Draft Environmental Impact Statement

Dutchess Community College Proposed Student Housing

Pendell Road
Town of Poughkeepsie
Dutchess County, New York

Draft Environmental Impact Statement

Date Submitted: March 8, 2010
Date Accepted for Public Review: March 23, 2010
Date of Public Hearing: April 13, 2010, 6:00 PM at the James & Betty Hall Theatre, Dutchess Community College Campus
Comments Must be Submitted By: April 26, 2010

Prepared by:

Prepared For:

Dutchess Community College
53 Pendell Road
Poughkeepsie, NY 12601
Draft Environmental Impact Statement

Dutchess Community College Proposed Student Housing

Town of Poughkeepsie
Dutchess County, New York

Applicant: Dutchess Community College
53 Pendell Road
Poughkeepsie, NY 12601
Phone: (845) 431-8000

Lead Agency: Board of Trustees of Dutchess Community College
53 Pendell Road
Poughkeepsie, NY 12601
Phone: (845) 431-8000

Prepared By: The Chazen Companies
21 Fox Street
Poughkeepsie, NY 12601
Phone: (845) 454-3980

Proposed Action: Construction of a four-story dormitory building on the existing soccer field of the Main Campus of Dutchess Community College, with 465 beds for resident students. The project also includes relocation of an existing soccer field to a vacant, 24.36-acre site at the intersection of Creek Road and Cottage Road, immediately adjacent to and north of Parking Lot “D” on the DCC Main Campus.
Applicant and Participating Consultants

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21 Fox Street
Poughkeepsie, NY 12601
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Albany, NY 12207
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Phone: (518) 283-0534
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The Chazen Companies
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# 1.0 EXECUTIVE SUMMARY

## 1.1 Description of the Proposed Action

The Project Sponsor, the Board of Trustees of DCC, is proposing the construction of new student housing on the existing Main Campus site located in the Town of Poughkeepsie, Dutchess County, New York. The new Dormitory Facilities are proposed in the area of an existing soccer field north of the tennis courts. The four-story, 160,000-square-foot dormitory building will contain 465 beds, and a courtyard will be constructed adjacent to the new building. Vehicular access to the dormitory will be provided via the existing driveway to Lot “D” off of Cottage Road. No new parking is proposed. Resident students will utilize the existing parking in Lot “D”, or other available student parking areas on campus.

The existing soccer field will be relocated to a vacant 24.36-acre parcel north of the campus owned by the County, held in trust for use by DCC, which use is to be determined by the College Board of Trustees. A parking area that will provide approximately 40 new parking spaces is proposed on the vacant parcel as well. The relocated field will be placed in the northwest corner of the vacant parcel along Cottage Road and will be approximately 200 yards away from the closest residences on Creek Road. The proposed parking area will be constructed along Cottage Road across from the College’s campus with an access drive directly across from an existing access drive to the campus. A pedestrian path will connect the soccer field to the parking area and to crosswalks located near the access drive. A fence will be installed along the Cottage Road property line to direct students to utilize crosswalks to cross Cottage Road.

The site proposed for the new dormitory building is located at the northern end of the DCC campus on the site of the existing soccer field, track, and bleachers. It primarily consists of mowed lawn and pavement areas associated with the track and the parking lot. The site is located west of Creek Road and south of Cottage Road, just south of Parking Lot “D”. The site proposed for the relocation of the soccer field is north of the intersection of Creek Road and Cottage Road, immediately north of Parking Lot “D”. This site is currently vacant and primarily contains forested habitat in various stages of succession. Four wetland areas were identified on the site.

The two sites are considered as “one action” for the purpose of SEQRA review. The project area is defined as the 7.5-acre portion of the 26-acre tax parcel that will be disturbed for the proposed new student housing and the 24.36-acre tax parcel that contains the new parking area and relocated soccer field. Both portions of the project site are zoned IN, Institutional, on the Town of Poughkeepsie Zoning Map.

The following table identifies all non-County owned properties abutting the project site:
### Table 1-1: List of Abutting Properties

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<thead>
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<td>52 Van Wyck Drive</td>
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<tr>
<td>604009</td>
<td>50 Van Wyck Drive</td>
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<tr>
<td>606966</td>
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<td>807149</td>
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<td>842250</td>
<td>246-260 Creek Road</td>
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<td>758229</td>
<td>14 Cheney Drive</td>
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<td>682246</td>
<td>5 Cheney Drive</td>
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<tr>
<td>606161</td>
<td>272-334 Violet Avenue</td>
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<td>607088</td>
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<td>725050</td>
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<tr>
<td>751012</td>
<td>204 Creek Road</td>
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<tr>
<td>751001</td>
<td>202 Creek Road</td>
</tr>
<tr>
<td>753985</td>
<td>3 Pine Echo Drive</td>
</tr>
<tr>
<td>755965</td>
<td>194 Creek Road</td>
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<tr>
<td>782950</td>
<td>190 Creek Road</td>
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### 1.2 List of Involved Agencies

#### Table 1-2: List of Involved Agencies and Required Approvals

<table>
<thead>
<tr>
<th>Type of Approval</th>
<th>Involved Agency</th>
</tr>
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| Stormwater SPDES Permit | New York State Department of Environmental Conservation  
Region 3 Headquarters  
21 South Putt Corners Road  
New Paltz, NY 12561 |
| Curb Cut          | Town of Poughkeepsie Highway Department  
Town of Poughkeepsie Town Hall  
1 Overocker Road  
Poughkeepsie, NY 12603 |
1.3 List of Interested Agencies

State University of New York
State University Plaza
353 Broadway
Albany, New York 12246

NYS Office of Parks, Recreation, and Historic Preservation
State Historic Preservation Office
Peebles Island Resource Center
P.O. Box 189
Waterford, NY 12188-0189

NYS Department of Transportation
Region 8 Headquarters
Regional Planning and Program Management Group
4 Burnett Boulevard
Poughkeepsie, NY 12601

Dutchess County Department of Health
387 Main Street
Poughkeepsie, NY 12601

Dutchess County Department of Planning
27 High Street
Poughkeepsie, NY 12601

Town of Poughkeepsie Town Supervisor and Town Board
Town of Poughkeepsie Town Hall
1 Overocker Road
Poughkeepsie, NY 12603

Town of Poughkeepsie Planning Board
Town of Poughkeepsie Town Hall
1 Overocker Road
Poughkeepsie, NY 12603

Fairview Fire District
258 Violet Avenue
Poughkeepsie, NY 12601
## 1.4 Summary of Potential Impacts and Mitigation Measures

### Table 1-3: Summary of Impacts and Mitigation Measures

<table>
<thead>
<tr>
<th>EIS Chapter</th>
<th>Potential Impacts</th>
<th>Mitigation Measures</th>
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</table>
| 3.1 Geology, Soils, and Topography | • The proposed action will disturb a total of approximately 13.98± acres of land for construction of the project, which could result in erosion and sedimentation impacts if not properly controlled.  
• Blasting may be required in some areas on the proposed dormitory site. | • Impacts to soils and geology will be minimized through erosion and sediment control measures and the establishment of Best Management Practices (BMPs), as outlined in the New York State Stormwater Management Design Manual and New York Standards and Specifications for Erosion and Sediment Control. See Section 3.1 for details.  
• The Applicant will comply with Chapter 100, “Explosives,” of the Town of Poughkeepsie Code and all Federal and State requirements in order to minimize impacts from blasting. |
| 3.2 Stormwater Management | • Construction of the proposed project could result in temporary impacts to water quality from erosion and sedimentation.  
• The proposed project will increase the amount of impervious surface area on the DCC campus, and could contribute to downstream pollution of surface water if not properly controlled.  
• The post-development peak runoff rate will be less than or equal to the pre-development runoff rate for all design points and design storms. | • The Preliminary Stormwater Pollution Prevention Plan (SWPPP) includes temporary and permanent erosion and sedimentation control measures that will reduce the potential for adverse impacts to stormwater quality.  
• The Preliminary SWPPP also contains permanent quantity and quality control methods to be implemented to reduce potential impacts from stormwater. |
| 3.3 Ecological Resources | • Approximately 8.34 acres of the proposed soccer field site and approximately 5.62 acres of the proposed dormitory site will be disturbed. This may cause indirect impacts to wildlife utilizing those areas for habitat, although most species would be expected to relocate off-site or to other areas of the site that are not being disturbed.  
• Marginally suitable habitat for Indiana bats was identified in the northeast portion of the proposed soccer field site.  
• Wetland B could potentially be an “associated wetland” for Blanding’s turtles, but it is unlikely to be used as such due to its shallow water depth, close proximity to Creek Road, and degraded conditions. This wetland will be indirectly disturbed to existing vegetation and hydrologic corridors between the site and off-site wetlands will be minimized.  
• The proposed parking area for the soccer field will be constructed with permeable materials.  
• There will be a contiguous corridor of undeveloped land in the eastern portion of the soccer field site.  
• The use of fertilizers, pesticides, and herbicides will be minimized throughout the site.  
• Direct impacts to Wetland B will be avoided, and indirect impacts to the wetlands will be mitigated through implementation of stormwater quantity and quality control measures. |
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<th>EIS Chapter</th>
<th>Potential Impacts</th>
<th>Mitigation Measures</th>
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<tr>
<td><strong>3.4 Wetland Resources</strong></td>
<td>• The proposed project will result in direct impacts to Wetlands C and D, which are isolated wetlands. This is not considered a significant impact due to the isolated nature of the wetlands and the low quality of the wetlands. • The project will have indirect impacts on Wetlands A and B resulting from changes in stormwater runoff patterns.</td>
<td>• Indirect impacts to Wetlands A and B will be mitigated through implementation of stormwater quantity and quality control measures.</td>
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<td><strong>3.5 Transportation</strong></td>
<td>• The proposed project is not intended to accommodate the needs of existing students and current enrollment trends, and will not result in an increase in traffic. Some improvements are recommended to address existing delays. • The existing parking supply is anticipated to be adequate to serve the proposed dormitory. A new 40-space parking lot is proposed to serve the relocated soccer field.</td>
<td>• At the intersection of Creek Road and Cottage Road, it is recommended that pavement markings be installed to designate two turning lanes (left and right) on the Cottage Road approach to formalize the current practice of motorists. This action requires coordination with the Town of Poughkeepsie and/or the Dutchess County Highway Department. • At the intersection of Creek Road and Pendell Road, it is recommended that the Town of Poughkeepsie and/or the Dutchess County Highway Department be contacted regarding possible signal timing adjustments at this intersection to facilitate improved efficiency of traffic operations. Recommended timing plans are presented in the TIS (see Appendix 9.2).</td>
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<td><strong>3.6 Cultural Resources</strong></td>
<td>• The proposed dormitory site shows evidence of prior disturbance; therefore, the potential for unknown cultural resources to exist on the site is considered minimal. A Phase 1 Cultural Resources Investigation conducted on the proposed soccer field did not identify any historic or prehistoric sites. The NYSHPO</td>
<td>• No mitigation required.</td>
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1.0 Executive Summary

1.5 Summary of Project Alternatives Considered

Each of the required alternatives is fully described in Section 5.0. A brief summary is provided below.

No Build Alternative

The “No Build” alternative is required to be addressed under 6 NYCRR 617.9(b)(5). The “No Build” alternative is the scenario that would occur if the dormitory were not undertaken and the existing soccer field were not relocated to the Creek Road/Cottage Road site. The Main Campus of DCC would remain as is, with the soccer field and track in their existing condition. DCC would not introduce onsite

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<th>Potential Impacts</th>
<th>Mitigation Measures</th>
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<tr>
<td>3.7 Utilities – Water and Wastewater</td>
<td>• The average daily water demand for the proposed project was estimated to be 28,740 gpd, with a peak demand of 57,480 gpd. Wastewater generation will equal water demand.</td>
<td>• No mitigation required.</td>
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<td>• The Town’s existing water supply and distribution system, and existing wastewater collection and treatment system, are adequate to serve the project.</td>
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<td>3.8 Community Services</td>
<td>• The proposed project will result in a less than significant impact on the demand for police protection services. It is anticipated that the demand could be met with existing staffing levels.</td>
<td>• In order to reduce the burden of the project on the Fairview Fire District, DCC has entered into a draft contract with Transcare for ambulance transport for on-campus medical emergencies, which will eliminate the need for the FFD to respond to DCC for such emergencies. Since the majority of calls for service to DCC involve ambulance transport (&gt;70% of DCC calls), this will significantly reduce the number of calls requiring FFD response to DCC.</td>
</tr>
<tr>
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<td>• The proposed project may result in an increase in demand for fire and emergency medical services.</td>
<td>• Representatives of DCC are open to future discussions with the FFD to renegotiate a mitigation agreement based on the estimated project-generated demand for services. Any such future mitigation agreement will take into consideration other mitigation measures as applicable, including the emergency transport agreement noted above.</td>
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</table>
student housing and would remain a commuter campus. This alternative would not have any environmental impact, but would not meet the Applicant’s objectives.

**Alternative Dormitory Location**

This alternative qualitatively evaluates the development of the proposed dormitory on the Creek Road/Cottage Road site. Under this alternative, the existing soccer field would not need to be relocated. This alternative location is less desirable than the preferred location for a number of reasons, including potential issues with student safety, increased distance from academic buildings, more difficult topography, increased potential for construction-related disturbances to adjacent residences, and the fact that the site is not within the Town’s sewer district.

**Dormitory Only Alternative**

This alternative would involve development of the dormitory only, with no relocation of the soccer field to the Creek Road/Cottage Road site. In this alternative, that site would remain undeveloped in its current condition. The potential impacts of this alternative would be similar to those of the preferred alternative, except that the magnitude of the impacts would be less due to the fact that less development would occur. In particular, this alternative would require less grading and earth moving than the preferred alternative and would consequently generate less construction-related traffic, noise, and dust. A negative aspect of this alternative is that without relocation of the soccer field, DCC would lose this recreational and athletic facility.

**Reduced Scale Alternative**

The Final Scoping Document required an evaluation of an alternative that reduces the number of beds in the student dormitory, if such an alternative was necessary to mitigate potential significant adverse impacts of the proposed project. The proposed project does not have any significant adverse impacts that cannot be mitigated by measures recommended within the environmental impact evaluation described in this DEIS. Therefore, there is no need to evaluate a reduced scale alternative.

### 1.6 Public Need and Benefits

The demographics of the student body at DCC are changing. There are now more full-time students enrolled at DCC than part-time students. Due to the current economy, the enrollment of full-time students has increased, as DCC is perceived as offering a high quality education at an affordable cost. As enrollment has increased, the percentage of Dutchess County residents attending DCC has also increased, and that trend is expected to continue.

More and more full-time students want to transfer to a four-year school after completing their education at DCC, and providing the ability for them to live in a residence hall will enable students to more easily make the transition to living on campus at another college or university in the future. It is important to note that national studies have shown that students living on campus in residence halls do better academically than students who commute to college. Other SUNY community colleges have found that having residence halls enhances the student activities program for all students.
The objective of the project sponsor is to build and operate a residence hall facility that would be in a price range that future students would consider attractive and affordable, and which would provide a safer and more secure environment than other off-campus housing alternatives. Building a resident hall at DCC will not change the mission of the college, just as having student housing has not changed the mission of other community colleges. DCC will remain an open access college dedicated to serving the needs of the residents of Dutchess County and no County resident will be denied admission as a result of building the residence hall.

With regard to the financing of the residence hall project, there will be no cost to Dutchess County or the College. The project will be paid for by issuing bonds, and the interest and principal on those bonds will be paid off by the fees charged to the students who live in the residence hall. No taxpayer money will be used to build or operate the residence hall.
2.0 DESCRIPTION OF THE PROPOSED ACTION

The Project Sponsor, the Board of Trustees of Dutchess Community College is proposing the construction of new student housing on the existing Main Campus site of Dutchess Community College located in the Town of Poughkeepsie, Dutchess County, New York. The new dormitory is proposed in the area of an existing soccer field. Also as part of the proposed action, the existing soccer field will be relocated to a vacant 24.36-acre parcel north of the campus owned by Dutchess County, held in trust for use by Dutchess Community College, which use is to be determined by the College Board of Trustees. The two sites are considered as “one action” for the purpose of SEQRA review.

2.1 Project Site Location and Description

The project site consists of a portion of the Main Campus of Dutchess Community College (DCC), as well as a vacant parcel directly across from the Main Campus located at the intersection of Creek Road and Cottage Road, north of Parking Lot “D”. The project site is defined as the 7.5-acre portion of the 26-acre tax parcel on the Main DCC Campus that will be disturbed for the proposed new student housing and the vacant, 24.36-acre tax parcel that will contain the proposed relocated soccer field. The regional location of the project site is shown on Figure 2-1.

The site proposed for the new dormitory building is located at the northern end of the DCC campus on the site of the existing soccer field, track, and bleachers. It primarily consists of mowed lawn and pavement areas associated with the track and the parking lot. The site is located west of Creek Road and south of Cottage Road, just south of Parking Lot “D”.

The site proposed for the relocation of the soccer field is north of the intersection of Creek Road and Cottage Road, immediately north of Parking Lot “D”. This site is currently vacant and primarily contains forested habitat in various stages of succession. Four wetland areas were identified on the site (wetlands are fully discussed in Section 3.4 of the DEIS). The locations of both sites and the existing site conditions are shown on Figure 2-2.

2.2 Project Description

Proposed Dormitory

The dormitory building on the DCC campus is proposed to contain 465 beds in a four-story, 160,000 square foot (SF) building. The building will make use of the grade of the existing hillside at the north end of the soccer field and will therefore appear as a four-story building from the south side and a three-story building from the north side.

The ground floor of the building will contain a central lobby and will house laundry facilities, a vending area, a fitness center, and a mail room for the students. On the north side of the building, which is below-grade on the ground floor, areas will be provided for mechanical and electrical utilities and storage. The first floor, which is on grade level with the parking lot, will contain a dining room containing 30 seats and a central kitchen, as well as a multi-purpose room. The two upper floors will be strictly residential.
Dutchess Community College

Regional Location Map

Cottage Road / Creek Road
Town of Poughkeepsie
Dutchess County, New York
Dutchess Community College

Site Location and Existing Conditions

Cottage Road / Creek Road
Town of Poughkeepsie
Dutchess County, New York

Legend:
- Proposed Dormitory Site
- Proposed Soccer Field Site

Proposed Soccer Field Site
Proposed Dormitory Site

Map Document: (R:\1\10800-10899\10809_00_DCCC\GIS\maps\10809_00_SiteLocation_8x11.mxd)

Drawn: 2/18/2010 -- 11:41:42 AM

Scale: 1:4,800

Figure: 2-2
Student beds will be provided on each level of the building, along with a student lounge for each wing. The beds will be arranged in two different configurations of suites, each of which will contain a kitchen, living room, bathroom, and storage closet. Suite ‘A’ encompasses approximately 1,160 SF and contains a double room and three single rooms, while Suite ‘B’ totals approximately 1,060 SF and includes two doubles and one single. Each suite will house five students. The ground floor will contain six ‘A’ suites and seven ‘B’ suites, for a total of 65 beds. The first floor will contain eight ‘A’ suites and 16 ‘B’ suites, for a total of 120 beds. The second and third floors will each contain eight ‘A’ suites and 20 ‘B’ suites, for a total of 140 beds on each floor.

A sunken courtyard will be constructed adjacent to the new building in front of the south entrance to provide an outdoor gathering space for students and create a welcoming entry to the building. Stairs will connect the courtyard to the lawn. A 10-foot-wide lighted pedestrian walkway will be provided from the courtyard, which will connect to the existing walkway adjacent to the tennis courts. The proposed walkway will also continue around to the east to provide access to one of the academic buildings (the Center for Business and Industry) via a series of stairs. The existing sidewalk that extends from the Center for Business and Industry to Parking Lot D will be replaced with a maximum slope of 5% to be compliant with the Americans with Disabilities Act (ADA).

On the north side of the building, another courtyard and a 9-foot-wide walkway will be created to provide access from the parking lot. The parking islands will be replaced and improved with landscaping, and pedestrian-scale lighting will be provided in front of the building. The dormitory will be handicapped-accessible from the north side.

An area for deliveries and maintenance vehicles will be provided on the west side of the building, along with two handicapped parking spaces. No other new parking is proposed. New stormwater, water, and sewer utilities are proposed to serve the building and will connect to existing utilities. A wastewater pump station will be located west of the building, which will be needed due to the elevation change between the dormitory location and the receiving sewer main.

