BKV GROUP

Technical Memorandum

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| Project | Tennessee State University Campus Master Plan |
| Subject | 3. Existing Campus Conditions<br>3.1 Campus Grounds<br>3.1.3 Building Use and Condition<br>3.1.3.2 Facility Assessment |
| From | BKV Group, Inc |
| To | Tennessee State University |

The objective of this work element is to gain an understanding of the general physical quality and functional quality (or suitability of a building to support the functions it presently houses) of primary buildings on the main and downtown campuses at Tennessee State University.

## 1. ASSESMENT METHODOLOGY

BKV representatives performed a Physical Quality Assessment of campus buildings. BKV and Paulien representatives performed a Functional Quality Assessment of campus buildings. Assessment information is based on site observations of buildings, meetings with facility management administration and staff, and review of the latest TBR Physical Facilities Survey data.

Individual buildings were rated by category by the planning consultant and a numeric value was assigned to each rating category as follows:

- Physical Quality: Satisfactory = 3; Deteriorating = 2; and Unsatisfactory = 1.
- Functional Quality: Good = 3; Marginal = 2; and Poor = 1.

Both of these ratings were added together on a building-by-building basis. The highest a building could rate, therefore, was a six (6), which is good, and the lowest a building could rate was a two (2), which is not good and indicates a significant number of issues requiring correction before the building can be of productive use as a contemporary educational facility. Some buildings were not rated and those buildings were included as if they are acceptable spaces.

This assessment allowed the consultants to factor out unacceptable quality facilities in its analysis of space needs. A building is considered acceptable if it has a combined rating of five (5) or six (6). When a space analysis in this study is adjusted for quality, any building with a combined rating of four (4) or less is subtracted from the existing assignable square feet (ASF).

Table 1 following this Memo summarizes the building condition assessment for Educational and General Use Facilities, including tabulations of areas by the combined rating category.

Table 2 following this Memo summarizes the building condition assessment for Auxiliary Enterprise Use Residential Facilities, including tabulations of areas by the combined rating category. Appendix documents the planning team's detailed assessment of the condition of

the primary facilities located on the main and downtown campuses, using a Facility Assessment Form.

## 2. PHYSICAL QUALITY

Tables 1 and 2 following this Memo show each building's Physical Quality rating. Figure 1 following this Memo is a map of each building color-coded by rating category.

Major buildings on campus are in varying states of physical condition. This assessment classifies those buildings according to their overall physical quality. Buildings are identified as Satisfactory, Deteriorating, and Unsatisfactory.

Satisfactory buildings are typically the newest or those that have had significant recent remodeling. These buildings are in good to excellent condition and require little or no physical updating. Examples of newer buildings include the Wellness Center, Performing Arts Center, Floyd-Payne Campus Center, Research and Sponsored Programs Building, and the Heiman Student Apartments. Examples of older buildings with significant recent remodeling include Clay Hall, Jackson Industrial Technology, Farrel-Westbrook Hall, and Strange Music Building.

Deteriorating buildings are typically those that are over 20 years old with little or no updating or those which may have been remodeled and are now in need of additional work. These buildings are in average condition and require moderate to significant physical updating. Examples would be Brown-Daniel Library, HM Love LRC, Gentry Athletic Complex, Read Hall and Boyd Residence Center.

Unsatisfactory buildings are typically those that are oldest and in need of major renovation or demolition. These buildings are in poor condition and require extensive updating. They should be considered first for a change in use or for possible replacement. Examples would be Clement, Elliot, Humphries Halls, Hale Stadium Rooms and Wilson Residence Center.

Building envelope components and support systems have reached or are approaching a critical 20-25 year lifespan or maintenance milestone for 25% of campus buildings, those constructed between 1980 and the early 1990's. These current and upcoming needs are in addition to the deferred needs of older facilities, including those that may have received significant renovation during the same time period.

A number of buildings have had recent mechanical, life safety and ADA upgrades. However, significant deferred maintenance, repairs and system obsolescence upgrades continue to need attention on the campus.

Electrical systems in most of the older buildings are at capacity. They are not necessarily overloaded but the number of spare circuit breakers and spaces for additional loads such as computers and lab equipment do not exist, thereby limiting their functionality.

