roads. Solid waste will be collected according to the schedules applicable to the private

contractor. Since the Village of Cold Spring does not supply solid waste pickup within multifamily developments, thus development will not have an impact on the Village's solid waste facilities.

The Village of Cold Spring annual budget includes tax levys to provide for services which include Police, Fire and Ambulance service. Based upon the modest population increase, no new police officers are warranted and no new equipment is required as a result of the proposed project.

Fiscal Benefits

The project will induce construction employment in the short term. In the long-term, the new resident population would introduce consumer demand for the retail and service establishments located within the Village of Cold Spring, as well as the larger commercial area within the region.

Short Term Employment Opportunities

The construction value of the proposed project would total approximately \$23.3 million. Construction of the project would require a commitment of person hours of labor, which can be viewed as beneficial to the community, the local economy, and the construction industry with respect to the generation of jobs. Based on labor hour estimates published by the Urban Land Institute, and accounting for secondary employment resulting from the construction, this project would generate 85 to 100 full time equivalent jobs in the various construction trades associated with this project.

It is anticipated that a number of construction workers would come from Putnam County and nearby counties in the region. These workers are expected to have a positive impact on existing local businesses that provide such services as food convenience shopping, gasoline, etc.

Long Term Employment Opportunities

The Lahey Pavilion is currently occupied by approximately 11,500 square feet of medical office space which will continue to be used. In addition to the Lahey Pavilion, the proposed project includes construction of 32,500 square feet of new retail and office space. From an employment perspective the project will increase the Village's retail / office space by 32,500 square feet.

There are several multipliers available to estimate the number of employees generated by non-residential development. The Institute of Transportation Engineers (ITE) Parking Generation¹ estimates 3.4 jobs per 1,000 square foot of office building space. The ITE Trip Generation Handbook² indicates approximately 3.3 employees per 1,000 square foot of Office Space. A multiplier of three jobs per 1,000 square foot has been used for the purpose of this analysis to estimate the number of jobs that could be generated. Based upon this multiplier the 7,000 square foot of retail space, used for this analysis, would generate approximately 21 new employees. It is reasonable to assume that some portion of the 15,000 square foot of office space that could be used for municipal proposed may involve local jobs which are relocated, however these jobs would be new to the Village's employment base, given that the project does

¹ ITE Parking Generation (4th Edition 2010. Page 201)

² ITE Trip Generation for Land Use 710. General Office Building

represent an increase in the overall office space available within the Village, thus at least a portion of this space is likely to be utilized for new employment.

Utilizing the 3.0 employees per 1,000 square foot of office/retail space, the Butterfield Redevelopment project has the potential to add approximately 98 new jobs to the Village's employment base.

Local Economy Spending

Future residents would utilize retail, personal service, and other commercial uses located in the project vicinity. Businesses within the project vicinity, especially those located within the Village, would benefit from new resident expenditures. Approximately 30 percent of household income is spent on retail goods and services.

A household income ranging from \$30,000 to \$75,000 annually, depending upon the amount of financing necessary, would be required to support the average value of \$325,000 of the proposed market rate senior housing. Using an average household income of \$50,000, it is estimated that 55 households would spend more than \$825,000 annually. A substantial portion of these expenditures would be made at supermarkets, local convenience stores, apparel stores, restaurants and service businesses such as gas stations and hair salons in the area.

It is anticipated that a number of the Butterfield residents may be existing Village residents who move to Butterfield, in which case the housing vacated by those persons moving would be reoccupied by new residents who would contribute to the increase in spending described above.

Sales Tax

Providing local shopping opportunities will serve to capture sales tax dollars in Putnam County. Based upon an average annual revenue of \$300 per square foot³, sales expected from the 7,000 square foot retail portion of the proposed development, would be approximately \$2.1 million. Applying the 8.375 percent sales tax to the proposed retail use, future sales tax revenues generated from the proposed development, would be more than \$175,000 annually. Any additional retail space beyond the 7,000 square foot used for this analysis would result in a proportional increase in anticipated sales tax revenues.

³ Simon Properties Annual Report 2010.

Summary

The proposed Butterfield redevelopment project will provide senior housing in the Village of Cold Spring, in addition to an increase in municipal office space and new retail opportunities. As a result of this project the community will realize the following economic benefits:

- Collective municipal and school revenues are projected to total approximately \$597,279 annually.
- Tax revenue to the School District will increase by approximately \$340,000, and result in an annual net benefit to the district *after covering costs* by more than \$325,000.
- The project will result in net benefit revenue to the Village of more than \$60,000 annually *after covering costs*.
- The project-generated annual revenues to Putnam County would be approximately \$66,908 annually.
- Retail spending by the new residents of the community is projected to exceed \$825,000 annually.
- Sales tax revenue is projected to be more than \$175,000 annually.
- The project would generate 85 to 100 full time equivalent jobs in the various construction trades associated with this project and between 21 and 98 full time jobs upon completion.

3.0 SOILS AND TOPOGRAPHY

The Butterfield proposal includes redevelopment of the project site in the Village of Cold Spring for a mixed use project which includes senior housing and retail / municipal office space. The 5.7-acre site is currently occupied by the abandoned Butterfield Hospital which is to be demolished, and the Lahey Pavilion which will continue to be used for medical offices, and associated parking and lawn areas.

3.1.1 Existing Conditions

The project site, contains primarily one type of soil, mapped by the United States Department of Agriculture (USDA) Soil Conservation Service (SCS) of Putnam and Westchester Counties, New York as Ub - Udorthents, smoothed, shown in Figure 3-1, Soils Map. This mapping unit consists of very deep, excessively drained to moderately well drained soils that have been altered by previous actions including cutting and filling, usually from previous development. These soils include fill material commonly located more than 20 inches deep over the original soil type. These soils can be composed of alternating layers ranging from sand to silt loam. Slopes are typically 3 to 15 percent but can range from 0 to 25 percent in some areas, with the steeper slopes being found on the edges of the mapped areas. Properties and characteristics of this soil type are variable, due to the cutting and filling nature of past activities. These soils are common in developed areas. The Butterfield property is currently developed with two buildings indicating that soils on this site are conducive to supporting building site development.

Test soil borings were conducted by the project architect which confirmed the very deep nature of the soils. The location of the soils test borings are shown on Figure 3-3. The test pit logs are included in Appendix L for reference. As the logs indicate, soils tests were taken at a minimum of 7 locations. Test pit elevations ranged from elevation 114.5 to elevation 145.5. The borings were taken at a minimum of three feet deep to a maximum of eleven feet deep, with the most measurements at generally eight feet deep. There was no bedrock or groundwater encountered in any of the test holes. There are no bedrock outcrops on the site or in the vicinity of the site.

The site is generally gently sloping with smaller areas of steep slopes located along the boundaries of the property, as shown on Figure 3-2.

3.1.2 Avoidance or Minimization of Potential Impacts

Soils

Engineering measures such as proper design of foundations, with subsurface drainage if needed, and proper designs of pavement subbase and excavated slopes can be expected to overcome any limitations of the onsite soils. An erosion and sediment control plan will be prepared to assure proper handling of soils to avoid undue erosion. Currently the site is developed with two existing buildings, a parking lot and a field. Historic use of the property shows that it is capable of supporting structures and is conducive to being used in a developed manner. The project proposal will result in an increase of 0.85 acres of impervious surface on the site -- existing buildings and parking lots occupy 2.25 acres and the proposed project will have a total of 3.1 acres of impervious surface.

Based on the absence of bedrock outcrops on the site or in the vicinity of the site, the presence of deep soils present on the site, and the test borings which did not encounter any rock

formations, it is not anticipated that any rock removal will be necessary to construct the proposed project. If bedrock were to be encountered during construction, mechanical means (i.e. ripping, chipping) would be employed in lieu of blasting.

Blasting

Although not anticipated, any necessary blasting would only be carried out after a Blasting Plan, specific to this project, would be developed with the Blasting Contractor. A sample Blasting Protocol is included in Appendix M for reference. The Blasting Plan includes, but would not be limited to the following:

- Determine a radius of sensitive receptors to the blasting site.
- Notifying property owners within the radius of sensitive receptors. This notification would provide warning that blasting will occur and the dates it is planned to start and finish.
- Conducting pre-blasting inspections for buildings within the radius of sensitive receptors. This will be completed by the Blasting Contractor.
- Conducting post-blasting inspections of the buildings within the specified radius.
- Blasting will only be conducted during specified hours in conformance with the Village of Cold Spring Noise code, Chapter 76, or may be further restricted in the Blasting Protocol to be approved by the Village's representative.

The Blasting Plan would be developed in full conformance with all Village of Cold Spring regulations and in accordance with New York State blasting law. The contractor's Blasting Contract would be based on site specific blasting requirements, and would be submitted to the Village for approval in advance of any site work activity. Peak particle velocity would be maintained at the property line so as to avoid any effects on off-site structures.

Radon

Foundations will be tested for radon and established practices for radon mitigation will be employed should radon be encountered at levels that call for its remediation. Radon is easily tested for in any building prior to occupancy. Once the building is occupied the testing requires cooperation with the occupant. Radon is easily mitigated through proper passive mitigation systems that can be installed either during construction or after the building is already constructed. These, systems are installed under the foundation with a series of pipes that will create a passage for the radon gas to travel safely out a pipe stack instead of through the foundation of the building.

Topography

The proposed redevelopment includes the demolition of the existing hospital building, regrading of portions of the site and construction of six new buildings. The retail building and the office building are to be located along US Route 9D within the slopes along the southern portion of the property, closest to the Village and the remaining four residential buildings are proposed to step up the slope towards the north portion of the property. As illustrated in Figure 3-2, the proposed development will disturb less than half an acre of slopes of 15 percent or greater. During construction, erosion control measures will be implemented to mitigate the steep slope disturbance.

Potential Erosion

The soil Erosion and Sediment Control Plan for the project will be designed to conform to applicable requirements of the New York State Department of Environmental Conservation. A representative, Erosion and Sediment Control Plan is shown in Figure 3-4, which shows erosion control measures to be utilized during construction. This plan was developed for an earlier redevelopment concept, however it is representative of the type of erosion control measures that would be included with the Site Plan drawings and illustrates the various measures proposed to provide temporary and permanent stabilization of disturbed areas in accordance with New York State Department of Environmental Conservation best management practices ("BMPs") as listed below;

Best Management Practices (BMPs)

The principle objectives of the Soil Erosion and Sediment Control Plan are the following:

- divert clean surface water before it reaches the construction area;
- control erosion at its source with temporary and permanent soil protection measures;
- capture sediment-laden runoff from areas of disturbance and filter the runoff prior to discharge; and,
- decelerate and distribute storm water runoff through use of natural vegetative buffers or structural means before discharge to off-site areas.

These objectives will be achieved by utilizing a collective approach to managing runoff, i.e. Best Management Practices (BMPs).

Divert clean runoff - Diversion of runoff from off-site or stabilized areas will be accomplished through surface swales and erosion control barriers in order to keep clean water clean.

Time grading and construction to minimize soil exposure - To the extent practical, the development will be phased to limit the area of disturbed soil exposed at any particular time.

Retain existing vegetation wherever feasible - Construction fencing or silt fencing will be used to physically define the limits of work. Areas not to be developed (regraded), will be retained in the existing condition until the developed areas are completed and stabilized.

Stabilize disturbed areas as soon as possible - In areas where work will not occur for periods longer than two weeks, soil stabilization by hydroseeding or mulching will be done

within 48 hours after the soil has been exposed. Following completion of grading operations, level areas will be immediately seeded and mulched. Sloped areas, such as fill slopes will be treated as exposed areas and will be seeded or stabilized using an appropriate approved method such as matting, depending upon weather conditions at the time of carrying out the work.

