CHAPTER ONE:
Description of Proposed Action
CHAPTER ONE: DESCRIPTION OF PROPOSED ACTION

1.1 Introduction (General Description of Proposed Project)

The West Campus Residential Initiative (WCRI) proposes to create five residence halls, known as Houses, on west campus. The Houses will be an integration of new building construction with the existing Gothic halls which will remain. (The Gothic halls refer to Boldt Hall, North Baker Hall, South Baker Hall, Baker Tower, Founders Hall, Mennen Hall, Lyon Hall, the War Memorial, and McFaddin Hall, which were constructed in the gothic style. This report will refer to these residence halls collectively as the Gothics). Approximately 325 to 375 students will live in each House. The total number of students living on west campus will remain at approximately 1800, essentially the same as pre-Residential Initiative levels. Each house will have a dedicated dining facility and a variety of program spaces. A community recreation center (CRC) will also be constructed to serve west campus residents. The existing six Class Halls, Noyes Center, and approximately 195 parking spaces will be removed from west campus. The site will be completely rehabilitated and will include construction of new driveways and emergency access lanes, walkways, and landscaping. Accessibility for the disabled will be greatly improved.

Replacement parking for the approximately 195 spaces is proposed to be constructed one block away at the intersection of University Avenue and Lake Street. Landscaping, lighting, storm drainage, and pedestrian walkways to access the parking lot will also be constructed at the University Avenue site. The existing historic carriage path that serves as a pedestrian linkage through the block, will be reconstructed.

The project schedule calls for construction to begin on the relocated parking, House 1 and the north wing of House 2 in the spring of 2003. Completion of all phases of the project is expected to take seven years. Full build out of the project should be complete in 2010.

1.2 Project Purpose, Need, and Benefit

Cornell is a residential university. Since the university’s earliest days, the majority of students have come to Cornell from far outside the Ithaca area and have had to find housing locally, rather than commuting to and from their family homes every day. Andrew D. White, Cornell’s first president, set forth in his 1866 Plan of Organization the expectation that faculty members would become well acquainted with students outside of class. They did so in several of the campus’s earliest buildings. Residence on campus, although not required of anyone, has been a vital part of the undergraduate experience at Cornell ever since.

Undergraduate residence has also been one of the most studied issues on campus. Since 1966, there have been at least 23 reports dealing with campus housing. Most recently, President Hunter Rawlings in his October, 1997 Report on Residential Housing at Cornell University presented an action plan that calls for housing all first-year students on north campus and reserving campus housing in west campus and Collegetown for sophomores, juniors and seniors. The report states:

“We will improve the living and learning environment on west campus by making it architecturally and programmatically attractive to upperclass students. We will make significant architectural improvements to reduce density, as recommended by the Residential Communities Steering Committee (RCSC), and to respond to the findings of the student demand survey conducted by the Randolph Group*.... Changes will include increasing the number of single rooms, ensuring
more privacy and quiet study for residents … and increasing the availability of common living areas. We will provide quality programming designed to meet the interests and needs of upperclass students, such as programs based on the residential college model used effectively at a number of other universities.”

*The Randolph Group completed a comprehensive survey of Cornell students living on and off campus in Spring of 1997. The purpose of the study was to assess demand for on-campus housing among undergraduates and to identify the predominant factors that influence their housing decisions.

The conversion of north campus to a first-year student campus left west campus, by design, as the upperclass student campus. The existing west campus consists of the Gothics and six residence halls known as Class Halls. Although attractive for temporary housing, the class halls were not intended to be permanent when they were constructed after World War II. They received a major renovation in the 1980’s but their configuration is unsuited to upperclassmen since they are predominantly small double rooms (162sf) with hall baths shared by 22 students – not the kind of space that would meet most upperclass students’ needs or preferences.

The relocation of upperclass students to west campus provides an opportunity to establish an option of residential colleges or “Houses”, an idea long discussed at Cornell and an exciting new option for Cornell students that will compliment the changes made for first-year students.

These new living and learning Houses will offer a rich variety of intellectual programs that support the educational mission of the University. Leadership in the Houses will be provided by faculty members, creating a seamless continuum between formal and informal learning. Many of Cornell’s peer institutions have offered the residential college or House system for decades with great success. The West Campus Residential Initiative presents an opportunity for Cornell to remain competitive and attract the best students by offering this enhanced undergraduate experience in a large research institution.