## 3. BUILDING CODE CONSIDERATIONS

Construction documents for campus projects must be prepared in accordance with all state laws and code requirements. In addition, they shall conform to requirements set by the State Fire Marshall (which are the same as the National Fire Code as published by the National Fire Protection Association) as well as the Life Safety Code.
In addition to the Building Code requirements, the Board of Regents requires all building projects to comply with criteria set forth in the Building Project Manual document.

TSU has made regular efforts to upgrade facilities for code compliance, particularly as part of deferred maintenance and repair projects as well as major renovations. 25% of TSU buildings exhibit a range of code compliance and life safety issues still requiring correction. Refer to Quality Assessment Forms for additional detail.

## 4. ACCESSABILITY COMPLIANCE

All new facilities and areas in existing facilities under renovation must comply with the Americans with Disabilities Act (ADA). The only exemption from compliance with the ADA occurs if it is proven technically infeasible to make accessibility modifications. TSU uses the Americans with Disabilities Act as a guide for building construction and renovation projects.

The campus has made a significant effort to bring campus buildings into compliance with ADA. Among the improvements observed were designated parking, accessible routes, toilet upgrades, telephone upgrades and general circulation and entrance upgrades. Some buildings or areas within buildings still need to be made accessible on an ongoing basis. Accessible levels within buildings or rooms, door redesign (including hardware replacement and approaches), toilet and drinking fountain redesign, and signage replacements should be done as building renovations are planned.

## 5. MAINTENANCE ISSUES

Due to their age, certain buildings have a long list of deferred maintenance issues. These include exterior walls and window systems, interior finishes, mechanical and electrical systems. Many systems were not built to current standards for energy efficiency, thus resulting in added operational costs. Mechanical systems are in need of upgrade and/or repair in some buildings.

## 6. BUILDING INTERIOR ISSUES

25 to 30% of buildings exhibited dated or worn-out finishes such as flooring, ceilings, wall coverings and painted surface damage. Examples include Crouch Hall, Health Research Center, Harned Hall, HM Love Learning Resource Center, Holland and Humphries Halls, and Wilson Residence Center.

A common issue for many buildings over 15 years old was non-code compliant stairs and handrails, which is a life safety and liability concern.

Overall lighting levels vary according to the age of building. Some areas are inadequately lit, either due to lack of proper intensities for the tasks, poor circuiting control or fixture

placement, or to glare. Consideration of energy efficient fixtures may offset the increased power requirements for upgraded lighting and result in operational savings.

**7. FUNCTIONAL QUALITY**

Tables 1 and 2 following this Memo show each building's Functional Quality rating. Figure 2 following this Memo is a map of each building color-coded by rating category.

Major buildings on campus exhibit varying states of functional condition. This assessment classifies those buildings according to their overall functional quality. Buildings are identified as Good, Marginal, or Poor.

Good facilities include newer buildings such as AgIT Center, McWherter Administration, Practice/Event Building, and Rudolph Residence Center; and recently renovated older buildings such as Avon-Williams, Boswell Complex - Chemistry, and Lawson Hall.

Marginal facilities include Brown-Daniel Library, Henkel Administration Center, Holland Hall, and Watson Residence Center.

Poor facilities include Clement, Harned, Humphries and Torrence Halls, Health Research Center, General Services, and Wilson Residence Center.

Primary buildings were evaluated for their "functional quality" or suitability to support the functions they currently house in terms of information technology, lab equipment, fixtures & furnishings, lighting, acoustics, configuration, building envelope, MEP (mechanical, electrical & plumbing) systems, accessibility, preservation issues, and decommissioned status.

Below is a synopsis of conditions observed at TSU for each of the functional quality items evaluated. Following each synopsis is a brief description of the planning team's expectations for functional quality based on observations and experience at other academic institutions. These expectations serve as a benchmark to judge functional quality conditions at TSU.

**8. INFORMATION TECHNOLOGY**

Levels of information (voice/data) technology in buildings at TSU are generally sufficient in classrooms, teaching laboratories and student areas inside of buildings. Most reported problems are with infrastructure issues such as inadequate location or size of data closets, inaccessible cableways or lack of conduit routing. Examples of buildings with infrastructure problems include Crouch, Clement, Holland Hall and the Power Plant.