A conceptual plan depicting the proposed dormitory facilities and the locations of utilities, landscaping, and lighting is provided as Figure 2-3. The elevation of the building from the courtyard (south side) is shown in Figure 2-4 and a detail view of the courtyard entrance is shown in Figure 2-5.

Proposed Soccer Field

Since the dormitory building is proposed on the site of the existing soccer field, the proposed project also includes relocation of the soccer field to a vacant site just north of the Main Campus. The field is proposed in the northwest corner of the vacant parcel along Cottage Road and will be approximately 200 yards away from the closest residences on Creek Road. A championship-sized soccer field is proposed, with a minimum width of 225 feet and a minimum length of 360 feet and a north-south orientation. A 30-foot area free of obstructions will be maintained around the field, in accordance with the specifications for a championship field. An 8-foot-wide walking path will also be provided around the field. The site plan for the soccer field is shown on Figure 2-6.
Figure 2-4: Courtyard Elevation of Proposed Dormitory

Figure 2-5: Detail View of Courtyard Entrance
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Approximately 40 new parking spaces are proposed to serve the soccer field. The proposed parking area will be constructed parallel to Cottage Road and will be accessed via a 20-foot-wide permeable hardscape drive. The vehicular entrance to the field is proposed directly across from the existing access drive to parking lot D. A pedestrian path up to the soccer field is proposed just west of the access drive and will connect the soccer field to the parking area and to crosswalks located near the access drive. A fence will be installed along the Cottage Road property line to direct students to utilize crosswalks to cross Cottage Road.

Lighting is proposed along the pedestrian walkway and within the parking area for safety purposes. The field will not be lighted. The soccer field site will contain stormwater management areas, but will not be served with water or sewer utilities. A portable lavatory will be available for use on the site.

### 2.3 Construction Phase

The dormitory project is proposed to be constructed in one phase. The schedule for relocation of the soccer field has not yet been determined; it may happen concurrently with or subsequent to the construction of the dormitory. Construction of the proposed project is expected to start in 2010 and be completed in 2012. Construction activities will occur during daylight hours on weekdays and on Saturdays if necessary, but not before 7:00 AM. Construction vehicles will access the site via Creek Road. Efforts will be made to reduce the number of construction vehicle trips to and from the site by keeping vehicles onsite as much as possible.

It is anticipated that typical safety measures, such as orange construction fence, signage, designated material storage areas, etc., will be utilized throughout the duration of construction. Any material that must be stockpiled will be stored in an area away from storm drainage, wetlands, and/or water courses, and will be properly protected from erosion by a surrounding silt fence barrier.

The proposed grading and other earth-moving activities have the potential to generate dust. Construction measures such as wetting down work areas, appropriate erosion and sedimentation control, and minimization of site clearing at any one time will minimize dust emissions resulting from construction activities. Temporary dust suppression measures may include, but are not limited to, the following:

- Minimizing soil erosion and sedimentation by stabilization of disturbed areas and by removing sediment from construction site discharges;
- Preservation of existing vegetation to the maximum extent practicable. Following the completion of construction activities in any portion of the site, permanent vegetation is established on all exposed soils; and
- Planning of site preparation activities to minimize the area and duration of soil disruption.

Construction-related noise is an unavoidable, but short-term, impact of development. As noted above, construction activities will occur during daylight hours, which is when people are less sensitive to noise impacts. Typically, construction equipment generates noise levels when measured 50 feet from the
source that range from 70 decibels (dBA) to over 95 dBA. These levels can be compared to a shouting voice at six feet (70 dBA) or to a lawn mower at three feet (95 dBA). Since noise from stationary sources attenuates at a rate of 6 dB per doubling of distance, a 90 dBA noise level at 50 feet from the source would be reduced to 84 dBA at 100 feet, 78 dBA at 200 feet, and so forth. The noise level at receptors within the surrounding area will vary depending on the specific areas in which construction is taking place. The closest residence on Creek Road is approximately 500 feet from the edge of the proposed dormitory building. At this distance, noise from the loudest construction activity would be in the range of 75 dBA.

To reduce the potential impact of noise on adjacent residences, all construction vehicles and equipment will be well maintained and operated in an efficient manner. In particular, the mufflers on all construction equipment will be fully functional and well maintained by the construction contractor. Mufflers will reduce the frequency of sound on machinery that pulses, such as diesel engines and compressed air machinery. To the extent practicable, electrical power will be used to run air compressors and similar power tools and sound blankets will be used on noise-generating equipment.

2.4 Objectives of Project Sponsor

The objective of the project sponsor is to build and operate a residence hall facility that would be in a price range that future students would consider attractive and affordable, and which would provide a safer and more secure environment than other off-campus housing alternatives.

2.5 Purpose of and Need for the Project

The demographics of the student body at DCC are changing. There are now more full-time students enrolled at DCC than part-time students. Due to the current economy, the enrollment of full-time students has increased, as DCC is perceived as offering a high quality education at an affordable cost. As enrollment has increased, the percentage of Dutchess County residents attending DCC has also increased, and that trend is expected to continue.

More and more full-time students want to transfer to a four-year school after completing their education at DCC, and providing the ability for them to live in a residence hall will enable students to more easily make the transition to living on campus at another college or university in the future. It is important to note that national studies have shown that students living on campus in residence halls do better academically than students who commute to college. Other SUNY community colleges have found that having residents halls enhances the student activities program for all students.

DCC first considered building student housing in 2005 to better serve its students. At that time, a number of community colleges within the State University of New York (SUNY) system had built and were operating residence halls. Currently, 20 of the 30 SUNY community colleges currently have student housing or are actively planning to build residence halls. The Board of Trustees of SUNY has passed a resolution endorsing the concept of student housing at SUNY community colleges. The New York State Commission on Higher Education issued a report in 2008 concluding that community colleges needed dormitories for at least part of their student populations, and that community colleges have evolved from commuter schools into multi-dimensional campuses serving a diverse student body. The DCC Board of Trustees has also consistently supported having student housing on campus.
In November 2005, DCC conducted a student housing analysis, including a student survey and an off-campus rental market analysis, to evaluate the feasibility of developing housing at DCC. The study determined that market conditions were favorable and there was enough student demand to support the development of such housing.

### 2.6 Required Review and Approvals

The Board of Trustees of Dutchess Community College, as the Lead Agency, has the approval authority for the proposed project. Other agencies with approval responsibilities are identified below.

<table>
<thead>
<tr>
<th>Agency</th>
<th>Type of Approval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Town of Poughkeepsie Highway Department</td>
<td>Curb Cut Permit</td>
</tr>
<tr>
<td>Town of Poughkeepsie Town Hall</td>
<td></td>
</tr>
<tr>
<td>1 Overocker Road</td>
<td></td>
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<tr>
<td>Poughkeepsie, NY 12603</td>
<td></td>
</tr>
<tr>
<td>New York State Department of Environmental</td>
<td>SPDES General Permit</td>
</tr>
<tr>
<td>Conservation</td>
<td>(for disturbances ≥1 acre)</td>
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<tr>
<td>Region 3 Headquarters</td>
<td></td>
</tr>
<tr>
<td>21 South Putt Corners Road</td>
<td></td>
</tr>
<tr>
<td>New Paltz, NY 12561</td>
<td></td>
</tr>
</tbody>
</table>
3.0 EXISTING CONDITIONS, POTENTIAL ENVIRONMENTAL IMPACTS, AND PROPOSED MITIGATION MEASURES

This section of the DEIS identifies existing environmental conditions, potential impacts of the Proposed Action, and proposed mitigation measures as appropriate for each of the major issues identified during the formal scoping phase of the project. The potential significant impacts resulting from the proposed project to both natural and human resources are evaluated in both a quantitative and qualitative manner, including cumulative impacts and secondary effects if applicable. Potential impacts resulting from the proposed project are presented both graphically and in text format. Impacts that cannot be mitigated, if any, are specifically identified and the magnitude of those impacts is evaluated.

This section is organized into the following categories:

- 3.1 Geology, Soils, and Topography
- 3.2 Stormwater Management
- 3.3 Ecological Resources
- 3.4 Wetland Resources
- 3.5 Transportation
- 3.6 Cultural Resources
- 3.7 Utilities – Water and Wastewater
- 3.8 Community Services
3.1 Geology, Soils, and Topography

This section provides a general discussion of local geology, on-site soils, and topography utilizing data from the 2002 Dutchess County Soil Survey and observations from field visits. Potential impacts of site grading and construction with respect to soil erosion, slope stabilization, farmland soils, and rock and t,ree removal are identified. The erosion and sediment control plan developed for the proposed project is outlined and a discussion of construction methods and Best Management Practices (BMPs) is included with an evaluation of their effectiveness to mitigate impacts.

Regulatory Framework

Erosion control measures, which are designed to minimize soil loss, and sediment control measures, which are intended to retain eroded soil and prevent it from reaching water bodies or adjoining properties, are developed in accordance with the following documents:

- NYSDEC SPDES General Permit for Stormwater Discharges From Construction Activity, Permit No. GP-0-08-001.
- New York State Standards and Specifications for Erosion and Sediment Control, NYSDEC.
- Town of Poughkeepsie Erosion and Sediment Control Ordinance Part II, Chapter 97.

3.1.1 Existing Conditions

Geology and Topography

Dutchess Community College lies entirely within the Hudson Lowlands physiographic region, which extends three to six miles on either side of the Hudson River. Bedrock geology underlying the project site is characterized as mixed Ordovician age Mount Merino and Indian River formations of shale, argillite, and chert and Stuyvesant Falls Formations of shale and siltstone. Several bedrock outcroppings were observed throughout the proposed soccer field site during ecological site visits.

In general, the topography of the project site is classified as gently undulating terrain that slopes eastward toward the Hudson River. The on-site slopes ranging from 0-10%, 10-20%, and >20% are illustrated on Figure 3.1-1, “Existing Slopes Map.”

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1 It should be noted that a new version of the General Permit, GP-0-10-001, was recently released by the NYSDEC and went into effect on January 29, 2010. The NYSDEC is also in the process of updating the SWMDM, with an anticipated release date of May 1, 2010. The new general permit provides a window within which any project that was designed in accordance with the old manual can proceed with construction only if a Stormwater Pollution Prevention Plan (SWPPP) is completed, Notice of Intent (NOI) is filed, and coverage is obtained under the new general permit prior to six months following the release of the final revision of the new SWMDM. Therefore, if the proposed project is not ready to proceed with construction prior to October 30, 2010 (assuming a May 1, 2010 release date), the proposed stormwater management system design may need to be modified. The proposed project will be required to comply with all applicable provisions of GP-0-10-001 and the SWMDM in effect, and the SWPPP will be updated to reflect the applicable new requirements, if necessary.

EXISTING ON-SITE SLOPES

Dutchess Community College
Town of Poughkeepsie, Dutchess County, New York

Specifically, the majority of the proposed dormitory site, which currently contains athletic fields and a track, is relatively flat. Beyond the track, the land slopes gently upward with 0 percent to 20 percent slopes. The steepest slopes are located in the eastern portion of the site, adjacent to Creek Road. The average elevation of the existing field is 279± feet above mean sea level (msl), while the elevation of the proposed dormitory site ranges between 245± feet msl to 298± feet msl.

The proposed soccer field site exhibits rolling terrain that gradually slopes from the northwest to the southeast. Elevations on the site range from approximately 232 feet above mean sea level (msl) in the southeastern portion of the site to approximately 320 feet msl in the northwestern corner adjacent to Cottage Road. The majority of the proposed soccer field site has slopes between 5 and 20 percent, with steeper slopes up to 21 percent in the northeastern corner adjacent to Creek Road.

Soils

According to the Dutchess County Soil Survey, seven soil types are identified on the project site. Their approximate locations are illustrated in Figure 3.1-2, “Soils Map.” Generally, slopes of these soils range between 1 and 15 percent, with some areas extending as much as 25 percent. None of the soil types present is listed as containing hydric inclusions or hydric soils in New York State. Each soil type found onsite is described below.

**Bernardston silt loam, 15 to 25 percent slopes (BeD)** – This soil type consists of very deep, moderately well drained and well drained soils formed in glacial till deposits. Permeability is moderate in the surface layer and subsoil and slow in the substratum. Surface runoff is rapid. The water table is perched at 1.5 to 2.0 feet from February to April. Bernardston silt loam, 15 to 25 percent slopes soils are not listed as hydric in New York State. This soil type is mapped in the northern portion of the proposed soccer field site and in the southeastern portion of the proposed dormitory site.

**Dutchess-Cardigan complex, rolling, rocky (DwC)** – This soil type consists of very deep, well drained Dutchess soils and moderately deep, well drained Cardigan soils formed in glacial till deposits. For Dutchess soils, permeability is moderate, surface runoff is rapid, and the depth to the seasonal high water table is greater than six feet. For Cardigan soils, permeability is moderate, surface runoff is rapid, and the depth to the seasonal high water table is greater than six feet. Dutchess-Cardigan complex, rolling, rocky soils are not listed as hydric in New York State. This soil type is mapped in the central portion of the proposed soccer field site and the western portion of the proposed dormitory site.

**Dutchess-Cardigan-Urban land complex, undulating, rocky (DxB)** – This soil type consists of very deep, well drained Dutchess soils, moderately deep, well drained Cardigan soils, and Urban land soils. For Dutchess soils, permeability is moderate, surface runoff is medium, and the depth to the seasonal high water table is greater than six feet. For Cardigan soils, permeability is moderate, surface runoff is medium, and the depth to the seasonal high water table is greater than six feet. Urban land soils are not assigned a capability subclass. Dutchess-Cardigan-Urban land complex, undulating, rocky soils are not listed as hydric in New York State. This soil type is mapped in the southern portion of the proposed soccer field site and in the northeastern portion of the proposed dormitory site.
Legend:
- Proposed Dormitory Site
- Proposed Soccer Field Site

Soils:
- BeD, Bernardston silt loam, 15 to 25 percent slopes
- DwC, Dutchess-Cardigan complex, rolling, rocky
- DxB, Dutchess-Cardigan-Urban land complex, undulating, rocky
- DxC, Dutchess-Cardigan-Urban land complex, rolling, rocky
- NwC, Nassau-Cardigan complex, rolling, very rocky
- PwB, Pittstown silt loam, 3 to 6 percent slopes
- Ud, Udorthents, smoothed
- Ur, Urban land

Dutchess Community College
Soils Map
Cottage Road / Creek Road
Town of Poughkeepsie
Dutchess County, New York
Nassau-Cardigan complex, rolling, very rocky (NwC) – This soil type consists of shallow, somewhat excessively drained Nassau soils and moderately deep, well drained Cardigan soils formed in glacial till deposits. For Nassau soils, permeability is moderate, surface runoff is medium, and the depth to the seasonal high water table is greater than six feet. For Cardigan soils, permeability is moderate, surface runoff is medium, and the depth to the seasonal high water table is greater than six feet. Nassau-Cardigan complex, rolling, very rocky soils are not listed as hydric in New York State. This soil type is mapped in the eastern portion of the proposed soccer field site and in the southeastern portion of the proposed dormitory site.

Pittstown loam, 3 to 8 percent slopes (PwB) – This soil type consists of very deep, moderately well drained soils formed in glacial till deposits. Permeability is moderate in the surface layer and subsoil and slow or moderately slow in the substratum. Surface runoff is medium. The water table is perched at 1.5 to 3.0 feet from November to April. Pittstown loam, 3 to 8 percent slopes soils is not listed as hydric in New York State. This soil type is mapped in the northwest portion of the site.

Udorthents, Smoothed (Ud) – This unit consist of very deep, somewhat excessively drained to moderately well drained soils that have been altered by cutting and filling. It is in and adjacent to urban areas, industrial area, schoolyards, and borrow areas. Areas are rectangular or irregularly shaped.

Urban land (Ur) – This soil type consists of areas where the soil surface is covered by impervious material. Soils consist of well drained Udorthents, smothered, and moderately well drained Udorthents, wet substratum. Surface water is excessively well drained. A capability subclass is not assigned for this soil unit. Urban land soils are not listed as hydric in New York State. This soil type is mapped in the southwestern portion of the proposed soccer field site and in the northern portion of the proposed dormitory site.

Farmland Soils

The USDA Natural Resource Conservation Service (NRCS) classifies farmland soils on the basis of their capability to produce common cultivated crops and pasture plants without deteriorating over a long period of time. Farmland soil classification identifies map units as prime farmland, farmland of statewide importance, or farmland of local importance. Prime Farmland soils are defined as soils that are best suited for producing food crops. Farmland of Statewide Importance is land recognized by the State of New York as important to agriculture while having some properties that reduce productivity. Similarly, Farmland of Local Importance is land of importance to the local economy, but does not meet the standards to be classified as Prime Farmland or Farmland of Statewide importance.

The site has approximately 4.9± acres of Prime Farmland Soils, specifically Pittstown silt loam in the northwestern portion of the proposed soccer field site. Approximately 12.4± acres of Dutchess-Cardigan complex soils classified as Farmland of Statewide Importance are located in the western portion of the proposed dormitory site (5± acres) and in the central portion of the proposed soccer field site (7.4± acres). Existing ecological conditions on portions of the proposed soccer field site suggest past agricultural uses; however, the project site is not currently used for crop production, nor has it been in the recent past.
The project site is not located within an Agricultural District. The nearest Agricultural District in the vicinity of the project site is Agricultural District 22, which is located approximately 0.5 mile east of the site, along the opposite bank of Fall Kill Creek.

**Preliminary Onsite Soils Investigation**

Three test pits were completed on the dormitory site as part of the work performed for completion of the Preliminary Stormwater Pollution Prevention Plan (SWPPP). Test pits were advanced near the proposed stormwater pond to depths of 7 to 8 feet to determine general soil conditions, depth to bedrock, and depth to groundwater. Soils encountered generally consist of approximately 6 inches of topsoil, underlain by approximately 2-6 feet of fill. Beneath the fill is a layer of silt and clay containing boulders approximately 1 foot in diameter. A ledge of shale was encountered at 2 feet in half of test pit two, which is located just off the northwest corner of the exiting track. Groundwater was not encountered at any of the test pits. Based on the results of this analysis, it is anticipated that some blasting will be required during construction. Results of the subsurface investigation are provided as Appendix I of the Preliminary SWPPP (see Appendix 9.3 of the DEIS).

### 3.1.2 Potential Impacts

**Soil Disturbance**

Construction of the proposed project would require grading and earth-moving activities, which have the potential to cause erosion and off-site sedimentation. Approximately 5.62 acres of land, OR 9.1% of the dormitory site, will be disturbed for grading, excavation, construction, paving, and landscaping. Additionally, approximately 8.34 acres of land, OR 35.5% of the soccer field site, will be disturbed during construction. Much of this area has been altered previously during construction of Dutchess Community College and from past agricultural use.

Construction of the soccer field will result in approximately 7,500 square feet of excess material. To balance the site, this material will be used as fill for construction of the proposed dormitory. A grading and drainage plan has been developed for the proposed project (see Appendix 9.7, Engineering Plans).

**Steep Slope Disturbance**

Construction activities can result in the potential for erosion to occur. Construction on steep slopes increases the potential for erosion to occur, and offsite sedimentation if erosion is not controlled. Vegetation removal also can cause erosion, when root structures are no longer able to provide soil stabilization, especially during heavy rain events. Table 3.1-1 summarizes the anticipated amount of slope disturbance resulting from the construction of the proposed project.

<table>
<thead>
<tr>
<th>Slope Category</th>
<th>Dormitory Site</th>
<th>Soccer Field Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – ≤ 10%</td>
<td>3.63 acres</td>
<td>6.23 acres</td>
</tr>
<tr>
<td>10 – ≤ 20%</td>
<td>1.27 acres</td>
<td>1.47 acres</td>
</tr>
<tr>
<td>≥ 20%</td>
<td>0.73 acres</td>
<td>0.65 acres</td>
</tr>
</tbody>
</table>
As indicated in Table 3.1-1, there will be less than an acre of disturbance to steep slopes (slopes in excess of 20%) on each site. Construction of the proposed dormitory will disturb segments of steep slopes located in the western and northern portion of the site. On the soccer field site, disturbance to steep slopes will occur in the southern portion of the site for construction of the stormwater management ponds.