Minimize the length and steepness of slopes - The steepness and length of project associated slopes have been designed to minimize runoff velocities and to control concentrated flow. Should any concentrated (swale) flow from exposed surfaces be expected to be greater than 3 feet per second, haybale or stone check dams will be installed in the swale. The check dams will be placed so that unchecked flow lengths will not be greater than 100 feet.

Maintain low runoff velocities - To protect disturbed areas from storm water runoff, haybale diversion berms and/or soil diversion berms and channels will be installed wherever runoff is likely to traverse newly exposed soil. Immediately following the clearing and stripping of topsoil, rough grading for the temporary and permanent swales and ponds will take place. The swales will direct runoff so that it can be checked or impounded.

Trap sediment on-site and prior to reaching critical downstream areas - Silt fences, hay bale check dams, filter strips, ponds, sediment traps (in areas where no ponds are proposed), and catch basin filters will be used to either impound sediment-carrying runoff and/or to filter the runoff as it flows through an area. A stabilized construction entrance will be installed to prevent construction vehicles from tracking soil onto public roadways. All temporary erosion control devices will be installed prior to the commencement of construction. The permanent storm water management systems will be installed in conjunction with the construction.

Establish a thorough maintenance and repair program - Erosion control measures will be inspected frequently and following rain events during which 0.5 inches of precipitation or greater falls in a 24 hour period, particularly prior to and following storms, and these features will be repaired as needed to ensure that they continue to function properly. The Project Sponsor will be responsible for monitoring and maintaining the soil erosion and sedimentation controls.

Prior to any disturbance, erosion and sediment control measures would be installed in accordance with the specifications of the Erosion Control Plan. The construction contractor will be required to install all sediment and erosion control measures and maintain them throughout the entire construction process.

Based on the identified erosion control measures being implemented, construction on the site's topography is not anticipated to result in a significant impact.

4.0 WATER RESOURCES

Surface Water

The subject property contains no wetlands, watercourses or waterbodies. The site slopes up from US Route 9D toward the north, such that the entire site, including the Leahy Pavilion and the old hospital, drains overland and through storm drains to NYS Route 9D, and eventually into the Hudson River. This project will feature redevelopment of the areas where the existing parking lots and hospital building are now located.

Based upon a prior preliminary engineering study of the project, it is anticipated the proposed stormwater maintenance facilities will be subsurface infrastructure located generally under the Gateway park area. As shown in the soils boring data included in Appendix L, the soils located on this site were found to be medium to coarse sandy solis consistent with Riverhead loam which are classified as well drained and suitable for construction. There was no bedrock or ground water encountered in the soils testing.

Installation of infrastructure for sanitary sewer will connect directly to the sewer main located in US Route 9D. The connection will not go through the existing connection of Butterfield Hospital but instead will install a new direct connection thereby minimizing or eliminating concerns over additional infiltration and inflow.

As shown in Figure 4-1, the proposed Butterfield redevelopment project is taking place in substantially the same areas that the previous Hospital utilized. Those areas of the site that were not previously developed are limited to the building sites of the two office/retail buildings along US Route 9D. The increase in impervious surface area for the subject site is relatively minor, approximately 0.5 acres. All indications are that onsite soils are pervious and do not exhibit shallow groundwater.

Stormwater Pollution Prevention Plan

A SWPPP is a plan to reduce off site impacts associated with stormwater from a project site by controlling changes in runoff, and pollutants associated with runoff. The NYSDEC State Pollution Discharge Elimination System Stormwater General Permit for Construction Activities (GP-0-10-001), requires SWPPPs for certain projects, such as Butterfield, that disturb or expose one or more acres of soil during construction. To comply with GP-0-10-001, a SWPPP must include erosion and sediment controls for implementation during construction and measures to control changes in stormwater quantity and quality once the project is complete. The SWPPP will be developed such that runoff from the entire site meets the permitting requirements of GP-0-10-001, including the approximately 0.5 acres of new impervious development for the office and retail buildings.

The proposed stormwater treatment measures to be included in the SWPPP will satisfy NYSDEC standards by including provisions for stormwater treatment to avoid potential impacts on receiving waters and downstream properties. Per the NYS DEC requirements the project will not result in **any** increase in water volume or rate discharged from the site compared to existing conditions. State standards for water quality treatment, as set forth in NYSDEC GP-0-10-001, specifically require the water quality volume (WQv) to be calculated, and treated, in accordance with the NYSDEC Stormwater Management Design Manual (the "Manual"). In addition, the calculated Runoff Reduction Volume (RRv) will be designed to infiltrate into the underlying soils,

as required. The stormwater practices proposed for the Butterfield site will be designed in accordance with the Manual and are intended to satisfy New York State mandates.

Since a portion of the existing development on the property will be retained, NY standards for stormwater management allow that portion of the project to be treated under rules specific to redevelopment sites, while the remaining development will need to comply with standards applicable to new development. Proposed impervious surfaces, outside of existing impervious area, will be treated as new development. For these areas, RRv must equal WQv. The RRv will be met using underground Infiltration Trenches which have RRv capacity of 90 percent, such as Cultec rechargers, or perforated pipes in gravel. The RRv will be infiltrated into the ground. Based on preliminary percolation tests, the infiltration rate (fc) of the underlying soils is greater than 5 inches per hour. As such, 100% of the WQv will be pre-treated prior to discharge to the infiltration trench. Pre-treatment will be a New York State Verified Proprietary Stormwater Management Practice, or Stormwater Manufactured Treatment Device which has Interim Certification from the New Jersey Department of Environmental Protection (NJDEP), which NYSDEC recognizes. After off-line infiltration, the overflow from the Infiltration Trench system would be diverted to a second infiltration trench system, solely to attenuate the post construction discharge rates.

Proposed impervious surfaces within the existing development area will be treated as redevelopment. These areas will also be treated with an accepted Stormwater Management Practice. In accordance with the Manual, 25 percent of the WQv will be treated.

Sanitary sewage will not be mixed with stormwater, but rather will be conveyed to the Village's existing lines and then to the sewage treatment plant on Fair Street.

The proposed concept plan includes a 20 percent shared parking arrangement to reduce impervious surfaces. In preparing the final site plan to be submitted for approval, the applicant will consider other green stormwater options including land banked parking, pervious pavement, green roof designs and rain gardens.

Stormwater Discharge Rate

The peak flow discharge for the post development conditions under various storm events will be analyzed at the design point to the existing storm drain in Route 9D.

The soil across most of the site is mapped as Udorthents, Smoothed. Hydrologic soil group B will be used for the analysis, as surrounding soils include Riverhead Loam and Urban Land - Riverhead Complex. For the entire site, the post-construction 1-year 24-hour discharge rate (CPv), 10-year 24-hour discharge rate (Qp), and 100-year 24-hour discharge rate (Qf) will be controlled to less than the pre-development discharge rate.

As the developed condition peak discharges will be less than in the existing condition, there will be no anticipated impacts to off-site storm drain systems or surface waters. A detailed analysis of pre- and post-development drainage conditions will be provided in the SWPPP.

The proposed stormwater management measures will be designed to minimize the potential impact to downstream, surface water resources through the implementation of collection and treatment practices that will treat pollutants associated with developed sites and maintain the quantity of runoff resulting from the project to a level that does not exceed pre-development

peak flow rates. The proposed plan is designed to address both water quality and quantity in accordance with State standards.

Erosion and Sediment Control

As specified in the SWPPP, soil erosion and sedimentation measures, such as silt fencing, will be installed prior to any construction activities. Erosion control methods to be employed are based upon the guidelines within the New York State Standards and Specifications for Erosion and Sediment Controls for New Developments. Construction will be phased, so that no more than 5 acres of the site is disturbed at one time.

Implementation of soil erosion and sediment controls in accordance with the New York standards and specifications for erosion and sediment control will avoid or minimize any adverse effect on surface waters down gradient from the site including the Hudson River. The applicant will engage a Certified Professional in Stormwater Quality/Erosion and Sediment Control to oversee implementation of the SWPPP, including its site specific Erosion and Sediment Control Plan.

The site-specific SWPPP to be prepared for this project will describe additional pollution prevention measures to be implemented during the construction and operation of the site facilities, addressing activities such as pesticide use, material storage, waste disposal and spill response for further protection of surface water resources. Implementation of the SWPPP will include certifications by the project owner and contractors at the site, and approval by the Village (as the MS4) and notification of NYS DEC prior to the commencement of construction.

Ground Water

Groundwater is the subsurface water found in the saturated zones within the soil and rock mantle of the earth. Groundwater is presumed to flow to the west, generally following the topography of the site.

Depth to water table (surficial groundwater elevations) varies on the site and during seasonally wet periods. Based on data published in the USDA's *Soil Survey for Westchester and Putnam County*, the soils on this site have a groundwater table greater than six feet below the surface throughout the year.

The project site and surrounding areas receive potable water from the Village of Cold Spring Municipal Distribution System, which is proposed as the source of drinking water for this project. As public water serves the site and nearby properties, groundwater use is not a significant issue for this application.

There are no plans to use groundwater at this site. There will be no water taking from the local aquifer. Recharge will be slightly affected by the installation of road, driveways and other impervious surfaces on the site. However, stormwater runoff collected from these surfaces will be directed into proposed stormwater management practices designed for infiltration. Therefore, the project is not anticipated to adversely impact groundwater conditions in the area.

The type of heating system for the proposed project has not yet been determined. Options for heating are heating oil, propane gas, heat pumps and electrical service . Natural gas service is not currently available in the Village. In the event that heating oil is selected, any proposed underground storage tanks will be fully vaulted to minimize any risk to groundwater. In addition, the proposed homes will be sewered. Therefore, the development is not projected to result in adverse groundwater-related impacts.

Mitigation Measures

Redevelopment of the Butterfield property will occur in substantially the same areas as are currently developed and thus the drainage patterns are substantially the same as they are under existing conditions. The increase in impervious surface area for the subject site is relatively minor, approximately 0.5 acres.

As stated, the site requires a NYS DEC General Permit (GP-0-10-001), which requires that there be no increase in the quantity or the rate of stormwater runoff from the site after construction as compared to existing conditions. The Stormwater Pollution Prevention Plan prepared for the site will identify measures as necessary to insure compliance with this standard. In addition, a site specific erosion control plan will be submitted for review and approval by the Village as part of the Planning Board's site plan review process. As a result of these measures no impacts to stormwater are anticipated.

The Site will be served by the Village of Cold Spring Municipal Water System, the Water Superintendent has reviewed the proposed Concept Plan and confirmed there is sufficient water available to meet the needs of the Butterfield Redevelopment as proposed. Based upon the sample soils borings conducted, all indications are that onsite soils are pervious and do not exhibit shallow groundwater. Any fuel oil storage tanks will be located above ground in double walled tanks with leak alarms installed. No impacts to ground water are anticipated.

5.0 ECOLOGY

Existing Conditions - Flora and Fauna

The 5.7 acres of the site are located within an historically developed residential area beginning at the corner of NYS Route 9D and Paulding Avenue. The surrounding properties have been developed since the mid 1800's; most of this development was associated with the Cold Spring Foundry ironworks, which operated to the south and west of the property on the west side of Route 9D. The Hudson River and Constitution Marsh are located a minimum of 1,500 feet to the west and southwest respectively, with the center of the Marsh and Constitution Island more than 4,000 feet away. See attached location map (Figure 1-1) and aerial photos (Figures 5-1 and 5-2) for the site context.

The Butterfield site is entirely upland and far removed from the habitat and water features associated with the marsh and river. At present, there are approximately 3.7 acres of lawn and landscaped areas and 2.0 acres of impervious surfaces (pavement and buildings) on the property. As a developed institutional and medical offices property within the larger context of a developed Village center, the diversity of existing ecological resources at the site is limited.

