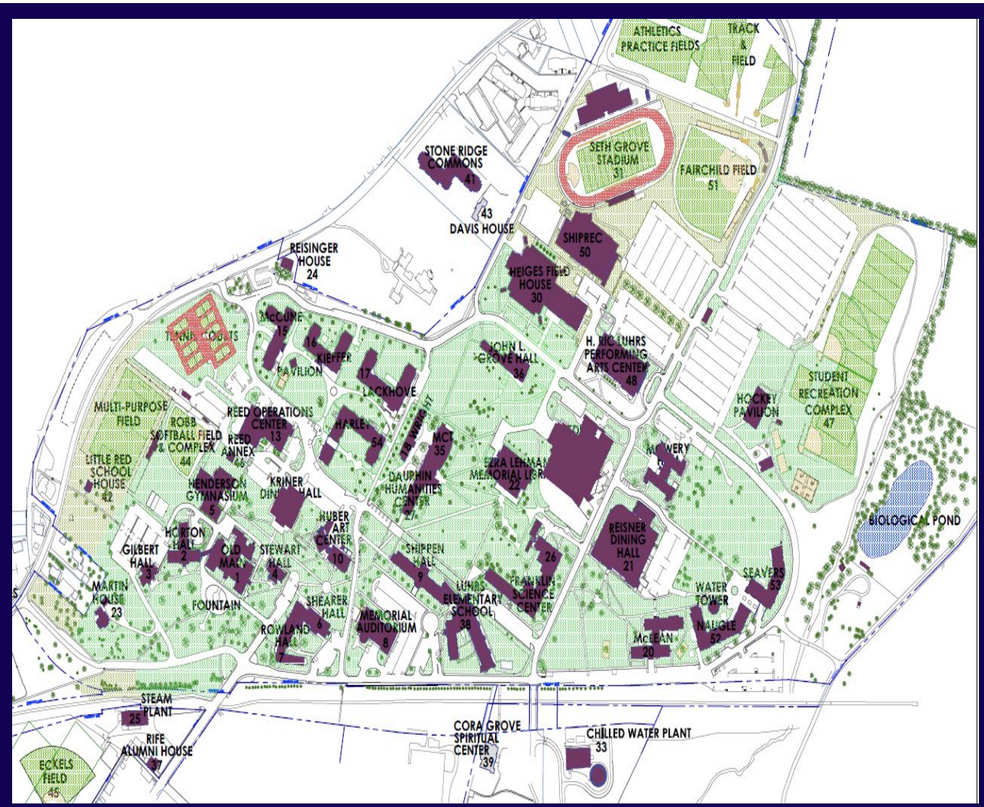

SHIPPENSBURG UNIVERSITY

CAMPUS MASTER PLAN

2018

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A. EXECUTIVE SUMMARY

Shippensburg University continues to evolve and develop to meet long-term goals defined in its Four Pillars, the SU Strategic Plan 2016-2021, the SU Academic Master Plan 2013-2018, and the SU Strategic Enrollment Management Plan. This Campus Master Plan will assist the campus community in accomplishing well-defined objectives which are steps toward meeting these goals. The concepts and recommendations of this Campus Master Plan are fully nested with those aforementioned documents and will be seen later in matrix form.

The University appreciates the value of planning. This Campus Master Plan is an update of the 2008 Facilities Master Plan. The process of planning has been collaborative. Students, faculty, staff, and community representatives worked with the Facilities team in a process guided by the Council of Trustees and University administration.

A.1 BACKGROUND FOR PLANNING

Goals for the Master Plan were agreed upon early in the process:

- Campus Master Plan
  - Update 2008 Facilities Master Plan
  - Integrate with the SU Strategic Plan
  - Flexible Plans for an Evolving Future
  - Show the Development of the Campus in Ways That Are Consistent With and Support the University's Values
  - Setting Conditions for Student (and Institutional) Success
  - Attract and Retain Students
  - Support Shippensburg University's Marketing and Branding Initiatives
  - Improve Residential Life and Enhance Community
  - Assess Use of Academic and Non-Academic Spaces
  - Strengthen Shippensburg University's Position Locally and Regionally
  - Unified Action with Decentralized Execution

Planning would be based on the following assumptions (as approved by the President on January 22, 2018):

- The master plan should show the development of the Shippensburg University campus over three phases: 0 to 5 years, 5 to 15 years, and 15 to 25 years.
- The master plan should assume incremental growth in student population.
- The master planning process should engage all parts of the campus community, and key stakeholders from Shippensburg, Cumberland, and Franklin counties.
- The master plan should illustrate optimal development within the University's boundaries.
- Programmatic and curricular changes may be minimal over the life of the plan. There is the potential for the expansion of programs for engineering.

Shippensburg University organized the Campus Master Plan process into five Tasks:

Task 1: Planning

November 1, 2017 – January 22, 2018

Initial planning and scoping involving the determination of the goals and objectives of the master plan. Initial planning phase included meeting with all affected stakeholders regarding project priorities and requirements. The initial planning phase ended with the approval of the Goals, Objectives, and Methodology for the Master Plan on January 22, 2018 by the President and the Executive Management Team.

Task 2: Inventory Existing Conditions January 23 - April 11, 2018

This phase was characterized by further stakeholder discussions, including the integration of the Franklin Science Center renovation, the development of a School of Engineering, the development of the Annual Capital Budget Submission (as submitted to PASSHE on March 30, 2018), and the initial classroom and laboratory study (finalized April 11, 2018 and later republished September 13, 2018).

Task 3: Program Development April 12 – October 4, 2018

Staffing, planning, and coordination continued for the development of a Mini-Master Plan Update. Continual discussion between stakeholders and the development of numerous tools that led to the completion of the Mini- Master Plan Update. At the direction of the President, the scope of the update was broadened to encompass a new Master Plan as briefed on October 4, 2018.

Task 4: Deliberate Staffing October 5, 2018—January 23, 2019

A Campus Master Plan Committee was formed under the direction of the Senior Vice President of Administration and Finance, met for their first session on November 27, 2018, and were presented a DRAFT Campus Master Plan. The next two month period was characterized by feedback, integration, and adjudication for the final DRAFT. The DRAFT was also presented at a Town Hall Meeting on January 23, 2019 for the campus at large.

Task 5: Final Report January 24 – January 29, 2019

Once all final edits were made as feedback from the Town Hall was incorporated, the final report was presented to the President, the Executive Management Team, and the Council of Trustees (January 30, 2019).

Historical Background

Shippensburg University was established in 1871 as the Cumberland Valley State Normal School. Like many of the early land grant colleges, the Cumberland Valley State Normal School was originally built as a single large structure which included all functions for the new institution from classrooms to living quarters. For twenty years Old Main was the Normal School's only building. In the last decade of the 19th century and first decade of the 20th the remaining buildings of the campus on the hill were constructed. The mall between Henderson and Memorial Hall was established in the 1930s. The 1950s and '60s saw the build-out of the two residential quads and the Lehman Library academic quad. After another hiatus, construction activity re-commenced in the late '90s with new academic buildings, a conference center, a performing arts center and a recreation center. Since the 2008 Master Plan, Shippensburg University has built six new suite-style dormitories, demolished six legacy dormitories, decommissioned a Steam Plant, and constructed a new Chilled Water Plant.

The campus has expanded northward from its original hilltop with spurts of growth in the 1930s, in the post-war era, and in recent years—each time with a logical plan that reflected the needs of the institution and the values of its time.

A.2 ANALYSIS OF EXISTING CONDITIONS

Shippensburg University is located in the heart of the Cumberland Valley on high land just outside the town of Shippensburg.

The town is advantageously located between Interstates 81 and 76. Route 696 connects the two interstates and forms the west boundary of the University. Route 81 runs the length of the Great Valley and connects the important commercial and government centers of Hagerstown and Harrisburg.

The Hagerstown to Harrisburg corridor is experiencing considerable economic expansion. Shippensburg University is poised to be a key player in providing intellectual capital, and in workforce and business development. This Master Plan can serve as a tool to inform regional leaders in business and government about the University's plans. The Master Plan should also encourage continuing dialogue about the University's evolving role in regional development.

Shippensburg University covers approximately 200 acres of gently rolling land. The campus slopes from the high point at Old Main northward towards the remaining portions of campus.

Shippensburg University owns and operates nearly 2.4 million square feet of buildings on approximately 200 acres of land outside the town of Shippensburg. Distribution of building uses across the campus is coherent and logical.

Academic life in the nineteenth century was centered in the vicinity of Old Main. Today's academic quad revolves around the Lehman Library. Buildings around the library contain all the primary classrooms, laboratories, and associated teaching spaces. Some academic spaces remain in the historic district.

The two residential quads lie to the east and west of the Lehman quad. Each cluster of residence halls are supported by a dining hall.

Three athletic zones support varsity and recreational activities. North of the Lehman quad is Heiges Field House and the Recreation Center. Further north are Seth Grove Stadium and varsity practice fields and Fairchild baseball field. To the east are recreation fields. In the southwest portion of the campus are fields and tennis courts supported by Henderson Gymnasium.

Campus green space is the defining feature of the Shippensburg University campus. The lawns, trees, and other landscape features provide a peaceful, scholarly sense of place. Distant views beyond the lawns and between the buildings are of the Central Pennsylvania agricultural landscape and the Blue Ridge Mountains. The University has a well maintained campus landscape made up of large mature deciduous trees, small deciduous/flowering trees, evergreen trees, shrubs, ground covers and accent plantings comprised of both annuals and perennials.

Pedestrian movement is primarily focused in the Lehman Library quad district. Many of the most heavily used daily destinations for pedestrians are in or around the quad. Based on distances alone, the campus is walkable. It is approximately a half mile from the west edge of the west residential quad to the east edge of east residential quad, and a half mile from Seth Grove Stadium to the Spiritual Center across the Rails to Trails path.

University faculty, staff, and commuter students travel to Shippensburg by vehicle using the greater Shippensburg transportation network. The University Campus is essentially bounded by Newburg Road (Route 696) on the west/ northwest, Adams Drive on the south, and Fogelsonger Road on the east. Access points are: Lancaster Drive (near tennis courts and at Foundation) and Old Main Drive off of Newburg Road; North Prince Street to Adams Drive, with Dauphin Drive and Cumberland Drive off Adams Drive; and Burd Run Road off Fogelsonger Road.

Transit of daily delivery and service vehicles can continue to pose a concern for pedestrians and continued enforcement of existing traffic rules is critical to maintaining the campus sense of safety.

Parking on campus is located both inside and outside the perimeter vehicular loop road around the campus core. In general there is an adequate quantity of parking spaces on campus—3,683 spaces—but there is a perceived inconvenience in some instances where the parking space location in relation to the user's desired point of designation requires walking.

The utility infrastructure was greatly enhanced as a result of the 2008 Campus Master Plan. The decommissioning of the Steam Plant (2014), the establishment of centrally-noded boilers, and the construction of a Chilled Water Plant (2016) have made Shippensburg University the lowest energy consumer in PASSHE. Department of General Services (DGS) contract 412-55 (Electrical and Telecommunications Infrastructure) will be completed in the summer of 2019. This is the final phase of infrastructural improvements from the 2008 Campus Master Plan. This will allow for redundancy between four electrical feeders, greatly increase bandwidth to support interconnectedness, and will also see an upgrade in telephony to Voice over IP (VoIP).

A.3 THE CAMPUS MASTER PLAN

Concepts for the development of the campus grew out of analysis of existing conditions and program needs, consideration of population growth over time, and an understanding of the unique culture and qualities of Shippensburg University.

- Coherence
- Branding
- Renewal
- The Learning Environment
- Energy
- Athletics and Recreation
- Technology
- Accessibility and Equity
- Sustainability
- Internal Circulation
- The Residential and Campus Experience
- Recapitalization
- Community Interaction

3.1 The primary changes to Pedestrian Circulation, Roadways, and Parking recommended by the Campus Master Plan are:

3.1.1 PEDESTRIAN CIRCULATION

A number of changes are proposed to improve pedestrian circulation:

- To address the issue with crossing York Drive at Lancaster from the academic quad, provide a continuous pedestrian path from the sidewalk at Harley Hall in the vicinity of the area in the parking lot hatched out to the sidewalk at ROC.
- To address the issue of continuing past ROC to Robb Field, investigate the feasibility of adding a designated walkway in this area.
- Formalize the "goat path" in the vicinity of the tennis courts. Look at routes and lighting.
- Address the gap in the sidewalk along Adams Drive in the vicinity of Memorial Hall by installing sidewalk.
- Address the lack of sidewalk between the Heiges lot and Seth Grove stadium by adding sidewalk.
- Investigate the feasibility and requirements for a pedestrian/small vehicle pathway between the Horton lot and the back side of Henderson Gymnasium.
- Investigate adding a node along the diagonal walk across the academic quad in front of the library to accommodate the high pedestrian use in this area.
- Continue replacement and improvements to pedestrian curb cuts. As areas are renovated, included replacement of these curb cuts to be ADA compliant.
- Develop a project to eliminate the gap in the sidewalk system between Seavers Hall and Mowrey Hall.
- Continue survey and correction of tripping hazards on campus thru pumping, cutting or replacement of damaged sections.
- Add pedestrian striping at the Lancaster/York intersection.
- The Physical Plant Department, as a member of the ADA 504 Committee, is continually looking for opportunities for improvement for access across the campus at large. Numerous projects are evaluated based on ground slope, curb cuts, and other impediments to mobility for solution.