The proposed project includes mitigation measures, discussed below, to reduce to potential for erosion and sediment migration to occur.

**Rock Removal**

Soil and rock excavation, including blasting in some areas, will occur during construction of the proposed dormitory. As site plans are advanced through the site plan review process, a blasting plan will be prepared for areas where excavation will be needed.

Excavation and blasting activities have the potential to generate dust, noise, and ground vibrations, and could result in damage to structures if not properly planned and conducted. Modern blasting operations are conducted routinely without damage or inconvenience to people or properties located nearby. A controlled blasting is performed by:

- Drilling holes into the bedrock to design depth, diameter, and spacing;
- Placement of charge, carefully designed for optimal breakage, into the drilled hole; and
- Timed detonation of the charges in a optimal sequence to fragment the rock while minimized vibration and noise.

Rock blasting can create three effects of concern:

- **Flyrock** – Rock pieces propelled into the air.
- **Ground Motion** – Ground vibrations from the blast.
- **Airblast** – Air pressure created by the blast.

Impacts from blasting can be minimized by proper application of preventative measures, monitoring, and proper design of the blast by a qualified blasting contractor. Prior to any blasting operations, it is essential to monitor and record the existing conditions of structures and areas adjacent to the site. This is typically performed by conducting pre-blast site surveys. During the blast, ground vibration and air blast pressure are monitored and recorded at various intervals from the blast and at nearby structures. Flyrock is minimized by using blast mats over the surface of the blasting site.

The Town of Poughkeepsie regulates blasting activities and the use of explosives within their Town code under Chapter 100, Explosives. The code requires a blaster’s license to be issued by the Town Clerk, limits the hours of blasting, regulates the use of blasting covers, and outlines the requirements of the blasting management plan. The Applicant will comply with Chapter 100 “Explosives” and all Federal and State requirements in order to minimize impacts from blasting.
Farmland Soil Disturbance

Approximately 17.3± acres of land in the along the western portion of the project site are classified as farmland soils, but the project site is not currently in agricultural use, nor has it been in the recent past. This area represents approximately 0.007% of the total lands designated as farmland soils within Dutchess County (223,307 acres). The development of these lands and consequent change in soil classification to Urban Land is not considered a significant impact as the on-site farmland soils make up a small percentage of the overall farmland soils in Dutchess County.

3.1.3 Mitigation Measures

The proposed action will disturb a total of approximately 13.98± acres of land for construction of the project. Approximately 5.62± acres of that disturbance is within an area that has already been disturbed over the years due to previous activities on the Main Campus of Dutchess Community College. Impacts to soils and geology will be minimized through erosion and sediment control measures and the establishment of Best Management Practices (BMPs), as outlined in the New York State Stormwater Management Design Manual and New York Standards and Specifications for Erosion and Sediment Control.

The following information is summarized from the preliminary SWPPP for the proposed project, located in Appendix 9.3, and from the Grading, Drainage, & Erosion and Sediment Control Plan, provided in Appendix 9.6.

Construction-Period Erosion and Sediment Control Measures

Stabilized Construction Entrance: Prior to construction, stabilized construction entrances will be installed, to reduce the tracking of sediment onto public roadways. Construction traffic will enter and exit the site at the stabilized construction entrance. The intent is to trap dust and mud that would otherwise be carried off-site by construction traffic.

Dust Control: Water trucks will be used as needed during construction to reduce dust generated on the site.

Temporary Soil Stockpile: Materials, such as topsoil, will be temporarily stockpiled (if necessary) on the site during the construction process. Stockpiles shall be located in an area away from storm drainage, water bodies and/or courses, and will be properly protected from erosion by a surrounding silt fence barrier.

Silt Fencing: Prior to the initiation of and during construction activities, a geotextile filter fabric (or silt fence) will be established along the down slope perimeter of areas to be disturbed as a result of the construction which lie up gradient of watercourses or adjacent properties. These barriers may extend into non-impact areas to provide adequate protection of adjacent lands.

Temporary Seeding: Areas undergoing clearing or grading and any areas disturbed by construction activities where work has temporarily or permanently ceased shall be stabilized with temporary vegetative cover within seven days from the date the soil disturbance activity ceased.
Erosion Control Blanket: Erosion control blankets will be installed on all slopes exceeding 3:1. Erosion control blankets provide temporary erosion protection, rapid vegetative establishment, and long-term erosion resistance to shear stresses associated with high runoff flow velocities associated with steep slopes.

Stone Check Dams: Stone check dams will be installed within drainage ditches to reduce the velocity of stormwater runoff, to promote settling of sediment, and to reduce sediment transport offsite.

Temporary Sediment Trap: Temporary sediment traps shall be constructed to intercept sediment-laden runoff and reduce the amount of sediment leaving the disturbed areas and to protect drainage ways, properties, and rights-of-way.

Post-Construction and Permanent Erosion Control Measures

Establishment of Permanent Vegetation: All areas at final grade must be seeded and mulched within 14 days after completion of the major construction activity. All seeded areas should be protected with mulch. Final site stabilization is achieved when all soil-disturbing activities at the site have been completed and a uniform, perennial vegetative cover with a density of 80 percent has been established or equivalent stabilization measures (such as the use of mulches or geotextiles) have been employed on all unpaved areas and areas not covered by permanent structures.

Rock Outlet Protection: Rock outlet protection shall be installed at the locations as indicated and detailed on the accompanying plans. The installation of rock outlet protection will reduce the depth, velocity, and energy of water, such that the flow will not erode the receiving watercourse or water body.

Erosion Control Matting: Erosion control matting will be placed on steep slopes and within drainage channels as deemed necessary during the design stage, in order to protect and stabilize areas subject to erosion.

Best Management Practices and Low Impact Design Techniques

A series of Best Management Practices (BMPs) and stormwater management Low Impact Design (LID) techniques will be utilized throughout the site to prevent and/or reduce the movement of sediment, nutrients, pesticides, and other pollutants transported by stormwater runoff. BMPs are structural or non-structural methods that protect water quality from potential adverse effects of human activities. Stormwater management LID techniques are methods of treating stormwater quality through infiltration and the use of vegetation in an attempt to treat stormwater “naturally.”

Stormwater runoff from the proposed dormitory and soccer field will be treated in a variety of ways. Stormwater management LID techniques such as grass filter strips, stormwater management dry swales (vegetated swales), and permeable hardscape surfaces (access drive to soccer field) are proposed in an effort to manage stormwater in a “natural” way. Also, BMPs such as wet ponds (pocket ponds) and surface sand filters will also be used to treat stormwater runoff in various areas of the site. Specific applications and anticipated effectiveness of these practices are discussed in Section 3.2, Stormwater Management.
Blasting

It is anticipated that blasting will be required in some areas for construction of the proposed project. The Applicant will comply with Chapter 100 “Explosives” and all Federal and State requirements in order to minimize impacts from blasting.
3.2 Stormwater Management

This section provides a description of the existing conditions on the project site, including drainage patterns, existing stormwater drainage facilities, and pre-development peak discharge rates. A summary of the preliminary Stormwater Pollution Prevention Plan (SWPPP) prepared for the project is provided, including a discussion of potential changes to stormwater runoff quantity, quality, and peak discharge rates as a result of the proposed project. The complete preliminary SWPPP is provided in Appendix 9.3. Lastly, this section discusses the project’s compliance with applicable stormwater regulations and outlines proposed mitigation measures, if necessary, to reduce potential stormwater impacts.

Regulatory Framework

NYSDEC Requirements

As part of the State Pollutant Discharge Elimination System (SPDES), the NYSDEC issues a General Permit for construction activities that disturb one or more acres of land. A SWPPP is one of the requirements of the General Permit. The SWPPP is developed with stormwater management practices in conformance with the NYS Stormwater Management Design Manual (SWMDM), which regulates stormwater quantity and quality.

It should be noted that the SWPPP for the proposed project was prepared under GP-0-08-001. A new version of the General Permit, GP-0-10-001, was recently released by the NYSDEC and went into effect on January 29, 2010. The NYSDEC is also in the process of updating the SWMDM, with an anticipated release date of May 1, 2010. The new general permit provides a window within which any project that was designed in accordance with the old manual can proceed with construction only if the SWPPP is completed, Notice of Intent (NOI) is filed, and coverage is obtained under the new general permit prior to six months following the release of the final revision of the new SWMDM. Therefore, if the proposed project is not ready to proceed with construction prior to October 30, 2010 (assuming a May 1, 2010 release date), the proposed stormwater management system design may need to be modified. The proposed project will be required to comply with all applicable provisions of GP-0-10-001 and the SWMDM in effect, and the SWPPP will be updated to reflect the applicable new requirements, if necessary.

The SWMSM requires that projects meet three separate stormwater quantity criteria:

- The Channel Protection Volume (CPv) requirement is designed to protect stream channels from erosion.
- The Overbank Flood Control Volume (Qp) requirement is designed to prevent an increase in the frequency and magnitude of flow events that exceed the bank-full capacity of a channel, and therefore must spill over into the floodplain.
- The Extreme Flood Control (Qf) requirement is designed to prevent the increased risk of flood damage from large storm events, to maintain the boundaries of the pre-development 100-year floodplain, and to protect the physical integrity of stormwater management practices.
Additionally, the SWMDM requires that water quality treatment be provided for the initial flush of runoff from every storm.

**Local Requirements**

The project site is located within the boundary of a regulated, traditional land use control Municipal Separate Stormwater Sewer System (MS4). However, as it is a part of the State University of New York system, the campus is considered a non-traditional MS4 and as such the approval requirement for traditional MS4 projects stated in GP-0-08-001 does not apply. Chapter 173 of the Town of Poughkeepsie Municipal Code (Stormwater Management Ordinance) does not apply to the proposed project since DCC is its own non-traditional MS4.

**3.2.1 Existing Conditions**

When a rainfall event occurs, some of the precipitation infiltrates into the soil and some evaporates into the atmosphere. Stormwater runoff occurs as the remaining precipitation travels downhill over the ground and other surfaces. The volume of runoff generated during a storm event is determined by the unique characteristics of the drainage area, including slopes, soil types, and land cover.

Located within the lower Hudson River Estuary, the project site consists of two watersheds that drain into either Morgan Lake or Fall Kill Creek. Morgan Lake is an 11± acre lake located approximately one mile south of the project site. The watershed contributing to Morgan Lake comprises approximately 29.5 acres and includes the proposed dormitory site. Fall Creek is a NYSDEC as Class C tributary to the Hudson River located east of the project site. The watershed contributing to the Fall Kill Creek comprises approximately 38.5 acres and includes the proposed soccer field site.

Stormwater management facilities currently found on the proposed dormitory site include yard drains, pipes, manholes, and swales, which convey water away from the existing track and athletic fields. These facilities direct stormwater runoff westward to a network of drainpipes located at Van Wyck Drive. The proposed soccer field site does not contain any stormwater management facilities. Stormwater runoff generally drains southward across the proposed soccer field site toward drainage ditches located along Creek Road and Cottage Road. Once runoff enters the roadside drainage ditches, stormwater is conveyed southeast through culverts under Creek Road.

In order to assess the hydrological conditions on the project site and evaluate existing runoff discharge rates from the site, the two watersheds that contain the project site were examined. This 68-acre area was broken down into smaller watersheds, or subcatchments. The separation of the watersheds into subcatchments was dictated by watershed conditions, methods of collection, conveyance, and points of discharge. The existing subcatchments are illustrated on Figure 3.2-1, “Pre-Development Watershed ‘Areas A & B’ Delineation Map.”

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3 NYSDEC Class C - Waters supporting fisheries and suitable for non-contact activities.

Computer modeling of the subcatchments was employed to analyze existing stormwater discharge patterns and rates at chosen Design Points (DP). The analysis is discussed below in Section 3.2.2, “Potential Impacts,” while the existing peak discharge rates (in cubic feet per second) for the 1-, 2-, 10-, 25-, and 100-year 24-hour storm are presented in Table 3.2-1.

<table>
<thead>
<tr>
<th>Design Point</th>
<th>1 year</th>
<th>2 year</th>
<th>10 year</th>
<th>25 year</th>
<th>100 year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>16.91</td>
<td>22.63</td>
<td>41.50</td>
<td>54.99</td>
<td>83.21</td>
</tr>
<tr>
<td>2</td>
<td>18.32</td>
<td>40.45</td>
<td>81.44</td>
<td>111.04</td>
<td>172.87</td>
</tr>
<tr>
<td>3</td>
<td>10.61</td>
<td>12.93</td>
<td>19.88</td>
<td>24.47</td>
<td>33.59</td>
</tr>
<tr>
<td>4</td>
<td>5.52</td>
<td>8.55</td>
<td>19.40</td>
<td>27.55</td>
<td>45.10</td>
</tr>
</tbody>
</table>

### 3.2.2 Potential Impacts

Construction of the proposed project will involve site grading, roadway grading and paving, installation of a storm drainage system, installation of associated utilities, and development of the proposed dormitory building and soccer field. Some of these changes will create additional impervious areas, which will alter the hydrologic characteristics of the existing watersheds and could have indirect impacts on stormwater quality and quantity. The total area of impervious surfaces (e.g. roads, driveways, sidewalks, rooftops) associated with these improvements is approximately 1.21 acres or 8.7% of the project site.

The preliminary SWPPP has been prepared to provide an assessment of potential stormwater impacts associated with the creation of impervious surfaces. The preliminary SWPPP is not intended to be a final engineering design, as certain detailed aspects of the project are likely to change during the review process. However, this level of analysis is more than adequate to evaluate the potential impacts of stormwater from the project. Final stormwater design will be advanced in support of and during the site plan review process.

**Stormwater Quantity Impacts**

Impervious areas such as rooftops, roads, driveways, and parking lots can cause rainfall to convert into stormwater runoff rapidly. If not properly managed, increases in stormwater runoff can affect downstream aquatic systems by causing stream bank erosion and floodplain expansion.

In order to evaluate the effects of the increase in impervious surfaces due to the proposed project, peak discharge rates of the post-development conditions without stormwater control were modeled. Then, to evaluate the effects of the proposed stormwater management as part of the proposed project, four additional design points (DP5 through DP8) were modeled considering attenuation from the proposed stormwater facilities. Figure 3.2-2 illustrates the post-development watershed areas. Descriptions of each of the selected design points are provided below:

- **DP1**: This off-site design point is located on Creek Road, approximately 230 feet north of the Creek Road and Cottage Road intersection. Runoff discharges from a 24-inch pipe onto the west side of Creek Road.
This page intentionally left blank.
- **DP2**: This on-site design point is tributary to an existing drainage network located on Van Wyck Drive. The drain network on Van Wyck Drive flows southerly, eventually discharging into Morgan Lake.

- **DP3**: This design point is located along Cottage Road, approximately 230 feet west of the Cottage Road and Creek Road intersection. This on-site design point is tributary to DP1, part of the Fall Creek tributary. This design point primarily includes runoff from existing parking and discharges, through an existing culvert, across Cottage Road in a northerly direction.

- **DP4**: This design point is located along Creek Road and is approximately 1,100 feet north of DP1. This design point primarily includes runoff from offsite areas and discharges, through an existing culvert, across Creek Road in a Westerly direction. It is tributary to the Fall Kill Creek tributary. The offsite areas are not part of the proposed improvements.

- **DP5**: This design point is located near the soccer field driveway, off Cottage Road. It is tributary to DP 1, part of the Fall Kill Creek tributary. This design point primarily includes runoff from the proposed soccer field, walking path, and parking area. This design point is only included in post-development conditions.

- **DP6**: This on-site design point is located near the soccer field driveway, off Cottage Road. It is tributary to DP5, part of the Fall Kill Creek tributary. This design point primarily includes runoff from the proposed soccer field, and walking path. This design point is only included in post-development conditions.

- **DP7**: This design point is located near the proposed building on the westerly side of the existing track. This on site design point is tributary to DP2, part of the Morgan Lake tributary. It primarily includes runoff from the proposed dormitory and is only included in post conditions.

- **DP8**: This design point is located near the soccer field driveway entrance and Cottage Road and is tributary to DP1, part of the Fall Kill Creek tributary. This design point primarily includes runoff from the proposed soccer field driveway, and walkway. This design point is only included in post conditions.

Table 3.2-2 below provides a summary of the modeled pre- and post-development discharge rates for each design point, without accounting for the proposed stormwater management controls. This comparison demonstrates that without stormwater management controls in place, the post-development runoff flows would be greater than pre-development runoff flows at DP1 and DP2 for each of the storm events modeled. Post-development peak discharge rates at DP3 and DP4 would be less than or equal to that of existing conditions. Therefore, stormwater management features are required for DP1 and DP2, as well as for each new design point in the post-development condition.
Table 3.2-2: Summary of Pre- and Post-Development Peak Discharge Rates without Control

<table>
<thead>
<tr>
<th>Design Point</th>
<th>Pre 1 year</th>
<th>Post 1 year</th>
<th>Pre 2 year</th>
<th>Post 2 year</th>
<th>Pre 10 year</th>
<th>Post 10 year</th>
<th>Pre 25 year</th>
<th>Post 25 year</th>
<th>Pre 100 year</th>
<th>Post 100 year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>16.91</td>
<td>19.18</td>
<td>22.63</td>
<td>25.50</td>
<td>41.50</td>
<td>46.49</td>
<td>54.99</td>
<td>61.41</td>
<td>83.21</td>
<td>92.43</td>
</tr>
<tr>
<td>2</td>
<td>18.32</td>
<td>30.83</td>
<td>40.45</td>
<td>44.87</td>
<td>81.44</td>
<td>86.65</td>
<td>111.04</td>
<td>116.45</td>
<td>172.87</td>
<td>178.16</td>
</tr>
<tr>
<td>4</td>
<td>5.52</td>
<td>5.06</td>
<td>8.55</td>
<td>7.82</td>
<td>19.40</td>
<td>17.71</td>
<td>27.55</td>
<td>25.15</td>
<td>45.10</td>
<td>41.21</td>
</tr>
<tr>
<td>5</td>
<td>N/A</td>
<td>1.40</td>
<td>N/A</td>
<td>2.35</td>
<td>N/A</td>
<td>5.85</td>
<td>N/A</td>
<td>8.56</td>
<td>N/A</td>
<td>14.49</td>
</tr>
<tr>
<td>6</td>
<td>N/A</td>
<td>1.33</td>
<td>N/A</td>
<td>1.96</td>
<td>N/A</td>
<td>4.12</td>
<td>N/A</td>
<td>5.71</td>
<td>N/A</td>
<td>9.07</td>
</tr>
<tr>
<td>7</td>
<td>N/A</td>
<td>4.83</td>
<td>N/A</td>
<td>6.97</td>
<td>N/A</td>
<td>11.84</td>
<td>N/A</td>
<td>15.14</td>
<td>N/A</td>
<td>21.77</td>
</tr>
<tr>
<td>8</td>
<td>N/A</td>
<td>0.62</td>
<td>N/A</td>
<td>0.84</td>
<td>N/A</td>
<td>1.51</td>
<td>N/A</td>
<td>1.98</td>
<td>N/A</td>
<td>2.92</td>
</tr>
</tbody>
</table>

This analysis demonstrates the need for post-development stormwater attenuation within DP1 and DP2. Stormwater attenuation is also required for the new design points to be created in the post-development condition (DP5-DP8).

Several stormwater control practices have been incorporated into the design of the project to attenuate stormwater peak discharge rates. In accordance with NYSDEC regulations, the proposed stormwater management basin quality controls have been designed and sized to provide channel protection (Cpv), overbank flood control (Qp10), and extreme flood protection (Qf100). A conventional stormwater management system was developed consisting of centralized stormwater quantity controls designed to meet the requirements of the SWMDM. The layout of the recommended practices is depicted on Sheets SP-A3 and SP-B3 in Appendix 9.7.

Within Subcatchments 1, 5, 6, and 8 (located on the proposed soccer field site), stormwater will be treated by two pocket ponds. A pocket pond is a variation of the traditional wet stormwater pond that is designed for the treatment of runoff from small drainage areas. The drainage area is usually so small (between one and five acres) that little or no base flow is available to sustain water elevations during dry weather. Instead, water elevations are heavily influenced, and in some cases maintained, by a locally high water table. Because of these smaller drainage areas and the resulting lower hydraulic loads of pocket ponds, outlet structures can be simplified and often do not have safety features such as emergency spillways and low level drains.