1.3 Proposed Location, Setting and Zoning

The proposed residential hall project site is located in the west campus area of the Cornell University campus. It is bordered by University Avenue to the north, West Avenue to the east, Campus Road to the south, and Stewart Avenue to the west. The replacement parking site is located one block west of the residential hall site and is bordered by University Avenue to the north, Von Cram, 660 Stewart Avenue and the Kahin Center to the east, Llenroc to the south, and University Avenue to the west. Both sites are located within the City of Ithaca.

Figure 1.3.A, City Location Map, illustrates the City of Ithaca and surrounding area. The proposed project locations are noted. Figure 1.3.B Site Location Map, shows a more detailed map of the two site locations on campus. Figure 1.3.C, Existing Conditions: West Campus and University Avenue illustrates existing conditions on the project and adjacent sites.

The entire west campus block is zoned U-1 (university). Most of the University Avenue site is zoned U-1. The exception to this is the southern most Cornell owned parcel on this block which is zoned R-1B (residential). The proposed uses are allowed under the existing zoning regulations. Figure 1.3.D Existing Zoning illustrates existing zoning.
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Figure 1.3.A: City Location Map
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Figure 1.3.B: Site Location Map

WC  West Campus Site

SP  University Avenue Surface Parking Site
Figure 1.3.C: Existing Conditions
West Campus & University Avenue
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Figure 1.3.D:
Existing Zoning
West Campus & University Avenue
1.4 Program

The proposed House system is based on the belief that the needs of upperclass students differ from those of first-year students. Unlike first-year students, where personal growth and development issues predominate, upperclass students, now grounded in the university community, are ready to benefit from being drawn more fully into the intellectual community of the university. A major goal of the House system is to integrate residential, academic, and recreational life.

The House system, as developed by the West Campus Program Planning Group, is seen as a distinct housing option, but one among several that will be available for upperclass students. Cornell assumes that many students will continue to opt to live in the thriving fraternity and sorority system or off-campus. Those who wish to live in traditional residence halls can choose between Cascadilla Hall and Sheldon Court. In addition, program and co-operative housing will continue to be available. The House system, therefore, need not meet the needs of all students, but is shaped to support the specific vision of a learning community of faculty, students, and staff. Here, students can learn from each other. Students will come to know faculty outside of the classroom and learn from them informally, and faculty will, in turn, learn from students. Early in the development of the university, Ezra Cornell and A.D. White borrowed from the Oxford-Cambridge model of residential colleges when they established Morrill Hall with classrooms as well as residential quarters for faculty and students, assuming a seamless continuum between formal and informal learning and mentoring. This initiative revives these concepts.

Programmatically, this upperclass housing option will complement the new first-year community on north campus which opened in fall, 2001. Architecturally, living accommodations on west campus will include suite-style room arrangements, in-House dining, and common rooms to encourage social and academic interactions within the House. In architectural terms this means that buildings will combine residential and common spaces in such a way as to build community among the members and support the social program and community activities that would integrate intellectual and residential life.

Leadership in the Houses will be provided by faculty members, by professional staff, by graduate students, and by the undergraduate residents themselves. Transforming the residential environment on west campus to a House system requires construction of five new Houses, and construction of a Community Recreation Center (CRC).

Each House will have about 360 student beds and a dedicated dining facility. In-House dining is viewed as essential to building a community where informal interaction between faculty and students is encouraged. Apartments will be provided for the House professors, House assistant dean, five or six graduate resident fellows, and one guest suite for visiting faculty. A library/reading room, computer room, seminar room, and common room will be provided in each house to support informal study and activities as well as provide venues for scheduled programs. In addition, each house will have its own service desk and mail boxes. It is in common spaces such as these that casual interaction among students, faculty, staff and graduate resident fellows is expected to take place on an unstructured basis. Students will also be encouraged to use these spaces creatively for their own extracurricular activities such as performances, dance, films, study sessions, etc.

The Community Recreation Center (CRC) is a building with an indoor gymnasium, fitness center, multi-purpose room (aerobics/performance), a convenience store and a snack bar (to replace the similar facilities in Noyes Center), and program support spaces such as staff offices. It is ex-
pected that the Community Recreation Center will be the social and recreational hub of west campus drawing students out of the somewhat inward-directed Houses and serving as the primary vehicle that links the Houses to one another and to students in nearby Greek houses and Collegetown residences. While the House emphasis is on intellectual community, the Community Recreation Center will be a destination for late night dining, active recreation, and services such as photocopying, dry cleaning drop-off, ATMs and in general a place where they may run into Cornellians who live elsewhere.