3.1.2 ROADWAYS

The previous Master Plan recommended a future project to connect Queen Street to Adams Drive in alignment with Dauphin Drive. This would allow a secondary entrance/exit from the campus loop road to/from the town. This connection crosses the Cumberland Valley Rail Trail and would require a bridging of the trail and to meet existing grades on Adams Drive and Queen Street. This will be studied further as safety concerns have manifested on the current steps connecting the two roads, either as a roadway, or potentially a walking path.

3.1.3 PARKING

There are a couple of locations that should be studied for additional parking:

- C-1 Lot at the old Steam Plant
- CUB parking at the east end of Grove Hall
- Seth Grove Stadium lot
- ADA accessible parking will continue to be monitored for shortfalls and develop solutions as part of the ADA 504 Committee process

4. BRANDING

Moving forward the 2018 Campus Master Plan recommends the following expansion projects:

- Continue a deliberate process of interior branding painting as building painting renewal is planned for the future on a programmatic basis. Include environmental branding into branding considerations specific to the occupancy.
- Pursue the replacement of the green (and rapidly deteriorating) terrazzo flooring on the first floor of Old Main and replace with an epoxy-based product supporting the current Ship branding color palette.
- Continue to update all exterior building signage eventually to the new darker "Ship Blue" to include potentially the legacy brick signage in front of Heiges Field House and Memorial Auditorium.
- Continue to determine best locations for building banners and the message they convey
- Expand interior branding painting to the Athletics enterprise. Numerous instances of legacy coloring for outside structures need to be programmed and executed.
- Explore the use of photographic imagery at Seth Grove Stadium Rear to turn a visual liability into a quality first impression.
- Piloting of web-based wayfinding kiosks for interior wayfinding in high visitor traffic areas (based on pilot project at Grove Hall College of Business) and potentially utilizing students in development of virtual reality prototypes.
- Removal and upgrade of all legacy masonry-based signage (Memorial Hall/Heiges Field House)
- Exploration of a GIS-based wayfinding system that is mobile app-based that can extend to knowledge management (accessibility of files/images/information geospatially referenced enabling easy locatability in a single venue)
- Continue to explore possibilities of upgrades to all campus gateways.

5. ATHLETICS AND RECREATION

Master Plan recommendations:

5.1 CAMPUS

- Any upgrades to facilities need to be accomplished equitably between male and female ensuring a consistent level of service.
- Field Lighting: Provide night lighting at Fairchild baseball field and Robb softball field.
- Develop an Athletics Branding Master Plan that denotes a single standard for branding (banners, wind screens to include environmental branding) and their maintenance, times for erection and demounting. Additionally prioritize painting of all surfaces (interior and exterior) in a common color scheme consistent with Ship branding colors and painting scheme. The painting project for Seth Grove Stadium (Summer 2019) will be reflective of that methodology.
- Commission a locker room study that encompasses all campus Athletics facilities. The scope of the study will include the potential "manufacturing" of space at both Seth Grove Stadium as well as in the area behind Henderson Gymnasium, and the potential for a connector between the Heiges Field House and the ShipREC, and the complete renovation of the Henderson Gym locker room space. The potential of a new Field House (potentially in the vicinity of Seth Grove Stadium) will also be explored and weighed against potential gains in existing buildings and spaces.
- Replace (as part of lifecycle management) turf fields at both Seth Grove Stadium and the Multi-Purpose Field.
- Determine feasibility of changing both Baseball (Fairchild Field) and Softball (Robb Field) from grass to turf.
- Determine best location to construct a new Astroturf field to generate needed capacity.
- Coaches' offices will be studied after the completion of the campus-wide office census and attempt to consolidate for functionality where possible.

Recreation Fields Improvements

Reconfigure the jogging path around the recreation fields to accommodate an additional softball field. A report by TETHYS Consultants Inc. dated February 28, 1995 delineated a wetland in the area of the proposed softball field home plate. An updated wetland delineation study would need to be conducted to clearly determine the potential impacts.

5.2 SETH GROVE STADIUM

- Field Lighting: Install night lighting for 24-hour use and television capability.
- Grandstand Structure Improvements: Renovate the grandstand structures on the west side of the field to provide space within the structure for:
    - Improved and enlarged home team facilities. This may be included in the Locker Room study using a pre-fabricated structure under the grandstand area.
    - Football Storage as well as Track, and potentially Band and Camps and Conferences.
    - Renovate and expand press box to provide ADA accessibility, media hookups, and more/safer space for media.
    - Provide SU identity on highway side of grandstand structure using photographic imagery.
    - Paint Seth Grove Stadium on all exterior surfaces for the Summer of 2019.

c. Seth Grove Stadium and Environs:

- The interior chainlink fence between the running track and the playing field at Seth Grove Stadium is worn, has lost its aesthetic appeal, and may require replacement.

- The median strip of grass in between the running track and the playing field perimeter fence at Seth Grove Stadium should be considered for replacement with a less maintenance intensive covering to include poured rubber.

- Additional storage requirements at Seth Grove Stadium should be included in the Locker Room Study.

- A tent is habitually erected at the rear of Seth Grove Stadium annually for extended periods of time. Consideration should be given to the construction of a more permanent pavilion that could serve the practice field.

- The practice field at the rear of Seth Grove Stadium is actually three separate fields, with separate grades. The field in total should be renovated to a single paying surface and should be considered for a perimeter fence once completed (to avoid the annual establishment of a near perimeter fence to support activities at Seth Grove Stadium).

d. Commission a study to determine the feasibility of a new Field House. The scope would include potential construction of a new two-story 36,000 sf Field House at the south end of Seth Grove Stadium to accommodate multiple sports and potentially link back to Heiges Field House.

5.3 HEIGES FIELD HOUSE IMPROVEMENTS

- As part of the locker room study, determine the feasibility of the relocation of Administrative Offices, Football Coaches Suite to a 2d floor office suite (with potential film room) and analysis of both visitor's restrooms and expansion of locker room facilities can be accommodated.

- Also as part of the locker room study, determine if a connector between Heiges Field House and ShipREC is feasible to manufacture more locker room space.

- Determine the viability of establishing some form of food venue that affords practicing athletes (and others users of Heiges Field House) an alternative venue when time is critical. This will be considered for incorporation into the Study on Retail and Dining Venues.

5.4 HENDERSON GYMNASIUM IMPROVEMENTS

a. As part of the locker room study, determine if entire locker room space can be renovated, giving exclusivity at the team level, and the potential use of pre-fabricated buildings behind Henderson Gymnasium.

6. ACADEMIC SPACE PLANNING

There are current requirements (based on either new space or inadequate space at current location) to support the following functions as part of the academic mission and will be further analyzed by the Campus Master Plan:

- Exploration of the changing demographics of the population of student learners that we serve (to include adult learners). The PASSHE Chancellor's Vision, together with recent documents (NCHEMS/RAND Reports) set conditions (for future) discussions of what physical infrastructure and space is required to attract and retain those new populations
- Conduct a campus-wide office space census to ensure optimal utilization and key control
- Exploration of space requirements for the establishment of the new School of Engineering using Kriner Hall and the Old Steam Plant, and the immediate need for swing space to accommodate classes in Fall semester 2019
- Exploration of space requirements to support development of allied health programs
- Establishment of office space for the Doctorate of Business Administration program under the College of Business
- A deeper discussion is required regarding growth, requirements, proximity for all academic areas to ensure coherence is sustainable. The proximity of classrooms, faculty offices, faculty/student work areas and the location of the department are integral to the quality of the academic experience, and for collaboration.
- Establishment of a Maker Space to support the Charles H. Diller Center for Entrepreneurial Leadership and Innovation
- Office Space for Ship Votes
- Establishment of an HCS Speech lab in Dauphin Humanities Center
- Space for the Center for Educational Leadership
- Space for the Center for Early Childhood Education
- Space for Shippensburg Community Resource Coalition
- Reorganized and contiguous space for the Institute of Public Service
- Establishment of seasonal manufacturing space for the Robotics Competition
- Relocation of the Small Business Development Center (SBDC)
- Reorganized space for the Office of Equity, Inclusion, and Compliance
- Assessment of the current Lehman Library Archives and Special Collections Study and the impacts of a potential requirement for 24/7 access to the ground floor enabling study/collaboration during off-peak hours, especially for commuter students

7. STUDENT HOUSING MASTER PLANNING

- At Mowrey Hall, final projects are underway that support both the new University Student Success Center as well as future residential needs include:
    - The construction of an interior ADA access lift joining the lobby with the half floor on the left of the Mowrey lobby
    - The construction of a male ADA accessible bathroom on the half floor
    - The construction of a third floor kitchen servicing residents on floors 3-5
- McLean Hall cosmetic and system upgrades (carpet, paint, furniture, AC, electrical/ lighting, cameras), common spaces & multi-purpose room, second elevator, open lounge space. Assess office usage spaces and create outside space options
- McLean Hall & Mowrey Hall and Phase I and II Housing – staff apartments for future growth
- Mowrey Hall Graduate Student Housing top floors, examine electrical updates, AC, paint, kitchen construction to support remaining residents, laundry, cameras, upgrades to elevator
- Phase I and II - Upgrades for the Suites: Laundry, Computer Labs, outdoor upgrades, media rooms, room/suites/common space furniture and carpet replacement
- Continue to assess LLCs, physical changes that may need to come
- Multi-purpose Rooms usage will be evaluated for possible future usage in providing collaborations with academic affairs to assist with student success.
- Continue to assess usage of study lounges/ tv lounges
- Examine parking for on-campus students
- Cycling repainting program for dedicated halls

8. OUTDOOR CAMPUS

A few locations on campus could benefit from significant projects:

- CUB Amphitheatre: This expansive concrete area with the concrete seating areas is not particularly inviting. The function is divided between table seating for dining and hanging out, and the other side for flexibility for large group activities. No shade is available for students using this area. One design concept would integrate in ground planters especially in the table seating side and could incorporate low walls for sitting and defining the space. Shade sails could be incorporated for environmental branding to add color and provide shade in the tiered seating areas. Artwork or differing textures could be incorporated in the walls of the seating area to provide visual relief. A design effort would be advantageous in development of this space.
- Reisner Entrance at Cumberland and Lebanon Drives: This expansive corner would be enhanced from grade alterations and retaining/sitting walls.
- PAC at Adams and Lancaster Drives: The iconic entrance to the Performing Arts Center could be enhanced with development of the grass area along the roadway at Adams and Lancaster Drives. This area could be graded and a wall providing additional color and environmental branding appropriate to set off the front of the PAC.
- Kriner Entrance: The patio at the entrance to the Kriner Dining Hall is a plain slab with picnic tables. The addition of a low wall, and a shade structure could significantly enhance the visual appeal and function of this space.
- Old Main Front: The concrete in the vicinity of the flagpole and fountain along with the curb line on the circle could all be renewed to enhance the appearance of this well visited portion of campus. The grass portion around the fountain should be regraded to better accommodate weddings and social activities. The brick walkway on this side of Old Main should also be widened and improved for ADA accessibility allowing full access to this grand iconic entrance. Additionally consider additional environmental branding in this area.

9. SUSTAINABILITY

The following are a list of concrete actions and it is recommended that these be strongly considered to help set and achieve realistic goals over the short-term, mid-term, and longer-term relative to this current Campus Master Plan.

- Near Term: It is critical to define a clear aspirational vision for where the University would like to be with regard to sustainability, and this includes establishing commitments to meet a goal of footprint neutrality within the context of internationally-recognized timelines to limit worsening climate change impacts, and reduce per-capita water demand.
    - Many universities and colleges are implementing strategies to participate in bulk purchasing, and carbon trading and carbon-offset programs and Shippensburg should consider ways to decrease footprints in all sectors and participate in development of PASSHE-wide energy reduction challenges.
- Near-Term: Initiate a marketing and PR campaign to celebrate our successes (utilize existing Sightlines Audits and awards) and market our green campus facilities and initiatives, proximity to the restored Burd Run Watershed, Michaux State Forest, and the Cumberland Valley Rail Trail, and the Foreman Triangle to external organizations (in PA and beyond). Put Shippensburg on the map as a green campus, and establish Shippensburg University as a destination campus for students of all majors interested in attending a green/sustainability-oriented campus.
- Near Term: Feedback from the student intern at Volvo said that it was important to be able to acquire technology to implement hardware/software/data management systems where the entire university grid (i.e. building energy use, air quality, water use, waste streams, etc.) over specific time periods can be measured and openly shared. Many of these technologies are currently in use with

Automated Logic ® by the Physical Plant Department as building systems are monitored on a 24/7 basis using a web-based (and mobile) application.