There are three general types of vegetative cover on the site: young, early successional deciduous trees in a hedge row along the northeastern property line near Paulding Avenue; managed lawn on the east side of the parcel (the "open field") and on the south side of the existing Lahey Pavilion building; and managed landscape plantings including individual evergreen and deciduous trees and groups of ornamental shrubs around the existing buildings. There are no areas of native, natural vegetation nor significant wildlife habitat. On a recent site visit, one crow (*Corvus brachyrhynchos*) and evidence of deer grazing on the site were observed. Deer are known to graze in the open field. A turkey vulture (*Cathartes aura*) was observed flying over the site.

There is a small number of sizable trees in the developed area. Figure 5-3 illustrates the location of the major trees along US Route 9D and in the interior of the site and indicates which of these trees will be preserved. Of particular note on the site is a 57 inch diameter copper beech tree adjacent to the former hospital parking lot on the east side of the property, which is specifically identified on the existing conditions survey plan. Although very prominent, the copper beech tree on the subject property is not viewed as an important "ecological resource" and is not protected under and local or state regulations. This tree is a non-native ornamental derived from a European Beech. The Copper Beech tree is valued by the community and represents an aesthetic resource. The applicant has retained a New York State Arborist to evaluate the tree and develop a tree preservation plan to protect the tree during construction. This report is included as Appendix K.

In the larger context, the vegetative communities on the parcel are connected to adjoining areas which contain similar habitat off of the property, and limited opportunities for food and cover for some urban-tolerant wildlife species. Unsurprisingly, given the developed nature of the site and surrounding area, no sensitive wildlife habitat was observed to occur on the site.

Correspondence was received from the New York State DEC Division of Environmental Permits and the DEC Division of Fish, Wildlife and Marine Resources (attached). The following species of conservation concern were identified as being known to occur on or within the immediate vicinity of the site.

Birds

Bald eagle (*Haliaeetus leucocephalus*) - Threatened
Least bittern (*Ixobrychus exilis*) - Threatened

Dragonflies and damselflies

Tiger spiketail (*Cordulegaster erronea*) - Unlisted
Needham's skimmer (*Libellula needhami*) - Unlisted

Fish

Short-nosed sturgeon (*Acipenser brevirostrum*) - Endangered
Atlantic sturgeon (*Acipenser oxyrinchus*) - Unlisted, but no catch allowed
Atlantic silverside (*Menidia menidia*) - Unlisted

Plants

Long's bittercress (*Cardamine longii*) - Threatened
Saltmarsh aster (*Symphotrichum subulatum* var. *Subulatum*) - Threatened

The correspondence also included several habitat types and communities, including brackish intertidal mudflats and tidal marshes.

It is clear from the information provided with these letters that the DEC records show the proximity of the Butterfield site to Constitution Marsh and the Hudson River. All of the species and most of the community types are directly related to the Marsh and adjacent habitats. The least bittern, the dragonflies, the fish species and both plant species are connected to and dependent on the marsh and river for their habitat needs. The two remaining vegetation communities, oak-tulip forest and chestnut oak forest, are associated with Highlands State Park and the ridgelines of Bull Hill, Breakneck, Schofield Ridge and Fishkill Ridge, none of which are close to or impacted by this proposal.

The NYS DEC is the authority on the bald eagle and its habitat throughout the State of New York and is legally responsible for its protection. Protocols for protection of the bald eagle have been and continue to be focused on the nest tree and immediate surrounding environs. The intent of this approach is to protect the adult birds and their young from disturbance at the nest which is a relatively consistent, easily identifiable and vulnerable habitat that is used by a mating pair of birds for a period of years or decades. Nests are typically made in tall conifer trees with a view of the water body which the eagles use as a food source.

It is known that Constitution Island and portions of the marsh surrounding it do support individual birds during the winter. However, the Butterfield site is far removed from the Island and the Marsh, and does not support a dense forest of tall conifers that might be used even occasionally by roosting eagles. One large Norway spruce is present on the site immediately adjacent to the old hospital building and is shown on the attached photos (Figures 5-4 through 5-6). The river itself is not visible from the property, although the ridgeline of the mountains across the river is visible.

Potential Impacts & Mitigation

The Butterfield redevelopment site is located upland within the fully developed Village of Cold Springs and not in immediate proximity to Constitution Marsh.

Tree removal is necessary to accommodate new parking areas, roads and buildings which will result in a change to the visual conditions of the site. A landscape plan will be developed in consultation with the Planning Board during the site plan review that will include new tree plantings, foundation plantings, etc. which will serve to soften the visual changes that will occur to the subject site.

As discussed, there is a 57 inch diameter copper beech tree adjacent to the former hospital parking lot on the east side of the property. This tree is a non-native ornamental derived from a European Beech. Although not an ecological resource, the Copper Beech tree is valued by the community and represents an aesthetic resource. The applicant has retained a New York State Arborist to develop a tree preservation plan to protect the tree during construction thus minimizing impacts to the extent practical.

As a result of the distance between the redevelopment site and Constitution Marsh; in combination with the implementation of an approved Landscape Plan and those measures identified in the Tree Preservation Plan for the Copper Beech tree, no significant ecological impacts are anticipated.

6.0 IMPACT ON HISTORIC AND ARCHAEOLOGICAL RESOURCES

Historic and Archaeologic Sensitivity

A Phase 1A Historic and *Archaeologic* Assessment Report has been prepared by CityScape, a NYS certified Archaeologist. The study concludes that “There is no expectation that the Butterfield Hospital Site will contain historic cultural resources.” The study also finds that the project site has been profoundly disturbed thus there is a low potential to recover intact prehistoric cultural resources. The complete Phase 1A report is included in Appendix J for reference.

6.1 The Grove

Existing Conditions & Avoidance of Impacts

The proposed Butterfield Redevelopment site is adjacent to a residential structure known as The Grove, (tax lot designation 49.5-3-46.1), a historic home located on Grove Court. It was designed by noted architect Richard Upjohn and built in 1852–1853 in the Italianate style. It was modified in the 1870s with a mansard roof. It has a two and one half story, nearly square, main block with a two-part wing at the northeast corner. It features a porch along the full width of the front. The house has been vacant since 1977. It was listed by the New York State Office of Parks Recreation and Historic Preservation (OPRHP) on the National Register of Historic Places in 2010.

As detailed in the Village Comprehensive Plan, The Grove is zoned Designated Retail-Financial-Professional and is owned by the Village. Among the goals stated in the Comprehensive Plan with regard to The Grove is to encourage preservation and adaptive re-use of historic structures; and to identify and promote alternative uses for the site, to generate revenue for the Village.

Historic and Archaeologic Sensitivity

A Phase 1A Historic and *Archaeologic* Assessment Report has been prepared by a NYS certified Archaeologist and is included as Appendix J for reference.

The applicant will mitigate any visual impacts to the historic home to the extent practical.

New York State OPRHP guidelines consider the potential for archaeological resources to be minimal in areas with previously disturbed soils, steep slopes of 12% or greater, or poorly drained soils, since they are not likely produce intact cultural resources. Since the site has been previously disturbed, archaeological sensitivity is anticipated to be minimal.

6.2 Julia Butterfield Hospital

The proposed Butterfield Redevelopment anticipates demolition of the existing Butterfield Hospital. Due to the site location in the Cold Spring Historic District, it is necessary to secure a Certificate of Appropriateness prior to the demolition from the Village of Cold Spring Historic District Review Board (HDRB).

The project was referred to the HDRB on August 8, 2012. The HDRB conducted a thorough review over the course of several meetings. To facilitate the review process, the applicant submitted an independent report on the historical importance of the hospital prepared by Historical Perspectives Inc., dated December 12, 2012. The report states:

"The 1922 Butterfield Hospital was a handsome brick Georgian Colonial Revival, which commanded a hilltop outside the Village. Due to the demands of a growing community and advances in medical care, the building was updated and expanded in 1941, 1963, and, again, in the 1970's. Eventually, the 1922, 1941 and 1963 sections of the building were abandoned and only the 1983 building, which replaced the 1970s section lost to fire, is still in operation. The older sections of the building as they now stand bear almost no relation to the hospital envisioned by the original philanthropist, Julia Butterfield, or her architect H. B. Upjohn. Upjohn's design has been lost to a series of utilitarian additions which themselves have lost their usefulness. "

The Historical Perspectives Report further states:

" A legitimate concern for the HDRB is not just for the individual non-contributing hospital building, but will its loss profoundly affect the surrounding historic properties. This edge of the Historic District has already been severely compromised with post 1955 construction episodes that are not sympathetic to either the District or the Hospital. Currently, this entrance corridor does not foreshadow the depth of nineteenth century jewels that comprise the Village core. Through a Certificate of Appropriateness the HDRB will be able to retain the open lawn on Route 9D, protect the historic Paulding Avenue homes from incongruous in-fill, and creatively establish a properly scaled and designed streetscape that will incorporate architectural features that guide the traveler toward the Village."

After considerable deliberation the HDRB granted the necessary Certificate of Appropriateness on December 19, 2012 , which is included for reference in Appendix H.

Based upon the results of the Phase 1A Historic and Archaeologic Assessment Report, the project is anticipated to have minimal impacts on designated historic resources in the Cold Spring Historic District. There will be some alteration of the visual landscape from certain vantage points on Route 9D or Paulding Avenue. However, the existing Butterfield hospital building represents an eyesore within the district. It's removal and replacement with buildings having more architectural interest and consistent with the visual goals of the district is viewed by the applicant as a benefit. The conclusions of the Archaeological Phase 1A report are consistent with this view.

7.0 OPEN SPACE AND RECREATION

The Butterfield applicant intends to redevelop the project site from a largely abandoned use (the Butterfield hospital) to a mixed use development that includes senior housing and multi-use office space. There is an expansive lawn area in the northeast section of the site and at the gateway to the Village, of which approximately 67 percent is proposed to be retained as open space.

The existing lawn is an area that has previously been used by the community for activities such as sledding, farmers market, carnivals, pick-up games and exercising dogs. This great lawn area is considered by Village residents to be an open space resource. However, the open field on the Butterfield site is private property and is not currently open to the public. Any use of the field in the past year has occurred without the permission of Butterfield, LLC.

As shown on Figure 1-3, the applicant intends to preserve the approximately 43,600 sf of open lawn area designated on the Concept Plan as "Gateway Park", located in the northeast portion of the property near Paulding Avenue, consistent with the recommendation of the Special Board Comments on Butterfield Project, included as Appendix E. Preservation of the "Gateway Park" area represents approximately 67 percent of the existing open lawn area. The applicant is open to discussing potential uses for the future "Gateway Park". It is anticipated that at a minimum, the applicant will make the "Gateway Park" lawn available to the Village subject to an access agreement to be worked out with Village officials during the site plan review process. Such an agreement will set forth the responsibilities of the various parties with respect to permitted activities, hours of use, maintenance, insurance, etc. Access to the "Gateway Park" would be available from public roads including the ample frontage along Route 9D and Paulding Avenue. "Gateway Park" is within walking distance of almost all residential areas of the Village. Any parking could take place on local streets.

The applicant notes that the existing lawn is private property and as such, full use of the entire project site, including the lawn area, consistent with the bulk requirements set forth in the zoning code would be permitted. However, the applicant acknowledges the Village community's concern over their continued use of the open lawn area. The retention of approximately 67 percent of the existing lawn as the open space "Gateway Park" area, is being offered as a discretionary benefit by the applicant in consideration of the Village's commitment to the concept plan attached to the proposed B-4A zoning request.