A more detailed space program statement is presented in Tables 1.4.A and 1.4.B at the end of the Chapter.

1.5 Comprehensive Plan

1.5.1 West Campus Site Plan

The design of the west campus plan is grounded in an analysis of the site and its context. The proposed site plan is a westward-oriented extension of the Libe slope “front lawn.” The focus on the westward orientation of the site and its hillside typology is an effective strategy for the development of features, such as pedestrian pathways and relationships to existing buildings that are unique to west campus. Looking to the east are primarily campus views across Libe slope; to the west are regional views of townscape, Cayuga Lake and West Hill. By giving equal consideration to the spaces between buildings as to the buildings themselves, east-west views and pathways through the site can be opened up, forging local and regional connections, both visually and physically. Figure 1.5.A West Campus Proposed Site Plan, illustrates the overall plan including building locations, paths, parking, and landscape spaces. Figure 1.5.B is a photograph of a model of the proposed site plan without the CRC with Libe slope shown at the top of the page. Figure 1.5.C is an aerial view photograph of the same model.

The site analysis process led to the identification of three primary features, from which concepts guiding the approach to site layout and landscape design were developed. The three features are:

- building orientation
- landscape typology, and
- pedestrian circulation.

Building Orientation:
The west campus site drops off approximately sixty feet from east to west along the path of travel from campus to city. An east-west building orientation, perpendicular to the orientation of the Class Halls, would use this dramatic topography to better advantage. This orientation would maximize solar exposure of outdoor spaces during the afternoon when student use is most likely to be highest. Therefore, buildings are oriented with the long axis running east-west, perpendicular to the grain of the site topography, to maximize western views from spaces both on the site and within each building. This building orientation maximizes the amount of daylight admitted to open-ended courtyards which form house greens and west campus lawns. The orientation also allows for maximizing the building program while utilizing the slope of the site to minimize the impact of building massing.

The Community Recreation Center is positioned at the south end of West Avenue on the last
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Figure 1.5.A:
Proposed Site Plan
West Campus
1. DESCRIPTION OF THE PROPOSED ACTION

Figures 1.5.B & 1.5.C: Model Photographs
West Campus
available building site bordering Libe Slope. This location fully supports the community aspect of the facility, as it is well situated in relation to the five new Houses, the existing fraternities, Willard Straight Hall, and surrounding student residences.

Landscape Typology:
Two distinct types of landscapes comprise the open spaces developed in support of the west campus program: House greens and west campus lawns. Each House has a House green, an outdoor space directly adjacent to the house entry and primary indoor common spaces. The House green is defined by, but not fully enclosed by, the House buildings. The west campus lawns include two primary landscapes belonging to the larger west campus community – House members, fraternity members, non-resident students, and residents of nearby neighborhoods. These campus landscapes are oriented along two primary view corridors. First, a west sloping lawn restores distant views across the Cayuga Lake Inlet Valley from the War Memorial and second, the terraces of the Baker complex extend toward the southwest. While the House greens are terraced to accommodate outdoor programming, the west campus lawns beyond the Baker and War Memorial terraces are restored to the natural topography that is an extension of Libe Slope.

The main lawn will be landscaped with canopy trees to reinforce the vistas framed by the new buildings and enhance the sense of depth of the views across the west campus. The House greens will be developed as leveled or gently sloping lawns with canopy and flowering understory trees at the edges. Groundcover planting beds with low shrubs and flowering understory trees will be used to provide privacy for residential spaces adjacent to public spaces where needed. Evergreen vegetation, trees and shrubs will be used for screening service areas and in areas where sun exposure is limited. The House greens are in scale with existing landscapes on west campus and consistent in scale with historical models of house commons and greens.

The restoration and management of the landscape of the west campus will be an ongoing endeavor through all construction phases. An assessment of the conditions of the existing vegetation on the west campus reveals that a number of large canopy trees show signs of decline. These trees are generally located along roadways and sidewalks or in areas with shallow depth to bedrock soils. In addition, the west campus development will require the installation of new site utilities that will result in the removal of existing vegetation, much of which is associated with buildings that will be replaced by the west campus plan. The landscape design for the west campus takes into account these circumstances and includes the protection of existing trees and the replacement, where appropriate, of declining trees and trees impacted by construction activities. Small trees, where feasible, will be relocated to other areas of the campus prior to construction. The areas not impacted by construction, such as the volunteer vegetation along Stewart Avenue, will be managed by removing invasive non-native vegetation and reintroducing native plant species to restore a multilayered woodland edge. Figure 1.5.D Proposed Landscape Plan illustrates the proposed landscape concept.