- Near Term: Once a data management/data sharing system is implemented, this information should be made regularly available to all stakeholders (including students, faculty, staff, administrators, facilities managers, and visitors) and within each building so the entire campus community can be informed.
    - Development and inclusion of annual "stewardSHIP/Sustainability" training/orientation programs and other informational programs in all divisions to improve awareness and role of active, informed, decision-making is also necessary.
- Near-Term: Expand recycling and waste management program to move toward Zero Waste by 2028.
    - There is significant interest among student groups for this work, and it provides significant opportunities for student involvement in facilities, including on-going course projects to monitor waste streams. This work can also facilitate campus-wide systems, with green waste supporting compost generation for the farm and natural areas, and the farm and natural areas supporting food service and the campus experience.
    - Example initiatives: https://zerowaste2020.universityofcalifornia.edu/
- Mid-Term: Data should be used to inform development of benchmark goals and establish development of KPI's (Key Performance Indicators) that can be assessed and modified as necessary to realize aspirational goals in the longer-term.
    - KPI's should be established for all waste streams, purchasing contracts to improve supply chains, reduce the number of high-footprint products, reduction of single-use plastics and packaging, reduce transportation/commuter costs, reduce imported energy demands while increasing onsite energy production, establish resource consumption thresholds and footprint reduction strategies for all divisions (academic, residential, recreational, athletics, etc.), etc.
- Mid-Term: Add and modify parking and campus outdoor lighting with solar PV-charged units
    - This will save campus money in the long-term, and provide a visible commitment to sustainability on campus. This transition will also allow us to provide more/brighter lighting on campus at night, greatly improving campus safety and improve the campus experience – especially for commuters that have expressed concerns.
- Mid-Term: Commit to converting at least 50% of suitable roof infrastructure to green roofing by 2028.
    - This will provide significant benefits to sustainable water management, building heating and cooling, and reduce the University's carbon footprint. Green roofing will also provide social-ecological connectivity between building infrastructure and campus grounds by providing habitat corridors, pollinator spaces, etc., and could potentially be used as productive spaces for food services.
    - By including instrumentation and ongoing assessments with these projects, there is significant potential to include student involvement and classroom exercises across multiple units on campus.
    - Green roofs are highly visible symbols of the University's commitment to sustainability, and can help shape the university brand and attract students to campus.
- Mid-Term: Redevelop green spaces to create a multifunctional campus landscape that manages water, stores carbon (to qualify for carbon-trading programs), produces food, and invites student engagement.
    - Restore/re-wild select campus areas with proper signage to create a 'Great Valley Walking Tour" of native ecosystems on campus. This can attract student and community members, increase biodiversity, and reduce the cost of grounds maintenance.
    - Use permaculture practices to redesign campus greenspaces to produce food and ornamental plantings that are lower-maintenance. This will create wildlife habitat on campus, and make for a more dynamic, beautiful, and welcoming campus environment.
    - Better incorporate opportunities/spaces for community engagement with campus green spaces (beyond the blue and red Adirondack chairs). This will improve the student experience, and invite student engagement and investment in the campus ecosystem.
    - Install innovative PV-outfitted hammock/seating areas in academic quads with charging stations, outdoor digital signage, Wi-Fi repeaters, etc.
- Mid-Term: Create/repurpose campus spaces to provide viable and welcoming 'third space' for students on campus – especially commuter students.
    - Commuter students have reported feeling out of place on campus since they do not have access to spaces that are not just 'study spaces.' Some even report that academic spaces are restrictive and difficult to access, especially on nights/weekends.
    - Creating social spaces on campus will build a more sustainable and welcoming community for ALL students.
    - CUB amphitheater should be re-envisioned to be an architectural center of outdoor, all-weather campus activities. Should include a high-tech red/blue/white sail and shade structure outfitted with PV and artistically-designed wind turbines and moveable planters that can be used to create outdoor living spaces.
- Mid-Term: Redevelop campus transportation and parking infrastructure to improve bike and pedestrian access around campus and build connectivity corridors with the community.
    - Walkability of campus and ADA considerations are important.
    - Install charging stations for electric cars, and assign carpool-only parking spots/stations to encourage/incentivize car-pooling.
    - Redirect two-way campus traffic to one-way only during academic day or provide bike-only lanes.
    - Facilitate car-pooling using apps and public-private partnerships for quality-of-service solutions.
- Long-Term: Celebrate successes, and evaluate/establish new benchmarks and facilities improvements to exceed prior successes and continue innovation using new technologies. Explore the possibility of net 100% energy-independence from off-site energy production and 100% on-site energy production.

10. CAPITAL PROJECTS

Shippensburg University provides an Annual Capital Budget Submission to PASSHE every spring (APPENDIX 4) that is comprised of the top five (5) capital projects, and is usually informed by the Campus Master Plan.

The Franklin Science Center Renovation remains the number 1 priority for the University for capital budgeting purposes as it is already approved, and will go into the design phase in late 2019, with construction anticipated in the late 2022-2024 time period. The Franklin Science Center renovation project is discussed extensively throughout this document.

Old Main, the main administrative building for the University, remains a leader in deferred maintenance backlog ($13M as provided by SIGHTLINES ®). Replacement of the existing HVAC (replacing an outdated bladder system based on a feasibility study conducted by Century Engineering on December 31, 2011) remains one of the main concerns. The existing windows all require replacement (double single pane glass with failing frames), the interior finishes have been partially renovated; however, a major repainting of the entire structure should be planned for. The fourth floor of the building remains in original condition from mid 1960s vintage and could serve as swing space for a time-phased renovation. The challenge is to be able to accomplish this while also assessing other academic needs across the campus.

Heiges Field House has a modeled deferred maintenance backlog in excess of $10M (based on SIGHTLINES ®). Although the arena floor has been renovated, as well as the environmental unit in the indoor pool area, the building (and the arena) remain largely without air conditioning, lack public restrooms on the first floor, and materially lack in available (and equitable) locker room space for student athletes, as well as officials. A Locker Room study will be commissioned to determine the best way forward given existing locker room space, and potential options for expansion of capacity, and simultaneously addressing numerous Title IX concerns.

Horton Hall is equal in deferred maintenance backlog (as modeled by SIGHTLINES ®) at $10M to Heiges Field House. The challenge is that Horton Hall has limited classroom space (a single Class "C" classroom) and is primarily used for administrative offices. A campus-wide office census in nearing completion and that will further determine future use of Horton Hall. As this analysis continues, a coherent usage plan for Horton Hall will be developed that follows the principles of this Campus Master Plan.

Henderson Gym has a $6.64M backlog in deferred maintenance (as modeled by SIGHTLINES ®) and has outdated facilities that dually serves as the home of the Exercise Science Department. Windows have been recently replaced, but a full third of the usable square footage lies in the abandoned natatorium (indoor pool). The Locker Room Study will further analyze potential potions both within the Henderson Gym building as well as potential for pre-fabricated structures to the rear (serving a dual purpose of swing space for a potential renovation) as well as retaining them for expansion of space for underserved sports teams.

One specific recommendation of the 2008 Campus Master Plan called for the demolition of the Reed Operations Center (ROC), which houses the Printing Shop, the SU Campus Police, and the Physical Plant Department. The ROC, constructed in 1937, has been renovated numerous times. The 24/7 nature of Police and Facilities makes it a hard building to simply replace (while still maintaining 24/7 service to the University). The move of Alumni to Stewart Hall was not conducted due to the de-scoping of the Stewart Hall renovation Project, which also then precluded the Police from moving into the Rife House, and the movement of Facilities to Hoffman Mills would have required using smaller vehicles on state road 696. ROC still is listed by PASSHE for demolition, without a suitable (and occupiable) alternative identified. A further consideration that might simplify the tripartite of Police/Facilities and Printing Shop would be to potentially move the print shop to another area on campus. Exploration of the Old Mail Room at Old Main should be further studied for feasibility and long term sustainability among other options. The Campus Master Plan recommends the exploration of other space for new construction on the campus proper, while exploring the potential for grant funding for a Public Safety Center.

B. MISSION, VISION, GOALS, AND ASSUMPTIONS

Lehman Library

Old Main Fountain

View of Shippensburg from Old Main

1. **Mission of the University** (from the Shippensburg University Strategic Plan 2016-2021 and the Shippensburg University website)

Student learning and personal development through highly effective and innovative teaching, complemented by a wide variety of out-of-class experiences, continue to serve as the hallmarks of a Shippensburg University education.

Shippensburg University of Pennsylvania is a regional state-supported institution. It is part of the State System of Higher Education of Pennsylvania, which is made up of 14 universities located in various geographic regions throughout the Commonwealth. Founded in 1871, Shippensburg University serves the educational, social, and cultural needs of students primarily from southcentral Pennsylvania. The university enrolls students from throughout the Commonwealth of Pennsylvania, the Mid-Atlantic region, the United States, and various foreign countries as well.

Shippensburg is a comprehensive university offering bachelor's and master's degree programs in the colleges of arts and sciences, business, and education and human services. The curricula are organized to enable students both to develop their intellectual abilities and to obtain professional training in a variety of fields. The foundation of the undergraduate curriculum is a required core of courses in the arts and sciences. These courses prepare students to think logically, read critically, write clearly, and verbalize ideas in a succinct and articulate manner; they also broaden students' knowledge of the world, past and present.

The university's primary commitment is to student learning and personal development through effective and innovative teaching and a wide variety of high-quality out-of-class experiences. The ultimate goal is to have students develop to their utmost the intellectual, personal, and social capabilities they need to perform as competent citizens prepared to embark on a career immediately upon graduation or after advanced study. The personal attention given each student at Shippensburg is reflective of the strong sense of community that exists on campus and the centrality of students within it. The university encourages and supports activities which give students many opportunities to apply the theories and methods learned in the classroom to real or practical situations, such as faculty-student research and student internships. Student life programs and activities complement the academic mission and further assist students in their personal, social, and ethical development.

Committed to public service and community-centered in its relationships to the region, the university works closely and collaboratively with other organizations at institutional, programmatic and individual levels to develop common goals, share resources and invest cooperatively in the future of the region.

2. The Shippensburg University Vision Statement (from the Shippensburg University Strategic Plan 2016-2021)

To be recognized as the premier public (comprehensive) university in providing high quality education for students and a wide array of programs and services to meet the needs of South Central Pennsylvania and beyond.

Overall, our purpose is to help build a better, stronger South Central Pennsylvania and beyond, economically and culturally, through recruiting, retaining, and developing students, faculty, and staff who have the abilities, skills, and values to compete and contribute to their community in an evolving world.

3. Goals of the Master Plan (as approved by the President on January 22, 2018)

- Update 2008 Facilities Master Plan
- Integrate with the Shippensburg University Strategic Plan
- Flexible Plans for an Evolving Future
- Show the development of the campus in ways that are consistent with and support the University's values
- Setting conditions for Student (and institutional) success
- Attract and retain students
- Support Shippensburg University's marketing and branding initiatives
- Improve Residential Life and Enhance Community
- Assess use of academic and non-academic spaces
- Strengthen Shippensburg University's position locally and regionally
- Unified Action with Decentralized Execution

4. Master Plan Assumptions (as approved by the President on January 22, 2018)

- The master plan should show the development of the Shippensburg University campus over three phases: 0 to 5 years, 5 to 15 years, and 15 to 25 years.
- The master plan should assume incremental growth in student population.
- The master planning process should engage all parts of the campus community, and key stakeholders from the community of Shippensburg, Cumberland, and Franklin counties.
- The master plan should illustrate optimal development within the University's boundaries.
- Programmatic and curricular changes may be minimal over the life of the plan. There is the potential for the expansion of programs for engineering.

C. BACKGROUND

1. The Master Plan Team

The master planning process was highly interactive with all parts of the campus community providing input and feedback. The President's Cabinet provided regular review of the progress of master planning work. The President (as assisted by the Executive Management Team) was the decision authority. The Council of Trustees provided invaluable insight and prompted long term vision and approval for the direction of the plan.

Council of Trustees

Andrew Alosi

Charles Black

William A. Gindlesperger

Glenn Grell

Douglas Harbach

Bryan Lowe

Antoinette Marchowsky

Evan Redding Secretary/Student

Andrew M. Paris Vice Chair

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Scott Barton	Senior Vice President for Administration and Finance
Donta Truss	Vice President for Enrollment Management & Student Success
Sue Mukherjee	Chief Strategy Officer
Kim Garris	Chief External Affairs Officer

President's Cabinet

Laurie Carter	President
Scott Barton	Senior Vice President for Administration and Finance
Kim Garris	Chief External Affairs Officer
Sue Mukherjee	Chief Strategy Officer
Adam Roth	Director of Facilities Management and Planning
Carolyn Callaghan	Dean, Professional, Continuing, and Distance Education
Anne Detter Schaffner	Shippensburg University Foundation
Amy Diehl	Associate Vice President & Chief Information Technology Officer
Carlesha Halkias	Director of Social Equity
Mindy Fawks	Associate Vice President, Administration and Finance
Clair Jantz	Chair, University Forum
Jennifer Haughie	Associate Vice President, Enrollment Management
Nicole Hill,	Dean, College of Education & Human Services
John Kooti	Dean, John L. Grove College of Business
Kara Laskowski	President, SU APSCUF
David Lovett	Senior Associate Vice President of Student Affairs
Barbara Lyman	Provost and Executive Vice President
James Mike	Dean, College of Arts and Sciences
Tracy Schoolcraft	Associate Provost and Dean of Graduate Studies
Daniel Velez	Interim Vice President, Student Affairs
Denise Yarwood	Dean, Academic Engagement and Student Support
David Topper	Associate Vice President, Administration and Finance
Curt Miller	President, SU AFSCME
Logan Wein	Designee from Student Government
Don Mayer	Designee from APSCUF
Maya Mapp	Director of Admissions
Donta Truss	Vice President of Enrollment Management and Student Success
Mark Bodenhorn	Interim Director of Communication and Marketing
Michelle Forman	Dean of Libraries
Shannon Moran	President of the Graduate Student Association Board

The Campus Master Plan Committee

Jim Mike	Interim Provost
Donta Truss	Vice President of Enrollment Management and Student Success
Scott Barton	Senior Vice President for Administration and Finance
Sue Mukherjee	Chief Strategy Officer
Kim Garris	Chief External Affairs Officer
Daniel Velez	Interim Vice President, Student Affairs
Amy Diehl	Associate Vice President & Chief Information Technology Officer
Mindy Fawks	Associate Vice President, Administration and Finance
Tracy Schoolcraft	Associate Provost and Dean of Graduate Studies
John Kooti	Dean, John L. Grove College of Business
Nicole Hill,	Dean, College of Education & Human Services
Barry McClanahan	Executive Director of Campus Life
Jeff Michaels	Director of Athletics
Kara Laskowski	President, SU APSCUF
Allison Carey	APSCUF
Curt Miller	President, SU AFSCME
Gabbie Johnson	Student-Athlete
Dominic Stroh	Student-Athlete
Lucas Everidge	Student Association
Robert Giulian	Student Association
Aven Bittinger	Student Association

The staff of Facilities Management and Planning managed the Master Plan project.