A landscape and lighting plan will be submitted at the time of site plan application which will demonstrate significant landscape treatments of the site and preservation of the well known large copper beech tree located in the center of the site.

As can be seen in the representative building elevations included in Appendix B, the Butterfield applicant envisions buildings which are designed to compliment the historic character of the Village of Cold Spring, and which are anticipated to be finished in natural earth tone materials and colors.

In addition, the more than \$119,000 annual tax revenue to be paid to the Village general fund by this tax positive project will help to support the substantial recreation programs sponsored by the Village.

Based upon the Applicant's commitment to preservation of approximately 67 percent of the existing lawn area as the "Gateway Park", no significant impacts to open space are anticipated.

8.0 TRAFFIC ANALYSIS

The project site is located off of NYS Route 9D and Paulding Avenue (a Village street) in the Village of Cold Spring, New York.

The Applicant is proposing a mixed use development consisting of 55 senior condominiums plus one superintendent unit, an existing 11,500 square foot medical services office building known as the Lahey Pavilion, up to 15,000 square feet of municipal offices, up to 13,000 square feet of retail space and 10,500 square feet of general office space on the former Butterfield Hospital Site, in addition to three single family residential lots. Figure 1-3 shows the proposed Concept Site Plan. A complete Traffic Study which assesses existing and future traffic operating conditions is included in Appendix D.

Four driveways to the site currently exist, three of which connect to NYS Route 9D and one which provides access to Paulding Avenue. The three access points to US Route 9D are proposed similar to their existing locations. The vehicular access to the Butterfield site from Paulding Avenue will be eliminated. The three proposed single family homes would each have a private driveway access to Paulding Avenue.

The project's mixed use would put seniors near medical services, retail uses, government services, and other uses in the Village. In addition this location has sidewalks on NYS Route 9D and is in proximity to Village businesses and walking trails.

The proposed project is expected to generate 76 a.m. peak hour trips, 103 p.m. peak hour trips and 61 Saturday peak hour trips. No reduction in vehicular trips was assumed, although this type of reduction would be typical for a mixed use project.

The following intersections were studied;

- NYS Route 9D and NYS Route 301 (Main Street)
- NYS Route 9D and Benedict Road
- NYS Route 9D and Bank Street
- NYS Route 9D, Paulding Avenue, and Chestnut Street
- NYS Route 9D, Paulding Avenue, and Wall Street

There will be minimal change to the existing operational level of service as a result of the proposed Butterfield project. With one exception each of the intersections studied will continue to operate at a level of service C or better. Former plans for the existing Foodtown Plaza call for elimination of direct access to US Route 9D and a routing of all traffic to Benedict Avenue. This reconfiguration would have contributed to the Benedict Road intersection with NYS Route 9D operating at level of service D in both the No-Build and the Build conditions. The analysis is overly conservative in combining these volumes.

Total site generation is relatively low (less than traffic on Benedict Road for example) and thus site accesses would operate acceptably.

Access sight lines along NYS Route 9D are discussed in the Traffic Study (Appendix D Section 3.0 and Attachment F). Minor grading and vegetation removal will be incorporated into the proposed site plan as needed.

No off-site mitigation measures are needed or proposed.

The Butterfield Traffic Analysis studied the scenario of 7,000 square feet of retail space, 15,000 square feet of municipal office space, 10,500 square feet of general office space and 11,500 square feet of existing medical office space, in addition to 55 senior residential units, and three single family houses. This study is included in Appendix D.

The Traffic Analysis assumed that Building 2 would include 7,000 square feet of retail space on it's ground floor. However, The proposed zoning law allows for up to 13,000 square feet of retail space on site with a maximum of 7,000 square feet in any one building, which must be constructed at street level. This represents a potential increase of up to 6,000 square feet of retail space in Building 1, and a commensurate decrease in the amount of Municipal Office space to a minimum of 9,000 square feet.

The tables below evaluate the impact of the Maximum Retail Alternative Scenario and compares the trip generation of the Alternative to the proposed plan as detailed in the Butterfield Traffic Analysis.

As indicated in Table 8-1, trip generation rates for the Maximum Retail Alternative are unchanged from the Butterfield Traffic Analysis.

Table 8-1 Maximum Retail Alternative Butterfield Trip Rate Summary for New Uses						
Land Uses {ITE Code}	Peak Hour Trip Rates ³					
	Weekday A.M.		Weekday P.M.		Saturday	
	IN (Trips/ Unit**)	OUT (Trips/ Unit**)	IN (Trips/ Unit**)	OUT (Trips/ Unit**)	IN (Trips/ Unit**)	OUT (Trips/ Unit**)
Single Family housing 3 residential dwelling units {210}	0.188*	0.563*	0.630*	0.370*	0.502*	0.428*
Senior adult housing attached 55 dwelling units [252***]	0.092	0.178	0.232	0.198	0.181	0.137
General office space 10,500 square feet {710} ¹	2.643	0.360	0.506	2.474	0.232*	0.198*
Retail 13,000 square feet {820}	0.595*	0.365*	1.781*	1.929*	2.506*	2.314*
Municipal offices 9,000 square feet ² {730}	0.835	0.375	0.375	0.835	0.038	0.084
* Average Rates.						
** Units are dwelling units, or 1000 square feet gross floor area for municipal offices, general offices, and retail. <u>Trip Generation</u> , Institute of Transportation Engineers, 9th edition, Washington, DC, 2012.						
*** Weekday data is based on the maximum rates which are about twice the average rates. Directional distribution is presumed evenly distributed on Saturday.						
¹ Weekday p.m. rates doubled from average to approximate a.m. peak hour rates.						
² Weekday p.m. rates reverse of a.m. rates and Saturday 10% of p.m. rates.						
³ Appendix D Traffic Study Attachment I.						

The Maximum Retail Alternative involves construction of up to 13,000 square feet of retail space, an increase of 6,000 square feet of retail space compared to the Butterfield Traffic Analysis and a commensurate reduction in municipal office space. Under these circumstances the number of peak hour external trips retail is projected to be 74 a.m. peak hour trips, 117 p.m. peak hour trips, and 89 Saturday peak hour trips as shown in Table 8-2. The maximum new one-way peak hour number of trips is 71, which occurs during the p.m. peak hour.

Table 8-2 Maximum Retail Alternative Butterfield New Trip Generation						
Land Uses	Peak Hour Trips*					
	Weekday A.M.		Weekday P.M.		Saturday	
	IN (Trips)	OUT (Trips)	IN (Trips)	OUT (Trips)	IN (Trips)	OUT (Trips)
Single Family housing 3 residential dwelling units	1	2	2	1	2	1
Senior adult housing attached 55 dwelling units	5	10	13	11	10	8
General office space 10,500 square feet	28	4	5	26	2	2
Retail 13,000 square feet	8	5	23	25	33	30
Municipal offices 9,000 square feet	8	3	3	8	0	1
Total by direction	50	24	46	71	47	42
TOTAL	74		117		89	
<small>Trip Generation, Institute of Transportation Engineers, 9th edition, Washington, DC, 2012.</small>						
<small>* No reduction taken for mixed use.</small>						

Table 8-3 indicates the difference in the number of trips between the Butterfield Traffic Analysis and the Maximum Retail Alternative. The largest increase is on Saturday when municipal offices are generally closed and retail demand peaks, thus resulting in a 28 vehicle trip increase. A comparison of the change in volumes and delay from the No Build to the Build Condition for the Maximum Retail Alternative as compared to the Butterfield Traffic Analysis, provided in Appendix D, indicates that increases in delay are projected to be less than one second per vehicle as shown in Table 8-3. This minimal increase in delay is expected to result in similar traffic operating conditions as shown in the Butterfield Traffic Analysis (Appendix D).

Table 8-3 Butterfield Trip Generation Comparison						
Land Uses	Peak Hour Trips*					
	Weekday A.M.		Weekday P.M.		Saturday	
	IN (Trips)	OUT (Trips)	IN (Trips)	OUT (Trips)	IN (Trips)	OUT (Trips)
Butterfield Traffic Analysis	51	25	38	65	33	28
Maximum Retail Alternative	50	24	46	71	47	42
Change in Trips	-1	-1	+8	+6	+14	+14
Percent Change in Site Generated Trips	-3%		+14%		+46%	
Order of magnitude of expected change in delay for the approach most changed from No Build to Build Condition.	reduction less than 0.1 seconds of delay per vehicle		increase of 0.4 seconds of delay per vehicle		increase of 0.6 seconds of delay per vehicle	
<small>Trip Generation, Institute of Transportation Engineers, 9th edition, Washington, DC, 2012.</small>						

Pedestrian Amenities

Internal sidewalks and crosswalks provide internal pedestrian connections (See Appendix D Traffic Study Section 7.0 and Attachment G) and establishes connection to the external sidewalk system. A concept for bicycle parking locations is included in Figure G-3 in the Traffic Study Appendix D Attachment G.

Shared Parking

The Applicant has proposed new zoning which permits up to 20 percent shared parking among uses. The reduction in parking reduces stormwater runoff by reducing impermeable surfaces, encourages alternative transportation, and reduces costs. The plan further reduces permeable surfaces by providing parking under buildings. These parking initiatives are important to limiting the development footprint to the existing disturbed areas, thus allowing the preservation of open space which is to be used in the creation of "Gateway Park".

Figure K-1 in Attachment K of the Traffic Study illustrates the concept of shared parking where a certain number of spaces are considered as "designated" parking, allocated to each specific building, and how the remainder is available as shared parking. The Traffic Study discusses how the designated parking plus the shared parking provides an increase in the total effective parking available for each use exceeding the parking stipulated in the Village's Code before the twenty percent reduction.

Summary

The project has provided for alternative transportation modes to vehicles to reduce the increase in site vehicle traffic. The use of shared parking and parking inside the buildings reduces proposed permeable coverage of parking areas.

Traffic operations are acceptable under Existing Conditions during the weekday a.m. and p.m. peak hours and the Saturday peak hour. The projected increases in site traffic will be divided, utilizing three points of access. The network traffic operations will continue to function in an acceptable manner under all three peak hour periods.

Based upon the information as presented in the Traffic Analysis, no significant impact to Transportation operations is anticipated as a result of the Butterfield Redevelopment project.

9.0 LAND USE, ZONING AND COMMUNITY CHARACTER

The project site consists of a single tax parcel, owned by Butterfield Realty located on US Route 9D in the easterly portion of the Village of Cold Spring. Figure 9-1 shows the site location in relation to the Village. Recognizing the significant opportunities presented by the property's unique location and its current under-utilization, Butterfield seeks to redevelop this parcel with a mix of complimentary uses developed in an integrated and attractive fashion. The proposed redevelopment includes a retail/office building a municipal/governmental uses office building, age-restricted senior market rate condominiums and a medical services building. The medical services building is an existing improvement on the property.

The Village is largely built out and the Butterfield site represents a unique opportunity for redevelopment that is unequaled in the Village. The site's location serves a a "gateway" to the Village. The redevelopment provides an opportunity for an modest expansion of the Village business core through development of the retail and municipal uses proposed. The mixed use project, including senior residential and retail/office space would serve as a transition between the residential area to the north and the Village's business district to the south and west .

The proposed B-4A, Medical and Health Care Facility Mixed Use District regulations, are designed to allow this mixed use development which will yield significant benefits to the Village through increased employment opportunities and tax revenue and increased availability of senior housing, without significant negative impacts.