Educational technology (audio-visual and interactive) for teaching and learning environments exists in most buildings, but is not present consistently across campus or within certain buildings. Examples of good state-of-the art facilities include Ag IT & Environmental Research, Clay Hall, Jackson Industrial Arts, and McCord Hall's Cox & Fancher Computer Science Complex. Examples of inadequate educational technology include many classrooms in Elliot Hall and larger classroom-labs in Humphries Hall.

Contemporary classrooms are most often planned around one of four levels of technology: 1) basic audio-visual/TV; 2) plug-&-show presentation capability with computer access at the front of each room; 3) active learning classrooms with computers at each student station; and

4) two-way video classrooms. Equipment often found in classroom settings includes video data projectors, TVs, plasma and LCD monitor screens, HDTVs, VCRs, and DVDs; computers for presenters, and electronic smart boards; classrooms wired (or wireless) for student laptop computer use; computers at each student workstation; key response systems; interactive electronic whiteboards; digitizing tablets; overhead projectors; document cameras; slide projectors; microphones; video, film, CD and audiotape sound; assistive listening devices; audio mixers, amplifiers, speakers and feedback eliminators; teleconferencing, distance learning and two-way video; video compression and web streaming video; centralized audiovisual distribution systems; and video to VGA converters to change between video and data sources for the video/data projector.

Lecterns for "plug and show" computer controls are common and need to be small and placed on the right or left front side of the room facing the students. Display connections, data jacks, and AC power are typically included in the lectern. During lectures, a user supplied computer is connected to a ceiling mounted video projector with a multi-pin connector at the lectern. Plug and show capabilities are frequently incorporated in undergraduate science teaching laboratories as well as classrooms. Ethernet connections make it possible to interact in real time with distant individual personal computers, workstations, databases, or banks of stored text and images.

**9. LABORATORY EQUIPMENT**

The Research and Sponsored Programs Building, Ag IT & Environmental Research, and the newly remodeled Jackson Industrial Arts contain a significant number of teaching and research labs that appear well equipped with technology, laboratory equipment and furnishings appropriate for their uses. Other teaching laboratories, such as the dental and health labs in Clement Hall, research labs in CARP, and selected biology teaching and research labs in Harned Hall, have obsolete equipment and/or inadequate space, layouts and infrastructure to support contemporary equipment and program flexibility.

Safety, flexibility, functionality, efficiency, "research-rich" environments and equipment intensive are terms used to describe contemporary teaching and research laboratories. Equipment commonly found in undergraduate science and engineering teaching laboratories include fume hoods, canopy hoods, hood stations, ductless fume hoods, laminar flow stations, bio-safety cabinets, incubators, freezers, refrigerators, autoclaves, nuclear magnetic resonators, growth chambers, glassware washers and sterilizers, balances, flammable and acid storage cabinets, chemical storage rooms, computers, ovens, glove boxes, water baths, centrifuges, atomic absorption spectrometers, water purification systems, material sampling and testing equipment, environmental rooms and plant growth chambers. Research and program laboratories often include the equipment listed above plus specialized equipment necessary for investigation into specific areas of program focus and research.

**10. FIXTURES AND FURNISHINGS**

Fixtures and furnishings in buildings at TSU range from poor and aging to generally acceptable. While some of the furnishings appear to have been upgraded recently, other buildings are working with older and outdated furnishings. Furniture of different styles and ages are often combined in a single building or room. For example at Humphries Hall, offices, classrooms and student areas appeared to lack suitable furniture and fixtures

necessary to adequately support the functions that they house. Buildings such as Crouch Hall have antiquated and deteriorating window treatments which affect the quality of the learning environment and the functionality of controlling daylight and room darkening requirements.

In contemporary classrooms, oversized tablet arm chairs are generally preferred by students to maximize space for note taking, calculators and exam materials. Industry standards dictate that approximately 10% of tablet-arm chairs in classrooms be designed for left-handed students. Adherence to this standard was not observed at TSU. When possible, and especially in larger classrooms, continuous writing surfaces (tables), common in professional schools, should be used to provide students with additional room to spread out materials. A movable 2' x 5' lecturer's table, chair and podium are desirable in the front of each classroom. The facilities in the new AgIT&ER, renovated Jackson Industrial Arts, and many spaces in renovated Avon Williams adhere to these standards, but many other buildings were found lacking in this area.