Adam S. Roth	Director for Facilities
Bruce Herring	Assistant Director, Planning & Engineering

2. The Master Plan Process

Shippensburg University organized the Campus Master Plan process into five Tasks:

Task 1: Planning

November 1, 2017 – January 22, 2018

Initial planning and scoping involving the determination of the goals and objectives of the master plan. Initial planning phase included meeting with all affected stakeholders regarding project priorities and requirements. The initial planning phase ended with the approval of the Goals, Objectives, and Methodology for the Master Plan on January 22, 2018 by the President.

Task 2: Inventory Existing Conditions January 23- - April 11, 2018

This phase was characterized by further stakeholder discussions, including the integration of the Franklin Science Center renovation, the development of a School of Engineering, the development of the Annual Capital Budget Submission (as submitted to PASSHE on March 30, 2018), and the initial classroom and laboratory study (finalized April 11, 2018 and later republished September 13, 2018).

Task 3: Program Development April 12 – October 4, 2018

Staffing, planning, and coordination continued for the development of a Mini-Master Plan Update. Continual discussion between stakeholders and the development of numerous tools that led to the completion of the Mini- Master Plan Update. At the direction of the President, the scope of the update will be broadened to encompass a new Master Plan as briefed on October 4, 2018.

Task 4: Deliberate Staffing October 5, 2018—January 23, 2019

A Campus Master Plan Committee was formed under the direction of the Senior Vice President of Administration and Finance, and met for their first session on November 27, 2018, and were presented a DRAFT Campus Master Plan. The next two-month period was characterized by feedback, integration, and adjudication for the final DRAFT. The DRAFT was also presented at a Town Hall Meeting on January 23, 2019 for the campus at large.

Task 5: Final Report January 24 – January 29, 2019

Once all final edits were made as feedback from the Town Hall was incorporated, the final report was presented to the President and the Executive Management Team, and the Council of Trustees (January 30, 2019).

3. The 2008 Campus Master Plan

The University Campus Master Plan is customarily updated every 10 years. The 2008 Campus Master Plan (prepared by WTW Architects) served as a guide that literally transformed the campus (and its

infrastructure) for the challenges of the following ten years, and way beyond. The underpinnings and research that comprised a great deal of the plan remain as relevant today as it did in 2008. The change to the problem set for the 2018 Campus Master Plan is attributable to two factors, a decline in student enrollment since the last master plan, and the fiscal realities caused by that decline in student population.

The original master plan cost in excess of $750,000, and it was originally anticipated that an update would cost roughly $200,000. Due to fiscal realities, and a desire to both control cost (for other needed areas) and to maximize usage of organic expertise, the Physical Plant Department developed a methodology for updating the 2008 Campus Master Plan. A methodology for a master plan update was briefed and approved by the President of Shippensburg University (SU) on January 22, 2018

The 2008 Campus Master Plan set definitive goals for capital projects, shaping and perceived reality (2008-2033) of a campus atmosphere. With very few exceptions, the University followed the Campus Master Plan, and in those instances where actions were not taken, frequently it was due to changing conditions, showing the **flexibility** of the master plan. In short, the 2008 Campus Master Plan brought the campus to a waypoint, that now forms the benchmark for the 2018 Campus Master Plan, along a journey of continuous improvement. The following delineates in detail what was PLANNED, versus what was REALIZED, and where possible, what quantifiable results were achieved.

From the major recommendations of the original Campus Master Plan:

UTILITY INFRASTRUCTURE

- The 2008 Campus Master Plan highlighted the deficiencies of an aging steam plant, and the need for renewal. SU executed Department of General Services (DGS) Project 412-54 which developed a network of centrally-noded boilers at Kriner Dining Hall, Ceddia Union Building (CUB), Luhrs Performing Arts Center, and the Franklin Science Center, serving adjacent buildings. This network led to the closure of the Steam Plant in the first order. But in the 2d order, it greatly reduced our carbon emissions footprint (leading to more sustainable operations). But as we look at higher order effects, the steam plant (and the miles of underground steam lines) were no longer leaking with a frequency that caused an enormous expenditure of manpower to locate and eventually fix the leaks, coupled with the decreased need to excavate, causing both safety and aesthetic concerns. This project led to SU becoming the PASSHE leader in lowest energy consumption.
- The 18 chillers of various ages serving 13 buildings were highlighted as a deficiency in the 2008 Campus Master Plan. SU executed DGS Project 412-54 which led to the construction of a central chilled water plant. This plant led to the decommissioning of all 18 chillers (and commensurate decreased maintenance costs) in favor of a single two million gallon cooling tank, with a capacity of 3000 tons of year-round cooling. This too led to SU becoming the PASSHE leader in lowest energy consumption.

Central Chilled Water Plant

- The electrical and telecommunications infrastructure of the campus as envisioned by the 2008 Campus Master Plan cited needed upgrades. The planning and eventual execution of Department of General Services (DGS) project 412-55 (commenced in January 2018) will ensure redundancy between the four main campus electrical feeders, while simultaneously expanding bandwidth for data transmission, and also setting conditions for upgraded telephony using VoIP technology. Although not completed at the time of publishing of this document, all indications are that this project will set infrastructural conditions for the **22d century** as it relates to electrical and telecommunications infrastructure.

CIRCULATION

- The 2008 Campus Master Plan called for the construction of a roadway extension of Cumberland Drive from Bucks Drive (Now Baseball Access Road) to the Shippensburg University Foundation Conference Center onto State Route 696 (North Earl Street/Newburg Road). The completion of the project known as the "Loop Road Project" which involved a "tri-partite" agreement between Shippensburg Township, The Shippensburg University Foundation, and Shippensburg University, was completed. This new loop road assured contiguous mobility across the northern portion of campus, linking commercial activities at the Foundation with the main campus, and creating a "single campus" without border distinctions.
- The single lane bridge at Burd Run Creek, offered one-way traffic onto the Northeastern portion of campus off of Fogelsonger Road. SU executed project SU 2007/8 which led to the demolition of the existing bridge, and replacing with a new bridge capable of two-way traffic and making that entrance a true gateway to the Northeastern portion of campus.

Burd Run Bridge Today

SIGNAGE AND BRANDING

The 2008 Campus Master Plan recommended a graphically unified system of signs for campus gateways, wayfinding/directional signs, roadway signs, traffic and parking signs, and building identification. Signs which incorporate the Shippensburg University graphic standards emphasize the university's brand and quality. The University implemented a comprehensive campaign since the 2008 Campus Master Plan that established new signage at campus gateways, building signage using the Ship logo, and updated all roadway and parking signs.

Main Campus Entrance at Prince Street

Sample Campus Parking Sign

ATHLETICS

The 2008 Campus Master Plan recommended the elimination of the grass field at Seth Grove

Stadium in favor of a synthetic turf field. SU executed project 2009/17A which replaced grass with turf, but additionally executed project 2009/17B which also replaced the failing turf field with new turf at the Multi-Use Field behind Henderson Gymnasium.

ACADEMIC SPACE

The 2008 campus master plan highlighted an academic space need of 388,267 ASF, leading to a deficit of 22,893 ASF. A 35% enrollment increase was also studied which led to a potential increase in assignable square footage by 115,150 ASF. The anticipated enrollment increase did not materialize. With the space changes over the last 10 years, PASSHE Space Guidelines we currently have excess space of 27,896 ASF (E&G) and 193,036 (AUX). The University is now looking both quantitatively as well as qualitatively at existing space and forms one of the major tenets of the 2018 Campus Master Plan. That work is predicated on the qualitative work performed by Paulien and Associates in their 2015 Classroom and Laboratory Study, denoting classrooms as "A" (best quality), "B" (slightly less optimal), and "C" (candidates for repurposing). This study remains crucial to the qualitative analysis of the campus. The 2008 Campus Master Plan recommendation of a classroom supply reduction of 18 classrooms will also be considered by the 2018 Campus Master Plan Analysis, including the revalidation of Class "C" classrooms.

CAMPUS HOUSING

The 2008 Campus Master Plan recommended the replacement of all of the outdated existing housing with new low-rise living/learning centers featuring suite style beds. To accomplish this a developer was selected and Phase I was constructed on an open site at the east end of campus (Seavers and Naugle Hall along with the Etter Health Center) and on the site of a parking lot, volley ball courts and the Faculty office building on the west end of campus (Presidents (later Harley) Hall. Seavers Apartments and the Etter Health Center were then demolished. Phase II was constructed after demolition of Lackhove, Kieffer and McCune Halls and replaced with buildings of the same names. Once that was complete Harley and Naugle Halls were also demolished. The new housing was constructed in phases. Phase I, which was ready for occupancy in January 2012, included Seavers Hall and Naugle Hall (with a new Etter Health Center at the Ground Level), and lastly Presidents (later Harley) Hall. Phase II housing was ready for occupancy in August of 2014, and included Lackhove Hall, McCune Hall and Kieffer Hall. A Phase III was contemplated, but the enrollment conditions were not sufficient, and (showing the flexibility of the 2008 Campus Master Plan) was never constructed. Both the legacy McLean and Mowrey Halls were not demolished and are still in use to the present day (Mowrey – Student Success Center/Graduate Housing) and (McLean – Administrative Offices of ResLife).

LEED CERTIFICATION

The 2008 Campus Master Plan stated the University's strong interest in sustainable living/learning facilities. Although the statement was directed towards what would become the Phase I and II Housing, SU pursued Leadership in Energy and Environmental Design (LEED) across the campus. LEED certification as it relates to the campus is shown below (all new construction, renovation where stated):

LEED Silver Certified

Ceddia Union Building (CUB) – 2012 Reno

LEED Certified

Harley Hall – 2012

Kieffer Hall – 2014

Lackhove Hall – 2014

McCune Hall – 2014

Naugle Hall - 2012

Seavers Hall – 2012

Etter Health Center - 2012

LEED Certifiable Design

Chilled Water Plant – 2016

Dauphin Humanities Center – 2007 Reno

Grace B Luhrs Elementary School – 2001

Huber Arts Center – 2012 Reno

Lehman Library – 2010 Reno

Luhrs Performing Arts Center – 2017 Reno

Martin House – 2010 Reno

McLean Hall – 2007 Reno

Mowrey Hall – 2007 Reno

Resiner Hall – 2007 Reno

Rowland Hall – 2006 Reno

Shearer Hall – 2006 Reno

Shippen Hall – 2013 Reno

ShipRec – 2009

4. History of the Development of the Campus

4.1 EARLY YEARS

Shippensburg University was established in 1871 as the Cumberland Valley State Normal School. The origin of the school was closely related to the normal school movement as it grew and developed throughout the Commonwealth of Pennsylvania. Prior to the second half of the nineteenth century there was no systematic education or certification for teachers. "For the most part, teachers in the common schools were untrained, and had as their only training such education as they had received in the schools in which they afterward taught." (Hubley, Hilltop Heritage, 5)

In May, 1857, Pennsylvania Governor James Pollack signed a bill which divided the state into thirteen normal school districts. The normal schools were to be private institutions approved by the state with certifications given to graduates. The turmoil of the Civil War delayed implementation of the plan for normal schools.

Following the War the citizens of Shippensburg were interested in establishing a normal school in their vicinity. A public meeting was called on February 1, 1870, and State Superintendent Wickersham was invited to speak. It was encouraging to the people of Shippensburg to hear Wickersham say that "of all the places in this valley, Shippensburg, in many respects, was the most desirable." A letter to the editor in the Shippensburg News stated "The Professor made choice of our pleasant little village, as it is surrounded by a beautiful country, pure water in abundance, good society, and in short everything calculated to make the locality healthy, wealthy, and attractive. . ." (Hubley, Hilltop Heritage, 7) Citizens elected a board of trustees whose first task was to secure subscriptions to the capital stock of the school. When this effort proved successful, the trustees felt warranted to begin a site selection process. A committee investigated seven alternative sites for what would be the Cumberland Valley State Normal School, and a majority of the stockholders voted to locate the school on a hill overlooking the town.