Pedestrian Circulation:
A pedestrian circulation network of multiple pathways through the site defines the location and topographic siting of each house. A primary pathway traverses the site from the northwest to the southeast, linking the intersection of Stewart and University avenues with the corner of West Avenue and Campus Road. The primary entry to each house, and the west campus lawns are directly accessed from this pathway. In addition to providing clearly defined site entries at locations of heavy pedestrian activity, this pathway traverses the site at a maximum slope of 1:20 (5% gradient), making it fully navigable by persons in wheelchairs and placing the primary entry
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Figure 1.5.D: Proposed Landscape Plan
West Campus

- Lawn
- No Mow Lawn
- Meadow
- Planting Beds
- Existing Vegetation
- Proposed Vegetation
and common spaces of each house on an accessible route. The individual Houses are sited alternately to the east and west of the path, so that corresponding views along the path open alternately to the west and east. The interrelationships among topography, buildings and pathways afford a rich and varied pedestrian experience, and are linked to existing paths through the Gothics and the adjacent fraternities to the south.

1.5.2 Architectural Design

The architectural design of the new Houses is a direct outgrowth of the site analysis process and the landscape design. The approach to the design of architecture and landscape is seamless and interrelated. The architectural principles guiding building massing, program arrangement, and the approach to architectural context and scale follow directly from this overall process.

The east-west oriented linear buildings, primarily accommodating the residential program and ranging from three to seven stories above grade, follow the slope of the hillside as it falls to the west. House dining and common spaces will be accommodated by a transparent structure that bridges between the residential wings. By placing dining and common spaces along the main site path, the spaces of highest occupancy and activity, as well as greatest architectural transparency, are directly adjacent to the primary site circulation route. Figure 1.5.E is an enlarged site plan of Phase 1 and illustrates the relationships.

The dining/commons spaces and the House green are the primary community spaces for the House. The residential wings define the edges and angle toward the dining/common spaces and the adjacent house green as the center of each house. The higher building masses in the east-west direction and the low north-south dining halls, together with the narrowing of spaces between buildings to the east and the opening up of spaces to the west, acknowledge the westward campus orientation. Views from buildings and outdoor spaces along the eastern interior of the site are directed to the west, over the low roofs of the dining halls.

The residential wings will be clad in masonry, primarily brick, in a language that is compatible with, but does not mimic, the immediate Gothic context. Due to the requirements of twenty-first century regulatory and technological standards, it would not be possible to construct new buildings with the same dimensions and massing as the early twentieth century Baker Hall and War Memorial structures. Modern standards in life safety, accessibility, and building infrastructure by necessity increase the area required for the basic program. However, the language of the Gothic structures can be utilized to mediate the larger volumes necessary to meet modern requirements. The ends of the new buildings, particularly where adjacent to the existing, are modulated to defer to the scale of the Gothics. The bends and offsets in the long building wings, while framing views out from the site, also serve to conceal the overall building massing, presenting fragmentary, picturesque views of buildings within the site. Figure 1.5.F: West Campus, Conceptual Elevations illustrates exterior fenestration, building materials, and height in relation to the adjacent Boldt Tower.
INSERT 11x17 GROUND LEVEL PLAN
KTA -- BLACK AND WHITE

Figure 1.5.E:
Ground Level Plan
Phase One
1. DESCRIPTION OF THE PROPOSED ACTION

Figure 1.5.F:
West Campus
Conceptual Elevations

House 1: Conceptual South Elevation

House 2: Conceptual North Elevation
1.5.3 University Avenue Surface Parking

Construction of the WCRI will result in the relocation of approximately 195 parking spaces off-site. The university evaluated a number of potential locations for replacement parking. Section 4.2.1, Alternative Locations to the University Avenue Surface Parking, describes the alternatives considered. Criteria were established for evaluating alternative locations to ensure that the location would successfully serve the intended purpose, that is, provide parking for the same number of students and staff currently parking on west campus. The site selection criteria is summarized below.