Faculty members often choose chalkboards over whiteboards. If chalkboards are used, they should be black for contrast. Front teaching wall chalkboards often extend from one side of the classroom to the other. Chalk dust is incompatible with classroom technology such as computers, video data projectors, VCRs, and DVDs. For this reason, whiteboards should be considered as a highly desirable alternative to blackboards. Movable aluminum honeycomb core chalkboards can provide additional flexible board space. For example, Clay Hall has been well equipped in this manner in recent renovations, but other buildings were found lacking.

Today's teaching wall is often designed to permit the simultaneous use of projection screens and boards giving the presenter the option to project images on a screen and write on the board. One or two matte projection screens mounted above the chalkboard in the front of the classroom will fill video, data, slide and overhead projection needs. Consider a 3 x 5.3 ratio (9 x 16) for DVD and HDTV. Fit screens to the size of the audience basing the screen size on room depth and seating capacity. Mount screens high enough for the students in the back of the classroom to see the bottom of the screen, typically 48" above the floor. Overhead transparencies are projected from a table in the front of the classroom, video and data from a ceiling-mounted video/data projector and slides from a table in the rear of the room. Advanced classrooms may include a fixed electronic smart board that combines several of these functions. For additional flexibility, add one or two screens on either side of the one center screen. Sometimes a classroom will lend itself to an additional corner screen at 30 to 45 degree angle.

**11. LIGHTING**

Corridors, offices, classrooms and laboratories need to be appropriately lit for the function they serve. Glare on computer monitors, improper light intensity, inappropriate placement and control of light fixtures, and lack of energy saving features are all common in many buildings at TSU. Few good examples of these lighting design considerations were observed, even in newer/remodeled buildings such as labs in Jackson Industrial Technology. Clay Hall had adequate general lighting for lecture and white board use, but typically was not circuited for control with audio-visual technology. Two better examples were selected computer labs in Torrence Engineering and Boswell Complex – Physics/Math that used fluorescent light fixtures with recessed parabolic louvers for glare control.

Three to four lighting zones are common in contemporary classrooms: 1) student back row, 2) student center seating area, 3) front presentation area, and 4) lectern/side board lights. Teaching wall lights are controlled to maintain readability without lighting the projection surface. Lights are typically switched parallel to the front of the room or "teaching wall". Lights above student zones are switched at the entry door and presentation zone lights in the front of the classroom.

When lights in the student zone of a classroom are turned on, no more than 3-5 foot candles of ambient room light should fall on the screen. During projection, room light should be bright enough (40-50 foot candles) for student interaction. Consider all-spectrum, 3500 degree Kelvin fluorescent tubes for natural color. Fluorescent light fixtures should include recessed parabolic louvers to minimize glare on computer and TV monitors as well as light spillage onto projection screens. Sufficient light is needed at the lectern and on the board, but it must be controlled to minimize ambient light that washes out the images on the screen. Room darkening shades or blinds should cover windows to block light and assure that glare from windows does not appear on computer monitors, TV or projection surfaces. Vision panels in doors should be narrow to reduce spillage of light from the hallway. Some of these conditions are present in the newest and most recently remodeled TSU buildings but absent from many older and non-renovated structures.

Where floor-to-floor heights permit higher ceilings, indirect or combination direct/indirect lighting may be employed for ideal ambient light quality, reduced glare, and improved visual comfort.

Incorporating occupancy sensors to turn lights off when the room is vacated for a set period of time will provide energy savings ranging from 10% to 50%, depending on occupant habits. Dual sensors, comprised of passive and infrared and ultrasonic technologies, require the absence of heat and motion to shut off, minimizing false triggering problems. These systems are present in portions of several TSU facilities, such as public area occupancy sensors in Ferrel-Westbrook and Lawson Halls, but were not widely observed. Buildings designed or remodeled for next-generation quality should also incorporate daylighting strategies to maximize natural illumination, control glare, and further reduce the use of artificial illumination energy.