Pocket ponds can be used to attenuate the peak flow and provide quality treatment by sedimentation, chemical flocculation, and biological removal. Sediment forebays will capture sediment and floatable trash/debris prior to entering the pond. The pocket pond is landscaped with a variety of plantings including emergents and woody shrubs, with each type of planting corresponding to the water depth. An extended aquatic bench will maximize the biological uptake of pollutants.

Stormwater from Subcatchments 2 and 7 will be treated using an underground stormwater detention system and a surface sand filter. The underground stormwater detention system is a practice that stores and detains stormwater runoff in a subsurface system of large diameter interconnected storage pipes, in order to meet water quality control requirements. The surface sand filter is a treatment practice that treats stormwater by settling out large particles in a sediment chamber and then filtering stormwater through a sand matrix. The pre-treatment basin is designed to handle 25% of the treatment volume prior to discharging to the filter.
With implantation of the proposed stormwater management practices, the peak rate of runoff in the post-development condition will be less than or equal to pre-development conditions.

**Stormwater Quality Impacts**

By causing rainfall to rapidly convert into runoff, impervious areas can cause an increase in the amount of nutrients and pollutants in surface water resources. These pollutants can be transported by stormwater if adequate preventative measures are not put in place.

Most runoff related water quality contaminants are transported from land during the initial stages of storm events. Therefore, the SWMDM requires that water quality treatment be provided for the initial flush of runoff from every storm. The amount of runoff to be treated for water quality is referred to as “Water Quality Volume” (WQv). The equation used to compute WQv assumes that, all other variables being equal, WQv increases along with percent of impervious cover.

In addition to providing attenuation, the proposed pocket ponds and surface sand filter will provide stormwater quality treatment to runoff from the project site. The pocket ponds will provide pretreatment by capturing coarse sediment particles and floatable trash/debris in the forebay. Then water will enter the wet pond where primary treatment will take place through sedimentation, chemical flocculation, and biological removal. An extended bench designed within each pocket pond will maximize biological uptake of pollutants. Additionally, the proposed surface sand filter will remove pollutants by permitting coarse sediment to settle out in the pretreatment basin and then trapping or straining out remaining pollutants as water flows over the sand filter.

The WQv equation was applied to the drainage area tributary to each of the stormwater quality practices, to determine the appropriate size necessary to meet the SWMDM guidelines. The practices have been sized to accommodate the WQv’s summarized in Table 3.2-3 below.

<table>
<thead>
<tr>
<th>Stormwater Practice</th>
<th>Drainage Area (acres)</th>
<th>Impervious Area (acres)</th>
<th>WQv (CF)</th>
<th>Treatment Volumes Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pocket Pond (PND-5)</td>
<td>7.547</td>
<td>0.482</td>
<td>6048</td>
<td>Pre-Treatment Volume (10% of WQv)</td>
</tr>
<tr>
<td>Pocket Pond (PND-8)</td>
<td>0.469</td>
<td>0.077</td>
<td>374</td>
<td>605</td>
</tr>
<tr>
<td>Stormwater Filter</td>
<td>Drainage Area (acres)</td>
<td>Impervious Area (acres)</td>
<td>WQv (CF)</td>
<td>Pre-Treatment Volume (25% of WQv)</td>
</tr>
<tr>
<td>Sand Filter (FIL-02)</td>
<td>3.264</td>
<td>1.250</td>
<td>5145</td>
<td>1286</td>
</tr>
</tbody>
</table>

Additional stormwater quality control measures will be implemented to reduce potential indirect impacts, including erosion and sediment control measures such as the establishment of permanent vegetation for all areas at final grade (as described below). With the construction and maintenance of the proposed stormwater management facilities, no adverse impacts to adjacent or downstream properties are expected.

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The Chazen Companies
March 8, 2010
Construction Phase Impacts

Construction phase pollution sources anticipated at the site may include sediment, vehicle fuels and lubricants, chemicals associated with building construction, and building materials. Without adequate control during construction of the proposed project, there is the potential for each type of pollutant to be transported by stormwater, which could adversely affect stormwater quality.

As noted in the Preliminary SWPPP, the following housekeeping practices will be implemented during the construction phase to prevent construction-related pollutants from entering drainage systems:

- Material resulting from the clearing and grubbing operation will be stockpiled up slope from adequate sedimentation controls.

- The general contractor will designate areas for equipment cleaning, maintenance, and repair. The general contractor and subcontractors will utilize those areas. The areas will be protected by a temporary perimeter berm.

- The use of detergents for large-scale washing is prohibited (i.e., vehicles, buildings, pavement surfaces, etc.)

- A Spill Prevention and Response Plan shall be developed for the site by the contractor. The plan shall detail the steps needed to be followed in the event of an accidental spill and shall identify contact names and phone numbers of people and agencies that must be notified. The plan shall include Material Safety Data Sheets (MSDS) for all materials to be stored on-site. All workers on-site will be required to be trained on safe handling and spill prevention procedures for all materials used during construction. Regular tailgate safety meetings shall be held and all workers that are expected on the site during the week shall be required to attend.

- Concrete trucks will not be allowed to wash out or discharge surplus concrete or drum wash water on the site.

- Construction materials shall be stored in a dedicated staging area. The staging area shall be located in an area that minimizes the impacts of the construction materials effecting stormwater quality. Chemicals, paints, solvents, fertilizers, and other toxic material must be stored in waterproof containers. Except during application, the contents must be kept in trucks or within storage facilities. Runoff containing such material must be collected, removed from the site, treated, and disposed of at an approved solid waste or chemical disposal facility.

The preliminary SWPPP identifies other pollutant controls related to construction activities, including the following:

- No solid or liquid waste materials, including building materials, shall be discharged from the site with stormwater. All solid waste, including disposable materials incidental to any construction activities, must be collected and placed in containers. The containers shall be emptied periodically by a licensed trash disposal service and hauled away from the site.
Substances that have the potential for polluting surface and/or groundwater must be controlled by whatever means necessary in order to ensure that they do not discharge from the site. As an example, special care must be exercised during equipment fueling and servicing operations. If a spill occurs, it must be contained and disposed of so that it will not flow from the site or enter groundwater, even if this requires removal, treatment, and disposal of soil. In this regard, potentially polluting substances should be handled in a manner consistent with the impact they represent.

Temporary sanitary facilities will be provided by the contractor throughout the construction phase. They must be utilized by all construction personnel and will be serviced by a licensed commercial contractor. These facilities must comply with state and local sanitary or septic system regulations.

Non-stormwater components of site discharge must be clean water. Water used for construction, which discharges from the site, must originate from a public water supply or private well approved by the Health Department. Water used for construction that does not originate from an approved public supply must not discharge from the site; such water can be retained in the ponds until it infiltrates and/or evaporates.

Potential construction related impacts resulting from soil loss are described in Section 3.1.

### 3.2.3 Mitigation Measures

The stormwater analysis and preliminary SWPPP are an integral part of the project’s environmental analysis, which takes into consideration existing parameters of site topography, soils, erosion potential, surface waters, vegetative characteristics, and overall health of the watershed. Flow projections, modeling, and project design sensitive to stormwater concerns combine to manage stormwater in compliance with current regulations, incorporating engineering design measures to minimize impacts on the site’s natural resource through proposed stormwater management facilities discussed in the preliminary SWPPP. The methodology used to develop the preliminary SWPPP will be adhered to for the preparation of the project’s final SWPPP. Stormwater quality and quantity controls designed for this preliminary SWPPP are preliminary in nature and are intended to demonstrate the location, approximate size, and design concept. Detailed analysis of these practices must be performed and the design of each practice must be refined as part of the final SWPPP preparation, which will occur during site plan review.

**Stormwater Quantity**

The preliminary SWPPP also contains a stormwater quantity analysis, which examines the pre-development and post-development features and conditions associated with the rate of surface water runoff within the study area, with the analysis taking in to consideration the drainage patterns, drainage structures, soil types, and ground cover types under pre- and post-development conditions. The SWMDM requires that the projects meet channel protection requirements, overbank flood control, and extreme flood control requirements.

A comparison of the pre- and post-development watershed conditions was performed for all design points and storm events identified in the preliminary SWPPP. The preliminary SWPPP indicates that for
all design points and design storms, the peak rate of runoff associated with the proposed project will not be increased over pre-development conditions.

**Stormwater Quality**

Water quality mitigation measures include soil erosion control measures and good housekeeping practices implemented during construction to avoid the introduction of sediment and pollutants into adjacent waterways during construction. They also include post-construction stormwater controls to provide water quality treatment and to ensure that water quality volumes (including channel protection volumes, overbank flood controls, and extreme flood control) protect channels from erosion, and do not exceed the bank full capacity of a channel. They also ensure that, through the use of stormwater detention, the post-construction flows at each design point do not exceed the pre-construction flows.

**Construction-Related Pollution Controls:** During construction, this is accomplished by sequencing site disturbance activities to establish erosion controls, minimize disturbed areas, maintain existing vegetation as much as possible, and stabilize newly disturbed areas as soon as possible. Stormwater pollutant controls utilized during construction will include temporary sediment barriers and sediment traps designed in accordance with the NYS Standards and Specifications for Erosion and Sediment Control. Appendix 9.7, Engineering Plans, includes Sheets SP-A3 and SP-B3, which illustrate the erosion and sediment control practices that will be implemented during construction. Section 3.1, “Geology, Soils, and Topography,” provides a list of the temporary erosion and sediment control measures that will be included as part of the construction documents (see Section 3.1.3).

Additional pollutant controls and housekeeping practices are provided in the SWPPP summarized above to prevent pollutants other than sediment from affecting stormwater quality. With implementation of these measures, construction of the proposed project will not adversely affect water quality.

**Post-Construction Stormwater Controls:** As discussed above, a series of Best Management Practices (BMPs) and stormwater management Low Impact Design (LID) techniques will be utilized throughout the site to prevent and/or reduce the movement of sediment, nutrients, pesticides, and other pollutants transported by stormwater runoff. In accordance with Chapter 6 of the SWMDM, the stormwater control practices used on the site (Ponds and Filtration Practices) have been sized to accommodate the water quality volumes (WQVs) associated with the upstream drainage area for each practice. Overall, stormwater management LID techniques and BMPs will effectively accomplish stormwater management.
3.3 **Ecological Resources**

The purpose of this section is to describe existing vegetation and wildlife observed or having the potential to occur within the project site, including any endangered or threatened species. Potential impacts to vegetation and wildlife from development of the proposed project and any necessary mitigation measures needed to minimize these impacts are discussed.

### 3.3.1 Existing Conditions

The proposed dormitory site consists predominantly of mowed lawn currently utilized as a soccer field, as well as some small areas of pavement associated with the existing parking lot. Due to the existing conditions in the areas proposed for disturbance, as well as the fact that the proposed dormitory site has been the subject of prior disturbance during the creation of the existing soccer field, a habitat assessment was not conducted for the dormitory site.

The proposed soccer field site consists primarily of forested habitat in various stages of succession. This site is currently vacant but portions of it appear to have been managed as an agricultural field in the past. A habitat assessment of the proposed soccer field site was conducted on April 24, 2009, which consisted of an evaluation of the potential suitability of existing natural features to provide critical habitat for federally and/or state-listed endangered or threatened species, as well as an assessment of the ecological resources present on the site. The findings and conclusions of the habitat assessment are detailed in an appendix to the Wetland Delineation Report (see Appendix 9.4).

Nine ecological communities as described in Ecological Communities of New York are located within the boundaries of the proposed soccer field site. Terrestrial communities consist of mowed lawn, southern successional hardwood forest, successional old field, successional shrubland, and unpaved road/path. Aquatic communities consist of intermittent stream, red maple hardwood swamp, shallow emergent marsh, and shrub swamp. A brief description of these nine communities is provided in the following section. Their approximate locations within the project site are shown on Figure 3.3-1. Ecological communities on the proposed dormitory site, as interpreted from aerial photography, are also identified on Figure 3.3-1.

*Terrestrial Communities*

**Mowed Lawn:** Recreational and commercial lands in which the groundcover is dominated by clipped grasses and there is less than 30% cover of trees. This community is found along the southwestern portion of the proposed soccer field site.

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Figure 3.3.1 - Ecological Communities Map

Dutchess Community College
Cottage Road / Creek Road
Town of Poughkeepsie
Dutchess County, New York

Legend:
- Proposed Dormitory Site
- Proposed Soccer Field Site
- Intermittent Stream
- Unpaved Road/Path
- Developed Areas/Structures
- Mowed Lawn
- Red Maple Hardwood Swamp
- Shallow Emergent Marsh
- Shrub Swamp
- Successional Hardwood Forest
- Successional Old Field
- Successional Shrubland

Notes:
* Boundaries for ecological communities are hand-drawn and approximate.
* Ecological communities for soccer field site are based on habitat assessment and communities for the dormitory site are based on aerial interpretation.
Southern Successional Hardwood Forest: A hardwood or mixed forest community that occurs on sites that have been cleared or otherwise disturbed. This community is located throughout the northern, eastern, and southern portions of the proposed soccer field site. Canopy tree species within this community include black cherry, black birch, Norway maple, and white ash. A small cluster of black locust is located in the northeastern corner of the site. Sub-canopy tree species include eastern red cedar, Norway maple, and black cherry.

Successional Shrubland: Consists of shrubland that occurs on sites that have been cleared or otherwise disturbed. Successional shrubland communities generally have at least 50% shrub cover. This community is located in the central and western portions of the soccer field site. Species indentified in this community include multi-flora rose, tatarian honeysuckle, black raspberry, common buckthorn, and staghorn sumac. Tree species include Norway maple, black cherry, black walnut, and tree-of-heaven.

Successional Old Field: This community consists of a meadow dominated by forbs and grasses that occurs on sites that have been cleared and plowed, and the abandoned. This community is located in the central and western portions of the site, bordered by successional shrubland. Species include orchardgrass, reed canarygrass, goldenrods, common dandelion, wild madder, and common blue-eyed grass. This community is located in the central and western portions of the soccer field site.

Unpaved Road/Path: This community consists of sparsely vegetated road or pathway of gravel, bare soil, or bedrock outcrop maintained by regular trampling or scraping of the land surface. This community is located throughout the central and eastern portion of the soccer field site.

Aquatic Communities

Four small wetlands areas are within the boundaries of the proposed soccer field site. These wetlands are designated as Wetlands A, B, C, and D, as shown on Figure 3.4-2 in Section 3.4, “Wetland Resources.”

Intermittent Stream: Consists of small intermittent or ephemeral streambed in the uppermost segments of stream systems where water flows only during spring or after a heavy rain. This community is located in the southern portion of the site as an ephemeral stream that dissipates in the western part of Wetland B.

Red Maple Hardwood Swamp: Occurs in poorly drained depressions where red maple is the dominate canopy species. This community is located in the northeastern portion of the proposed soccer field site as Wetland A, and the southern portion of the site as part of Wetland B. Species within the red maple hardwood swamp areas of the site include red maple, eastern cottonwood, American elm, and box elder.

Shallow Emergent Marsh: Marsh meadow that occurs on mineral soils or deep muck soils that are predominately saturated and seasonally flooded. This community is located in Wetland B along the southern portions of the site, adjacent to Creek Road. Species include purple loosestrife and cattails.

Shrub Swamp: Inland wetland dominated by tall shrubs that occurs in wet depressions or valleys not associated with lakes. This community is located in the southwestern portion of the site as Wetland C.
and the northwestern portion of the site as Wetland D. Species include red-osier dogwood, and silky dogwood and invasive shrub species such as honeysuckle.  

**Endangered or Threatened Species**

To determine if any federally-listed or state-listed endangered or threatened species occur at the project site, the U.S. Fish and Wildlife Service (USFWS) website of Federally Listed Endangered and Threatened Species and Candidate Species in New York (by County), and the NYS Department of Environmental Conservation’s (NYSDEC’s) Environmental Resource Mapping Program, were reviewed.

The USFWS list identifies federally-listed species according to the counties in which they are documented and may occur. According to this document (see Appendix 9.4), the federally endangered shortnose sturgeon, Indiana bat, and Dwarf wedge mussel, and the federally-threatened bog turtle may occur in Dutchess County. Additionally, Atlantic sturgeon and New England cottontail are two species that may occur within Dutchess County and are candidates for listing under the Federal Endangered Species Act (ESA). The range for Atlantic and shortnose sturgeons are restricted to the Hudson River, and Dwarf wedge mussels are restricted to rivers in Orange, Ulster, and Sullivan Counties, and historically in eastern Dutchess County; therefore, further evaluation of these three species was determined to be unwarranted for this site. The bald eagle is also listed as a species that may occur in Dutchess County. The bald eagle was formerly listed as a federally-threatened species; however, it was delisted from the ESA on August 8, 2007. It still receives protection under the Bald and Golden Eagle Protection Act (BGEPA), and it also receives protection by the NYSDEC as a state-listed threatened species. No “critical habitat” for any of the above-mentioned species has been designated by the USFWS within the site.

The NYSDEC Environmental Resource Mapping Program was also reviewed to obtain information regarding the known occurrences of both federally-listed and state-listed endangered and threatened species. This program identifies the generalized locations of New York State listed endangered, threatened, or rare plants, animals, and significant ecosystems, but does not provide specific locations or identify specific species. The NYSDEC mapping program identified the Site as being located within the vicinity of rare animals and historical or potential records of endangered and threatened plants. The rare animal species was not identified, and the mapping program did not provide the exact location of this species or the historical plant species. Therefore, it is impossible to know if these species has been observed within the site, or if they are only known to occur in the general vicinity of the site. No significant natural communities were identified within or immediately adjacent to the site.

The New York Natural Heritage Program (NYNHP) was contacted in order to gather more precise information regarding endangered or threatened species on or within close proximity to the site. NYNHP responded in a letter dated April 23, 2009 that the state-listed threatened Blanding’s turtle is known to occur at or in the vicinity of the site (see Appendix 9.4). No other endangered/threatened species or significant habitats were identified by the NYNHP as occurring at or in the vicinity of the site. Table 3.3-1

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5 Invasive species are those that are not native to an ecosystem and when introduced are likely to cause environmental harm by replacing the native species as dominant plants.


summarizes the listing status and preferred habitat of the potential federal- and state-listed threatened or endangered species identified by the USFWS and NYNHP as occurring in the vicinity of the proposed soccer field site.

Table 3.3-1: Summary of Regulatory Coordination and Preferred Habitat

<table>
<thead>
<tr>
<th>Species</th>
<th>Federal Status</th>
<th>State Status</th>
<th>Preferred Habitat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indiana Bat</td>
<td>Federally-listed</td>
<td>State-listed Endangered</td>
<td>▪ Wooded areas with at least half-day sun exposure</td>
</tr>
<tr>
<td></td>
<td>Endangered</td>
<td></td>
<td>▪ Exfoliating bark, crevices, dead limbs, or snags</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>▪ Hibernation: Caves or mines with high humidity</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>▪ Foraging: Riparian/floodplain forests, upland forests, open fields, pasture with scattered trees.</td>
</tr>
<tr>
<td>Bog turtle</td>
<td>Federally-listed</td>
<td>State-listed Endangered</td>
<td>▪ Calcareous Fens (i.e. wetlands dominated by herbaceous vegetation.)</td>
</tr>
<tr>
<td></td>
<td>Threatened</td>
<td></td>
<td>▪ Other habitat includes wet meadows, cow pastures, shrub swamps and forested wetlands with emergent wetland openings with exposure to the sun.</td>
</tr>
<tr>
<td>New England Cottontail</td>
<td>Candidate Species for Federal Listing</td>
<td>State-listed Special Concern</td>
<td>▪ Patchy and isolated areas that have been disturbed and are reverting to successional vegetative community such as abandoned agricultural fields or hedgerows of existing fields</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>▪ Edge adjacent to large bodies of water preferred</td>
</tr>
<tr>
<td>Bald Eagle</td>
<td>Delisted</td>
<td>State-listed Threatened</td>
<td>▪ Mature old-growth forested areas</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>▪ Foraging: Habitat edge to large bodies of water</td>
</tr>
<tr>
<td>Blanding’s Turtle</td>
<td>None</td>
<td>State-listed Threatened</td>
<td>▪ Variety of habitat including shrub swamp, marches, shallow ponds, vernal pools, hardwood forest, and old fields</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>▪ Core Habitat: Deep wetlands with shrubby component, little to no inflow/outflow, close proximity to gravelly or sandy soils.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>▪ Nesting: Open non-wooded areas with loose, coarse-textured soils and sparse vegetation.</td>
</tr>
</tbody>
</table>

The habitat assessment evaluated the potential presence of federally- and state-listed endangered and threatened species that may occur in the vicinity of the project site. No endangered or threatened species or candidate species were observed during the site visit. The potential for these species to occur on-site, based on habitat suitability, is discussed below.