- The site needs to be large enough to accommodate the required number of spaces. The number of spaces provided should meet parking demands so as to minimize parking pressure on residential streets, but not be so great that it encourages additional students and staff to bring vehicles to campus. Because the WCRI will not significantly change the west campus student and staff population, direct replacement of parking spaces to be removed from west campus without increasing the existing parking supply is considered an appropriate balance.
- The site needs to be located within an approximately five minute walk from west campus. If located further away, many students and staff won’t use it and will search for parking closer to the site.
- Safety is an important consideration in site selection. The site must be located in a well traveled area with sufficient nighttime light. Surface parking has the perception of being safer than underground or other parking structures.
- Environmental impacts, including impacts to historic resources, must be minimized. Historic resources are abundant in the west campus area and the surrounding city and are a consideration on almost every site.
- The site development costs must be reasonable to the overall project costs.

The University Avenue site, bounded by University Avenue to the west, University Avenue to the north, Von Cramm, 660 Stewart, and the Kahin Center to the east, and Llenroc to the south, best meets the site selection criteria and is the proposed location for replacement parking.

Replacement parking for west campus parking spaces to be eliminated is proposed to be located one block west on University Avenue. A new access drive is proposed to be located approximately 300 feet west of Stewart Avenue (just west of the existing Von Cramm driveway). The surface parking is sited on a plateau area parallel to the contours to minimize cut and fill on the site. The parking lot is laid out with a slight curvature in order to minimize the apparent size of the lot from any one location, and to create opportunities for informal landscaping around the perimeter. Two double loaded parking bays are proposed with a landscape island in the center. The landscape island will be a sloped bank that will create a grade separation between the upper and lower parking bays. The grade separation between the terraces will range from about five to ten feet, depending on the location. The grade separation between the terraces also minimizes the visibility of the parking from any one location. In general, the upper terrace will not be visible from University Avenue to the west, and the lower terrace will not be visible from the buildings located to the east of the lot. Figure 1.5.G Proposed Plan University Avenue Parking illustrates the layout of the lot, and Figure 1.5.H Proposed Section University Avenue Parking illustrates the grade relationships between the parking terraces and the street. Figure 1.5.J shows the proposed grading plan.
The site was formerly the estate of the Treman family (see section 2.4 Historic Resources for a detailed description of the properties). Two of the original three Treman houses remain. They are 660 Stewart and the Kahin Center. The third house burned and was replaced by the existing Von Cramm Cooperative. The carriage drive for the houses still exists and is used as a pedestrian linkage between University Avenue and Stewart Avenue. Reconstruction of the carriage drive as a lighted walkway is proposed. Sidewalks will be constructed that link the parking lot to the sidewalk along University Avenue to the north and to the reconstructed carriage drive.

Existing vegetation is preserved around the perimeter of the lot and will be supplemented with new plantings in order to maintain a visual buffer. Informal plantings are proposed in the lawn to the east to be consistent with the existing landscape character. Existing vegetation to remain along the south edge of the lot will block views of the lot from the important historic resource, Llenroc. The landscape island in the center of the lot will be too steep to support trees. It will be planted with hardy ground cover shrubs. The parking lot will be lighted using sharp cut-off fixtures that will be located so as to avoid light trespass.
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Figure 1.5.G: Proposed Plan
University Avenue Parking

CORNELL Property
Non-Cornell Property
Building
Proposed New Sidewalk
Existing Vegetation To Be Preserved
Proposed Vegetation
Existing Tree of Special Value

Approximate Total Number of Parking Spaces: 195
Figure 1.5.H: Proposed Section
University Avenue Parking
1. DESCRIPTION OF THE PROPOSED ACTION

Figure 1.5.J:
Proposed Grading Plan
University Avenue Parking

INSERT 11x17
UA GRADING PLAN HERE
IN BLACK AND WHITE
1.5.4 CRC

Siting for the Community Recreation Center is proposed at the southeast corner of the site, along West Avenue. An architect has not been selected for the design of the building, however, Cornell has developed a set of criteria to guide design development.