9.1 Village of Cold Spring Comprehensive Plan

The Village of Cold Spring adopted a revised Comprehensive Plan on January 10, 2012. Stated goals of the Comprehensive Plan that are supported in part by the proposed Butterfield redevelopment include:

- Protection of the small town, historic, neighborly and diverse character of the Village.
- Emphasis on walkability within the Village.
- Enhance the economic vitality of the Village.
- Improvement of the Main Street and Chestnut Street commercial areas.
- Ensure community facilities and services meet the Village's needs and are efficient and affordable.
- Investigate shared or consolidated municipal services.
- Keep the U. S. Post Office in the Village of Cold Spring
- Control property taxes
- Integrate new development within the traditional Village setting.

The proposed Butterfield redevelopment project seeks to address these goals listed above by providing residential development intended to compliment the character of the existing Village. Design of the residential buildings will be similar in architecture to the homes along Chestnut Street and Main Street and will be in conformance with the criteria outlined in the Historic District Design Guidelines. Proximity of the senior housing to the existing residential area on Paulding Street will facilitate integration into the neighborhood.

The project site is proximate to all retailers and service providers on Chestnut Street and any pedestrian environment is designed for walkability. The Traffic Analysis includes a map of the pedestrian and bicycle amenities included in and around the project. The series of sidewalks shown on the concept plan will create a direct pedestrian connection from Paulding Street to the Chestnut Street business district.

Development of retail and office space at the edge of the existing commercial core of the Village will establish an anchor of retail thus extending the commercial district. Development of additional tax rateables will enhance the economic vitality of the Village and will help in controlling property taxes in general. The choice to build active adult housing results in tax revenue for the school district without incurring additional costs, resulting in a net tax benefit to the district.

Construction of office space available for municipal use would allow the creation of a municipally sponsored community center or potential lease by the U. S. Post Office.

The Butterfield project further seeks to address certain specific goals set forth in the Comprehensive Plan as listed below:

"Encourage businesses in the Village that provide local jobs, convenient services to residents, sustain property values or provide more tax revenue than the cost of services for them, at a scale that respects the Village's small town character and the primary needs of the residents year round."

"Make the best possible use of the Butterfield Hospital site location in the Chestnut Street/Route 9D business district, including any potential for savings in providing government service and generating additional tax revenue, while preserving the lawn for the Village Gateway.

"Provide a variety of housing types and sizes to maintain the Village's existing population diversity."

Although the Comprehensive Plan does not specifically address age restricted housing, more than 33 percent of the Village's current population is over the age of 55, with the median age being 46.4, indicating the Village's existing population is oriented towards an older population.

9.2 Community Design Workshop

As discussed earlier, given the significance of the proposed project to the Village, a Community Design Workshop was held on April 14, 2012, (refer to Appendix H). The following specific recommendations from the Workshop have been incorporated into the current proposed Concept Plan for the site:

- Single Family Development is proposed along Paulding Avenue, including rezoning a modest portion of the site to R-1.
- All proposed Senior Residential Housing will be market rate housing.
- The Butterfield project creates tax positive uses including retail, office, and senior housing.
- Approximately 67 percent of the existing Butterfield Lawn area (approximately 43,600 sf) will be set aside as open space, to be known as "Gateway Park" and will continue to act as a gateway to the Village and serve community recreational uses. The project may include parking along US Route 9D to slow traffic on 9D and to provide pedestrian protection along the sidewalk.
- The project will include office space which may be utilized as a community center by others, Putnam County for example.
- The project includes a recreational community center connecting Buildings 5 and 6, to be used exclusively by project residents.
- The layout establishes a traditional pedestrian oriented streetscape and layout.
- The buildings have been designed with the intent to preserve Village scale and character and to reflect existing Village architecture.
- The project provides for municipal office space for uses such as a U.S. Post Office or a municipal sponsored Community Center

9.3 Land Use

Existing Land Use

The project site currently houses a medical office building that continues to operate, the abandoned hospital building and its associated paved areas occupy a prominent location in the Village and have not been utilized for a number of years. As Figure 9-1 shows, the site is located entirely within the Village and is integral to the Village's business district. The Chestnut Street commercial area is centered around the Foodtown shopping plaza which includes a food store, dry cleaner, nail salon, pizza parlor, bank, and the US Post Office. Also located in the Chestnut Street area are a drug store, liquor store, day care facility and a second bank. Following Route 9D towards Main Street is a gas station, gourmet deli, and a printing facility and the prominent Church located on the corner of Route 9D and Main Street.

The Butterfield site abuts residential properties to the north and west, the offices of Downey Oil Company are also located to the north. There is an existing senior housing complex located on the opposite side of US Route 9D in the only other B-4 zone in the Village.

As shown in Figure 1-3, the property boundary to the southeast is coincident with the right of way for NYS Route 9D. NYS Route 9D is a regional north-south route which provides access through the business area of the Village, intersecting with Main Street / NYS Route 301 less than one mile to the west. NYS Route 301 traverses northeast-southwest between Main Street and US Route 9 and the Taconic State Parkway which provide regional access to the site.

Effects on Land Use

Consistent with its proximity to the various community resources in the Village, the applicant proposes to integrate new development that brings tax revenue to the Village while retaining the small town feel of the Village by creating a mixed use project. The proposed Butterfield redevelopment adds needed municipal office and retail space to the Village's inventory and tax rolls and meets the community's need for senior housing, while maintaining community open space and serving the community in general. The plan allows for preservation of the open lawn in the northeastern portion of the site and protects the specimen Copper Beech tree in the center of the site.

The proposed project will provide a location for additional retail and office space within walking distance of the existing Village core. This addition will serve to increase the daytime population and pedestrian activity within the Village business district. Senior citizen housing will be located within immediate proximity to the existing banks, restaurants, drug store, food store, dry cleaner, beauty salon and other services all within walking distance.

Specific setback and bulk requirements have been incorporated into the proposed zone amendment to insure the proposed project accomplishes the Village's vision for development of this site. The project has been designed with the intention of being in harmony with the scale and pedestrian orientation of the existing Village. As can be seen in Figure 1-3, the Concept Site Plan includes specifics as to the size and orientation of each of the proposed buildings. The construction of the proposed project is to be accomplished in a single construction phase lasting approximately twenty-four to thirty-six months dependent upon market conditions.

Representative architectural renderings of the proposed buildings are included in Appendix B. Visual studies of the site proposal in relation to its immediate surroundings are also presented in Appendix B. Site Profile illustrations were prepared that show the position and bulk of the proposed buildings along a section line taken through the property from three positions (refer to the Key Map of the site profile locations). The site profiles are drawn to scale. Profile AA presents a "slice" from Route 9D through the proposed buildings on the project site to Paulding Avenue. Profile BB presents a west-to-east profile from Grove Court through the project site to Route 9D, and Profile CC presents another west-to-east profile taken through Route 9D at its intersection with Paulding Avenue on the right side of the Figure. The profiles show the relative building elevations and heights, and demonstrate how the buildings are stepped and separated on the site such that views, or "lines of sight," from the street will look past or over some buildings thereby revealing (rather than obstructing) landscape elements beyond the site -- nearby trees or even the distant horizon when looking west. Thus the appearance of the site will be altered by this proposal, however the visual context of the project is anticipated to "fit" within broader landscape setting.

As can be seen in the representative building elevations included in Appendix B, the Butterfield applicant is considering buildings which would be designed to be similar to the Village's existing architecture and to compliment the historic character of the Village of Cold Spring, and which will be finished in natural earth tone materials and colors. Actual renderings of each proposed building type will be submitted for review and approval to the Village's Historic District Review Board, prior to final site plan approval.

The new buildings shall be set into the existing topography and a landscape plan shall be prepared and submitted for approval during the site plan review. The landscaping will be designed to provide buffering and screening of the site and shall be in harmony with the surrounding area.

Given the buildings are intended to be appropriately scaled, set into the site topography and attractively landscaped, and furthermore shall be similar to the Village's existing architecture and shall be in full compliance with the Historic District Review Board's Design Guidelines, no significant impacts to aesthetic resources is anticipated.

9.4 Zoning

Existing Zoning

The project site falls in one zoning district, B-4 Designated Medical and Health Facility which was well suited to accommodate the now abandoned Butterfield Hospital. Only the Butterfield site and the site across Route 9D, which is fully built out with senior housing, are included in the Village's B-4 zoning district. Table 9-1 shows the permitted land uses in the B-4 zoning district and the bulk and yard requirements applicable to the B-4 district.

Effects on Zoning

The proposed amendment to the Zoning Code of the Village of Cold Spring would add a new sub-district to the B-4 district, known as B-4A, Designated Medical and Health Care Mixed Use. The primary effect of this amendment is to allow office and retail development on this site consistent with the proposed Concept Plan developed as a result of the Community Design Workshop in consultation with the Village's advisor, Ray Curran. The zoning amendment has been drafted with specific provisions to **revert back to the B-4 zone**, in the event that the site is not developed in substantial conformity to the Concept Site Plan as proposed. . A draft of the proposed B-4A zoning regulations is included as Appendix A.

The proposed zone amendment has been designed to assist the Village in providing the flexibility in design to allow for a tax positive mixed use project.

Land Use, Zoning and Community Character

January 8, 2014

The Concept Site Plan for the subject site has been developed to meet the specified bulk requirements and yard setback requirements of the proposed B-4A zone. Table 9-1 shows a comparison of the existing B-4 zone to the proposed B-4A zone.

Table 9-1		
Permitted Use, Bulk and Yard Requirements Comparison		
	Existing B-4	Proposed B-4A
Permitted Use		
	Uses Permitted in the R-1 Zone	Uses Permitted in the R-1 Zone
	Hospital and Sanatorium	Hospital and Sanatorium
	Nursing Home and Health related facility	Nursing Home and Health Related Facility
	Medical Center	
	Senior Citizen Housing (SP)	Senior Citizen Housing
		Municipal and other Governmental uses
		Privately owned facilities leased to a municipal or government entity, such as a United States Post Office
		Retail Stores
		Business and Professional Offices
		Banks
		Personal Service Shops
		Mixed Uses, consisting of two or more permitted uses in the district
Minimum Permitted		
Lot area (square feet)	60,000	120,000
Lot width (feet)	200'	200'
Lot depth (feet)	200'	200'
Front yard (feet)	PB Determination	75'
Side yard (feet)	PB Determination	10'
Combined Side Yard (feet)	--	25'
Rear yard (feet)	PB Determination	10'
Off Street Parking	Per Section 134-18 (E)	Per Section 134-18 (E) and 134-16 G(3)
Maximum Permitted		
Building height (stories)	2.5	2.5
Building height (feet)	35'	35'
Development Coverage	25%	25%
Source: Village of Cold Spring, Zoning Code. March 2012; Proposed Zone Amendment May 2013.		

The intent of the B-4A Designated Medical and Health Care Mixed Use district is to encourage development that will allow mixed uses and provide flexible land use and design regulations to encourage the creation of a mix use of residential, retail, recreation and municipal uses that generate a positive tax base for the Village, increase the availability of housing to persons of varying ages, and preserve open space.

The performance measures in the proposed zone allow for significant open space in the zone since development coverage is limited to 25 percent of the site area. The site's location along NYS Route 9D at the southern boundary of the Village of Cold Spring, in combination with a plan that will preserve approximately 67 percent of the existing lawn area as open space, allows this site to continue to serve as the "Gateway" to the Village, as recommended in the Village Comprehensive Plan.

Build Out Comparison

The existing site has 96,950 sf of building and impervious surface area associated with the Lahey Pavilion, the hospital building and paved areas. The proposed project would have 119,436 sf of impervious area exclusive of the three home sites.

The proposed concept plan attached to the zoning petition EAF, illustrated in Figure 1-3, represents the full buildout of the site under the new B-4A zoning. This proposed concept plan includes removal of 22,500 sf of land from the commercial zoning by converting it to R-1 and subdividing it into three home sites. It shows a building coverage of 52,686 sf and paved areas of 66,750 sf.