**Indiana Bat**

Marginally suitable roosting habitat for Indiana bats is located within the cluster of black locust along the northern property line in the northeastern corner of the proposed soccer field site. These trees have adequate physical characteristics, such as exfoliating bark and crevices, but lack the necessary solar...
exposure for suitable roosting habitat for Indiana bats. No mines or caves are known to occur or were identified onsite, indicating that wintering habitat is not present.

**Bog Turtle**

Calcareous fens or fen-like wetlands were not identified within the site. All of the on-site wetlands lack emergent areas with suitable soils, hydrology, and vegetation. As such, bog turtles are not likely to be present within the onsite wetlands based on lack of suitable habitat.

**New England Cottontail**

Suitable habitat for New England cottontails was identified in the successional shrubland areas along the edge of the field located in the central portions of the soccer field site. It should be noted that New England cottontail critical habitat is not currently regulated under endangered/threatened species legislation by either the USFWS or NYSDEC.

**Bald Eagle**

Suitable habitat for bald eagles was not observed within the vicinity of the site and no direct observations or nesting sites were observed within the surrounding area.

**Blanding’s Turtle**

Core habitat for Blanding’s turtle is not present within the project site as the on-site wetlands generally lack open canopied areas. Open canopied areas that are on the project site have shallow water depths, lack deep organic soil, and do not support vegetation characteristics of core Blanding’s turtle habitat. A recent study of Blanding’s turtle habitat did not identify core habitat on the project site. The closest known core Blanding’s turtle habitat is mapped approximately 400 meters southeast of the soccer field site. Additionally, nesting habitat was lacking at the site and wetlands that could be used as drought refuges were not identified on-site.

Blanding’s turtles may use wetlands that lack characteristics of core and drought refuge habitat as “associated wetlands.” Associated wetlands range in size and typically provide shelter for traveling, a supplemental food supply, and year round habitat for hatchlings and juveniles. Wetland B could potentially be used by migrating Blanding’s turtles as an associated wetland; however, the wetland’s shallow water depth, close proximity to Creek Road, and degraded conditions would likely diminish its use by Blanding’s turtles. Therefore, it is unlikely that Blanding’s turtles use any of the wetlands on the proposed soccer field site.

### 3.3.2 Potential Impacts

For the purpose of assessing potential impacts to wildlife habitats and populations as a result of the proposed project, site disturbances are defined as all alterations to the present conditions of the

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9 Ibid.
proposed dormitory site and the proposed soccer field site. This includes physical disturbances related to construction of structures, grading, paving, ditching and boring for utility services, modifications to drainage patterns, and landscaping. Approximately 8.34 acres of the proposed soccer field site will be disturbed and approximately 5.62 acres of the proposed dormitory site will be disturbed. These disturbances may be temporary or permanent in nature.

**Habitat Reduction**

As with any development, implementation of the proposed project will result in a reduction in the amount of available wildlife habitat onsite. Habitats disturbed on the proposed dormitory site include primarily mowed lawn with minor disturbance to successional shrubland habitat. On the proposed soccer field site, mowed lawn, shrub swamp, southern successional hardwood forest, successional old field, and successional shrubland will be disturbed. Landscaping is proposed in several locations on the dormitory site to provide shade, screening, and decoration, and limited landscaping is proposed on the soccer field site (see Sheets SP-A2 and SP-B2 in Appendix 9.6). The proposed landscaping is not intended to replace lost habitat; nevertheless, efforts will be made to utilize native species as much as possible. A list of potential landscaping species is provided in Section 3.3.3 below.

The proposed project will directly impact vegetation and will also indirectly affect the wildlife species that may utilize the vegetation as habitat. The majority of the habitat that will be impacted consists of previously disturbed vegetation (mowed lawn) and early successional habitats. Habitat removal could result in the temporary displacement of individual animals during the land clearing and construction phase. Land clearing activities would likely cause more mobile species to relocate off-site, while less mobile species would be expected to move to areas on the site not affected by development, such as the eastern portion of the proposed soccer field site, which will remain as open space. Wildlife populations are not expected to experience significant impacts from these habitat disturbances.

**Endangered and Threatened Species**

The habitat assessment of the project site did not note any threatened, endangered, or special concern species on the project site; however, potential Indiana bat, New England cottontail, and Blanding’s turtle habitat was identified.

The cluster of black locust trees in the northeastern portion of the project site only provides marginally suitable habitat for Indiana bats due to the minimal sun exposure these trees receive. This cluster will not be disturbed by construction of the proposed project. Mitigation measures to avoid taking of Indiana bats are discussed below.

It is anticipated that during construction in the western portion of the soccer field site any potential New England cottontails on the site will disperse to other undisturbed suitable habitat located in the center of the site. The suitable habitat in the center of the site will remain undisturbed. Therefore, the proposed project will have minimal impacts on the suitable habitat for New England Cottontails.

The project site does not contain core habitat for Blanding’s turtle. Wetland B could potentially be considered an “associated wetland”, but use of this wetland by Blanding’s turtle is unlikely due to shallow water depth, proximity to Creek Road, and degraded conditions. This wetland will be indirectly impacted by the proposed soccer field through alteration of site hydrological conditions. This indirect
impact is expected to be minimal, as water quality will be protected by implementation of the recommended sediment and erosion control and long-term pollutant control practices identified in the preliminary SWPPP. The wetlands that will be directly impacted by the proposed project, Wetlands C and D, do not contain the hydrological, vegetative, or soil characteristics typically preferred by Blanding’s turtles.

It is reasonable to conclude that no federally-listed or state-listed species are likely to be directly impacted by the proposed activities at the site.

### 3.3.3 Mitigation Measures

Direct and indirect impacts are anticipated as a result of the proposed project. To minimize impacts to habitat and wildlife during construction of the project, the following mitigation measures will be employed:

- Disturbances to existing vegetation and hydrologic corridors between the site and off-site wetlands will be minimized.
- The proposed parking area for the soccer field will be constructed with permeable materials.
- There will be a contiguous corridor of undeveloped land in the eastern portion of the soccer field site.
- The use of fertilizers, pesticides, and herbicides will be minimized throughout the site.
- Direct impacts to Wetland B will be avoided, and indirect impacts to the wetland will be mitigated through implementation of stormwater quantity and quality control measures (see Appendix 9.3).
- Construction and maintenance workers will be educated to look for turtles under construction and maintenance equipment before operating machinery.
- All necessary forest clearing will likely take place between October and March when Indiana bats are hibernating and would not be present at the site.

In addition, native plant species will be used as much as possible in all proposed landscape areas within the project site. Native plant species that may be used are listed below.
### Table 3.3-2: Typical Native Plant Species for Landscaping

<table>
<thead>
<tr>
<th>Deciduous Trees</th>
<th>Coniferous Trees</th>
<th>Shrubs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sugar Maple (Acer saccharum)</td>
<td>White Spruce (Picea glauca)</td>
<td>Red Chokeberry (Aronia arbutifolia)</td>
</tr>
<tr>
<td>American Sweetgum (Liquidambar styraciflua)</td>
<td>White Pine (Pinus strobes)</td>
<td>Spicebush (Lindera benzoin)</td>
</tr>
<tr>
<td>Tulip Tree (Liriodendron tulipifera)</td>
<td></td>
<td>Arrowwood Viburnum (Viburnum dentatum)</td>
</tr>
<tr>
<td>American Sycamore (Platanus occidentalis)</td>
<td></td>
<td>American Cranberrybush Viburnum (Viburnum trilobum)</td>
</tr>
<tr>
<td>White Oak (Quercus alba)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

With implementation of the above mitigation measures, the project’s impacts to vegetation and wildlife will be less than significant and no additional mitigation is necessary.
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3.4 Wetland Resources

This section of the DEIS describes the wetland resources found on the project site; their functions, benefits, and regulation; proposed impacts to those wetlands; and proposed mitigation. Wetland conditions are evaluated based on mapping provided by the National Wetlands Inventory (NWI), the New York State Department of Environmental Conservation (NYSDEC), and onsite field delineations.

3.4.1 Existing Conditions

To determine the presence and extent of any onsite wetlands, a wetland delineation was conducted on the proposed soccer field site on April 24, 2009, in accordance with the U.S. Army Corps of Engineers (ACOE) Wetland Delineation Manual. The Wetland Delineation Report for the soccer field site is provided in Appendix 9.6. A wetland delineation of the proposed dormitory site was not conducted. A preliminary wetland assessment found that there were no areas in this portion of the site that contained any aquatic resources. The site has also been graded and is currently mowed and maintained as the existing soccer field.

Prior to the wetland delineation, existing wetland mapping was reviewed to determine the potential for regulated wetlands on the project site. Figure 3.4-1 identifies streams and mapped NWI wetlands in the vicinity of the property. As shown, there are no NYSDEC-mapped wetlands in the project vicinity, and none of the NWI-mapped wetlands is located within the project site.

During the field investigations, four wetland areas were delineated within the boundaries of the soccer field site. These wetlands are designated as Wetlands A, B, C, and D. Table 3.4-1 provides a summary of the wetlands delineated on the project site and Figure 3.4-2 depicts the location of each. A description of each wetland follows.

<table>
<thead>
<tr>
<th>Wetland</th>
<th>General Location On-Site</th>
<th>Size (acres)</th>
<th>Habitat Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Northeastern</td>
<td>0.03</td>
<td>Red Maple Hardwood Swamp</td>
</tr>
<tr>
<td>B</td>
<td>Southern</td>
<td>0.57</td>
<td>Red Maple Hardwood Swamp</td>
</tr>
<tr>
<td>C</td>
<td>Southwest</td>
<td>0.02</td>
<td>Shrub Swamp</td>
</tr>
<tr>
<td>D</td>
<td>Northwestern</td>
<td>0.03</td>
<td>Shrub Swamp</td>
</tr>
</tbody>
</table>
Note: No NYSDEC wetlands lie within the area shown on this map.
Wetland A: This wetland is approximately 0.03 acres in size and is located in the northeastern portion of the proposed soccer field site. This wetland is a red maple hardwood swamp dominated by red maple, green ash, American elm, nodding wild onion, and Virginia creeper. Wetland A is not considered isolated due to a hydrologic connection to a drainage ditch located adjacent to Creek Road and Cottage Road.

Wetland B: This wetland is approximately 0.57 acres in size and is located in the southern portion of the proposed soccer field site. Wetland B includes red maple hardwood swamp, shallow emergent marsh, and intermittent stream ecological communities. The intermittent stream enters the site from the west via a box culvert and meanders through portions of Wetland B, and exits the site through a second box culvert in the southeastern portion of the site. The stream is approximately 2 to 4 feet wide with a sand-cobble substrate. Wetland B is dominated by eastern cottonwood, American elm, box-elder, red twig dogwood, skunk cabbage, and sensitive fern. Wetland B is not considered isolated due to a hydrologic connection to the drainage ditch located adjacent to Creek Road and Cottage Road. The drainage ditch adjacent to the eastern side of the project site ultimately flows to the Fallkill Creek, then drains to the Hudson River, the nearest traditionally navigable water.

Wetland C: This wetland is approximately 0.02 acres in size and is located in the southwest portion of the site. Wetland C is a scrub-shrub wet depression that is dominated by green ash, buckthorn, tatarian honeysuckle, Alleghany blackberry, and dogwoods. Wetland C appears to be the result of runoff from the adjacent road and parking lot. This area is surrounded by upland soils and scrub-shrub habitat and has no apparent connection to a Water of the US. Therefore, Wetland C is considered isolated.

Wetland D: This wetland is approximately 0.03 acres in size and is located in the northwestern portion of the site. Wetland D is a shrub swamp that is dominated by multiflora rose, tatarian honeysuckle, garlic mustard, and dogwoods. This wetland appears to be isolated. It is surrounded by southern successional hardwood forest to the west, north, and east, and successional old field to the south. This wetland is a poor quality wetland with most of the species consisting of invasive vegetative species. As such, there is no suitable breeding habitat for wildlife species in this wetland.

The Wetland Delineation report was submitted to the ACOE New York district on August 20, 2009 as a request for an Approved Jurisdictional Determination (AJD). A site inspection with representatives from the ACOE was conducted on December 3, 2009. As a result of that site inspection, minor revisions to the delineated wetland boundaries were recommended, and a modified wetland delineation was submitted to the ACOE in December 2009 (see Figure 3.4-2). In a letter dated February 1, 2010, the ACOE concurred that Wetlands C and D are isolated, while Wetlands A and B are regulated by the ACOE under Section 404 of the Clean Water Act. A copy of the AJD is included in Appendix 9.1.

Regulated Wetlands and Waters

Regulations pertaining to and regulatory agencies having jurisdiction over the project’s wetland resources are summarized in Table 3.4-2 below:
Table 3.4-2: Wetland Resources Regulatory Framework

<table>
<thead>
<tr>
<th>Citation</th>
<th>Regulatory Agency</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Regulations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Section 404 of the Clean Water Act</td>
<td>U.S. Army Corps of Engineers (ACOE)</td>
<td>Regulates the discharge of dredged or fill material into Waters of U.S., which includes navigable waters, wetlands, streams, rivers, and vegetated shallows (among others).</td>
</tr>
<tr>
<td>Section 401 of the Clean Water Act</td>
<td>ACOE</td>
<td>Water Quality Certification is required for undertaking activities regulated under Section 404 of the Clean Water Act (i.e. placing fill, or any other activities resulting in a discharge to waters of the United States). Applicants for federal permits require a Water Quality Certification from the NYSDEC indicating that the proposed activity will not violate water quality standards.</td>
</tr>
<tr>
<td>State Regulations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Article 24 of the Environmental Conservation Law</td>
<td>NYSDEC</td>
<td>Protects those wetlands larger than 12.4 acres in size, and certain smaller wetlands of unusual local importance. Also protects a 100-foot regulated adjacent area surrounding those wetlands. Regulates most work in those areas.</td>
</tr>
<tr>
<td>Town Regulations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chapter 116 Aquatic Resources Protection Law</td>
<td>Town of Poughkeepsie</td>
<td>Requires a buffered area for wetlands greater than or equal to one acre in size. Protective buffer ranges in width from 25 ft to 100 ft depending on the size of the wetland. Permit required for most activities in those areas if disturbance will be greater than or equal to 1/10th of an acre.</td>
</tr>
</tbody>
</table>

Due to their hydrologic connection to the Fallkill Creek and the Hudson River, Wetlands A and B would be considered waters of the U.S. and federally regulated by the ACOE under Section 404 of the Clean Water Act. Given their isolated nature, it is anticipated that no permits will be required under Section 404 of the Clean Water Act from the ACOE for the discharge of dredged or fill material into Wetlands C or D. There are no NYSDEC wetlands on the project site or within 100 feet of the project site.

The Town of Poughkeepsie has adopted its own set of regulations for the protection of wetland areas above and beyond the ACOE and NYSDEC regulations. Wetlands of a size greater than or equal to 1/10th of an acre (0.1 acre) are regulated by the Town. Wetlands A, C, and D are smaller than the minimum regulated size, while Wetland B meets the minimum size requirement for regulation by the Town of Poughkeepsie, but does not meet the minimum size that requires a buffer.

### 3.4.2 Potential Impacts

Construction of the proposed soccer field will not result in any direct impacts to any regulated on-site wetlands (Wetlands A and B). Indirect impacts to Wetlands A and B may occur as a result to changes in stormwater runoff due to development of the proposed project. As described in Section 3.2, Stormwater Management, and Appendix 9.3, Preliminary SWPPP, stormwater quantity and quality will be managed through the implementation of volume controls and treatment mechanisms, as required by the NYS Stormwater Management Design Manual. These practices will reduce the potential for urban debris...
(e.g., litter), stormwater pollutants, and sediment from the proposed project to enter the on-site wetlands. Therefore, with implementation of the proposed stormwater management quantity and quality controls, the project’s potential indirect impacts to Wetlands A and B will be minimal.

Wetlands C and D are not regulated by the ACOE, NYSDEC, or the Town of Poughkeepsie and will be removed during grading for the soccer field. A permit is not required for impacts to these wetlands. The removal of Wetlands C and D is not considered a significant impact of the project as the wetlands provide degraded, low quality habitat which is dominated by invasive species.

**Wetland Functions and Values**

This section describes the functions and values of the wetlands on the project site as described in The Highway Methodology Workbook\(^\text{10}\) based on a best professional judgment review. The following provides a detailed description of each of the Highway Methodology categorical characterizations. Tables 3.4-3a through 3.4-3d, *Summary of Wetland Functional Values*, provides a comprehensive overview for each of the four wetlands according to the Highway Methodology.

**Groundwater Recharge/Discharge** - This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area. Wetlands B and C likely provide groundwater recharge/discharge functions. These wetlands are in areas with more permeable soils and were likely formed at an interface with a groundwater discharge. It appears that Wetlands A and D are underlain by a clay layer, which would provide an impervious stratum for groundwater movement.

**Floodflow Alteration (Storage and Desynchronization)** - This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation and the gradual release of surface water. The on-site wetlands retain stormwater flows and Wetland A and B are also connected to waterways. They therefore can reduce the rate and volumes of floodflow and stormwater discharges from this site. Wetlands that perform this function often provide for a reduction in downstream flooding and a desynchronization of floodflows.

**Fish and Shellfish Habitat** - This function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat. Suitable fish and shellfish habitat was not identified in any of the on-site wetlands. Water depths and flows of the on-site wetlands are not sufficient to support any populations of these aquatic species.

**Sediment/Toxicant/Pathogen Retention** – This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas. This is at least one of the primary functions/values of all of the on-site wetlands.

**Nutrient Removal/Retention/Transformation** - This function considers the effectiveness of the wetland as a trap for nutrients in runoff water and the ability of the wetland to process these nutrients into other forms or trophic levels. All of the on-site wetlands provide some value for nutrient removal by function as settling and filtering basins.

---

Production Export (Nutrient) - This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms. Wetlands A and B provide some function for production export. This export might occur more episodically during spring flood events, or following storm events. Production export was not identified as a function of Wetland C and D.

Sediment/Shoreline Stabilization - This function considers the effectiveness of a wetland to stabilize sediment, streambanks, and shorelines against erosion. Wetlands B, C, and D serve to stabilize soils within these areas and lessens the potential for erosion and sedimentation. Wetland A does not provide adequate sediment/shoreline stabilization as this wetland is not located in area or situation that would provide this function.

Wildlife Habitat - This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. All of the on-site wetlands provide some functions for wildlife habitat. Wetland B contains the best quality wildlife habitat as this is the most expansive wetland with the greatest biodiversity; however, it is also located in area susceptible to degradation from stormwater runoff, pollutants, and other impacts associated with urbanization. Wetlands A, C, and D provide marginal quality wildlife habitat.

Recreation - This value considers the suitability of the wetland to provide recreational opportunities for the public. The wetlands on this site provide limited value for recreational uses as the wetlands are not easily accessible, there are no opportunities for consumptive uses (e.g., hunting, fishing, etc.), and the wetlands appear to have been impacted to varying degrees by previous development activities surrounding the site.

Educational/Scientific Value - This value considers the suitability of the wetland as a site for an “outdoor classroom” or an allocation for scientific study or research. The on-site wetland currently have little potential for educational or scientific uses. The wetland communities identified on the site are not considered to be rare or unique by the NYSDEC and there is most likely little potential for any of the on-site wetlands to be considered a potentially valuable area for educational or scientific purposes.

Uniqueness/Heritage - This value considers the effectiveness of the wetland to provide certain special values such as archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. The on-site wetlands provide limited value in this capacity as they are not considered to be rare communities and have been degraded by previous impacts from the surrounding landscape.

Visual Quality/Aesthetics - This value considers the visual and aesthetic quality or usefulness of the wetland. Wetlands on the site do not provide significant value for aesthetic quality as they are not easily visible, have been previously impacted, and are degraded habitats.