- The size and location of the site suggests the CRC building be limited to 35,000-40,000 gross square feet, to ensure the scale of the CRC is compatible with adjacent buildings. The footprint should be sized appropriately to allow open spaces around the CRC.
- The design of the CRC should respect the orientation of the nearby fraternities whose front facades face the site. The project must complement the residential scale of the fraternity houses.
- It is important that the design of the building responds in a deferential way to the adjacent existing Gothics.
- The height of the facility is to be limited so as not to exceed the eaves height on McFadden Hall. A considerable portion of the structure may need to be below grade. The only exception to this might be a small tower element.
- The space around the buildings is to be carefully landscaped and planned so as to create a positive environment for the adjacent structures and the relationship to existing campus fabric.
- Materials selected for the facility should be brick and/or stone to complement and blend with the existing Gothic structures, the proposed new residential units, and the adjacent fraternity houses.
- The building should be designed to frame and enhance views to and from the main campus as opposed to creating a visual obstruction. Significant views include:
  - Views of Libe Slope and Arts Quad buildings from Campus Road.
  - Looking east from the two fraternity houses adjacent to the CRC site.
  - Views of the CRC building and site from Libe Slope.
- Servicing access should similarly be designed to have minimal physical and visual impact on adjacent buildings and their occupants.
- The developing plans should utilize the historic design considerations to minimize impact to historic resources.

1.5.5 Proposed Sustainable Site Design

The program for the design of the site work, residence halls, and community center building includes sustainable design initiatives. A goal of the initiatives is to reduce the impact on the environment of construction, operation, and maintenance of each component of the project. In November of 2001, the university conducted a workshop to discuss the application of the Leadership in Energy and Environmental Design (LEED) Rating System to the WCRI project, and to establish LEED goals for the team. The basis for the workshop was the LEED Rating System, Version 2.0, dated June, 2001. The outcome of the meeting was the establishment of goals in each area of the LEEDS rating system. An overall goal of the university is to achieve a project that is eligible for LEEDS certification. It is uncertain at this time if certification is achievable, but the university will continue to develop plans for the project guided by the LEEDS rating system.
Some of the measures that will be implemented or are being explored include the following:

- Fluorescent lighting and natural lighting.
- Insulation levels exceeding building code requirements
- Assisted natural ventilation (ceiling fans, operable windows, mechanical exhaust)
- Heat recovery in building mechanical systems
- Prohibit smoking
- Energy conservation education for residents
- Building materials from sustainable sources
- Regionally manufactured building materials
- Flow-limiting showerheads, toilets, and faucets
- Recycling and composting programs

See section 3.2 Demolition and Recycling of Materials for a discussion on recycling during the demolition phase.

1.5.6 Site Utilities

The proposed housing program will require substantial relocation of existing utilities. With the exception of limited Verizon phone cabling and several NYSEG gas services, the utilities to be impacted are owned and operated by Cornell University. Temporary connections to provide uninterrupted service to the Gothic halls and fraternities will be incorporated in the design of each building phase. The general scope of utility planning and construction is summarized below.

**Steam:**
Campus steam will continue as the primary source for heating. The recent completion of a new 10-inch steam line from central campus to west campus has the capacity needed to supply the new facilities.

**Chilled Water:**
Air-conditioning will use the university’s chilled water system. A single connection to the high pressure chilled water supply on University Avenue will extend to House 1 and be converted to campus chilled water through heat exchangers. Primary chilled water piping will be extended from House 1 to the remaining buildings.

**Electric Distribution:**
Cornell purchases electricity from NYSEG at the University-owned Maple Avenue 115kV Substation. All new buildings on west campus will be connected to the campus 13.2kV electric distribution system utilizing underground conduit duct banks. The Gothics will remain on the existing 2.4kV system and the transformer feeding the fraternities will be replaced. An emergency/standby system consisting of two generators will be included in the electrical system design.

**Natural Gas:**
Gas service will be extended to the new buildings from existing NYSEG mains surrounding west campus. Gas-fired equipment will be used primarily in kitchen and laundry facilities.

**Potable Water and Fire Flow:**
The source of potable water is the Cornell-owned filtration plant on Fall Creek. The west campus distribution system is connected to the university’s ground tank grid through an 8-inch main
originating at the Johnson Art Museum and a 6-inch main in the vicinity of Willard Straight Hall. Static pressure in the west campus system is as high as 140 psi. A new 16-inch main installed down Library Slope and across the north end of the site connecting to House 1 will increase available fire flows and residual pressure. Successive building phases will replace all of the existing small diameter mains in the campus core with a large diameter supply main looped back to West Avenue. If deemed necessary an auxiliary booster pump and dedicated fire water supply loop will be incorporated in the water system design.

Sanitary Sewer:
Current domestic waste from west campus is conveyed by gravity through the City of Ithaca collection system to the Ithaca Area Wastewater Treatment facility. Since population on west campus will remain essentially the same, wastewater loading is not expected to increase and there should be no impact to the collection or treatment works from the new buildings. Existing mains are largely clay tile, the majority of which will be replaced with new PVC pipe. A connection to the city-owned 18-inch main on University Avenue is the discharge point for most of the new buildings. Two other existing connections on Stewart Avenue will continue to be utilized to a lesser extent. Grease traps for each of the new dining halls will be installed as required components of the plumbing design to satisfy pre-treatment regulations.