Shippensburg viewed from Old Main lawn

This relationship of town to school is consistent with educational trends in the post-Civil War era. Frederick Law Olmsted was a noted 19th century campus planner and is considered the father of American landscape architecture. He was involved in the design of at least twenty schools over the course of his career from the 1860s to the 1890s. Prior to Olmsted, colleges were often planned as places apart from cities and towns. In his plan for the Berkley, California campus, Olmsted argued that colleges should be located neither in the country

(divorced from "domestic life" and "civilization," and producing "the barrenness of monastic study"), nor in the midst of a city, with its distractions. The proper location was just outside of a city or town. Olmsted believed that human habitation should be integrated with nature and this influenced his many park plans. (Turner, Campus, 141, 150)

Olmsted advocated college buildings of modest size including a "cottage system" of housing. But, like many of the early land grant colleges, the Cumberland Valley State Normal School was originally built as a single large structure which included classrooms, offices, and living quarters for men, women, and faculty. It also contained dining facilities, a library, and an auditorium. After considerable discussion about the appropriate size of the building, now known as Old Main, the cornerstone was laid on May 31, 1871 and was completed in 1873. (Wilkens, A Photographic Survey, 10)

Between 1896 and 1898 Old Main's profile was altered to its present appearance. (Wilkens, A Photographic Survey, 10) Up to 1896 Old Main was distinctly Victorian in Style. The fourth floor windows were in dormers within a Mansard roof. The central tower was topped with a steep pyramidal roof with dormers. Decorative cupolas were set back from the east and west mansards. A porch extended in front of the central tower with steps from what is today the second floor down to grade. Prior to 1896 the second floor was the "principal story" or piano nobile. (Loucks, Nomination Form for the National Register of Historic Places) The alterations of the late 1890s changed the appearance from Victorian to today's Federal style, which was popular on college campuses from the late 19th to the mid-20th centuries. The cupolas were removed and the mansard roofs were replaced with steep gable roofs. The central tower was built higher in brick and topped with a painted wood Federalist cupola (replaced in aluminum in 2008). The Victorian porch at the front of the tower was replaced with a gable roofed porch with the central entrance to the first floor. These major architectural changes were made to remedy the habitually leaking flat top of the original, and now out-of-fashion, Mansard roof. (Loucks, Nomination Form for the National Register of Historic Places)

For twenty years Old Main was School's only building. In the last decade of the 19th century and first decade of the 20th the remaining buildings of the campus on the hill were constructed: Stewart Hall (1893), Horton Hall (1894), Martin House (1908) and Gilbert Hall (1912). In 1901 a bridge was erected to connect Old Main to Horton Hall, a ladies' dormitory. Beginning in the 1870s improvements to the grounds were realized with planting of trees and landscaping, and the construction of tennis courts and ball fields. The Class of 1896 contributed funds for the fountain in front of Old Main. A steam plant was constructed in 1898 on a site across the railroad tracks (today's Cumberland Valley Rail Trail). Eckels Field was in use by 1904.

Bridge connecting Old Main and Horton Hall

The fountain, gift of the Class of 1896

Old Main ca. 1879

Old Main 1971

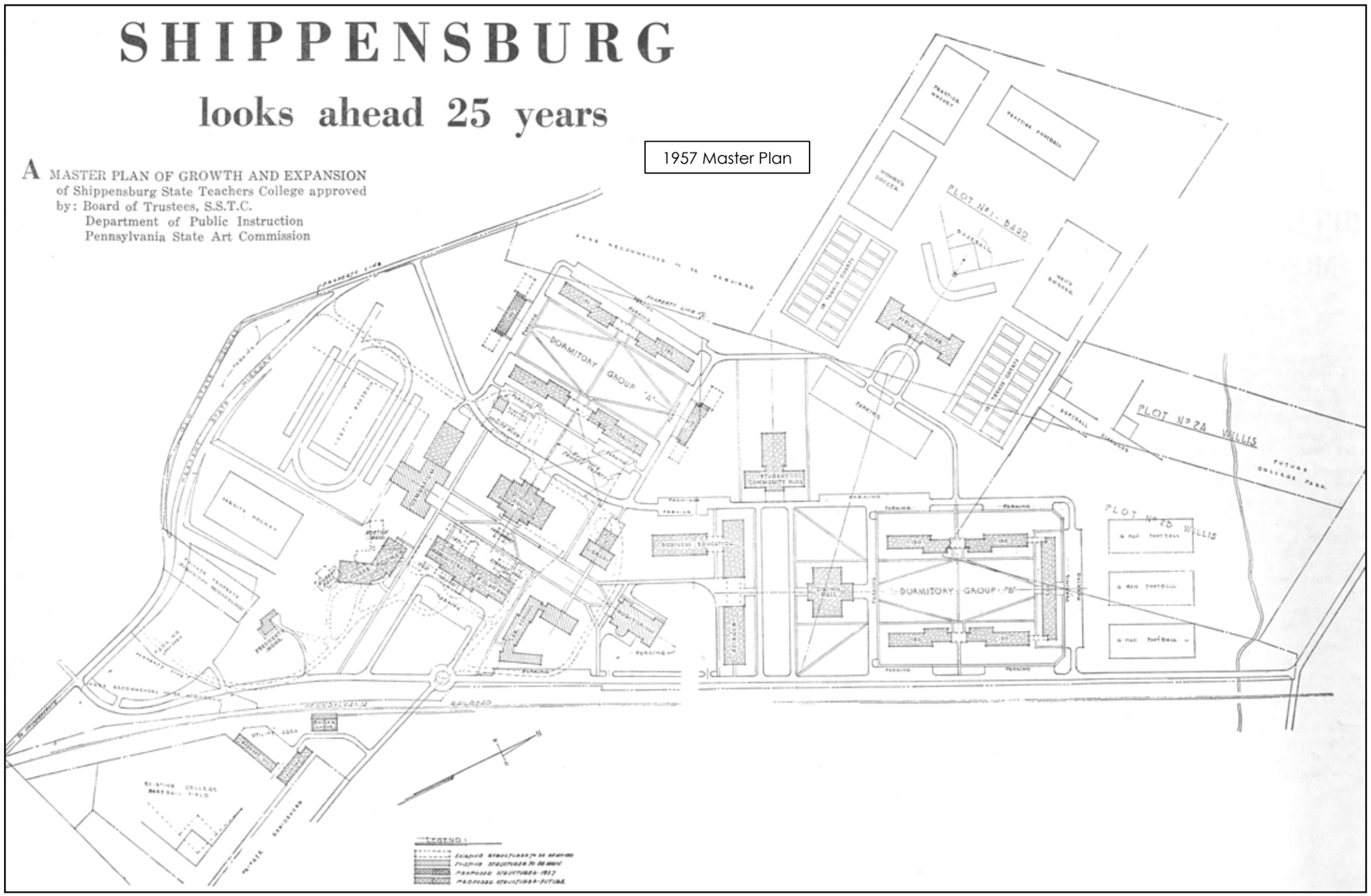
4.2 BETWEEN THE WARS

There was a pause in the development of the campus during World War I and the 1920s. Following the Depression, a new quad was established in the 1930s for the growing institution. The rear of Old Main and Stewart Hall established the south side of the quad, and a Library (1931, now the Huber Arts Center) marked the north side. Henderson Gymnasium (1937) was the terminus at the west end. The year 1937 saw the completion of Rowland and Shearer Halls on the south of the quad. Two buildings in the 1950s completed the quad: Memorial Hall (1950) at the west end and Kriner Dining Hall (1957) on the north. The architecture of the buildings reflected the national trend between the wars toward a restrained classicism for university buildings. Henderson features an arched portico, Memorial Hall a columned portico, and Kriner Dining Hall a simplified Federalist central tower.

Kriner Dining Hall

4.3 POST WAR EXPANSION

A 1957 campus plan showed the growth of student housing on two formal, axial quadrangles in the approximate location of today's residential districts. The demolitions of the Old Main and other older buildings on the hill were called for to be replaced by administration and classroom buildings. The student dormitories in the west campus were completed in the 1950s and 1960s but not in the formal arrangement proposed in this plan: Wright Hall (1958), McCune Hall (1959), and Harley, Kieffer, and Lackhove Halls (all 1964). The 1957 plan proposes 36 tennis courts symmetrically arranged on either side of a small field house.

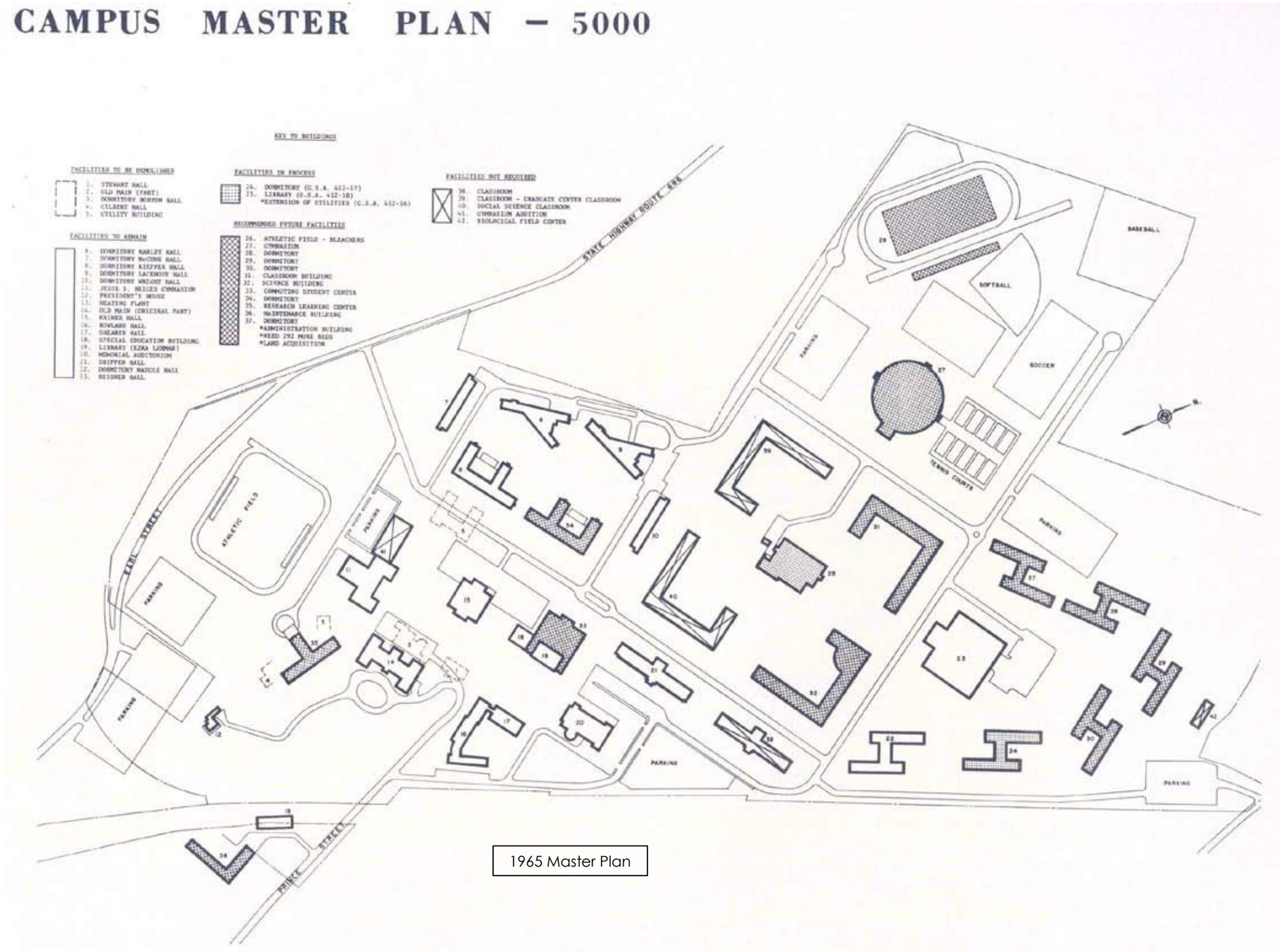


The 1965 campus plan shows the campus that is familiar to us today. The linear quadrangles of the 1952 plan were abandoned, as was the demolition of the hilltop historic buildings. A square academic quadrangle was proposed with a library at its center. The centerpiece of the new quad, the Ezra Lehman Memorial Library, was constructed in 1967. Academic buildings were positioned to form the edges of the Library quad: Dauphin Hall (1970), Franklin Science Center (1970), and, much later, the MCT Building (1996) and Luhrs Elementary School (2001). The Cumberland (now Ceddia) Union Building (1970) was built closely adjacent to the Library on the northeast corner of the quad.

The 1965 plan proposed five new dormitories, all in the same configuration as the recently completed Naugle Hall, in the east student housing area. Reisner Dining Hall and Naugle Hall were both constructed in 1965. Completing the east residential quad were McLean Hall (1967) as shown in the plan, and Mowrey Hall (1971), and Seavers Hall (1976) in different configurations.

Expansion of athletic facilities was shown in the 1965 plan. Heiges Field House (1971) and Seth Grove Stadium (1972) were constructed along with athletic fields in the north and west parts of campus.

The architecture of the post-war buildings of the Library Quad and the new residential districts were "modern" in the sense that they followed no historic style and were not imitative of the buildings around them. The contextual relationship among buildings was limited to a consistent massing (flat roofs, 3 to 4 stories) and the use of brick masonry. The buildings generally formed the edges of open spaces of various configurations which, when supplemented with landscaping and artwork, provided the unity and identity desired by the growing University.



1965 Master Plan

4.4 THE CONTEMPORARY CAMPUS

Following a twenty year building hiatus, construction resumed in the late 1990s. The Shippensburg University Foundation developed needed amenities in constructing Stone Ridge Commons apartments (1999) and the Conference Center (2006). New academic buildings are the Grove College of Business (1997) and the Luhrs Elementary School (2001).

New facilities that enhance the quality of life for the Shippensburg community are the Performing Arts Center (2005) and the Recreation Center (2008).

Since the 2008 Campus Master Plan, Shippensburg University led major construction initiatives that focused on improvement of energy as well as student housing.