Endangered Species Habitat - This value considers the suitability of the wetland to support threatened or endangered species. The site does not support any federally or state-listed endangered or threatened species.
<table>
<thead>
<tr>
<th>Function/Value</th>
<th>Suitability</th>
<th>Rationale (Reference #)</th>
<th>Principal Function / Value</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groundwater Recharge/Discharge</td>
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<td></td>
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<tr>
<td>Floodflow Alteration</td>
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<tr>
<td>Fish and Shellfish Habitat</td>
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<tr>
<td>Sediment/Toxicant Retention</td>
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<td>9,</td>
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<td>Production Export</td>
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<td>Sediment/Shoreline Stabilization</td>
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<td>Wildlife Habitat</td>
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<td>3, 8, 11,</td>
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<td>Wildlife food sources are within this wetland or are nearby.</td>
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<td>Recreation</td>
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<td>Nutrient Removal</td>
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<td>3, 4, 5, 13, 14</td>
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<tr>
<td>Production Export</td>
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<td>1, 11</td>
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</tr>
<tr>
<td>Sediment/Shoreline Stabilization</td>
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<td>Wildlife Habitat</td>
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### Table 3.4-3c: Summary of Wetland C Functions and Values

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<td>Potential sources of excess sediment are in the watershed above the wetland.</td>
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<td>Nutrient Removal</td>
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<td>3, 4</td>
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<td>Potential sources of excess nutrients are present in the watershed above this wetland.</td>
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<td>Recreation</td>
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### Table 3.4-3d: Summary of Wetland D Functions and Values

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<th>Principal Function / Value</th>
<th>Comments</th>
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<tbody>
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<td>Groundwater Recharge/Discharge</td>
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</tr>
<tr>
<td>Floodflow Alteration</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fish and Shellfish Habitat</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Sediment/Toxicant Retention</td>
<td></td>
<td>1, 4</td>
<td></td>
<td>Potential sources of excess sediment are in the watershed above the wetland.</td>
</tr>
<tr>
<td>Nutrient Removal</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production Export</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Sediment/Shoreline Stabilization</td>
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<td>2, 3, 4</td>
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<td>Potential sediment sources are present upslope and upstream.</td>
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<tr>
<td>Wildlife Habitat</td>
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<td>8, 10</td>
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<tr>
<td>Endangered Species Habitat</td>
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</tbody>
</table>

### 3.4.3 Mitigation Measures

The Applicant has avoided and minimized all impacts to regulated wetlands on the site. As previously discussed above, Wetlands A and B will not be directly impacted by the proposed project. Wetlands C and D are not regulated by the ACOE, NYSDEC, or the Town. As such, no permits or compensatory mitigation is required for impacts to these areas.

The Applicant has developed a Preliminary SWPPP, as described in Section 3.2. As previously discussed, any potential indirect impacts from stormwater runoff as a result of the proposed project to Wetlands A and B have been mitigated to the maximum extent practicable by implementation of adequate stormwater controls.
3.5 Transportation

This section summarizes the Traffic Impact Study (TIS) completed for the project, which was prepared in accordance with the standards and guidelines in common use and as developed by the Institute of Transportation Engineers (ITE) and the Highway Capacity Manual (HCM). It includes a description of the proposed project’s location within the local and regional roadway network, identifies existing traffic volumes along study area roadways, and evaluates existing intersection operations in the project vicinity, including accident history. This section also includes an estimate of traffic volumes generated by the proposed project and describes potential impacts to area roadways in intersection operations. Mitigation measures are provided to reduce the significance of potential project-related impacts to the traffic network. The TIS is included as Appendix 9.2 of the DEIS.

3.5.1 Existing Conditions

Existing Roadway Network

The project site is part of Dutchess Community College (DCC), which is located west of NYS Route 9G in the Town of Poughkeepsie, Dutchess County, New York. The DCC campus does not have direct access onto NYS Route 9G, but does access Pendell Road and Cottage Road, both of which have direct access to NYS Route 9G. As illustrated in Figure 3.5-1, both sections of the project site are bound by Creek Road to the east. Cottage Road splits the two properties and defines the southwestern border of the proposed soccer field site. A description of the area roadway system is as follows:

**Cottage Road:** The Town of Poughkeepsie owns and maintains this roadway, which traverses in a general east/west direction, connecting NYS Route 9G to the west and Creek Road to the east. The 2005 AADT (Average Annual Daily Traffic) was 3400 vehicles per day according the NYSDOT Local Highway Traffic Volume Report. Cottage Road is a two lane paved roadway with minimal to no paved shoulders. The posted speed limit is 30 miles per hour (mph). Pedestrian and bicycle facilities are not provided along Cottage Road.

**Creek Road:** The Town of Poughkeepsie owns and maintains Creek Road, which traverses in a general north/south direction connecting NYS Route 9G in the Town of Hyde Park to Salt Point Turnpike in the City of Poughkeepsie. North of Cottage Road, Creek Road becomes Dutchess County Route 100. The 2006 AADT between Cottage Road and Pendell Road was 8800 vehicles per day according the NYSDOT Local Highway Traffic Volume Report. Creek Road is a two lane paved roadway with minimal to no paved shoulders. The Town of Poughkeepsie has a project planned to repave this stretch of Creek Road in the near future and improve shoulder width to better accommodate pedestrians and bicyclists. The posted speed limit is 25 mph in the vicinity of DCC. Although pedestrian/bicycle facilities are currently not provided along Creek Road, two defined pedestrian cross-walks are provided between the Student Parking Lot “E” on the east side of the road and the college campus itself. One cross-walk, in direct proximity to Hudson Hall, is controlled via a pre-timed traffic signal between 7:30 am and 10:30 pm, Monday through Friday. The other “uncontrolled” cross-walk provides direct access to a transit bus stop, student drop-off area and staff/faculty parking lot.
Proposed Dormitory Site
Town of Hyde Park

Proposed Soccer Field Site
Town of Poughkeepsie

Legend:
- Subject Parcels
- Study Area Intersections
- Stop Sign
- Traffic Light

Dutchess Community College
Local Roadway Network and Study Area Intersections
Cottage Road / Creek Road
Town of Poughkeepsie
Dutchess County, New York
NYS Route 9G: New York State owns and maintains this roadway, which travels in a general north/south direction, through Dutchess County. In 2006 NYS Route 9G exhibited an AADT of 11,520 vehicles per day between Cottage Road and Pendell Road. In the vicinity of the project site NYS Route 9G consists of one paved travel lane in each direction. Pedestrian/bicycle facilities are not provided.

Pendell Road: The Town of Poughkeepsie owns and maintains this roadway, which traverses in a general east/west direction, connecting NYS Route 9G to the west and Creek Road to the east. Pendell Road is a two lane paved roadway with minimal to no paved shoulders. The posted speed limit is 30 mph. Pedestrian/bicycle facilities are not provided along Pendell Road.

Study Area Intersections

Four existing intersections were analyzed relative to operating characteristics, including level of service and vehicle delay. Figure 3.5-1 illustrates the location of each intersection. The characteristics described below define the parameters used in the intersection capacity analysis for each location. These intersections were selected after discussions with DCC representatives and reflect intersections utilized by the majority of DCC students and staff.

1. Cottage Road at NYS Route 9G: This four-way signalized intersection is controlled by NYSDOT traffic signal D-34. The northbound NYS Route 9G approach consists of a dedicated left turn lane, one through lane and a shared through/right turn lane. The southbound NYS Route 9G approach consists of a dedicated left turn lane and a shared through/right turn lane. Both NYS Route 9G left turn lanes operate under a permissive/protected operation. The westbound Cottage Road approach consists of a dedicated right turn lane and a shared through/left turn lane. The westbound approach to this intersection serves the Hudson River State Hospital facility and consists of a single exit lane for all movements. There are no Right-Turn-On-Red prohibitions in any directions. There are no pedestrian facilities provided and no public bus stops in the immediate vicinity of this location.

2. Cottage Road at DCC Driveway: This intersection is a three-way “T” intersection with the DCC approach under stop sign control. This intersection consists of Cottage Road in a general east/west direction with the access driveway approaching from the south. All approaches consist of one travel lane at the intersection.

A fourth approach, from the north will be constructed as part of the relocation of the DCC soccer field. This approach will be under stop sign control. This fourth leg will handle traffic associated with the new soccer field. Sidewalks in conformance to ADA requirements, a marked crosswalk, and pedestrian signing will be provided as part of the reconfiguration of this intersection.

3. Cottage Road at Creek Road: This intersection is a three-way “T” intersection with the Cottage Road approach under “Stop” sign control. This intersection consists of Cottage Road approaching from the west, and Creek Road in a north/south direction. All approaches consist of one travel lane at the intersection. The Cottage Road approach, although a wide approach, is not marked for designated turn lanes.

4. Creek Road at Pendell Road/ Student Parking Lot “E”: This four-way intersection is controlled by a Town of Poughkeepsie traffic signal. The northbound Creek Road approach consists of a dedicated
left turn lane and a shared through/right turn lane. The southbound Creek Road approach consists of a shared through/left turn lane, and a dedicated right turn lane. Both the eastbound Pendell Road approach and the westbound Student Parking Lot “E” approach consist of a dedicated left turn lane and a shared through/right turn lane.

Other Roadways and Intersections Reviewed

The pedestrian signal on Creek Road at DCC was also reviewed for operation in the field. This three-color signal with pedestrian indications operates in stop-and-go mode from 7:30 am to 10:30 pm. During other hours of the day it operates in “flash” mode. This is a fixed timed signal providing 35 seconds of green time to Creek Road, followed by 4 seconds of yellow clearance time, followed by 12 seconds of “Walk” time, and then 12 seconds of flashing “Don’t Walk” time as a clearance interval. This timing cycle consistently repeats during the noted times of three-color operation. This signal would be more efficient for vehicles on Creek Road under a pedestrian actuated (pedestrian push button) operation, as traffic would only be stopped when pedestrians push the pedestrian button. However, past experience has indicated that school students, including college students, do not routinely use pedestrian push buttons, many times crossing against traffic whenever they arrive at the crosswalk.

Accident History

To access roadway safety in the vicinity of the project site, the most current accident information available was obtained from the NYSDOT. The latest available three-year accident history is from January 1, 2005 to December 31, 2007 for Creek Road and Cottage Road. For the intersection of NYS Route 9G, the most recent accident history is from February 1, 2006 to January 31, 2009. The accident history is summarized below in Table 3.5-1.

<table>
<thead>
<tr>
<th>Location</th>
<th>Total Accidents</th>
<th>Accidents w/ Injuries</th>
<th>Weather Related</th>
<th>Multi-Vehicle</th>
<th>Single Vehicle</th>
<th>Pedestrian/Bicyclist</th>
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<td>2</td>
<td>-</td>
<td>-</td>
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<td>-</td>
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<tr>
<td>Cottage Road</td>
<td>3</td>
<td>2</td>
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<td>-</td>
<td>-</td>
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</tr>
<tr>
<td>Intersection of Cottage Road and Creek Road</td>
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<td>2</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Creek Road – Between Pendell Road and Cottage Road</td>
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<td>5</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Intersection of Creek Road and Pendell Road</td>
<td>7</td>
<td>4</td>
<td>-</td>
<td>4</td>
<td>3</td>
<td>-</td>
</tr>
</tbody>
</table>

Existing Traffic Volumes

Manual turning movement counts were conducted at each of the study area intersections to determine weekday traffic volumes in the vicinity of the project site. The counts were conducted on weekdays from 7:30 am to 2:30 pm to identify the morning commuter and the mid-day commuter peak hours of traffic.

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11 Accident information obtained from the NYSDOT Safety Information Management System Report through January 31, 2009.
volumes consistent with campus activity, based on based on discussions with DCC. Figure 3.5-2 summarizes the 2009 existing traffic volumes at the study area intersection for the two peak periods analyzed.

3.5.2 Potential Impacts

To assess potential impacts of the proposed project on the local roadway network, the TIS projected traffic volumes to the expected project build year of 2012 for the build and no-build conditions. These 2012 traffic volumes were then incorporated into two interconnected analyses which include a Sight Distance Study and a Intersection Level of Service Analysis.

No-Build Traffic Volumes

No-build traffic takes into account the anticipated traffic volumes on the local roadway system in the proposed build year without the proposed project. Traffic conditions contributing to the 2012 no-build volumes are influenced by two variables, which include traffic volumes associated with general background growth in the study area, and traffic volumes associated with significant projects anticipated to occur before or during 2012.

To project the no-build traffic volumes, a growth rate of 1% per annum was applied to the 2009 existing volumes, based on data for NYS Route 9G as found in the NYSDOT Traffic Volume Report dated June 16, 2009, and discussions with the NYSDOT Region 8 Planning Group.

A review of proposed projects in the Town of Poughkeepsie identified one project adjacent to the proposed DCC project that has the potential to affect the study area intersections. This project, Pendell Commons, located on Pendell Road at NYS Route 9G, proposes to construct five buildings containing 24 senior housing units, 48 workforce housing units, and a community club house. As such, traffic volumes anticipated to be generated by this project were considered in the no-build traffic volume projections. Resulting no-build traffic volumes projected for 2012 are presented in Figure 3.5-3.

Build Traffic Volumes

The proposed project is in response to the needs of the current student population and is not intended to increase the number of students or staff traveling to and from the campus. Accordingly, the project itself will not generate trips; however, DCC has experienced continued growth in student enrollment. To reflect this trend, a conservative 10% growth factor over the 3-year period (from 2009 to 2012) was applied to each of the turn movements directly going into or leaving DCC. The new approach to Cottage Road for the soccer field is not included in the analysis of this intersection for the build condition as it will not contribute traffic during the morning or mid-day peak hours evaluated.

Figure 3.5-4 presents the trips generated by DCC and their assignment to the local roadway network. Build traffic volumes projected for 2012 are illustrated in Figure 3.5-5.
Figure 3.5-2: Existing 2009 Traffic Volumes
Figure 3.5-3: No Build 2012 Traffic Volumes
Figure 3.5-4: DCC Generated 2012 Traffic Volumes
Figure 3.5-5: Build 2012 Traffic Volumes


**Sight Distance Study**

Sight distance evaluations were completed at the DCC existing driveway, the proposed soccer field driveway, and at the crosswalk on Cottage Road. Two types of measurements were taken at each location – the intersection sight distance and the stopping sight distance. The intersection sight distance is the distance that a driver stopped at an intersection from a side road or driveway can see left or right while looking for vehicles traveling along the main road. The stopping sight distance is the distance that a driver traveling along the main road can see a vehicle stopped in the travel lane waiting to make a left hand turn onto a side road or driveway.

The methodology used for the sight distance study is from *A Policy on Geometric Design of Highways and Streets*, a guidance document issued by the American Association of State Highway and Transportation Officials (AASHTO). Each of the sight distance measurements exceed the ASSHTO recommendations (see Table 3.5-2).

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Stopping Sight Distance (feet)</th>
<th>Intersection Sight Distance (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Right Turn from Side Road</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Looking Left</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Left Turn from Side Road</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Looking Left</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Looking Right</td>
</tr>
<tr>
<td>Recommended Distance at 30 mph</td>
<td>200</td>
<td>290</td>
</tr>
<tr>
<td>DCC Access at Cottage Road – West Side</td>
<td>390</td>
<td>550</td>
</tr>
<tr>
<td>Soccer Field Access at Cottage Road</td>
<td>360</td>
<td>360</td>
</tr>
</tbody>
</table>

**Intersection Capacity Analysis**

To identify intersections that may have issues of concern, Level of Service (LOS) is used to describe the average amount of time delay per vehicle at an intersection. LOS A represents the best condition and LOS F represents the worst condition. LOS C is generally used as a design standard while LOS D is acceptable during peak periods. LOS E represents an operation near capacity. The *Highway Capacity Manual* further classifies LOS as follows:

- LOS A – Free flow, Excellent operating conditions
- LOS B – Reasonable free flow, Good operating conditions
- LOS C – Stable flow, Acceptable operating conditions
- LOS D – Approaching unstable flow, acceptable during peak hour
- LOS E – Forces or breakdown flow, Demand is greater than capacity, Operation failure
- LOS F – Failure of all operations
In order to identify a signalized intersection’s existing LOS, the average amount of vehicle delay is computed for each approach to the intersection as well as for the intersection as a whole. For un-signalized intersections, the average vehicle delay is computed for each critical movement to the intersection, which are normally the stop or yield controlled approaches along with the left-turns from the main roadways. Therefore, the LOS criteria (delay per vehicle in seconds) are slightly different for signalized and un-signalized intersections. Table 3.5-3 summarizes the LOS criteria for each.

<table>
<thead>
<tr>
<th>LOS</th>
<th>Signalized Intersections Delay Per Vehicle (seconds)</th>
<th>Un-Signalized Intersections Delay Per Vehicle (seconds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>≤ 10</td>
<td>≤ 10</td>
</tr>
<tr>
<td>B</td>
<td>10 – 20</td>
<td>10 – 15</td>
</tr>
<tr>
<td>C</td>
<td>20 – 35</td>
<td>15 – 25</td>
</tr>
<tr>
<td>D</td>
<td>35 – 55</td>
<td>25 - 35</td>
</tr>
<tr>
<td>E</td>
<td>55 – 80</td>
<td>35 – 50</td>
</tr>
<tr>
<td>F</td>
<td>&gt;80</td>
<td>&gt;50</td>
</tr>
</tbody>
</table>

To assess the LOS at each intersection, traffic volumes of weekday morning and mid-day peak hour periods were considered for the existing 2009, no-build 2012, and build 2012 conditions.

Results of the capacity analysis are provided in Table 3.5-4. In general, the 2012 no-build LOS scenario is synonymous with the 2012 build LOS scenario, with two exceptions during the morning peak hour – the northbound approach of Cottage Road at DCC access, and the northbound approach of Creek Road at Pendell Road/Student Parking Lot “E”. A detailed explanation of the results of the capacity analysis for each intersection follows.

1. **Cottage Road at NYS Route 9G**: The results of the analysis of this signalized, four-way intersection show that an acceptable overall LOS of B will be maintained throughout the no-build and build scenarios. All approaches and movements were found to have a LOS of C or higher.

2. **Cottage Road at DCC Driveway**: The results of the analysis of this existing un-signalized, three-legged intersection show that the critical movement during the morning peak period is LOS A for Cottage Road, and LOS C and LOS D for the stop controlled side roads under the no-build and build scenarios, respectively. This condition is typical of un-signalized intersections during peak periods of main road activity and does not warrant further attention. During the mid-day peak period acceptable LOS are maintained throughout the no-build and build conditions, with a LOS A on Cottage Road and LOS B on the DCC access approach.
### Table 3.5-4: Study Area Intersections and Levels of Service

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Approach</th>
<th>Morning Peak</th>
<th>Mid-Day Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Existing</td>
<td>No Build</td>
</tr>
<tr>
<td>1. NYS Route 9G at Cottage Road Signalized</td>
<td>Overall</td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Eastbound</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>Westbound</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Northbound</td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Southbound</td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>2. Cottage Road at DCC Access Un-Signalized</td>
<td>Eastbound</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>Westbound</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Northbound</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>3. Cottage Road at Creek Road Un-Signalized</td>
<td>Eastbound</td>
<td>F</td>
<td>F</td>
</tr>
<tr>
<td></td>
<td>Northbound</td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Southbound</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>4. Creek Road at Pendell Road/Student Parking Lot “E” Signalized</td>
<td>Overall</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td></td>
<td>Eastbound</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td></td>
<td>Westbound</td>
<td>E</td>
<td>E</td>
</tr>
<tr>
<td></td>
<td>Northbound</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>Southbound</td>
<td>C</td>
<td>C</td>
</tr>
</tbody>
</table>

3. **Cottage Road at Creek Road**: The results of the morning peak period analysis of this un-signalized, three-legged intersection show critical movement LOS consistent with un-signalized intersections during peak periods of main road activity. The “Stop” controlled approach (Cottage Road) displays LOS F during the existing, no-build and build scenarios while Creek Road exhibits LOS A under the existing and LOS B under the no-build and build conditions.