In large lecture halls, there should be separate pairs of front podium "spotlights" to focus on a speaker at stage left or stage right to provide light on the presenter while projecting images. Switch lights from the audio-visual control booth and from the front of the hall for control flexibility. All entry and exit doors to large lecture halls should be designed so that light from outside the room does not fall on the screen when doors are opened. While the design of doors in most lecture halls was good, the other conditions of lighting and controls were partially applied or absent from many facilities on campus.

**12. ACOUSTICS**

Reverberation times (echo) present in some classrooms at TSU are likely outside acceptable ranges for contemporary classrooms. The classrooms at Humphries Hall, for example, have "hard" wall and floor surfaces, i.e. they have little or no acoustical qualities of sound absorption; only reflection. Most rooms' only absorptive surface is the acoustical ceiling and that appeared to be older, not offering the absorptive quality of ceiling tile currently available. These conditions result in unnecessarily "live" room acoustics which make clarity difficult,

especially for the hearing impaired or where background noise is present (such as loud mechanical systems).

Acoustical treatment is typically designed to address the multiple concerns of hearing the presenter as well as containing the room sound so it does not disturb adjacent classrooms and offices. Ideally classrooms should have reverberation times in the range of 0.4-0.6 seconds. Carpeting, acoustical ceiling treatment, and sound absorption panels help minimize unwanted noise in the classroom. Additionally, carpet and softer resilient flooring absorbs or prevents disturbing sounds such as chairs being moved or shuffling feet. Noise levels within the space should not exceed NC 25 to 30. Numerous adverse acoustical conditions exist in TSU classrooms.

In large lecture halls, side walls should not be parallel, nor should they be a constructed of a continuous hard surface. Front walls and portions of front ceilings (frequently angled to reflect sound) should use hard surface materials. Sound dampening panels should be applied to rear and side walls. Ceiling speakers and an amplifier are necessary for voice, CD, TV and computer sound. Few lecture rooms on campus adhere sufficiently to these design standards, particularly the use of non-parallel walls. The two Boswell Science Complex auditoriums have good acoustical wall treatments and hard surfaced angled ceilings at the front; conversely Holland and Humphries Hall lecture rooms are not well-designed acoustically. Audio systems and visual projection/monitors are used with varying degrees of success.

Mechanical systems should be designed or adapted to current standards of noise levels for each room type. Systems that exceed recommended noise levels will disrupt hearing even in otherwise well-designed acoustical environments.

**13. CONFIGURATION**

Few academic buildings at TSU offer the amenities and space necessary to foster student interaction and congregation outside of the classroom setting, which is a common teaching/learning method employed by contemporary faculty. The majority of TSU buildings are double loaded corridors with little or no breakout/gathering space on each level or in central locations. Decentralized gathering, discussion and study areas facilitate frequent informal student interaction, student-teacher interaction, and professional collegiality between teachers. Examples of successful amenities include the newly remodeled corridor seating alcoves, recessed classroom entries, and display areas of Jackson Industrial Technology, and the placement of furniture and carpeting in the end-of-corridor window spaces in Crouch Hall.

Many buildings, such as Humphries Hall which has a very narrow double-loaded corridor footprint, do not offer appropriately configured classrooms to support contemporary teaching for the programs they house. Instructor space at the front of many classrooms is inadequate for easy movement between and around the first row of students and equipment used for teaching. Clay Hall is an example of a good classroom building, with multiple sized classrooms, flexible multi-purpose rooms with good acoustical operable walls, used in a successful mix of standard lecture rooms, lecture/lab, and high-tech classrooms. While there is great variety in configurations of classrooms available throughout TSU, the locations of these rooms are generally not coordinated with the programs they serve. Rather, the limitations of existing structures and many years of changing uses have yielded a mismatched collection of uncoordinated rooms. One consistent issue is the presence of many classrooms with obsolete configurations of 1 unit wide and 1.5 to 2.0 units deep.