As illustrated in Figure 9-2, under an as of right development, there would be no subdivision of residential lots. The lot area at 248,216 square feet with coverage at 25 percent, and 2.5 stories of building would permit a 155,135 sf medical facility. It could be medical offices, a nursing facility or a hospital. Such a facility, if medical office would require 621 parking spaces. There would be no community park under such an alternative.

Effects on Public Policy

The adoption of the proposed zoning amendment is consistent with many of the recommendations of the Village's Comprehensive Plan and the goals of Local Waterfront Revitalization Plan. Importantly, these actions will serve to generate a positive tax base for the Village, increase employment opportunities, increase the availability of senior housing, and preserve open space at a prominent location within the Village.

The Special Board Comments on Butterfield Project , included as Appendix E, makes specific recommendations as to the walkability of the proposed project. By its very location the proposed project will become an extension of the Village business district. The distance between the retail building and the municipal office building and Main Street is approximately 1/3 mile, with existing sidewalks available. The applicant intends to incorporate a pedestrian path to connect Pauling Avenue with NYS Route 9D and the Village Business District in the vicinity of the retail building. Consideration will be given to appropriate streetscape treatment in proximity to the existing sidewalk along the NYS Route D property frontage.

The Special Board Comments on Butterfield Project, also makes specific recommendations to ensure preservation of the existing lawn close to its current size, and to allow existing recreational uses to continue to the extent possible. The report further states "The Village could include a maximum lot coverage requirement; allow for 3 stories on some buildings to minimize building footprints; minimize the distance between buildings; and be flexible on setbacks and lot sizes." The proposed sub-district has been drafted consistent with these recommendations. The Southern Lawn will be preserved as Open Space to ensure it will remain available for continued recreational use by the community.

As discussed above, the Proposed Action conforms with many of the Village goals as published in its, recently adopted Comprehensive Plan, LWRP goals, and Zoning code and is in conformance with many of the Special Board Comments on Butterfield Project. In addition, the current plan includes significant modifications as a direct result of community input from the Community Design Workshop. Thus, no significant adverse impacts to Land use, Zoning or public policy are anticipated.

9.5 Community Services

Police Protection

The Cold Spring Police Department provides police protection services to properties within the 0.6 square mile area that comprises the Village of Cold Spring. The police department headquarters is located at 83 Main Street, Cold Spring, NY, less than one half mile from the project site.

The Village Police Department employs 13 police officers who provide 24-hour per day coverage. A letter received from Officer in Charge George Kane dated March 8, 2012 indicates that the department handles approximately 90 service calls per month equating to approximately 1,100 calls for service per year. The population data from the 2010 census indicates there are 2,013 persons residing in the Village of Cold Spring. Based upon these figures, the police department receives 0.045 calls per month per capita. There are presently 7 police officers per 1,000 residents.

The police department provides 24-hour patrol coverage with an average of 2 manned vehicles on the road at all times.

Department personnel are also involved in various community outreach programs including Crime Prevention, Accident Investigation and Reconstruction, STOP DWI, Commercial Vehicle Enforcement, Intelligence, Youth Court, and Child Vehicle Restraint.

Typical response time to a residence or business at the Butterfield site would be less than one minute.

Fire Protection

The proposed development will be served by the Cold Spring Fire Company #1 which is a 100% volunteer fire department serving the Village.

The Cold Spring Fire Department is located at 154 Main Street in the Village of Cold Spring, located approximately one half mile from the project site. The Company provides fire protection services to 3,500 residents and has a service area of approximately five square miles. Based upon this convenient location response time to the project site is an average of two to five minutes.

The Cold Spring Fire Company #1 currently operates 2 engines / pumpers, 1 tower ladder trucks, 1 heavy rescue vehicle, 1 light rescue vehicle, and one all terrain vehicle. The department is staffed by approximately 125 volunteer members who respond from the station in Cold Spring. The department responds to approximately 150 calls for service annually. The Fire

Company is supported through mutual aid agreements with area fire departments. The Cold Spring Fire Company does not respond to medical emergency calls. This service is provided by the Philipstown Volunteer Ambulance Corps.

Ambulance & Health Services

The Philipstown Volunteer Ambulance Corps (PVAC) provides emergency ambulance service to the project area. The coverage area of the PVAC serves an area of approximately 20 square miles within Putnam County, including the Town of Philipstown, Village of Cold Spring and Village of Nelsonville. Average response time is between three and five minutes. The Corps has approximately 40 members but has only 12 active volunteers, thus the Corp. recently hired paid EMT responders. The Executive Board and members determined this was necessary in order to meet their mission to provide the highest quality of pre-hospital emergency medical care to the community.

State law prohibits an ambulance from rolling without a trained EMT on board. Volunteer staff have been augmented with paid EMTs to cover day tours from Monday through Saturday when most volunteers are at their full time jobs in order to ensure prompt response time in emergency situations. The PVAC responds to an average of 350 calls per year.

Hospital services are provided primarily by the newly renovated Hudson Valley Hospital Center, located in the Town of Cortlandt. The 128 bed Hospital is fully accredited serving the community with high quality health care by a team of more than 350 physicians and 1,300 employees. The Hospital has inpatient care in both medical and surgical units, a busy maternity unit, an intensive care unit, and a progressive care unit. The Hospital operates a full-service state-of-the-art, 24-hour, "no-wait" emergency department along with a state-of-the-art surgical center, laboratories, cardio-pulmonary center, and a physical therapy center.

According to Hospital representatives, its physicians represent all of the medical specialties and offer their patients the latest in medical care supported by nursing, clinical, and technical staff. The hospital also offers various outreach programs that present preventive medicine and wellness subjects.

9.6 Avoidance or Minimization of Potential Impacts - Police, Fire, Ambulance & Health Services

As described earlier in this EAF, the Butterfield Redevelopment project is expected to accommodate 83 residents, including 74 seniors and 9 residents in the three single family homes. Based on multipliers described later in this chapter, at three employees per 1,000 foot of space, it is estimated that the 32,500 square foot of new retail/office space could result in approximately 98 employees.

Police Protection

Based on planning standards contained in the Development Impact Assessment Handbook, model factors for police protection recommend two (2) police personnel per 1,000 persons which further breaks down to 1.5 police personnel per 1,000 persons for residential uses and 0.5 police personnel per 1,000 persons for nonresidential uses. Based on this standard, 83 persons would increase police staffing needs by less than one tenth of a police officer which is not likely to have a significant impact on the Village's police personnel ratio of 7.0 personnel per 1,000 residents. Police protection for up to 100 new employees is a negligible impact based on the standards described above.

A Study funded by FEMA and prepared by the Lacey Fire Department, WA (included as Appendix N for reference), studied the impacts of aging demographics on any increased need for emergency services. The Study reports that it can be expected that calls for emergency services may double in populations in the age range 65 to 84 and may triple in populations over 85 compared to traditional standards. Given that the residents of Butterfield will be active adults over 55 years of age, a projection of 2.5 times the number of emergency service calls would provide a conservative analysis. Based on this increased standard 83 persons may increase the police staffing needs by less than 0.25 officers which is still not likely to have a negative impact on the Village Police Force.

In his letter dated March 8, 2012, Officer in Charge George Kane of the Village Police Department assures the applicant that "the Cold Spring Police Department has adequate personnel and equipment to provide police protection services to the Butterfield project. "

Fire Protection

Based on planning standards published in the Development Impact Assessment Handbook, approximately 1.65 fire department personnel per 1,000 population is recommended to provide adequate fire protection service. After multiplying this standard to account for the senior demographic described above, Up to 83 new residents would generate demand for less than one half of an additional fire department personnel. The proposed roads within the project will be designed in accordance with Village specifications and can adequately accommodate emergency service vehicles. Fire hydrants will be installed according to Village standards.

Ambulance Services

Based on planning standards contained in the Development Impact Assessment Handbook, approximately 36.5 calls per 1,000 population are made annually, indicating a population increase of 83 residents may result in an increase of 3 ambulance calls annually. As discussed, senior populations may triple this call volume. Based on this standard for an elderly population, the additional 83 residents may increase EMS calls by approximately 9 calls annually on average. Given the 24/7 coverage provided, with supplemental EMT service available, the proposed project would not have a significant impact on emergency medical services.

The Village of Cold Spring annual budget includes tax levys to provide for services which include Police, Fire and Ambulance service. Based upon the modest population increase, no new police officers are warranted and no new equipment is required as a result of the proposed project.

Based on planning standards contained in the Development Impact Assessment Handbook, four (4.0) hospital beds should be provided per 1,000 persons. Based on this standard, the projected population increase associated with the Butterfield redevelopment project has the potential to increase the need for beds in hospitals serving the Westchester and Putnam County area by approximately one third of a bed. When considering the increased standard for senior services, the Butterfield redevelopment project may increase the need for beds by one bed. Given the recent renovations to Hudson Valley Hospital Center, it is not anticipated this project will have a significant impact on hospital services.

Solid Waste Disposal

The per household rate for solid waste generation according to the Urban Land Institute's Development Impact Handbook, is .00175 tons per person per day. The proposed development projects an increase in population by 83 persons, resulting in an estimated solid waste generation of 4.4 tons per month.

Dumpsters and solid waste storage areas are proposed for the multifamily residential buildings and the recreational complex. All refuse storage areas would be screened from view of public roads. Solid waste will be collected according to the schedules applicable to the private contractor. Since the Village of Cold Spring does not supply solid waste pickup within multifamily developments, thus development will not have an impact on the Village's solid waste facilities.

9.7 Utility Services

The Village of Cold Spring is contained in it's own water and sewer district. As shown in Table 9-2, it is projected that the project will use approximately 14,602 gallons per day of water and generate approximately 12,280 gallons per day of sewage.

The Butterfield site is located in the Village of Cold Spring water and sewer districts, and has been paying taxes to the benefit of these districts for over 20 years. In addition to the taxes paid, the Village charges user fees based on a flat fee structure plus user fees based on the volume of water used. These taxes and fees are the revenue source the Village uses to cover the cost of the water and sewer infrastructure and service provided.

As discussed in detail in Section 2.0 that the Butterfield project will pay an estimated \$25,480 in sewer fees and an estimated \$32,684 in water fees to the Village on an annual basis. Since the water and sewer infrastructure already exists to serve the Village, the increase in user fees will result in a fiscal benefit to the Village.

**Table 9-2
Butterfield Redevelopment
Domestic Water and Sewer Demand**

Senior Market Rate Units					
Unit Type	Number of Units	NYS DEC Wastewater Generation Rate (per unit)	Wastewater Generated	Water Demand Rate +10% of Wastewater (per unit)	Water Demand
1 Bedroom	34	150 gpd	5,100 gpd	165 gpd	5,610 gpd
2 Bedroom	22	300 gpd	6,600 gpd	330 gpd	7,260 gpd
3 Bedroom	3	400 gpd	1,200 gpd	440 gpd	1,320 gpd
Sub-total			12,900 gpd		14,190 gpd
20% Savings for use of water conservation fixtures			-2,580 gpd		-2,838 gpd
Total Residential Demand			9,680 gpd		11,352 gpd
Non Residential increase	32,500 sf	0.08 gpd	2,600 gpd	0.1 gpd	3,250 gpd
TOTAL DEMAND			12,280 gpd		14,602 gpd

NYS DEC Ten State Standards; Table prepared by TMA 2013.