When analyzed with two designated turn lanes on the Cottage Road approach, a better picture of the operation is presented, in that the right turn and left turn movement are analyzed separately. Based upon field observations an estimated 100 feet, or four vehicles, of additional vehicle storage is available for the proposed right turn lane. The revised analysis results are presented in Table 3.5-5 below, which shows acceptable LOS under all conditions.
### Table 3.5-5: Revised LOS for Cottage and Creek Roads

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Approach</th>
<th>Morning Peak</th>
<th>Mid-Day Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Existing</td>
<td>No Build</td>
</tr>
<tr>
<td>3. Cottage Road at Creek Road</td>
<td>Eastbound (2 lanes)</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>Un-Signalized</td>
<td>Northbound</td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Southbound</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

#### 4. Creek Road at Pendell Road/ Student Parking Lot “E”

The results of the analysis of this signalized, four-legged intersection show overall LOS D for both the no-build and build conditions during the morning and mid-day peak periods. Under these evaluation scenarios the east (Pendell Road) and west (Student Parking Lot “E”) approaches present LOS D and LOS E, respectively, for the morning peak period and LOS E for both approaches during the mid-day peak. Associated individual turning movements are also of the order of LOS D and LOS E.

**Signal Optimization Analysis**

In an effort to improve operational conditions at the Creek Road at Pendell Road/ Student Parking Lot “E” intersection, the optimization of timing parameters was undertaken. The results are presented in Table 3.5-6 below compared to the 2012 build conditions. The optimization process results in the reduction in current cycle length from 135 seconds to 90 seconds for the morning and 80 seconds for the mid-day peak periods. Any amendment to these signal-timing parameters is subject to approval of and coordination with the Town of Poughkeepsie and/or the Dutchess County Highway Department.

### Table 3.5-6: LOS for Optimized Signal Timing at Creek Road at Pendell Road/Student Parking Lot “E”

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Approach</th>
<th>Morning Peak</th>
<th>Mid-Day Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2012</td>
<td>Optimized</td>
</tr>
<tr>
<td>4. Creek Road at Pendell Road</td>
<td>Overall</td>
<td>D</td>
<td>C</td>
</tr>
<tr>
<td>Student Parking Lot “E”</td>
<td>Eastbound</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td></td>
<td>Westbound</td>
<td>E</td>
<td>D</td>
</tr>
<tr>
<td></td>
<td>Northbound</td>
<td>D</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>Southbound</td>
<td>C</td>
<td>B</td>
</tr>
</tbody>
</table>

**Student Parking**

Designated student parking is provided in Lot “E” on the east side of Creek Road and in Lot “D” on the south side of Cottage Road immediately west of the existing DCC access driveway. Lot “D” is directly adjacent to the site of the proposed dormitory and is likely to be the preferred parking lot of resident students. The capacities of these parking lots are estimated to be at 1,700 and 1,200 spaces,
respectively. Occupancy of the parking areas was estimated immediately prior to the mid-day peak period by observing the approximate number of available parking spaces in each lot. Based on this observation, Lot “E” was estimated to be at 100% capacity (few to no available parking spaces) and Lot “D” was estimated to be at 75% capacity (approximately 25% of parking spaces were available).

As discussed above, the proposed project will serve the needs of the existing student population and is not intended to increase the number of students or staff traveling to and from campus. While it is possible that the introduction of resident students may decrease the amount of turnover in available parking spaces, the available capacity of Lot D immediately prior to the mid-day peak period was such that sufficient parking spaces should still be available for transient students. Therefore, the proposed project will not significantly affect existing parking availability at the DCC campus.

**3.5.3 Mitigation Measures**

Based on the results of this TIS for the proposed project, the following conclusions and recommendations are presented.

1. The project as planned will not generate any new trips to the local roadway system.

2. The intersection of NYS Route 9G with Cottage Road will operate at good levels of service under the 2012 build condition, and no mitigation is required.

3. The intersection of Cottage Road with DCC driveways will continue to operate at acceptable no-build LOS and queues during the build condition.

4. The intersection of Cottage Road and Creek Road will maintain the no-build LOS and queues throughout the build scenario. It is recommended that pavement markings be installed to designate two turning lanes (left and right) on the Cottage Road approach to formalize the current practice of motorists. This action requires coordination with the Town of Poughkeepsie and/or the Dutchess County Highway Department.

5. The intersection of Creek Road and Pendell Road exhibits the general maintenance of no-build LOS and queues throughout the build scenario. It is recommended that the Town of Poughkeepsie and/or the Dutchess County Highway Department be contacted regarding possible signal timing adjustments at this intersection to facilitate improved efficiency of traffic operations. Recommended timing plans are presented in the TIS (see Appendix 9.2).

6. The sight distance analysis of the intersection of Cottage Road with DCC driveways shows acceptable sight distances for all critical movements.

It is recommended that the new driveway to the relocated soccer field be aligned opposite the existing DCC driveway and be operated under “Stop” control. It is also recommended that a pedestrian crosswalk, sidewalks and pedestrian signing, including advanced signing as warranted, and pavement markings be installed in accordance with the latest edition of the National MUTCD subject to any relevant NYS supplement. The pedestrian crosswalk, sidewalk, and preferred driveway alignment are shown on the site plan for the proposed soccer field (see Sheet SP-B2 in Appendix 9.6).
Based on the traffic analysis undertaken, the proposed project will not have a significant impact on the local roadway system upon implementation of the recommended mitigation measures.
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3.6 **Cultural Resources**

This section identifies any potentially significant historic or pre-contact features on the project site and in the immediate surrounding area. Findings of the cultural resources survey for the project site are described, including the potential for the presence of historically significant buildings, structures, or artifacts.

3.6.1 **Existing Conditions**

The project site is located in the Town of Poughkeepsie within Dutchess County, New York. The project consists of actions in two separate locations: (1) construction of the proposed dormitory building located on the existing soccer field on the Main Campus, and (2) the proposed relocation of the soccer field to a vacant, 25±-acre site at the intersection of Creek Road and Cottage Road.

The site for the proposed dormitory was previously graded for the construction of the existing soccer field. Therefore, this portion of the overall project site is considered to be previously disturbed with little potential for unknown cultural resources to exist. Documentation of prior disturbance was sent to the Historic Preservation Field Services Bureau of the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP), and in a letter dated February 2, 2010, OPRHP issued an opinion that development of the proposed dormitory would have no impact on cultural resources listed in or eligible for listing in the National Register of Historic Places (see Appendix 9.1). Consequently, the remainder of this section of the DEIS focuses on the vacant site at Creek Road/Cottage Road, to which the soccer field is proposed to be relocated.

The Applicant commissioned a Phase IA and IB Archaeological Investigation of the vacant site to identify any significant historic or archaeological sites within the Area of Potential Effect (APE) for the project. The report is included as Appendix 9.5 of the DEIS. The APE is the portion of the project site that includes the footprints of the proposed improvements, as well as any areas subject to ground disturbance during their construction. Since only a portion of the parcel is proposed for development, the APE is considered approximately 12.5 acres comprising roughly the western half of the site (see Figure 3.6-1).

*Phase IA Survey*

The Phase IA assessment for the project site included a literature review of published and unpublished sources of historic and pre-historic information in the files of the OPRHP. These files contain previously reported OPRHP and New York State Museum (NYSM) properties listed or determined eligible for listing on the National Register of Historic Places, as well as previous archaeological surveys. Within one mile of the project site, two archaeological sites, three National Register Eligible (NRE) properties, and eight prior surveys are listed.
Dutchess Community College
Area of Potential Effect
Cottage Road / Creek Road
Town of Poughkeepsie
Dutchess County, New York


Legend:
- Site Boundary
- Area of Potential Effect (APE)

Dutchess County Office:
21 Fox Street, Poughkeepsie, NY 12601
Phone: (845) 454-3900

Capital District Office:
543 Rose Street, Troy, NY 12180
Phone: (518) 273-0055

Glens Falls Office:
100 Glen Street, Glens Falls, NY 12801
Phone: (518) 812-0513

Date: 02/08/2010
Scale: 1:3,600
Project: 10809.00
Figure: 3.6-1
As described and shown in Appendix 9.5, historical landowner and topographic maps dated from 1829 to 1946 were also reviewed to identify historical residential developments in the project area and surrounding region. The maps depict several structures in the vicinity of the project sites; however, only the 1891 map indicates the presence of a structure on the project site (MDS 6, as described in Appendix 9.5). It is thought that this may be an error in mapping another structure that was indicated on all other maps as being on the opposite side of Creek Road from the project site.

The Phase IA survey also included a site visit on February 26, 2009 to assess the physical conditions of the project site and determine site sensitivity for precontact and historic cultural material. No foundations were visible during the site visit.

The results of the Phase IA survey concluded that the majority of the project site is considered to have low to moderate sensitivity for precontact and historic cultural material, except in the vicinity of MDS 6 where there was considered to be a high historic sensitivity. Accordingly, a Phase IB survey utilizing shovel testing at standard intervals (50 feet) was recommended for areas within the APE that were dry and contained less than a 12% slope.

**Phase IB Survey**

A Phase IB archeological field reconnaissance was conducted on the proposed soccer field site from April 7 through April 10, 2009. It consisted of 243 shovel test pits excavated along a grid across the APE.

The Phase IB recovered 124 artifacts. Though general historic field scatters were found across the site, no foundation remains or features were encountered. The only precontact material identified was a single flake. Due to the lack of additional precontact material recovered, the precontact flake is considered a stray find and does not confirm the existence of a precontact site.

No foundation remains, cellar holes, or deposits were identified in association with the vicinity of the structure identified on the 1891 map. Plow zones and various scattered materials from the late 19th to 20th century were found along level portions of the APE with more recent man-made disturbances located along the boarders and central slope. Based on the soil stratigraphy of the shovel tests and the artifacts recovered, the APE appears to have been used as a pasture and for limited farming. Modern disturbances such as piles of road debris and buried utilities are located in the western and southern portions of the APE. No archeological sites were identified during the Phase IB survey.

### 3.6.2 Potential Impacts

As discussed above, the proposed dormitory site was previously disturbed during grading for the existing soccer field. Construction of the dormitory will have no impact on cultural resources.

The Phase IB for the proposed soccer field site did not reveal any historic or precontact sites. Upon completion of the Phase I survey, the OPRHP was contacted to review the information in accordance with Section 14.09 of the New York Parks, Recreation, and Historic Preservation Law. According to a letter dated July 14, 2009, OPRHP has “no concerns” with the proposed soccer field (see Appendix 9.1, “SEQRA Documentation and Correspondence”). Therefore, relocation of the soccer field to the vacant site will have no impact on cultural resources.
3.6.3 Mitigation Measures

The proposed project will not impact historic or pre-contact resources. Therefore, no mitigation measures are necessary.
3.7 Utilities – Water and Wastewater

This section describes the location and condition of existing water and wastewater infrastructure on the project site, and includes a description of existing municipal water capacity. An estimation of water demand and wastewater generation for the proposed student housing facility is provided, including a discussion of available fire flow. Potential impacts to the overall water distribution system and wastewater collection system are discussed, along with the need for an on-site pump station to serve the proposed project.

3.7.1 Existing Conditions

Water Supply

The project site is located within the existing Town-Wide Water Improvement Area operated by the Town of Poughkeepsie Water Department (Water Department). Water is supplied from the Hudson River to the Town of Poughkeepsie Water Treatment Plant. In addition to water from the Hudson River, the Town also maintains three water wells for back-up water supply, which are located on a well field near Wappinger Creek, south of Degarmo Road. The back-up wells have a total capacity of 2.2 million gallons per day (mgd).

The Water Department maintains two major pumping stations with a combined pumping capacity of 5 mgd. The Water Department also maintains and operates five booster stations and two storage tanks with a capacity of 5 million gallons each.

The Town has an existing water supply capacity of 10.3 mgd, with an average daily demand of 5.65 mgd. For a typical system of this size, the peak daily demand is conservatively estimated to be 1.3 times average, or 7.35 mgd. This leaves an excess capacity of 4.65 mgd under normal conditions, and 2.95 mgd under peak daily demand.

Dutchess Community College has an existing campus water supply and distribution system that connects to the Town’s system.

Wastewater

The project site is located within the existing Town of Poughkeepsie Fourth Ward Sewer Improvement District. Just east of the project site an 8-inch sewer collection system traverses Creek Road, Pine Echo Drive, and Corine Drive and ultimately discharges into the Town of Poughkeepsie trunk line at Fallkill Creek. The Town’s trunk line runs along the western side of Fallkill Creek to the City of Poughkeepsie trunk line, which ultimately discharges at the City of Poughkeepsie Wastewater Treatment Plant. The City’s Wastewater Treatment Plant has a permitted capacity of 8.0 mgd.

The sewer study area for the project includes the proposed dormitory site, the Washington Building on the DCC campus, and several residences along Creek Road, Pine Echo Road, and Corine Drive (see Figure 3.7-1). Presently, domestic sewage from this area is conveyed to the 8-inch sewer collection line.
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Existing Wastewater Flows

The total estimated daily wastewater generation rate was determined for each tax parcel within the study area by using Dutchess County Access Parcel Mapping (DCAPM) to determine the number of bedrooms and the 1988 New York State Department of Environmental Conservation (NYSDEC) Design Standards for Wastewater Treatment Works to determine expected hydraulic loading rates. The wastewater generation rate for Washington Hall was based on a previous study (see Appendix 9.8 for more information). It should be noted that DCAPM identified 31 residences located along Pine Echo Drive and Corine Drive as having private sewer. These residences have been excluded from the sanitary sewer analysis.

Infiltration was also considered in analyzing the sanitary system. Infiltration, due to cracks and poor joints, was assumed at 10-percent of the average daily flow for existing piping.

Peak flows were based upon the Great Lakes Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers “Recommended Standards for Wastewater Facilities” (also known as Ten-State Standards) and a 24-hour time period. Residential and college facilities were assumed to peak simultaneous to be conservative for the purposes of this study.

The existing daily flow being conveyed to the Town of Poughkeepsie trunk line from the contributing residences and existing college building is 17,150 gpd. Based upon an average daily flow of 17,150 gpd the projected peak flow rate would be 51 gpm or 0.11 cfs.

Existing Capacity Analysis

An analysis of the existing 8-inch diameter cast iron sewer collection system was performed based upon the peak flow determined above. Based on that analysis and using the minimum pipe slope of 0.40% within the study area, the existing sanitary sewer lines within the study area have a capacity of 350 gpm.

Three critical sections of the Town’s trunk sewer line along Fallkill Creek were reviewed in a previously analysis prepared by The Chazen Companies in 2000 (refer to Appendix 9.8 for a summary of the study). The lowest capacity of the three critical sections was in an 18-inch reinforced pipe with a 0.01% slope, which has an existing flow capacity of 1.05 cubic feet per second (cfs) or 471.2 gpm.

3.7.2 Potential Impacts

Water Supply

An engineer’s report details the results of an investigation and analysis of water supply conducted for the project and is included as Appendix 9.7. The report describes the project’s anticipated water demand, proposed water distribution system, and fire flow protection requirements. These elements are summarized below.

The proposed project will contain 465 dormitory beds, as well as a 30-seat café. The proposed soccer field will not require any potable water. Table 3.7-1 presents the estimated future water demand for the proposed project, derived from NYSDEC Design Standards for Wastewater Treatment Works (1988),
equating wastewater generation to water demand. Average daily water supply demands are calculated based on the per unit demand of the proposed dormitory and café uses. A 20% reduction is applied to the daily demand to account for low-flow fixtures that will be installed. As shown in Table 3.7-1, the calculated average daily water demand is 28,740 gpd. Peak daily flow rates are indicative of the system’s ability to react to peak demands. For the proposed project, peak flow rates are estimated to be approximately twice the average daily flow rate, or 57,480 gpd. This also represents the peak fire flow rate.

<table>
<thead>
<tr>
<th>Description</th>
<th>Units</th>
<th>Average Daily Demand per Unit</th>
<th>Calculated Average Daily Demand</th>
<th>20% Reduction Water Saving</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dormitory</td>
<td>465 Beds</td>
<td>75</td>
<td>34,875</td>
<td>27,900</td>
</tr>
<tr>
<td>1,500 sq ft Cafe</td>
<td>30 Seats</td>
<td>35</td>
<td>1,050</td>
<td>840</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>35,925</td>
<td>28,740</td>
</tr>
<tr>
<td>Peak Daily Demand (2x average)</td>
<td></td>
<td></td>
<td>57,480</td>
<td></td>
</tr>
</tbody>
</table>

Notes:
1. Hydraulic loading rates from Table 3 of the NYSDEC Design Standards for Wastewater Treatment Works 1988 unless otherwise noted.
2. Projected water demand assumes full occupancy of Dormitory and building facilities.
3. NYSDEC allows for up to 20% reduction in flows for installations equipped with certified water-saving plumbing fixtures.

Water will be supplied to the new dormitory through an extension of the existing campus water distribution system. Approximately 450 linear feet of a new 8-inch water main will be installed from the eastern side of the proposed dormitory southward along the existing sidewalk to an existing 8-inch campus water main. The proposed improvements to the on-site water supply and distribution system are illustrated on Sheet SP-A2, “Area ‘A’ Site, Utility, Landscape, & Lighting Plan,” provided in Appendix 9.6.

The proposed water main will be designed in conformance with the requirements and guidelines on the New York State Department of Health and the Recommended Standards for Water Works (Ten State Standards). The system will be designed to conform to the following pressure requirements provided by the Town of Poughkeepsie Water Department:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Pressure (psi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Working Pressure</td>
<td>35</td>
</tr>
<tr>
<td>Minimum pressure under all flow conditions</td>
<td>20</td>
</tr>
<tr>
<td>Maximum Pressure</td>
<td>100</td>
</tr>
</tbody>
</table>

The proposed dormitory will consume approximately 28,740 gpd, with an estimated peak demand of 57,480 gpd. As described above, the Town’s water supply and distribution system has an excess capacity of 4.65 mgd under normal conditions and 2.95 mgd under peak daily demand. Upon completion of project construction, there will continue to be an excess capacity of approximately 4.61 mgd under normal conditions and 2.88 mgd under peak demand.
The Town’s water treatment system has been designed to treat the entire water supply capacity of 10.3 mgd. Since the proposed dormitory will not require an increase in the existing water supply capacity, the project will have no anticipated impact on the existing water treatment system. The Town’s existing water supply and distribution system has adequate capacity to serve the site and no significant impacts are expected.

**Fire Flows**

For the proposed development, the peak fire flow rate is estimated to be approximately twice the average daily flow rate, or 57,480 gpd (40 gallons per minute). Hydrant testing was performed by SimplexGrinnel Company, on an existing hydrant located adjacent to the proposed connection for the new water main (identified as Hydrant #14). Results of the flow test indicate that the available flow rate for this hydrant is approximately 1,384 gallons per minute (gpm), with a residual pressure of 82 psi. Based on this result, it appears that the existing water distribution system will be adequate to serve the proposed dormitory. The data and results of the hydrant testing are provided within Appendix 9.7.

**Wastewater**

An engineer’s report details the results of an investigation and analysis of the existing and proposed sanitary sewer system and is included as Appendix 9.8. This report describes the projects proposed sanitary sewer system improvements and evaluates potential impacts to existing municipal infrastructure. Results of the analysis are summarized below.

**Anticipated Project Wastewater Flows**

As described in the Water Supply section above, the estimated average daily water demand for the proposed dormitory project is 28,740 gpd, including the 20% reduction for use of water-saving fixtures. It is anticipated that for this project, wastewater generation will equal water demand. Since the proposed soccer field will not have any sanitary services, no wastewater will be generated from that part of the project.

**Sewer Conveyance Analysis**

The combined daily wastewater flow of the proposed project and existing contribution area is 45,890 gpd. With the assumption that the existing residences and proposed dormitory peak simultaneously, the combined peak flow rate is 129 gpm. The existing collection system provides a maximum capacity of 350 gpd. As the maximum capacity is well in excess of the potential peak flow rate, the existing system is adequate to serve the proposed project.

The addition of the proposed student housing to existing flows will result in an overall peak flow of 404 gpm in the Town’s trunk line. The critical section of the trunk line evaluated has an existing capacity of 471.2 gpm. The available capacity is in excess of the estimated peak flow.
Proposed Sanitary Facilities

Due to the topographic differences between the proposed student housing and point of sanitary discharge to the existing collection system in the vicinity of Washington Hall, a pump station and associated force main will be required. The new on-site pump station will be located northwest of the dormitory building. Approximately 1,250 feet of new force main will transverse the site, just south of the dormitory building, to connect to the existing sewer collection pipe located adjacent to Creek Road. A back-up generator will provide emergency power to the pump station. All proposed on-site sanitary sewer facilities will be owned and operated by Dutchess Community College.