- Phase I of new residential housing was completed in 2012 and included Presidents (now Harley) Hall, Seavers Hall, Naugle Hall, and Etter Health Center.
- Phase II of new residential housing was completed in 2013 and included Kieffer Hall, Lackhove Hall, and McCune Hall
- The Chilled Water plant was constructed in 2016.
- Ceddia Union Building renovation and expansion in 2011
- Resiner Dining Hall renovation and expansion in 2009
- Huber Arts Center renovation and expansion in 2011
- Dauphin Humanities Center renovation and expansion in 2009

Shippensburg University has evolved from a single building normal school in 1873 to a leading Pennsylvania university for the 21st century, with over two million square feet of buildings on 200 acres. The campus expanded northward from its original hilltop with spurts of growth in the 1930s, in the post-war era, and in recent years—each time with a logical plan that reflected the needs of the institution and the values of its time. The current campus master plan builds on the successes of the past with optimism for the future.

Building Chronology

Name	Date	History	Current Use
Old Main	1871	Classrooms, living quarters for male and female students, faculty, administration, dining, and library	administration
Fountain	1877		demolished
Stewart Hall	1893	Originally a gymnasium, later a Student Center. Dedicated as Stewart Hall 1950	classrooms, storage – Reno 2018
Horton Hall	1894	Women's Dormitory. Science labs until Shearer was built in 1941. Bridge to Old Main 1901.	classrooms, offices
Fountain	1896	Gift of the Class of 1896 - Restoration 2012	fountain
Steam Plant	1898	*Replaced by current Steam Plant 1952.*	demolished 1952
Infirmary	1907		demolished
Martin House	1908	*Principal's Residence*	President's Residence - Reno 2014
Gilbert Hall	1912	Named for President Levi Gilbert 1947. Model (Training) School. Adult and Business Education 1942-1964	classrooms, offices
Disposal Plant	1927	Replaced by Utility Building (ROC) 1937	demolished
Utility Building	1927	Replaced by Utility Building (ROC) 1937	demolished
Ezra Lehman Memorial Library (Hubert Arts Center)	1931	Library. Named for President Lehman. Became Huber Arts Center, Kauffman Gallery, 1971	art center, gallery - Reno and Expansion 2011
Alumni Gymnasium (Henderson Gymnasium)	1937	Dedicated to Esther Henderson 1969 (pool no longer used)	gymnasium, lockers
Rowland Laboratory School	1937	Elementary school. Dedicated to President Rowland 1941.	Communications/Journalism Department, Global Languages - Reno 2006
Shearer Hall	1937	Dedicated to Simon S. Shearer 1941	Science. Geography Department – Reno 2006
Utility Building (Reed Operations Center)	1937	Dedicated to Kenneth O. Reed 1976	Facilities Management and Planning, Police, Safety, Duplicating Services
Memorial Auditorium	1951		auditorium, classrooms
Steam Plant	1952	Addition 1963 - Decommissioned 2014	future School of Engineering Labs
Reisinger House	1954	Career Development Center, Frehn Center	Department of General Services, Custodial Offices
Kriner Hall	1957		dining - renovated 2010
Wright Hall	1958	Dormitory - renovated 2010	classrooms, offices
McCune Hall	1959	Dormitory	demolished
Huber Arts Center Annex	1961	Counselor Education	Demolished 2011 and replaced as part of Huber Arts Center Reno 2012
Shippen Hall	1963	Classrooms, offices-business, foreign languages, art, math	College of Education and Human Services – Reno 2001
Harley Hall	1964	Dormitory	demolished
Kieffer Hall	1964	Dormitory	demolished
Lackhove Hall	1964	Dormitory	demolished
Naugle Hall	1965	Dormitory	demolished
Reisner Dining Hall	1965	Dining, classroom/lecture hall	dining -Reno 2009
Ezra Lehman Memorial Library (Hubert Arts Center)	1967	1st Floor renovated 2010	library, instructional design

McLean Hall	1967	Dormitory, Learning Assistance Center	dormitory, offices
Cumberland Union Building	1970	Renamed Ceddia Union Building 2005	Student Union Reno and expansion 1991 and 2011
Dauphin Humanities Center	1970	Humanities Department	College of Arts and Sciences - Reno 2009
Faculty Office Building	1970	Temporary Faculty Office Building	Demolished 2012 for Phase I Housing
Franklin Science Center	1970	Natural Sciences/Computer Science	Natural Science, Psychology - Reno 2002
Little Red School House	1970	School house originally constructed 1865, moved to campus 1969	demonstration
Heiges Field House	1971		Athletics
Mowrey Hall	1971	Renovated 2018	Student Success Center, dormitory
Seth Grove Stadium	1972	Exterior renovation 2018, synthetic field installed 2011	inter-collegiate sports
Etter Health Center	1976	Student Health Center	Demolished - 2013
Seavers Apartments	1976		Demolished - 2013
Math Computer Technologies Building	1996	Classrooms, Math Dept., Computer Center	renovated 2012
Hockey Pavilion	1997		hockey, recreation
John L. Grove College of Business	1997		College of Business, Sociology, Media Services
Grace B. Luhrs Elementary School	2001		elementary school moved from Rowland Hall
H. Ric Luhrs Performing Arts Center	2005		auditorium/performance, Music/Theater Arts Department
Shippensburg University Foundation Conference Center	2006		Foundation Offices and Conference Center, SU Camps and Conferences
Student Recreation Center	2008		student recreation
Phase I Housing - Presidents (now Harley) Hall, Seavers Hall, McLean Hall II (now Naugle Hall), Etter Health Center	2012		dormitory (suites), health center
Phase II Housing - Kieffer Hall, Lackhove Hall, McCune Hall	2013		dormitory (suites)
Chilled Water Plant	2016		chilled water system hub

PRESIDENTS		BUILDINGS AND EVENTS
	1870	
1871 - 1874 George P. Beard		**1871 - Cumberland Valley State Normal School Established**
		1873 - Old Main
1875 - 1878 I. N. Hayes		
1879 - 1881 B. S. Potter		
	1880	
1882 - 1885 S. B. Heiges		
1886 - 1888 John F. McCreary		
	1890	
1889 - 1906 G. M. D. Eckels		
		1893 - Stewart Hall
		1894 - Horton Hall
		1898 - Steam Plant
	1900	
		1907 - Infirmary
1907 - 1912 Samuel A. Martin		1908 - Martin House
	1910	
1913 - 1930 Ezra Lehman		1912 - Gilbert Hall
	1920	
		1926 - Cumberland Valley State Normal School Designated State Teachers College
	1930	1927 - Disposal/Utility Building
1931 - 1944 Albert Rowland		1931 - Huber Arts Center
		1937 - Henderson Gymnasium, Rowland Hall, Shearer Hall, ROC
	1940	
1945 - 1947 Levi Gilbert		
1948 - 1955 Harry L. Kriner		
	1950	1950 - Memorial Auditorium
		1954 - DGS Building
1956 - 1968 Ralph E. Heiges		1957 - Kriner Dining Hall
		1958 - Wright Hall
		1959 - McCune Hall
	1960	**1960 - State Teachers College Designated Shippensburg State College**
		1961 - Huber Annex
		1963 - Shippen Hall
		1964 - Harley Hall, Kieffer Hall, Lackhove Hall
		1965 - Reisner Dining Hall, Naugle Hall
1969 - 1980 Gilmore B. Seavers		1967 - Lehman Library, Mclean Hall
	1970	1970 - Ceddia Union, Dauphin Hall, FOB, Franklin Science Center
		1971 - Heiges Field House, Mowrey Hall
		1972 - Seth Grove Stadium
		1976 - Etter Health Center, Seavers Apartments
	1980	
1981–2005 Anthony Ceddia		**1983 - Shippensburg State College Designated Shippensburg University**
	1990	1996 - MCT Building
		1997 - Hockey Pavilion, Grove College
	2000	2001 - Luhrs Elementary School
		2005 - Performing Arts Center
		2006 - SU Foundation Conference Center
2006 Jody Harpster		2008 - Student Recreation Center
2007–2012 William N. Rudd	2010	
		2012 – Phase I Housing Harley/Seavers/Naugle/Etter
2013-2017 Jody Harpster		2013- - Phase II Housing Kieffer/Lackhove/McCune Hall
2017-Present Laurie A. Carter		2016 – Chilled Water Plant
	2020	

References:

Hubley, John E. Hilltop Heritage, Shippensburg State's First Hundred Years. 1971
Logistics for Learning, Utilization and Planning Report to Determine Facilities Needed, 14 State Colleges, Commonwealth of Pennsylvania, November 1965
Loucks, Charles. Nomination Form for the National Register of Historic Places, for Buildings at the Cumberland Valley State Normal School: Old Main, Stewart Hall, Horton Hall, Gilbert Hall, and Martin House, 1984 Shippensburg Plans for the Future, Projections for the Decade 1966-1975, December 1967

Shippensburg, Pennsylvania. Shippensburg University Archives & Special Collections. Ezra Lehman Memorial Library. Shippensburg University.

Turner, Paul Venable. Campus. Cambridge: The MIT Press, 1984

Wilkens, Theodore Henry. A Photographic Survey of the Structural Growth and Changes of Shippensburg State College 1871-1970. Thesis for Master of Science in Communication, May 1970

D. ANALYSIS OF EXISTING CONDITIONS

1. Shippensburg University's Location and Significance

Shippensburg University is located in the heart of the Cumberland Valley with Blue Mountain to the northwest and South Mountain to the southeast. The Cumberland Valley is a particularly lush portion of the Great Valley that runs from Eastern Pennsylvania to Alabama. The University is situated on high land just outside the town of Shippensburg.

The town is advantageously located between Interstates 81 and 76. Route 696 connects the two interstates and forms the west boundary of the University. Route 81 runs the length of the Great Valley and connects the important commercial and government centers of Hagerstown and Harrisburg.

Shippensburg University is located in Shippensburg Township in Cumberland County. The Cumberland County/Franklin County boundary is just to the west of the University. The Shippensburg Borough is just to the south.

The Hagerstown to Harrisburg corridor is experiencing considerable economic expansion, and Shippensburg University is poised to be a key player in providing intellectual capital, and in workforce and business development. The Master Plan should also encourage continuing dialogue about the University's evolving role in regional development

2. Regional Transportation

2.1 Regional Transportation

The greater Shippensburg region is anticipating significant residential and commercial growth, which will be largely driven by the nearby Interstate 81 (I-81) corridor. A recommendation of the Campus Master Plan is to commission an updated transportation study of the greater Shippensburg Area based on:

- Housing construction
- Warehouse construction
- Improvements to railroad infrastructure
- Improvements to highway infrastructure
- Potential construction of a mini-casino in the greater Shippensburg area
- Gap analysis in roadway maintenance to include snow removal
- Economic revitalization and projections (in conjunction with the Shippensburg Area Chamber of Commerce) for the downtown Shippensburg area
- Analysis of alternate modes of transportation (to include bicycles) that link the Shippensburg university Campus to external transportation infrastructure
- Assessment of mass transportation needs

3. Topography and Geology

3.1 TOPOGRAPHY

Shippensburg University covers approximately 200 acres of gently rolling land. The campus slopes from the high point at Old Main northward towards the remaining portions of campus. Landscape topography is the result of the structure and weathering characteristics of the underlying bedrock.

The more weather-resistant rock is responsible for areas of higher elevation, while less resistant rock, such as limestone, tends to erode to form low-lying valleys. The topography of the Campus does not place constraints on development.

3.2 FLOOD PLAIN

A 100-year flood plain is located along Burd Run Creek on the eastern portion of Campus. An additional flood plain is located off site, along Middle Spring Creek (locally known as "Branch Creek") on the west side of Route 696. A 100 year-flood plain is designated by the Federal Emergency Management Agency (FEMA) and is defined as the part of a valley floor over which a river spreads during seasonal or short term floods at least once every 100 years. Buildings constructed on flood plains are subject to flooding and new development should be sited elsewhere if possible.

3.3 AQUIFER RECHARGE AREAS

An aquifer recharge area is an area that transmits ground-water to the water table. Preliminary research of existing documents has not located any aquifer recharge areas on the University Campus; however, due to the limestone base that is prevalent on campus a geotechnical survey would be needed to confirm this assumption.

3.4 WETLANDS

A wetland is defined as transitional lands between terrestrial and aquatic systems where the water table is usually at or near the surface or land is covered by shallow water. To be classified a wetland in Pennsylvania the following three attributes must be present: 1) sufficient water to saturate or cover the ground, 2) hydric soils, and 3) hydrophytic vegetation.

The Office of Biological Services, U.S. Fish and Wildlife Service, National Wetland Inventory, has identified only one wetland on campus. This wetland is identified as a Biological Pond located between Burd Run Creek and Fogelsonger Road north of the Britton Road. The National Wetland Inventory has classified this wetland as PUBHh (Palustrine System, Unconsolidated Bottom Class, Permanently Flooded, Diked/Impounded).

A Jurisdictional Determination (JD) of additional wetlands was delineated in a report dated February 28, 1995 by TETHYS Consultants Inc. for the area between the intramural fields/jogging path and Burd Run. The 1995 wetland delineation report needs to be updated.

A wetland identification and delineation for the stockpile at Fogelsonger Storage Area dated August 5, 2013 was completed as requested by the Cumberland County Conservation District to address concerns with the location of recycled concrete material associated with the demolition of housing. Limited areas of wetlands are identified and documented.

The wetlands are likely to be a constraint to development on the University Campus. To develop any proposed activity in the vicinity of the identified wetlands an updated wetland delineation study would need to be conducted to clearly determine the potential impacts. Avoidance of the wetlands, if possible, or mitigation of impacts, would be required, as would U.S. Army Corps of Engineers and Pennsylvania Department of Environmental Protection permits.