Water

As Table 9-2 indicates, it is estimated that the project, at buildout, would result in the consumption of approximately 14,602 gallons per day of potable water. This number includes the estimated existing water use of the Lahey Pavilion. The Village of Cold Spring water treatment facility can produce 1.5 MGD. A letter received from the Village Superintendent of Water and Sewer, dated February 7, 2012, included in Appendix C, states "The average daily flow to the Distribution System (DS) for the past 24 months was 0.266 MGD. Based upon information further provided by the Water Superintendent, the Daily Maximum Total ranges from 0.363 to 0.616 MGD (experienced during the recent water main cleaning). Thus even under extreme circumstances

the Village's water treatment facility has available capacity to process more than an additional 0.8 MGD. The estimated 0.0146 MGD additional flow needed for the [Butterfield] project should not have a negative impact on the system's capacity," thus indicating the project would not have a significant impact on the Village's public water supply.

The Superintendent did request that water for irrigation use be taken from an irrigation well.

The Village recently completed an overhaul and cleaning of its water distribution system and subsequently tested the available Fire Flows throughout the Village. A tabulation of this data is included in Appendix P. On Chestnut Street (NYS Route 9D) at the location of the former Hospital Entrance, the Fire Flows increased by more than 147 percent as a result of this upgrade from 600 gpm to 880 gpm at 20 psi.

Adequate Fire Flow will be demonstrated at the time of site plan approval, prior to filing for a building permit, when the specific fire flow requirements of the proposed structures can be more accurately assessed.

Sewer

Also shown in Table 9-2, it is estimated that the project, at buildout, would result in approximately 12,280 gallons per day of sewage effluent, including existing flow from the Lahey Pavilion. The Village Superintendent of Water and Sewer, indicates current daily flows are 0.251 MGD. The maximum daily flow per the SPDES permit is 0.5 MGD, thus available capacity is estimated at 0.275 MGD, which is more than adequate to handle the anticipated 0.013 MGD increase as a result of the Butterfield redevelopment. The Superintendent does indicate the system is susceptible to inflow and infiltration from stormwater and groundwater, and requests the applicant inspect and repair any infrastructure directly related to the site development.

As the anticipated demand is less than five percent of the available capacity permitted under the SPEDES permit, it does not seem warranted that the applicant should be required to conduct downstream flow monitoring related to infiltration and inflow (I & I) for the entire system.

The applicant has committed to a new direct connection to the sewer main located in Chestnut Street across from the Lahey Pavilion entrance, thereby eliminating potential new sources of infiltration and inflow through the use of updated components.

As stated the impact on the Village Budget is projected to be positive. Tax revenue from the redevelopment is estimated to be approximately \$60,000 more than the cost of providing municipal services to the new Butterfield residents. Based upon the information provided herein, no significant impact is anticipated from the increased demand for community services.

9.8 Avoidance or Minimization of Economic Impacts

The proposed Butterfield redevelopment project will provide senior housing in the Village of Cold Spring, in addition to an increase in municipal office space and new retail opportunities. As a result of this project the community will realize the following economic benefits:

- Collective municipal and school revenues are projected to total close to \$600,000 annually.
- Tax revenue to the School District will increase by more than \$340,000, with a substantial net benefit of more than \$325,000 since there are no school age children associated with the proposed senior housing.
- The project will result in net benefit revenue to the Village of more than \$60,000 annually *after covering costs*, while meeting the increasing need for senior housing.
- The project-generated annual revenues to Putnam County would be approximately \$66,908 annually.
- Retail spending by the new residents of the community is projected to exceed \$825,000 annually.
- Sales tax revenue is projected to be more than \$175,000 annually.
- The project would generate 85 to 100 full time short term equivalent jobs in the various construction trades associated with construction of this project and approximately 98 full time equivalent jobs after completion.
- The Butterfield project will pay an estimated \$25,480 in sewer fees and an estimated \$32,684 in water fees to the Village on an annual basis. Since the water and sewer infrastructure already exists to serve the Village, the increase in user fees will result in a fiscal benefit to the Village.

10.0 CONSTRUCTION-RELATED EFFECTS

This section discusses the short term impacts related to construction. Construction is expected to last approximately 24 to 36 months. It is anticipated that the project sponsor would initially build some or all of the office/retail space first and then focus on the residential development. However, construction will be driven by market conditions and it is possible that there may be overlap between construction of the commercial and residential portions of the project. Mitigation measures are described below to mitigate short term construction impacts to the extent practicable.

The following construction sequence describes in general terms the process of project construction;

1. Protect areas beyond the limit of disturbance by installing temporary silt fencing.
2. Install tree preservation measures to protect the Copper Beech tree and trees along NYS Route 9D.
3. Construct stabilized construction entrances, including stone tracking pads.
4. Perform clearing and grubbing activities.
5. Install erosion control measures appropriate to each phase of work, including silt fencing, inlet protection, temporary berms, swales, and temporary sediment traps.
6. Perform grading, excavation and related operations, stockpile soil in approved areas.
7. Construct drainage system improvements, roadway improvements and street utilities.
8. Construct retail buildings and driveways.
9. Construct residential buildings and driveways.
10. During construction, all areas being disturbed will either be paved, seeded, sodded, or planted as specified in a timely manner to prevent unnecessary erosion.
11. Remove all temporary control measures.
12. Remove accumulated sediments from permanent storm water management facilities.

Steps 1 through 7 involve construction of the roads and stormwater management facilities and would be completed prior to construction of the individual buildings. Construction of the buildings would then follow a similar sequence of construction: install erosion controls, strip and store topsoil, grading, construction of utilities and buildings, and permanent stabilization. The project will be constructed in phases to limit disturbance on the site. Phase one will consist of building the infrastructure for the roads and drainage facilities - these areas will be stabilized as per the identified erosion control measures in advance of constructing the buildings. Phase two will consist of construction of the two office/retail buildings. Phase three will consist of construction of the multi-family units plus the community building.

A list of the New York State Department of Environmental Conservation Best Management Practices ("BMPs") to be employed in project construction are included in Section 3.0. A representative Erosion and Sediment Control Plan is shown in Figure 3-4. A site specific Erosion Control Plan shall be included as part of the Site Plan Drawings, and will depict the various measures proposed to provide temporary and permanent stabilization of disturbed areas. As the redevelopment project will take place in substantially the same areas as the existing development and will generally follow the existing topographic contours, it is not anticipated that a significant amount of earth work will be required.

Mitigation measures are described below that would minimize or avoid potential short term construction impacts to the extent practicable.

10.1 Noise

Noise can be defined as undesirable or “unwanted sound.” Even though noise is somewhat subjective, it affects the full range of human activities and must be considered in local and regional planning. Most of the sounds heard in the environment are not composed of a single frequency, but are a band of frequencies, each with a different intensity or level. Levels of noise are measured in units called decibels. Since the human ear cannot perceive all pitches or frequencies equally well, these measures are adjusted or weighted to correspond to human hearing. This adjusted unit is known as the A-weighted decibel, or dB(A).

It should be noted that a one decibel change in noise is the smallest change detectable by the human ear under suitable laboratory conditions. However, under normal conditions, a change in noise levels of two or three decibels is required for the average person to notice a difference. Table 10-1 shows community perception of noise change and response to increased levels. The level of a noise is measured and expressed in decibels (dB). Commonly, a standardized A-weighting is applied to sound levels to correct for certain characteristics of human hearing. The A-weighted sound level (dBA) is useful for gauging and comparing the subjective loudness of sounds.

Table 10-1 Perception of Changes in Noise Levels	
Change (dBA)	Average Ability to Perceive Changes in Noise Levels Human Perception of Change
2-3	Barely perceptible
5	Readily Noticeable
10	A doubling or halving of the loudness of sound
20	A dramatic change
40	Difference between a faintly audible sound and a very loud sound
Source: Bolt Baranek and Neuman, Inc. Fundamentals and Abatement of Highway Traffic Noise, Report No. PB-222-703. Prepared for Federal Highway Administration, June 1973.	

To the average person, a noise level increase of 2 to 3 dBA is barely perceptible, an increase of 5 dBA is noticeable, and an increase of 20 dBA is perceived as a dramatic change. Annoyance frequently results from increases of 10 dBA or more, depending on the frequency and duration of the noise events.

The level of impacts of these noise sources depends on the type and number of pieces of construction equipment being operated, as well as the distance from the construction site. The noisiest period of construction will occur during site clearing and rough grading activities.

Avoidance or Minimization of Noise During Construction

It is anticipated that nearby properties would experience temporary elevated noise levels at occasional periods during the construction period. This is a temporary, construction-related, unavoidable impact.

Local daytime ambient noise levels will increase both on and off of the project site during construction of the proposed Butterfield Redevelopment project. Construction activities are an expected and necessary consequence of any new development and cannot be avoided. Noise resulting from construction activities, however, is temporary, typically of short duration, and will cease entirely upon completion of the project.

Noise levels due to construction activities will vary widely, depending on the phase of construction activities. Noise levels at the site property line are projected to temporarily range between 65 dBA and 80 dBA during construction, depending on the type and location of construction activity at a given time, which may represent an increase of 10 to 15 dBA. The following table 10-2, shows representative maximum sound levels for diesel powered equipment and activities at a range of receptor distances.

Table 10-2 Typical Construction Noise Levels (dBA)				
Equipment/Activity	Maximum Sound Level			
	50 feet	200 feet	500 feet	1000 feet
Backhoe	82-84	70-72	62-64	56-58
Blasting	93-94	81-82	73-74	67-68
Concrete Pump	74-84	62-72	54-64	48-58
Generator	71-87	59-75	51-67	45-61
Hauler	83-86	71-74	63-66	57-60
Loader	86-90	74-78	66-70	60-64
Rock Drill	83-99	71-87	63-79	57-73
Trucks	81-87	69-75	61-67	55-61

Source: Tim Miller Associates, Inc.

Village of Cold Spring Noise Ordinance

Village of Cold Spring Code Chapter 76, which regulates noise, is included in Appendix F. The purpose of the chapter is to prohibit any unnecessary noise, and to regulate construction noise where applicable. The following are parts of the code that pertain to the construction of the Butterfield Property:

“§ 76-7. Construction Projects

Construction project (including demolition) shall be subject to the maximum permissible noise levels specified for industrial zones for the period within which construction is to be completed pursuant to any applicable construction permit issued by proper authority, or if no time limitation is imposed, then for a reasonable period of time for completion of project.”

Within §76-3:

Permissible Noise Levels, The allowable measured noise within an industrial zone is equal to no more than 80 dB(A) from 7:00 am to 10:00 pm and 75 dB(A) from 10:00 pm to 7:00 am.

Chapter §76-5, of the Village of Cold Spring Code allows for an increase in noise levels between 7:00 am and 10:00 pm.

“Between the hours of 7:00 am to 10:00 pm, the noise levels permitted in §76-3 may be increased by ten (10) dB(A) for a period of not to exceed fifteen (15) minutes in any one-hour period.”

Construction activities will be conducted generally on Monday through Friday from 7:00 a.m. to 6:00 p.m., and on Saturday from 8:00 a.m. to 6:00 p.m., thus remaining within the hours designated by the Village of Cold Spring Noise Ordinance for construction activities.

Blasting and rock removal are not anticipated for the project.

10.2 Construction Traffic

Avoidance or Minimization of Potential Impacts

It is expected that construction-related traffic would access the site during the construction period which is anticipated to be approximately 24 to 36 months in duration. The heaviest volume of construction traffic would occur at the beginning of the construction as site clearing and rough grading is conducted, and when asphalt and building materials are transported to the site. Once construction machinery reaches the site, it is likely to remain on site until the completion of grading and excavation. Construction material storage, equipment staging and soil stockpiling will occur on graded stabilized areas of the site.

Construction traffic would primarily access the site via a stabilized construction entrance at one or more of the existing access locations on US Route 9D. Construction traffic will access the site from US Route 9D to Paulding Avenue via the existing site driveway to be used as a construction access. When this is necessary, no truck trips will travel further west beyond the existing site access on Paulding Avenue, thus minimizing disturbance to the adjacent neighborhood. Truck trips will not utilize the east site driveway which serves as access to the Lahey Pavilion.