All proposed on-site piping and structures, including the pump station will be designed in accordance with the parameters set forth in Ten-State Standards, the 1988 New York State Department of Environmental Conservation (NYSDEC) “Design Standards for Wastewater Treatment”, and Dutchess County Department of Health (DCDOH) regulations. These facilities will be designed as engineering plans are advanced.

3.7.3 Mitigation Measures

The Town’s existing water supply and distribution system has sufficient excess capacity of 2.95 mgd - 4.65 mgd to supply the proposed dormitory, which has an estimated demand of 26,740 – 57,480 gpd. Results of the hydrant flow test indicate that there is adequate capacity and pressure to supply the necessary flow rates. Finally, the existing sanitary sewer infrastructure has sufficient capacity to accept the additional sanitary sewer flows from the proposed dormitory. Therefore, the project will not result in significant impacts to the existing water supply and distribution or wastewater systems, and no mitigation measures are necessary.
3.8 Community Services

3.8.1 Existing Conditions

Police

The DCC Office of Safety and Security provides 24-hour security on the Main Campus through on-campus patrols. Escorts are also available to assist students in getting to parked vehicles. The Office of Safety and Security also monitors all on-campus electronic surveillance. All members of the DCC community are required to have and carry with them personal identification cards, and all parked vehicles are required to have a parking permit displayed in the window.

Police protection services to DCC are provided by the Town of Poughkeepsie Police Department, located at 19 Tucker Drive. The Department employs 87 sworn officers and 12 civilians. The overall mission of the Department is to provide twenty-four hour police coverage to both the residents of the Town of Poughkeepsie and to those people who are traveling throughout the jurisdiction. The Department covers the entire 29-square-mile area of the Town of Poughkeepsie, home to approximately 45,000 people.

The Uniformed Patrol Division is one of the fundamental elements of the Department that helps achieve its stated mission. The patrol division is comprised of four lieutenants, five sergeants, 52 uniformed police officers (including crime scene technicians) and five civilian dispatchers. The division is broken into three squads working 6:45 AM – 3:15 PM and 2:45PM – 11:15 PM. There is also a permanent night shift divided into three platoons working from 10:45PM – 7:15AM, providing round the clock services to the town’s five patrol zones. The individual shifts are commanded by a lieutenant, while the daily operations are run by the sergeant so as to provide a direct line of supervision for uniform officers.

The patrol division maintains a fleet of patrol cars, canine vehicles and four wheel SUV’s, all of which have the latest equipment and technology. Each vehicle is equipped with police radios, MRD (Municipal Radio Dispatch) and a MDT (Mobile Data Terminal) laptop computer. The vehicles are also equipped with mobile cellular phones, radar units, video cameras, crime scene kits and AED’s (Automatic External Defibrillator).

According to statistics published by campus safety and law enforcement, DCC has an excellent record of safety.12

Fire and Emergency Medical Services

The project site is located within the 4.5-square-mile Fairview Fire District (FFD). The FFD operates one fire station located at 258 Violet Avenue in the Town of Poughkeepsie. The FFD covers the northern part of the Town of Poughkeepsie and the southern part of the Town of Hyde Park. The service area includes several large institutions and non-profit facilities, including Marist College, Vassar College, St. Francis Hospital, and the Hudson River Psychiatric Center. The FFD also has mutual aid agreements with the City

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of Poughkeepsie Fire Department, Arlington Fire District, Roosevelt Fire District, Hyde Park Fire District, and the Pleasant Valley Fire District.

According to the FFD's website, there are currently 16 paid firemen, including 12 firefighters/emergency medical technicians (EMTs) and four lieutenants, and 12 volunteers. Career staff is on duty every day operating in four-man groups, working 10-hour day shifts and 14-hour night shifts. In addition to the career staff, the district employs a full-time Career Chief and a part-time secretary.

The FFD operates two fire engines, a ladder truck, two ambulances (for Basic Life Support), a command vehicle, and two staff vehicles. Advanced Life Support services are provided by Alamo EMS, a not-for-profit EMS agency.

From January 1, 2010 through February 28, 2010, the FFD responded to a total of 301 incidents, nearly 40% of which were at tax exempt properties. Seven of the calls were at DCC, or approximately 2.3% of all calls so far in 2010. A review of incident reports from 2007 and 2008 indicate that the FFD responded to 49 and 50 calls for assistance, respectively, at DCC in those years. The majority of calls to DCC related to EMS incidents: there were 37 EMS calls out of 50 total calls in 2007 and 35 EMS calls out of 49 total calls in 2008. In 2007, FFD responded to DCC for one fire, which was a cooking fire that was confined to a container. In 2008, FFD again responded to one fire, this time on a light pole.

3.8.2 Potential Impacts

The proposed dormitory building will provide a total of 456 beds in configurations of single and double rooms. Rooms will be arranged in suites, with a maximum of five students per suite. Since the project will introduce a residential component to what has otherwise been a commuter campus, it is possible that the number of calls for emergency services will increase over current conditions.

The proposed soccer field is not expected to generate any increase in demand for services, as there is currently a soccer field on the DCC campus and there already exists the potential for there to be emergencies associated with that use. As with the dormitory, the proposed soccer field would be under the regular patrol of DCC on-campus security.

Police

The dormitory will have a number of security and safety features to protect resident students. The building has one main point of access to a secure lobby with a manned security station for check-in. Each wing of the building will have a separate access control, and each student suite will have a secure access. The method of control has not yet been determined, but may consist of a key card, key fob, or some other type of electronic control. Nighttime lighting will also be provided around the building for security purposes. The existing on-campus security detail will also continue to patrol the campus, including the dormitory, on a 24-hour-a-day basis. The introduction of a resident student population to DCC may increase the number of calls for police protection, but with the presence of on-campus security and the security features proposed within the building, the increase is not likely to be significant.

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Fire and Emergency Medical Services

With the introduction of a new structure on campus, as well as resident students who will be partaking in everyday household activities, the project could potentially increase the number of calls for fire protection services at DCC. In addition, with a student presence on campus 24 hours a day, it is reasonable to anticipate an increase in the number of calls for medical emergencies. Nevertheless, given that the number of resident students compared to the total DCC population will be small (465 resident students compared to over 8,000 total students), the increase in calls for service is likely to be small.

For fire control and suppression, the dormitory will be fitted with fire alarms on every floor and sprinklers throughout the building. The sprinklers are important in the case of a fire for protection of life and property in the minutes prior to the fire department arriving on the scene.

Although the proposed project’s impact on demand for fire and emergency medical services is anticipated to be small, the FFD is currently in a situation where there are not enough staff to handle multiple calls at one time. According to the FFD website, there are four firefighters per shift who staff two engines, one ladder truck, and two ambulances. For calls of a fire or possible fire, an engine and the ladder truck respond, with two firefighters on each apparatus. Thus, all four staff firefighters are occupied during a fire call, leaving no one available for other fire calls or ambulance calls. If two firefighters are out on an ambulance call, or all firefighters are out on two separate ambulance calls (which is common, according to the website), there is a shortage of staff remaining to go out on a fire call. In any of these cases, mutual aid must be called in to handle other calls while the staff firefighters are out.¹⁵ Consequently, responding to calls for service to DCC – as well as to anywhere else in the FFD service area – could result in a shortage of staff at FFD to respond to other calls and would require assistance from outside fire departments and EMS companies.

In order to reduce the number of times that the FFD needs to respond to calls at DCC, DCC is pursuing an alternative arrangement for emergency medical services, described below in Section 3.8.3. Since the majority of calls coming in to the FFD for service to DCC (>70%) involve medical emergencies and ambulance transport, rather than fire emergencies, an alternative arrangement for ambulance transport that does not require the response of the FFD is an appropriate way to reduce the burden of the project on the FFD.

In addition, DCC and the FFD previously entered into an agreement in March 2008 in which DCC would provide annual payments to the FFD for a set period of time in order to mitigate any potentially adverse impacts on the FFD resulting from the addition of dormitories on campus. A copy of the signed agreement is included in Appendix 9.1. The agreement was for a three-year period beginning on the date of completion of the dormitory, which was anticipated at that time to be August 1, 2009. The agreement would have therefore extended through July 31, 2012. The agreement also included a provision to allow permanent employees and active volunteers of the FFD to take a combined total of 15 college credits per academic semester, excluding summer sessions, without paying tuition. The agreement has not been implemented, given that the dormitory project is still in the review process.

3.8.3 Mitigation Measures

The proposed project is likely to have some impact on demand for emergency services, and thus may affect the ability of emergency service providers to respond appropriately. Given that the number of resident students will be small compared to the population of DCC as a whole, the impact is not likely to be significant. Nevertheless, DCC is considering options to mitigate its impact as much as possible.

To reduce the burden placed by DCC and the proposed project on emergency responders from the Fairview Fire District, DCC has entered into a draft contract with Transcare, in which Transcare would respond directly to all 911 calls for medical emergencies generated by DCC. Transcare would thus provide all Basic Life Support and Advanced Life Support transportation to and from DCC, 24 hours a day, 365 days a year. This will eliminate the need for the FFD to respond to DCC for medical emergencies, which would significantly reduce the number of calls generated by DCC to which the FFD must respond. The health insurance that is made available to students at DCC includes coverage for ambulance transports in emergency situations. Invoices for student transport would be sent to DCC for submittal to the student’s insurance policy. In cases of emergency transport for DCC staff members and other personnel, Transcare would submit invoices directly to the user for payment.

The details of this agreement have not yet been finalized, but it is DCC’s intention to secure an alternative arrangement for the ambulance transport of its students, staff, and other personnel.

Furthermore, representatives of DCC are open to future discussions with the FFD to renegotiate a mitigation agreement based on the estimated project-generated demand for services. Any such future mitigation agreement will take into consideration other mitigation measures as applicable, including the emergency transport agreement noted above.
4.0 ADVERSE UNAVOIDABLE SIGNIFICANT ENVIRONMENTAL IMPACTS IF PROJECT IS IMPLEMENTED

The proposed project will have some adverse impacts on the environment that cannot be avoided, even with implementation of recommended mitigation measures. Some of these are short-term impacts that will occur during construction, which generally arise from the alteration of existing site conditions. However, there are other impacts that would be permanent or long term impacts. Most of these are an unavoidable consequence of the development process and are not necessarily significant. Adverse impacts that cannot be avoided if the project is implemented are identified below:

- Disturbance of approximately 13.98± acres of the site for grading, excavation, construction activities, paving, and landscaping (short-term impact);
- Increase in the amount of impervious surface area and alteration of stormwater runoff patterns (long-term impact);
- Generation of additional traffic during the construction phase. Trucks, machine transport vehicles, supply vehicles, and work crew vehicles would add to the present traffic in the area (short-term impact);
- Increase in demand for emergency services, including police protection, fire protection, and emergency medical services (long-term impact);
- Increase in dust particles generated at the site during construction (short-term impact);
- Increase in lighting generated at the site (long-term impact); and
- Increase in energy usage, specifically electricity and heating fuels (long-term impact).
5.0 ALTERNATIVES

5.1 No-Build Alternative

The “No Build” alternative is required to be addressed under 6 NYCRR 617.9(b)(5). The “No Build” alternative is the scenario that would occur if the dormitory were not undertaken and the existing soccer field were not relocated to the Creek Road/Cottage Road site. The Main Campus of DCC would remain as is, with the soccer field and track in their existing condition. DCC would not introduce onsite student housing and would remain a commuter campus. This alternative would not have any environmental impact, but it also would not meet the Applicant’s objectives.

5.2 Alternative Dormitory Location

This alternative qualitatively evaluates the development of the proposed dormitory on the Creek Road/Cottage Road site. Under this alternative, the existing soccer field would not need to be relocated. Some of the potential impacts of this alternative would be less than those of the preferred alternative, such as less overall construction, and no disturbance to the Main Campus from construction activities.

However, even with less overall construction, this alternative would have greater impact in some instances than the preferred alternative. For example, locating the dormitory on the Creek Road/Cottage Road site would require more grading and earth moving due to the varied topography across the site, whereas the topography of the preferred location is more suitable to the placement of the proposed building. Locating the dormitory on the Cottage Road site would also put it in closer proximity to adjacent residences on Creek Road, which could create the potential for noise and land use conflicts. The duration of construction activities on the site would also be longer than that required for development of the soccer field in the preferred alternative, which would result in more disturbance to adjacent residences in terms of noise, construction-related traffic, and the generation of dust. Lastly, this alternative would involve greater impact to wetlands, including potential direct impacts to ACOE-regulated Wetlands A and B and Town-regulated Wetland B.

This alternative location is also a less desirable location for the dormitory than the preferred location for a number of reasons. One of the main reasons why this location was rejected is the availability of utilities. The site across Cottage Road is not within the Town’s sewer district; therefore, a sewer district extension would be required to serve the proposed project. The preferred site on the Main Campus is already within the sewer district and only requires connection to the Town’s existing wastewater collection system.

The location of the dormitory across the street from the Main Campus would also require students to regularly cross Cottage Road to get to and from classes and other activities on campus, which would increase the potential for safety conflicts between pedestrians and vehicles and opportunities for accidents. Security and monitoring would be more difficult on this site because it is separate from the Main Campus and would not benefit from the high level of activity that occurs there throughout the day.

Compared to the placement of the dormitory on the Main Campus, having the dormitory at a more distant location from the center of activity on campus would have less benefit on enhancing the sense of community and student life as the preferred location. In addition, the proximity to academic facilities in...
the preferred location would make it more convenient for students and may make the option of living in an on-campus dormitory more appealing.

5.3 Dormitory Only Alternative

This alternative would involve development of the dormitory only, with no relocation of the soccer field to the Creek Road/Cottage Road site. In this alternative, that site would remain undeveloped in its current condition.

The potential impacts of this alternative would be similar to those of the preferred alternative, except that the magnitude of the impacts would be less due to the fact that less development would occur. In particular, this alternative would require less grading and earth moving than the preferred alternative and would consequently generate less construction-related traffic, noise, and dust.

A negative aspect of this alternative is that without relocation of the soccer field, DCC would lose this recreational and athletic facility.

5.4 Reduced Scale Alternative

The Final Scoping Document required an evaluation of an alternative that reduces the number of beds in the student dormitory, if such an alternative was necessary to mitigate potential significant adverse impacts of the proposed project. The proposed project does not have any significant adverse impacts that cannot be mitigated by measures recommended within the environmental impact evaluation described in this DEIS. Therefore, there is no need to evaluate a reduced scale alternative.
6.0 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

The proposed project, like any development, will cause the short-term and long-term commitment of environmental resources. The construction of buildings, roads, and utilities, and the human, mechanical, and industrial activities associated with construction alter the landscape and the pre-development environment.

On the project site, areas of existing undeveloped land will be committed to the development of buildings, roads, parking areas, and landscaped areas. Existing soils will be altered and replaced with paving, and some wildlife habitat as it presently exists will be lost during development.

Resources consumed during construction of the development, including fossil fuels, electricity, and construction materials, will be committed for the life of the project. Non-renewable fossil fuels will be irretrievably lost through the use of gasoline and diesel powered construction equipment during construction. Commitments will also be made for the use of renewable and/or recyclable resources such as construction and building materials including timber, copper, ductile iron, concrete, and glass. The need for construction jobs will be an irretrievable commitment of labor resources.

As described in detail in Section 3.0, the long-term demand for water, energy, and other resources at the site will increase when the proposed project is complete. However, the amounts of these resources would be relatively small in relation to regional consumption, and sufficient quantities of water and other resources are anticipated to be available locally and in the region to accommodate for the demand.
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7.0 GROWTH INDUCING IMPACTS

The term “growth-inducing” generally refers to the potential for a proposed project to trigger additional development in areas outside the project site that otherwise would not occur without the proposed project. The theory is that new development is often likely to occur in or near developed areas, to take advantage of existing infrastructure and residential or economic activity.

Interest in student housing at community colleges is rising. In response to this trend, an increasing number of community colleges are building on-campus student housing to take advantage of the various benefits associated with student housing. According to a study of 55 community colleges nationwide, some of the top reasons community colleges are choosing to add student housing are to create a living and learning environment for students, to reduce student commute times, and to develop a general recruitment tool, especially for athletes and international students. In 2006, 13 of the 30 community colleges in the State University of New York (SUNY) system provided a student housing option. Of the 17 that did not provide housing at that time, six colleges were actively considering adding student housing, including DCC.

The proposed project responds to this trend and is intended to serve the existing student population. It is not intended to increase student enrollment beyond normal enrollment trends. The project also reflects the changing demographic of community college students. Economic and other considerations are influencing students’ choice of colleges, whereby some students who may have directly attended a four-year school are now choosing a community college with the intention of transferring to a four-year institution later. Some students are also traveling further to attend community colleges and are selecting schools based on the program they offer, not necessarily just the school’s location.

The proposed dormitory building will be located on the Main Campus of DCC. The project will connect to existing utilities within the campus and will utilize the existing adjacent parking lot to serve the needs of resident students. It does not require the extension of any water or sewer districts; it is served by existing roadways; and it is located within a community that has an established and broad variety of goods and services available to its residents and visitors.

DCC is one of three colleges located within the Town of Poughkeepsie. Vassar College currently provides on-campus housing to approximately 2,400 students and Marist College provides on-campus housing for approximately 3,050 students. Therefore, the addition of dormitory rooms at DCC does not represent a new type of land use within the Town of Poughkeepsie and is consistent with the types of land uses on other area college campuses.

The proposed dormitory project has little potential to trigger additional development or growth in the Town of Poughkeepsie, as most student necessities (i.e. food, class supplies, etc.) will be purchased from

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17 Ibid.

18 Vassar College Website, Accessed on February 19, 2010: [http://www.vassar.edu/about/index.html](http://www.vassar.edu/about/index.html).

19 Marist College Website, Accessed on February 19, 2010: [http://www.marist.edu/about/glance.html](http://www.marist.edu/about/glance.html).
existing campus stores. Students are also likely to patronize local commercial and retail establishments that cater to the current student population demographic within the Town, like restaurants, retail stores, and entertainment businesses. Patronage of such businesses may increase due to the increase in resident student population, which can be considered a benefit for the local economy; however, the increase in demand is not expected to be great enough to induce new businesses into the area. No mitigation measures are necessary.
8.0 EFFECTS ON THE USE AND CONSERVATION OF ENERGY RESOURCES

As with all development projects, energy will be consumed during construction and will continue to be consumed upon completion and use of the proposed project. During construction, energy will be used to power equipment and construction vehicles. Once construction is completed and the building is occupied, energy will be required for heating, air conditions, lighting, and the use of appliances permitted within the dormitory. It is expected that all systems will be modern, energy efficient units.

In an effort to manage energy use efficiently and reduce the green house gas emissions (i.e., the carbon footprint) of the proposed dormitory, many sustainable design elements are being considered for incorporation into the project design. The goal of incorporating these elements is to build a ‘green’ and LEED certifiable facility. Achievable sustainable components may include the following:

- Incorporation of a photovoltaic solar energy system to reduce electrical consumption or use of solar water heating;
- Installation of a geothermal heating and cooling system;
- Provision of a partially earth-sheltered building to increase insulating values and reduce environmental exposures;
- Use of recycled materials, local manufacturers and materials, and building materials with lower volatile organic compounds;
- Building construction waste management and facility user waste management;
- Design of windows to maximize the input of heat-creating light while minimizing the loss of heat through glass and maximizing the natural day-lighting of interior spaces;
- Providing levels of building insulation and envelope assembly design in excess of the NYS Energy Conservation Code to reduce heating and cooling loads;
- Incorporation of a solar reflective roof, to reduce cooling loads on the building;
- Provision of interior lighting controls to minimize unnecessary electrical usage;
- Provision of low-flow or zero-water plumbing fixtures (waterless urinals) where possible and incorporating native and drought-resistant landscaping to minimize water consumption; and
- Provision of a rainwater capture system for on-site landscaping and usage;

This sustainable design approach, which will incorporate many of the elements listed above, will serve to make the building more economical in the long-run, providing lower life-cycle costs, and resulting in a reduction of impacts to the community and the environment as a whole.