3.5 GEOLOGY

The Shippensburg Region is influenced by its location in the Ridge and Valley physiographic province. The mountains forming the northern and southern borders of Cumberland County are part of the ridge portion of this province. Quartzite, sandstones, and conglomerates are characteristic of this portion of the region. These rocks are generally tightly cemented with low porosity, but they also tend to be brittle, so numerous joints have developed. These joint openings produce a secondary porosity, which increases the permeability of the rock. In general, the number and size of joint openings decrease with depth. The other dominant rock types in the Region are the limestone and dolomite. Although limestone is particularly associated with high ground-water yield, this formation is also susceptible to sinkholes, surface subsidence, and groundwater contamination due to high porosity.

Bedrock underlying the University includes the Rockdale Run formation of the Ordovician Age. The carbonate bedrock at the site is moderately solution-prone, highly calcareous and weathers differently to produce a pinnacled or saw-tooth top of rock profile. Therefore, very pronounced rock pinnacles would be anticipated in this region. Common features associated with such "karst" terrain includes caves, internal drainage, lack of surface streams, solution channels and topographic features such as sinkholes. These features are the result of the dissolution of soluble bedrock, such as limestone or dolomite, over geologic time by groundwater and/or infiltration of surface water. Cassions or micropiles may be required for new structures.

3.6 SOILS

In Pennsylvania, soils information is maintained at the County level, typically by individual County

Conservation Districts. Soil surveys prepared by the conservation districts are entered into a statewide Soils Survey Geographic Database, which is then certified and managed by the United States Department of Agriculture, Natural Resources Conservation Service, and National Survey Center. The information was developed using a database called "SURGO." SURGO is the most up-to-date soil survey information available at the time this Plan. The Existing Soils Map indicates the soil types and slopes. A majority of the Campus and surrounding area possess soils with some type of moderate or severe development constraints. The Natural Resources Conservation Service defines constraints as being:

- Slight - soil properties and site features that are generally favorable for the indicated use and limitations are minor and easily overcome;
- Moderate - soil properties and site features that are not favorable for the indicated use and special planning, design or maintenance are needed to overcome or minimize the limitations; and
- Severe - soil properties or site features that are so unfavorable or so difficult to overcome that special design, significant increases in construction costs and possibly increased maintenance are required. Special feasibility studies may be required where the soil limitations are severe.

Types of soil constraints include the potential for shrink swell, severe slopes, flooding, wetness and low strength. To overcome the soil constraints, the following actions are required to make a site suitable for development:

- Shrink Swell - Sealing off or complete removal of affected soils and construction of carton forms and deep foundations;
- Severe Slopes - Excessive excavation activities and the construction of retaining walls;
- Flooding / Wetness - Dewatering of the site and changing the hydraulics of the site; and
- Low Strength - Selection of foundations that optimize the site conditions i.e. stone columns, deep foundations.

The only soil types on the Shippensburg Campus that do not represent a development constraint is the Ub, Urban land and Udorthents soil type

4. Existing Facilities

4.1 OVERVIEW

The Physical Plant of Shippensburg University consists of nearly 50 buildings on approximately 200 acres of gently rolling land outside the town of Shippensburg. Since Old Main was completed in 1873, there has been a general northward growth of the campus, away from Shippensburg and extending into the surrounding agricultural land. Construction of new buildings has been intermittent over the 147-year history of the University with a few notable building campaigns. See Section C.4, History of the Development of the Campus for more detail.

4.2 LAND AND BUILDING USES

Shippensburg University owns and operates nearly 2.4 million square feet of buildings. Distribution of building uses across the campus is coherent and logical.

Academic life in the nineteenth century was centered in the vicinity of Old Main. Today's academic quad revolves around the Lehman Library. Buildings around the library contain all the primary classrooms, laboratories, and associated teaching spaces. Some academic spaces remain in the historic district.

The two residential quads lie to the east and west of the Lehman quad. Each cluster of dormitories is supported by a dining hall.

Three athletic zones support varsity and recreational activities. North of the Lehman quad is Heiges Field House and the Recreation Center. Further north are Seth Grove Stadium and varsity practice fields and Fairchild baseball field. To the east are recreation fields. In the southwest portion of the campus are fields and tennis courts supported by Henderson Hall.

The Ceddia Union Building anchors a corner of the Lehman quad and is advantageously located in the academic zone and between the two residential zones.

A triangular lawn, also known as Foreman Triangle, serves as a buffer between campus and town at the southernmost corner of campus.

Each boundary of the campus has a distinct character. The campus is bounded on the south by the town of Shippensburg, on the southeast by the Cumberland Valley Rail Trail right of way, on the west by Route 696/Earl Street, and on the north by Foundation property and agricultural land.

In general the zoning of uses on the Shippensburg campus meets the criteria of adjacency, walkability, and aesthetics

4.3. BUILDING CONDITIONS

A building condition inventory was conducted as part of the 2008 Campus Master Planning process for the years 2007-2008. The results of that categorization are now outdated. There are organizations that can perform this task, such as PSFEI, but the costs can go as high as $1 per square foot assessed. The Physical Plant Department will explore an incremental facilities condition assessment in the future; tempered with the return on investment those results may bring.

The Physical Plant Department does however, maintain surveillance over all of the buildings in the inventory with the assistance of SIGHTLINES ®. This system conducts probabilistic modeling of all major building systems and creates pro formas of what would be required in order to maintain building stewardship. The Physical Plant Department developed the Heads Up Display (see APPENDIX 1) which ties all SIGHTLINES ® data, to unfunded projects. Tempered with the maintenance and operations knowledge of existing building condition the Heads-up display continues to serve the stewardship of the campus well, and serves as a direct linkage to the development of the Annual Unfunded Projects list (APPENDIX 3)as well as the PASSHE Annual Capital Budget Request (APPENDIX 4).

One specific recommendation of the 2008 Campus Master Plan called for the demolition of the Reed Operations Center (ROC), which houses the printing shop, the SU Campus Police, and the Physical Plant Department. The ROC, constructed in 1937, has been renovated numerous times. The 24/7 nature of Police and Facilities makes it a hard building to simply replace (while still maintaining 24/7 service to the University). The move of Alumni to Stewart Hall was not conducted due to the de-scoping of the Stewart Hall renovation Project, which also then precluded the Police from moving into the Rife House. The movement of Facilities to Hoffman Mills would have required using smaller vehicles on state road 696. ROC still is listed by PASSHE for demolition, without a suitable (and occupiable) alternative identified. The Campus Master Plan recommends the exploration of other space for new construction on the campus proper, while exploring the potential for grant funding for a Public Safety Center.

One condition that is of particular concern is accessibility, especially for our commuter students, during non-peak hour periods, in order to study/collaborate. The Library commissioned a Study regarding Archives and Special Collections with final report on April 7, 2017. These contemplated improvements should also be considered with a potential ability for the ground floor to offer 24/4 access. The potential alteration to the building, coupled with perhaps simpler methods to enable this condition need to be further assessed for rapid solution.

This Master Plan particularly addresses the conditions of classrooms and teaching laboratories. Teaching spaces compare reasonably well to national standards, but many require renovation to meet changing program objectives and generally accepted comfort levels. See Section E.6 Academic Space Planning for more detail. A number of recommendations are found that are tied to the 2015 Paulien and Associates study and will continue to be implemented.

The condition of residence halls and a plan for their renewal are discussed in Section E.7 Student Housing Master Planning.

The historic buildings—Old Main, Gilbert Hall, Horton Hall, and Stewart Hall ore listed on the National Register of Historic Buildings.

4.4 FACILITY DESIGN GUIDELINES

Shippensburg University seeks an energy and resource efficient approach to designing, constructing, renovating, operating, and maintaining its facilities. The University's approach includes: reducing energy consumption and costs,

minimizing the quantities of waste construction and demolition materials going to landfills, improving indoor air quality, and maximizing the use of sustainable materials and resources.

Professionals selected for the design of University projects are directed to follow the key strategies and technologies used in Building Green in Pennsylvania "What is a Green Building? Fundamental Principles of Green Building and Sustainable Site Design" as a guide for the type of passive green design that the University desires. Numerous campus buildings have been designed to the Leadership in Energy and Environmental Design (LEED) standard for either of design, or design and construction, and will continue to influence design criteria moving forward.

Professionals are directed to Shippensburg University's Facilities Design Guidelines which defines the standards and technical requirements for projects to tie into the University's infrastructure. It is also a tool to expedite the design and construction process in a cooperative partnering effort

4.5 ATHLETIC FACILITIES ANALYSIS

The Athletics enterprise was very proactive in following the recommendations of the 2008 Campus Master Plan. Among the numerous recommendations from the plan, a number of projects were executed to include:

- Construction of permanent toilet facilities at Robb Field and Fairchild Field. This project was executed using a less resource intensive solution that utilized a concrete pre-fabricated structure, saving over 50% of the estimated project cost.
- Upgrade of mechanicals and ventilation systems in the locker room area of Seth Grove Stadium.
- Construction of ADA access ramp frontage to Seth Grove Stadium, not only ensuring accessibility and inclusion, but also markedly redefining the aesthetic quality of the stadium itself.
- Renovation of the Weight Training & Fitness Center at Heiges Field House.
- Discontinuance of the lease at Davis House for coach's offices (now housed in both Heiges Field House and Horton Hall).
- The extension of Cumberland Drive to the Conference Center (Loop Road project) was completed, and the batting cage area relocated, and bullpens renovated.
- The grass playing field at Seth Grove stadium was changed to turf.
- Replaced scoreboard and sound system at Seth Grove Stadium.

The University also undertook a number of projects over and above those recommendations to include:

- The installation of a new environmental unit (Dectron Unit) in the Heiges Field House Pool.
- The demolition of the original arena floor at Heiges Field House Arena and replaced with a level sunken hardwood floor (eliminating the need for the repeated installation and disassembly of a modular wooden basketball floor, the danger of injury due to the height differential, and saving countless man-hours in the assembly/disassembly and maintenance of the floor).
- Renovation of the batting cages and bullpens servicing softball and Robb field.
- Tennis Courts were resurfaced within the past two years.

One of the goals of the Campus Master Plan was to integrate the Athletics and Recreation Master Plan, published in November 2011, into one single plan with unified purpose. Numerous aspects of that Athletics and Recreation Master Plan have been incorporated into the 2018 Campus Master Plan and as part of recommendations. Some of those recommendations include:

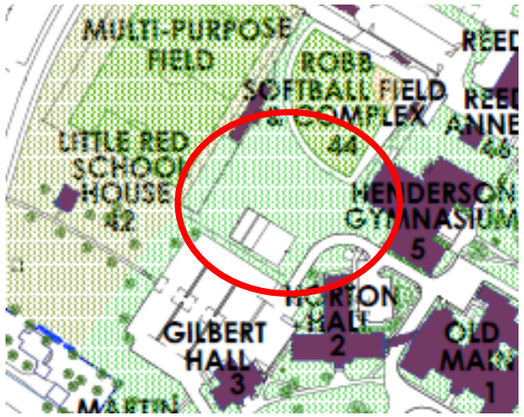
- Replacement of Henderson Gymnasium (affecting both Men's and Women's sports and Exercise Science)
- Renovation and Expansion of Heiges Field House
- Renovation and Expansion of Seth Grove Stadium
- Construction of a new Athletics building
- Construction of an Indoor Track Facility

The single greatest challenge to the Athletics enterprise moving forward is a question of equity. The men's and women's facilities are not at parity, and cause Title IX concerns. This problem is further exacerbated by a changing demographic within the Shippensburg university Student body, where more female students (and female student-athletes) are coming to Ship, and could potentially cause further growth of female athletic programs (and the necessary infrastructure to support them).

The equity issue is deeper though, as numerous teams are forced to share locker space, rather than each student having their own dedicated locker space. As potential student-athletes are recruited to Ship, or come to Ship to make their decision to enroll, frequently the lack of a dedicated locker space can be the determining factor in a young student's decision cycle. When that is coupled with locker room facilities that are either disparate from the field on which they play on, or are sorely lacking in either of modern amenities or aesthetic quality, that can be the difference between a student-athlete signing with Ship (or staying with Ship for that matter) or going elsewhere. This materially impacts the overall Shippensburg University mission, and must be immediately addressed.