Classrooms with wider versus deeper aspect ratios (1 unit deep and 1.3 units wide), where the wide wall is the teaching wall, are generally preferred by today's faculty because this configuration places students closer to the instructor and offers the instructor a wide range of presentation media. Curved or angled seating rows serve to foster essential eye contact between instructor and student. Typically 9'-0" to 12'-0" is necessary at the front center of the room to accommodate the instructor's table, lectern and equipment as well as position students an appropriate distance from the presentation surface to fall within the optimal viewing angle. Some faculty prefer entry doors at the rear of the room so late comers do not disturb the class, while others prefer them at the front to encourage students to sit up front; consistency is recommended for scheduling flexibility, and this decision can by made on a departmental or campus-wide basis. Tiered floors and staggered seating improves sight lines and sound transmission in larger classrooms, but also requires higher ceilings and greater floor space for accessibility and egress compliance at raised levels.

High quality student life, academic collegiality, and interdisciplinary teaching and learning are fostered by buildings that are planned with spaces to encourage interaction by including public regions within the building to put specialty disciplines on display, thereby engaging students, faculty, staff and visitors in the activities traditionally found behind classroom and laboratory doors. Design principles include 1) casual meeting/interaction spaces; 2) outdoor gathering spaces that are highly visible and inviting; 3) display areas and announcement boards that serve as gathering places for informal contact; and 4) connections to other campus buildings to facilitate interaction with faculty and staff in nearby buildings. Lawson Hall, Research and Sponsored Programs, and Jackson Industrial Technology exhibit several elements of these interactive educational environments.

### 14. BUILDING ENVELOPE ISSUES

22% of TSU buildings had significant issues with exterior enclosure components, and 27% had major roofing problems. Water damage on interior walls, ceilings and floors due to exterior envelop leakage, and exterior building areas in need of re-roofing, masonry tuck-pointing, scraping, painting, caulking and window repair, were noted. Examples include Torrence Hall which has failed and deteriorated translucent fiberglass window panels. Lawson Hall exhibited extensive damage to interior finishes due to major roof leakage and possible masonry joint and sealant deterioration. Ferrel-Westbrook Hall showed premature deterioration of mortar joints and greenhouse glazing sealant. These issues are critical to the long-term integrity of the buildings and because of short-term damage to finishes, building equipment and furnishings. Extended moisture problems also lead to extensive mold and mildew damage and indoor air quality issues. Additional information regarding the condition of exterior walls, roofs, windows and doors can be found in the Quality Assessment Forms.

**15. MECHANICAL, ELECTRICAL, AND PLUMBING ISSUES**

22% of TSU buildings had significant plumbing problems and 24% had major HVAC issues.15% exhibit fire protection deficiencies and electrical issues. Only 9% reported significant deficiencies in data and communication infrastructure. Water marks on ceilings due to pipe sweating, hot and cold occupied spaces, poor ventilation and roof equipment leaks were observed in selected new and old buildings on the TSU campus. Indoor air quality and comfort issues associated with obsolete or inadequately performing mechanical systems were reported. In many instances building infrastructure such as chilled and hot water piping, plumbing piping, electrical wiring and electrical equipment were reported as well beyond their life expectancy. Common problems with aging and outdated building automation controls were reported. Additional information regarding the condition of heating and air conditioning, electrical, plumbing and fire protection can be found in the Quality Assessment Forms.

**16. ACCESSIBILITY**

Portions of many buildings on the TSU campus were not in compliance with the Americans with Disabilities Act. Refer to Quality Assessment Forms for additional detail.

**17. PRESERVATION ISSUES**

Six buildings were identified as being in the University Historic District listed on the National Register of Historic Places. Their preservation should be carefully and regularly monitored although the buildings themselves are not of architectural significance.

**18. DECOMISSIONED SPACE**

The Fieldhouse (south of Hale Stadium) has been decommissioned and TSU intends to demolish it at an unspecified time. The General Services building was being prepared for decommissioning at the time this report was initiated, with many of the current functions in the process of relocating to the remodeled Henkel Administration Center.

**19. ANALYSIS OF COMBINED PHYSICAL AND FUNCTIONAL QUALITY**

Tables 1 and 2 following this Memo show each building's combined Physical and Functional Quality rating score and use color-coded columns to tabulate building areas by rating. Figure 3 following this Memo is a map of each building color-coded by combined rating category. The combined rating illustrates the overall quality of a facility, and generalizes the conditions for uniform comparison across the campus.