Although individual contractors have not yet been selected for this project, it is anticipated that construction-related traffic would originate primarily within Putnam County and neighboring communities. Some workers could also be expected to travel from the lower Hudson River Valley region, including Westchester and Dutchess counties.

Construction workers residing locally would be expected to use local roads to access US Route 9D and the site. Workers in the larger region, construction vehicles, and material deliveries would be expected to travel NYS Route 301, US Route 9, NYS Route 6/202 and the Bear Mountain Extension, to access the site via US Route 9D. Construction workers utilizing passenger vehicles would also likely use the Taconic State Parkway to NYS Route 301 to access US Route 9D.

An increase in construction-related vehicular traffic will occur and is a short-term, unavoidable impact. However, the redevelopment of the Butterfield site is not anticipated to have a significant impact on the local road network. The applicant will be required to adhere to NY State and local restriction on vehicle weights, traveling speeds, and parking within the Village which would limit potential impacts to local roads from the operation and delivery of construction

vehicles. If necessary, a flag man will be provided to insure smooth traffic flow on US Route 9D during the arrival and departure of heavy vehicle equipment. Excess material will be transported off site during non-peak hours when additional traffic capacity is available.

10.3 Demolition of Existing Hospital

Figure 10-1 Illustrates the areas which will undergo demolition. A demolition permit has been granted to the applicant and is included in Appendix I for reference. This permit is predicated on several conditions which must be met by the applicant to preserve and make publicly accessible any remaining historical and archaeological resources from the hospital, including the Ida Timme Memorial Arch.

A Phase 1 Environmental Assessment has been conducted on the site to assess potential soils contamination from the use and removal of underground storage tanks. Tank removal was completed in 2008 and the site was given a clean bill of health. This report is included in Appendix O for reference.

As part of the necessary permitting for demolition, buildings are inspected and building materials are sampled for asbestos. The samples are laboratory tested to determine if asbestos is present in the building materials. If asbestos is found, all building materials which contain asbestos are required to be removed, before the building with asbestos is demolished. The process of removing asbestos-containing materials (Asbestos Abatement) is conducted in accordance with OSHA guidelines that require that the contaminated material be disposed in an approved manner to specified locations separate from all other construction debris. This will leave the building or buildings free of asbestos-containing materials so that when demolition occurs, no hazardous material will be dispersed into the air or deposited into the soil.

Demolition Sequence

Demolition: The demolition process will occur through phases:

- Site protection – As shown in Figure 10-1, a 6' chain link safety fence will be set up around the Butterfield Hospital building at a safe distance to provide ample room for demolition equipment and trucks to safely operate. There will be gates to access the work zone for men and equipment. The fence provides for safety, security, and to catch any debris.
- Any existing utilities connecting to the building will be disconnected as required to safely perform the work.
- Any remaining fuel oil tanks will be cleaned, removed, and certification of closure provided.
- The building will be remediated of asbestos and certification provided.
- The cell towers on the roof will be removed and a temporary set-up will be installed adjacent to the Lahey Pavilion. The Lahey Pavilion is supplied with its own sewer and water connections and can function independently. Any electrical or phone interconnections between the former hospital and Lahey Pavilion will be rerouted to allow for demolition.

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- On the site where equipment and trucks will be traveling to access the work, there are already paved travel ways into and on the site. This means minimal soil tracking will occur during this demolition operations and removals via trucking from the site. While the existing pavement is not in the best condition, it still provides a means for traffic to travel upon without tracking soils in or out of the site. Anti-tracking pads will be placed along the existing entry from Route 9 and Paulding Ave. to further alleviate this concern. Additionally, if needed, street sweeping on and off site will be completed so that all intersections and roads are kept clean.
- As described below, quantities of clean concrete and /or asphalt materials will be crushed for potential reuse on site to reduce the amount of exported or imported materials necessary.
- It is estimated that an average of two truckloads per day may be required to handle the disposal of demolition materials as discussed below.
- Flag men will be provided as necessary to ensure a smooth flow of traffic while construction activities are taking place.

Demolished Materials are separated by type. The materials will be separated prior to concrete demolition and a construction sequence is as follows:

- a. The moveable contents that remain such as cabinets, chairs, desks, equipment, light fixtures, and papers will be removed and placed either directly into containers for transport to an approved waste facility selected by the demolition contractor. One of the local recycler/vendors is Royal Carting in Hopewell Junction, NY. The ultimate decision will be made by the licensed demolition contractor whom is responsible for hauling demolition from the site to appropriate facilities accepting the type of appropriate type of waste. Manifests will be provided to insure transport of the material to a licensed acceptable facility. We anticipate 120 CY or 4 trailer loads.
- b. Accessible Interior partition wood walls, ceilings, sheet rock, plasters, insulation, window, doors and other types of other like material will go into different containers and taken to an appropriate facility. We anticipate 300 CY or 10 trailer loads.
- c. Steel, boilers, radiators, copper tubing, steel piping, wiring and other metals will be separated for recycling. A popular local recycler of this material is Brookfield Recycling in Montrose and Elmsford, NY. This decision will be left to the selected licensed demolition contractor. We anticipate 120 CY or 4 trailer loads.
- d. All building materials will be tested for asbestos and any asbestos found will be remediated by a licensed Asbestos Abatement Contractor. This debris will not be mixed with other demolition materials and will be disposed of in an approved manner. This may account for an additional 1 to 3 truckloads.
- e. During the process of moving from the contents removal phase to steel removal phase, demolition will begin utilizing excavation/demolition equipment fitted with related attachments.

- f. At this stage, the demolition equipment will begin more advanced operations of breaking down the structure now that as many items that could have been separated, have been. Active crushing to create a recycled aggregate product for re-use on site will begin. The concrete, brick, block and masonry debris will be broken up into manageable sizes for loading into the concrete crusher. The concrete crusher has various separating devices and screens that allow separation of the crushed ¾" concrete RAP from the steel and other materials that allow for a clean processed material upon completion through the device. The non-RAP materials will be loaded into their separate containers for recycling or hauling to appropriate facility. The RAP material will be stockpiled at two locations (1) adjacent the gateway park and (2) utilizing the previous hospital basement area. The buildings concrete, brick, and other masonry products will be crushed to a ¾" minus product and used on site for sub-slab bedding, building backfills, utilities backfilling, retaining wall backfill, sidewalk sub-base, pavement sub-base and site fills. This will negate the need for the removal of about 900 cubic yards (30 truckloads) of material that will be being used as a Recycled Aggregate Product (RAP) on site. This also means that 900 cubic yards of import (30 truckloads) will need not be delivered to the site thus reducing overall traffic for this operation by 60 trailer loads total for removals and imports.

Similar to other construction activities, crushing will be limited to Monday through Friday from 7:00 a.m. to 6:00 p.m., and on Saturday from 8:00 a.m. to 6:00 p.m., thus remaining within the hours designated by the Village of Cold Spring Noise Ordinance for construction activities.

- g. The RAP could easily be stockpiled within the basement area for reuse during the various construction phases as the basement area after demolition could easily accommodate approximately 1300 CY of fill.
- h. There are also 2 wood shed structures located between the former Hospital and Route 9D. These will also be removed and minimally add to the quantities shown.
- i. Once these demolitions have been entirely completed, existing asphalt and sub-base needing removals will be completed where needed.
- j. These paving and sub-base materials will also be removed using conventional excavation equipment of various sizes, crushed via the concrete crusher and used on site. These will be used as paving sub-base materials and stockpiled adjacent the gateway park for future use. The RAP piles will be wrapped with silt fence to prevent erosion, however, they are essentially a crushed gravel type product and minimal sediments are generated. 600 CY of RAP or 20 trailer loads are anticipated which also reduce imported material for the site by 20 trailer loads.
- k. The equipment to be used for the operations will include track mounted excavators of various sizes fitted with grapples, rock hammers, and buckets. Tired loader of various sizes will be used to transport materials to staging areas for loading into trailers or the aggregate crusher. All of the equipment

is fitted with mufflers in order that sound generated during the process is kept at acceptable levels. Dust control will be controlled with continuous wetting and sprinkling of the work areas. Sound and dust will be monitored to keep within acceptable levels. Hours of operation, sound, and dust control will be in accordance with the Village Code. Anti-tracking pads, tire cleaning devices, and street sweepers will be utilized to protect area adjacent the site.

- I. Upon the conclusion of all demolition, the RAP will be used to level the demolition area as the schedule permits. All disturbed areas will be seeded and mulched to prevent erosion. Fencing will be removed as necessary.

Summary

Demolition is expected to take approximately three months.

(540) CY of NON-RAP demolition removals from site – (18) trailer loads or approximately or (27) tri-axle loads. The number of trips generated during demolition is projected to be an average of two truck trips daily and is not considered a significant impact.

1600) CY RAP generated VIA (900) CY from building masonry plus of (600) CY asphalt crusher RAP created for use on site and stockpiled within former foundation excavation of the hospital construction or adjacent the Gateway Park as adjusted by building construction sequencing. Recycling these materials will reduce 1500 CY of removals and 1500 CY of import for combined trip saving of approximately 100 trailer loads.

Construction Mitigation Measures

The site contractor will employ Best Management Practices as outlined in the Ten States Standards including but not limited to:

1. Protect areas beyond the limit of disturbance by installing temporary silt fencing.
2. Install tree preservation measures to protect the Copper Beech tree and trees along NYS Route 9D.
3. Construct stabilized construction entrances, including stone tracking pads.
4. Install erosion control measures appropriate to each phase of work, including silt fencing, inlet protection, temporary berms, swales, and temporary sediment traps.
5. stockpile soil in approved areas.
6. Construct drainage system improvements, roadway improvements and street utilities.
7. During construction, all areas being disturbed will either be paved, seeded, sodded, or planted as specified in a timely manner to prevent unnecessary erosion.
8. Periodically remove accumulated sediments from storm water management facilities as necessary.
9. Construction activities will be conducted Monday through Friday from 7:00 a.m. to 6:00 p.m., and on Saturday from 8:00 a.m. to 6:00 p.m., and will comply with all aspects of the Village of Cold Spring Noise Ordinance for construction activities.
10. It is not anticipated that Blasting will be necessary, however if necessary a Blasting Protocol will be submitted to the Village for review and approval.
11. Once construction machinery reaches the site, it is likely to remain on site until the completion of grading and excavation. Construction material storage, equipment staging and soil stockpiling will occur on graded stabilized areas of the site.
12. Construction traffic would access the site via a stabilized construction entrance at one or more of the existing access locations on US Route 9D. During specific portions of the

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construction, due to construction phasing or other site constraints, it may be necessary to access the site from Paulding Avenue on a limited basis. When this is necessary, no truck trips will travel further west beyond the existing site access on Paulding Avenue, thus minimizing disturbance to the adjacent neighborhood. Truck trips will not utilize the east site driveway which serves as access to the Lahey Pavilion.

13. A demolition permit has been granted to the applicant. This permit is predicated on several conditions which must be met by the applicant to preserve and make publicly accessible any remaining historical and archaeological resources from the hospital, including the Ida Timme Memorial Arch.
14. As part of the necessary permitting for demolition, buildings are inspected and building materials are sampled for asbestos. Any building materials which contain asbestos are required to be removed prior to demolition in accordance with OSHA guidelines. This will leave the buildings free of asbestos-containing materials so that when demolition occurs, no hazardous material will be dispersed into the air or deposited into the soil.

As a result of implementation of the mitigation measures listed above, short term construction impacts shall be mitigated to the maximum extent practicable and shall not result in a significant negative environmental impact.