Storm Sewer:
See section 2.1 for a detailed description of stormwater systems.

Telecommunications:
Telecommunications connections will be linked into the existing university system.

1.6 Facility Operations

Staffing
Operation of the five Houses and the Community Recreation Center will require approximately 23.5 new Full Time Equivalent (FTE) employees and about 30 part-time student employees. Employees currently working in Jansen’s Dining in Noyes Community Center will move to the House dining facilities. There will be a loss of 1.5 FTE’s within the Community Development function. Following is a summary of new employment positions.

- 6.9 full-time equivalent (FTE) facilities staff for building maintenance and care
- 11.5 (FTE) food-service staff for food preparation and service, dishwashing, cleaning, accounting, and supervision
- 1 (FTE) for house administrative support, and service desk/mail room supervision
- 4 (FTE) for oversight of the Community Recreation Center

Loading Docks and Service Areas
Each of the proposed buildings will have a loading and service area for deliveries, recycling and trash pick up, and service calls.

Fire and Emergency Service Support
All the buildings will be protected with smoke detection systems and sprinklers. Access routes to the buildings and other aspects of fire safety are being determined in conjunction with the Ithaca Fire Department and Cornell University’s Environmental Health and Safety group. All the
buildings will be protected with smoke detection systems and sprinklers. Access routes to the buildings described above under Proposed Site Circulation and other aspects of fire safety are being determined in conjunction with the Ithaca Fire Department and Cornell University's Environmental Health and Safety group.

“Blue light” emergency phones will be located within the project area, at locations to be determined in conjunction with Cornell Police. Other emergency phones will be located inside the main entrance to each of the new buildings.
## Table 1.4.A: WCRI HOUSE PROGRAM SQUARE FOOT SUMMARY

(* for new construction of a 360 bed house)

<table>
<thead>
<tr>
<th>Description</th>
<th>Appr. sf/space</th>
<th>Total area</th>
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<tbody>
<tr>
<td><strong>Living Accommodations</strong> (varies per House)</td>
<td></td>
<td></td>
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<tr>
<td>Undergraduate Student Suites (72 suites x 5 students each = 360 students total)</td>
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<td></td>
</tr>
<tr>
<td>Living Room (1 per suite = 72)</td>
<td>150</td>
<td>10,800</td>
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<tr>
<td>Bathrooms (1 per suite = 72)</td>
<td>80</td>
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<td>Doubles (1 per suite = 72)</td>
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<tr>
<td>Singles (3 per suite = 216)</td>
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<td>23,760</td>
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<td><strong>Graduate Resident Fellows (6 total - 1 tutor for each cluster (12 suites or 60 students)</strong></td>
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<td></td>
</tr>
<tr>
<td>Graduate Resident Fellows Apartment (6)</td>
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<td>3,000</td>
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<td><strong>House Professor (1)</strong></td>
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<td></td>
</tr>
<tr>
<td>House Professor's 3-Bedroom Apartment (1)</td>
<td>1,800</td>
<td>1,800</td>
</tr>
<tr>
<td><strong>House Assistant Dean (1)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>House Assistant Dean's 2-Bedroom Apartment (1)</td>
<td>1,200</td>
<td>1,200</td>
</tr>
<tr>
<td>Guest's 1-Bedroom Suite (1)</td>
<td>400</td>
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</tr>
<tr>
<td><strong>Cluster Amenity Spaces</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kitchenette (4)</td>
<td>80</td>
<td>320</td>
</tr>
<tr>
<td><strong>Administration</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>House Professor's Office</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>House Assistant Dean's Office</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>Administrative Assistant's Office</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td>Reception Desk/Mail Room/Lobby</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>Faculty/Program Offices (3)</td>
<td>120</td>
<td>360</td>
</tr>
<tr>
<td><strong>House Amenities Spaces</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conference Room</td>
<td>300</td>
<td>300</td>
</tr>
<tr>
<td>Library/Reading Room</td>
<td>800</td>
<td>800</td>
</tr>
<tr>
<td>Computer Room</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>Seminar Room</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>Common Room</td>
<td>2,500</td>
<td>2,500</td>
</tr>
<tr>
<td>TV Lounges (1)</td>
<td>400</td>
<td>400</td>
</tr>
<tr>
<td>Music Practice Rooms (1)</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td><strong>Support Spaces</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laundry/Vending Room</td>
<td>650</td>
<td>650</td>
</tr>
<tr>
<td>Recycling/Trash Rooms (3)</td>
<td>100</td>
<td>300</td>
</tr>
<tr>
<td>Public Toilets</td>
<td>300</td>
<td>300</td>
</tr>
<tr>
<td>House Facilities Break Room</td>
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<td>100</td>
</tr>
<tr>
<td>Bike Storage</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>Custodial Storage</td>
<td>400</td>
<td>400</td>
</tr>
<tr>
<td>Custodial Closet (9)</td>
<td>40</td>
<td>360</td>
</tr>
<tr>
<td>General Storage</td>
<td>800</td>
<td>800</td>
</tr>
<tr>
<td><strong>Dining and Dining Support Spaces</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dining Room (254 seats)</td>
<td>3,800</td>
<td>3,800</td>
</tr>
<tr>
<td>24/7 Pantry</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>Servery</td>
<td>1,200</td>
<td>1,200</td>
</tr>
<tr>
<td>Preparation Kitchen</td>
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<td>800</td>
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<tr>
<td>Warewash</td>
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<td>200</td>
</tr>
<tr>
<td>Chef/Manager's Office</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>Dining Employee Locker Room (2)</td>
<td>120</td>
<td>240</td>
</tr>
<tr>
<td>Dining Waste and Recycling Storage</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>Loading Dock - Staging Area</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>Loading Dock - Truck Area (not enclosed)</td>
<td>325</td>
<td>325</td>
</tr>
</tbody>
</table>
Table 1.4.B: COMMUNITY RECREATION CENTER SQUARE FOOT SUMMARY