From Table 1 the following conclusions may be made about Educational and General Use (E&G) facilities:

- 31 of 55 buildings (with 59% of GSF) had a combined score of 5 or 6 for a satisfactory/good overall condition rating.
- 11 of 55 buildings (with 25% of GSF) had a combined score of 3 or 4 for a deteriorating/marginal overall condition rating.

- 13 of 55 buildings (with 16% of GSF) had a combined score of 2 for an unsatisfactory/poor overall condition rating.

From Table 2 the following conclusions may be made about Auxiliary Enterprise Use (Residential) facilities:

- There are 14 separate residential buildings with a total of approximately 3,296 beds. Two of these buildings are Community Buildings associated with student apartment complexes. The style of residential units and bed count is as follows:
    - Dormitory Style: 1,790 beds (54%), primarily double rooms.
    - Suite Style: 750 beds (23%), primarily double rooms.
    - Apartment Style: 756 beds (23%), primarily single rooms.
- 9 of 14 buildings (with 48% of GSF) had a combined score of 5 or 6 for a satisfactory/good overall condition rating.
    - 1,196 beds (36% of total).
    - 756 beds are apartment style residences (greater SF/bed than dorms).
    - 410 beds are suite style units (greater SF/bed than dorms).
- 4 of 14 buildings (with 37% of GSF) had a combined score of 3 or 4 for a deteriorating/marginal overall condition rating.
    - 1,530 beds (46% of total).
    - 1,190 beds are dormitory style residences (less SF/bed than suite or apt).
    - 340 beds are suite style units.
- 1 of 14 buildings (with 16% of GSF) had a combined score of 2 for an unsatisfactory/poor overall condition rating.
    - 600 beds (18% of total).
    - 600 beds are dormitory style residences.

For planning analysis, the consultants referenced the physical and functional qualities separately when considering the long-term needs and potential of existing buildings. From our analysis of the 55 E&G facilities, we find:

- Twelve buildings (22%) of the 55 E&G buildings rated lower in physical quality than functional quality.
    - 8 of the 12 had a combined high score (5), but exhibited sufficient physical deterioration to require diligent maintenance and repair. (Examples include Boswell Complex Physics/Math, Lawson Hall, and Washington Health).
    - 3 of the 12 had a combined medium-high score (4) resulting from very high functional quality and very low physical quality. These three have unique attributes suggesting that major investment in physical renovation is warranted.
        - Gentry Athletic Complex, which suffers from unsatisfactory physical deterioration but is very good at meeting the unique functional requirements of athletics and recreation.
        - Crouch Hall, with unsatisfactory physical quality but functioning very well as a general classroom building.
        - HM Love Learning Resource Center, which also is physically unsatisfactory but functions very well as a classroom/office/media facility and is one of the buildings in the Historic District.
    - 1 of the 12, Central Receiving, had a combined medium-low score (3) indicating questionable value for long-term investment.

- Four buildings (7%) of the 55 E&G facilities rated higher in physical quality than functional quality.
    - 1 of the 4, Facilities Management (Operations), had a combined medium-high score (4) resulting from satisfactory physical quality but marginal functional quality. It is somewhat adaptable and primarily does not have sufficient space for the current use, suggesting a building addition may be appropriate.
    - 3 of the 4 (Carp, Goodwill Manor, and Read Hall) had combined medium-low scores (3), with deteriorating physical conditions and poor functional quality. These 3 are smaller buildings, typically difficult to adapt to other uses, and appear to be unsuitable for major renovation/remodeling investment. One exception may be Read Hall, which could continue to function as a recreation center/lounge for the adjacent apartment complex.

- The six buildings located in the University Historic District were rated as follows:
    - 3 of the 6 (49% of historic GSF): Satisfactory/good overall rating.
        - (Davis Humanities, Jackson Industrial Arts, McCord Hall).
    - 1 of the 6 (20% of historic GSF): Deteriorating/marginal overall rating.
        - (HM Love Learning Resource Center).
    - 2 of the 6 (31% of historic GSF): Unsatisfactory/poor overall rating.
        - (Elliot Hall and Harned Hall).