<table>
<thead>
<tr>
<th>Area Description</th>
<th>Approximate sf/space</th>
<th>total area</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recreation and Performance Spaces and Support</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gymnasium</td>
<td>6,500 6,500</td>
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</tr>
<tr>
<td>Gymnasium Storage</td>
<td>200 200</td>
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</tr>
<tr>
<td>Fitness</td>
<td>5,000 5,000</td>
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</tr>
<tr>
<td>Fitness Storage and Repair</td>
<td>150 150</td>
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</tr>
<tr>
<td>Multi-Purpose Room</td>
<td>1,800 1,800</td>
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</tr>
<tr>
<td>Multi-Purpose Room Storage</td>
<td>250 250</td>
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</tr>
<tr>
<td>Lockers / Changing / No Showers (2)</td>
<td>600 600</td>
<td></td>
</tr>
<tr>
<td><strong>Community Spaces and Support</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Café/Coffee Shop/ Juice Bar</td>
<td>2,500 2,500</td>
<td></td>
</tr>
<tr>
<td>Convenience Store</td>
<td>1,600 1,600</td>
<td></td>
</tr>
<tr>
<td>Lobby/ Atrium</td>
<td>500 500</td>
<td></td>
</tr>
<tr>
<td>Service Desk/Equipment Issue</td>
<td>300 300</td>
<td></td>
</tr>
<tr>
<td><strong>Administrative Spaces</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administrative Suite</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Director's Office</td>
<td>120 120</td>
<td></td>
</tr>
<tr>
<td>Assistant Director's Office</td>
<td>120 120</td>
<td></td>
</tr>
<tr>
<td>Dining General Manager &amp; Retail Manager</td>
<td>160 160</td>
<td></td>
</tr>
<tr>
<td>Administrative Assistant/Reception Area</td>
<td>300 300</td>
<td></td>
</tr>
<tr>
<td>Conference Room</td>
<td>250 250</td>
<td></td>
</tr>
<tr>
<td>Work Room/Storage</td>
<td>100 100</td>
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</tr>
<tr>
<td><strong>Building Support</strong></td>
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<td></td>
</tr>
<tr>
<td>General Building Storage</td>
<td>300 300</td>
<td></td>
</tr>
<tr>
<td>Custodial/Break Room</td>
<td>100 100</td>
<td></td>
</tr>
<tr>
<td>Loading Dock - Staging Area</td>
<td>150 150</td>
<td></td>
</tr>
<tr>
<td>Loading Dock - Truck Area (not enclosed)</td>
<td>300 300</td>
<td></td>
</tr>
</tbody>
</table>