Using the earlier cost conscious solution of permanent toilet facilities (at Robb and Fairchild Field) using pre-fabricated structures, perhaps the same approach could be used for locker room facilities. The attached Shippensburg University Athletics Facilities Assessment (APPENDIX 5) lists a multitude of concerns and projects to be undertaken. Looking specifically at the locker room issue, a few instances will be studied in depth:

- The home team locker room at Seth Grove Stadium, despite having been upgraded with a new ventilation system, still lacks many of the modern amenities and aesthetics. The visiting football team must use Heiges Field House for their locker room. Space for a new locker room could be "manufactured" using the dead space underneath the grandstands, using a modular locker room/shower unit, creating a new space for the home team, while also now creating locker room space at Seth Grove stadium for the visiting team (using the current home locker room).
- The locker rooms at Heiges Field House also are lacking in amenities as well as exclusive space for individual teams. The problem is further exacerbated by the lack of public restroom space on the first floor of Heiges Field House which greatly affects spectators coming to watch Ship games, and equally impacts those attending commencements at Heiges Field House. A potential solution may lie in the displacement of the current Athletics offices on the first floor, demolition of the two (60-student) classrooms on the 2d floor (and establishment of an office suite and possibly a team film room), and the construction of a combination of locker room upgrades as well as public restroom expansion on the first floor. The definitive lack of dedicated space for officials is also a confounding factor. The final solution could also lie in the repurposing of the racquetball courts in the basement which have the potential for a 2-floor configuration. This would require considerable analysis and establishment of a construction pathway, and requires further study.
- The locker rooms at Henderson Gymnasium are lacking at best. A building built in 1937, despite recent upgrades to include new windows, houses virtually all of the women's teams (and the men's soccer team) and provides only basic amenities, no exclusivity for teams, and is aesthetically displeasing. Whereas a major renovation would be required to bring this space to contemporary standards, the 2d order question of what to do with the teams during the period of construction comes to mind. A further thought on "manufacturing space" would be to develop the unused space between Henderson Gym and Robb Field and the Batting Cages. The establishment of pre-fabricated locker room/shower units (as mentioned with the Seth Grove solution) might not only create swing space during construction, but might provide enduring dedicated space to teams that currently either share (or are pre-empted by other teams), and should receive further study (and is pictured on the following page with red oval).
- The last locker room challenge could also be considered "manufacturing space" by creating a connector between the ShipRec and Heiges Field House. To be able to do so, without incurring a loss in parking and mechanical space would be the goal of a study and it would be consistent with earlier recommendations.



Proposed Analysis Area behind Henderson Gym

A second major challenge to the Athletics enterprise is one of sustainability, especially with the needs of contemporary athletic programs within the region.

- Shippensburg University has hosted the Pennsylvania Interscholastic Athletic Association (PIAA) games for many years. As programs continue to evolve, so do expectations. One of the recommendations of the 2008 Campus Master Plan was for the provision of lighting at Seth Grove Stadium, as well as the Throws Area in the practice field behind Seth Grove Stadium. As programs continue to grow, and more time is required to complete all events, PIAA will continue to go longer into the day, and will eventually require lighting to stay relevant as a PIAA hosting university. The long term prospects of continued PIAA must be weighed against future capital investments required to sustain that edge. If this is seen as vital to the mission of Shippensburg University, it should be seriously considered.
- The second sustainability challenge is one of maintenance of athletic fields and their eventual replacement:
    - The turf field at Seth Grove stadium is nearing the end of its useful life
    - The same could be said for the Multi-Purpose Field as well
    - The potential for switching the following fields from grass to turf or doing a major renovation to correct current deficiencies.:
        - Baseball (Fairchild Field)
        - Softball (Robb Field)
    - The potential exists for the construction of a new field (Astroturf) to support both Field Hockey and Lacrosse. A location would have to be part of a space study (as drainage in many of the obvious places (Eckels Field, Recreational Field Area) are all flood prone).
    - The potential resurfacing of the outdoor running track at Seth Grove Stadium
- The last sustainability challenge is one of branding. There are a multitude of colors across the Athletics enterprise. Numerous exterior structures lack coherence in colorization as it relates to the "Ship Standard" branding. A deliberate plan needs to be devised that addresses all painted surfaces to a single scheme with potential environmental branding. This is; however, not limited to painted surfaces as there are a multitude of wind screens, banners, and the like. A coherent color and branding plan needs to unify all of these into a single voice with a single message.

5. The Outdoor Campus

5. 1. OVERVIEW

Campus green space is the defining feature of the Shippensburg University campus. The lawns, trees, and other landscape features provide a peacefully, scholarly sense of place. Distant views beyond the lawns and between the buildings are of the Central Pennsylvania agricultural landscape and the Blue Ridge Mountains. These all come together to provide the first time visitor with a positive first impression of the campus.

5. 2. CAMPUS LANDSCAPE

The University has a well maintained campus landscape made up of large mature deciduous trees, small deciduous/ flowering trees, evergreen trees, shrubs, ground covers and accent plantings comprised of both annuals and perennials. The trees in combination with the buildings form the perimeter of various outdoor campus spaces and quads. Plantings of evergreen trees function as visual buffers at services areas and along some of the campus property. There are multiple outdoor gathering areas some of which could use further development to enhance their visual appeal and functionality. Site amenities such as benches and tables, trash/recycling receptacles and planters are of varying types and in different states of repair. Some older pieces have outlived their useful life and need to be upgraded to a modern standard.

5.3. DESIGN APPROACH

Accent planting with a combination of low plantings and trees is used throughout campus. Native plantings are used as much as possible to minimize maintenance requirements and to foster better plant development. Maintainability is paramount in the determination of size and complexity of plantings. Large complex plantings have been removed where the available manpower is not able to adequately maintain them. Themes and repeated plant types are used throughout campus to help tie one area to the next.

Trees are used along the boundaries of walks and open spaces to help define and accent the spaces. The University has an aggressive tree planting program with trees planted annually over the last 20 years.

Planters are primarily used in gathering areas to bring in plants and color. In some areas they are primarily for traffic control but also serve to bring plant life to the area.

Color is introduced whenever possible. This can be in the form of annuals, perennials, shrubs, and trees. Seasonal color planters should be considered throughout campus for the major walks.

Site amenities including benches and tables, trash/recycling receptacles are strategically placed. They are placed in gathering areas and places where there are trash issues. Benches and tables in the proximity of buildings are typically provided with outfitting funds on major projects. Ideally benches would be placed on dedicated slabs and not interfere with snow clearing operations. Post and chain is sparingly used and is beneficial to minimize cut thru areas and to accent some walks and protect planting beds.

5. 4. PRINCIPAL OPEN SPACES

The most iconic open space on campus is the sloped lawn in front of Old Main and the arc of the other historic buildings. This is a view that is cherished by the entire campus community, particularly alumni and first-time visitors. The fountain in front of Old Main is one of the most memorable spots on campus. The concrete finishes in this area would benefit from replacement. The curb line around the circle should be replaced and the lawn grade improved as well as the replacement of the concrete walkways.

The CUB amphitheater is a prominent component of the CUB. The expansive concrete area with tiered concrete seating areas is not particular inviting. The function of this space is divided between table seating for dining and gathering and the other side for flexibility for large group activities. There is no shade anywhere for students using this area. Consideration should be given for improvements in this area.

Other areas on campus could benefit from a review of their utilization. This includes:

- the Reisner Entrance at the corner of Cumberland and Lebanon Drives
- lawn space in front of the PAC at Adams and Lancaster Drives
- Kriner Entrance

A number of other building entrances could benefit from a closer review and incorporation of updated amenities such as trees, shrubs, flower planters, benches, table, and trash/recycling receptacles.

Classes are sometimes held outside. They typically use Adirondack chairs if they are nearby, or sit on the ground in nice weather. Simple outdoor classrooms could be accommodated near the John L. Grove Hall, the Rowland Shearer Courtyard area, or on the Academic Quad. Designs could incorporate hardscapes and sitting walls and space for additional seating as well as environmental branding.

5.5 OUTDOOR ART

There is only a handful of art pieces on campus, the opportunity for additional art exists. The Art Department has expressed interest in establishing an outdoor art walk following the completion of the major utility construction projects. With the completion of this most recent project the

opportunity is present to introduce more outdoor art on campus.

5.6 CLASS GIFTS

There are a number of class gifts reflected on campus. The fountain and the clock on the Raider Walk near Old Main are examples of two excellent long term class gifts. A few of them have reached the end of their useful life and should be updated. These include the kiosks at Heiges and Memorial which could be considered for repainting in a branding color to retain them in a functional. contemporary form.

5.7 OUTDOOR ATHLETIC FACILITIES NOTES

- Gender equity and Title IX should be addressed as the guiding principal for all future improvements
- Lighted artificial turf multi-use field for soccer, lacrosse and field hockey programs, field is in good condition (but will require replacement within two years), but scheduling is reported to be difficult due to high field demands.
- NCAA women's softball field. The field is in good condition with grade issues and turf irregularities that need to be addressed. The field does not have a press box, or lights.
- 9 Lighted tennis courts in good condition. The number of courts is reported to be adequate. A recent structural analysis of the court fencing revealed the post size and spacing is not adequate for attaching wind screening. Replacement or adding reinforcement will be required to add wind screening.
- 2 sand volleyball court in the student recreation area. These courts need renovation and sand replacement. There are 2 additional in Phase I Housing between Naugle and McLean and Phase II housing quad. The Phase I court is poorly sighted and should be moved, the Phase II court is the standard for campus.
- 2 Lighted asphalt paved basketball courts.
- Synthetic turf varsity football field and all weather running track with steeple chase, high jump, pole vault and long jump/triple jump runways. The fence around the field is dated and in need of replacement.
- 3 Natural turf football practice fields. Fields are in good condition. The upper two fields are also used for event parking. The lower field is also the impact area for javelin field events. A renovation to the fields to provide a continuous surface between them could permit multiple field layout options. An events tent is maintained near these fields during the football season and for camps and conferences. A pavilion could replace the aging tent. Also, for major track meets, a temporary fence is placed around a portion of the field for safety and crowd control issues between the SU Foundation property and the throws events and practice fields. This could be a permanent fence.
- Natural turf multi-use area for field events including shot put, javelin, discus, and hammer throw.
- NCAA men's baseball field. The field is in poor condition with grade issues and turf irregularities that need to be addressed. The field does not have a press box, or lights.
- Lighted natural turf student recreation field complex for soccer and softball. The complex also provides basketball courts and an asphalt jogging path. The facilities are in good condition with the softball infield needing replacement, although a portion of the complex is subject to flooding. The complex is not available for use by the athletic department.
- Existing natural turf field area at Eckels Field, primarily used for rugby practices and by the community with limited restroom availability. Current restrooms should be removed or replaced due to their condition.
- The interior chain link fence between the running track and the playing field at Seth Grove Stadium is worn, has lost its aesthetic appeal, and may require replacement.
- The median strip of grass in between the running track and the playing field perimeter fence at Seth Grove Stadium should be considered for replacement with a less maintenance intensive covering to include poured rubber in consideration.
- Additional storage requirements at Seth Grove Stadium should be included in the Locker Room Study.
- A tent is habitually erected at the rear of Seth Grove Stadium annually for extended periods of time. Consideration should be given to the construction of a more permanent pavilion that could serve the practice field.
- The practice field at the rear of Seth Grove Stadium is actually three separate fields, with separate grades. The field in total should be renovated to a single paying surface and should be considered for a perimeter fence once completed (to avoid the annual establishment of a near perimeter fence to support activities at Seth Grove Stadium).

5.8 eSPORTS

a. eSports is a form of competition using video games. Most commonly, eSports takes the form of organized, multiplayer video game competitions, particularly between professional players and teams.
b. This is a growing area of interest within the student population and is established at numerous campuses across the nation.
c. SU currently does not have space dedicated to this new and growing interest area

Existing Campus

ATHLETICS PRACTICE FIELDS
TRACK & FIELD
SETH GROVE STADIUM 31
FAIRCHILD FIELD 51
STONE RIDGE COMMONS 41
43 DAVIS HOUSE
REISINGER HOUSE 24
SHIPREC 50
HEIGES FIELD HOUSE 30
McCUNE 15
16 KIEFFER PAVILION
17 LACKHOVE
JOHN L. GROVE HALL 36
H. RIC LUHRS PERFORMING ARTS CENTER 48
STUDENT RECREATION COMPLEX 47
HOCKEY PAVILION
MULTI-PURPOSE FIELD
ROBB SOFTBALL FIELD & COMPLEX 44
REED OPERATIONS CENTER 13
REED ANNEX 46
HARLEY 54
18 WRIGHT
MCT 35
LITTLE RED SCHOOL HOUSE 42
HENDERSON GYMNASIUM 5
KRINER DINING HALL
DAUPHIN HUMANITIES CENTER 27
EZRA LEHMAN MEMORIAL LIBR. 22
BIOLOGICAL POND
HORTON HALL 2
GILBERT HALL 3
OLD MAIN 1
STEWART HALL 4
HUBER ART CENTER 10
SHIPPEN HALL 9
REISNER DINING HALL 21
26
MARTIN HOUSE 23
FOUNTAIN
SHEARER HALL 6
ROWLAND HALL 7
MEMORIAL AUDITORIUM 8
LUNDS ELEMENTARY SCHOOL 38
FRANKLIN SCIENCE CENTER
SEAVERS 53
WATER TOWER
NAUGLE 52
McLEAN 20
STEAM PLANT 25
RIFE ALUMNI HOUSE 37
ECKELS FIELD 45
CORA GROVE SPIRITUAL CENTER 39
CHILLED WATER PLANT 33

6. Campus Circulation

6.1 PEDESTRIAN CIRCULATION

Shippensburg University is a very walkable campus. It is approximately a half mile from the west edge of the west residential quad to the east edge of east residential quad; and a half mile from Seth Grove Stadium to the Spiritual Center across the Cumberland Valley Rail to Trails path making most destinations within a 10-15 minute walk. The University maintains an extensive network of concrete and asphalt sidewalks that make up the primary routes used for pedestrian circulation on campus. Major routes have wider walks with the minimum size being 6 feet to allow snow removal with a larger piece of equipment. Routes internal to the campus are typically concrete with those walks on the edges typically asphalt.

Pedestrian movement is primarily focused in the Lehman Library quad district. Many of the most heavily used daily destinations for pedestrians are in or around the quad: the Library, the CUB, the academic buildings, and Reisner Dining Hall. Early in the day and late in the afternoon there is considerable pedestrian traffic to and from the Library quad—from the east and west residential quads, from the commuter lots to the north, from off-campus housing to the west and south. The most heavily traveled pedestrian route is a diagonal through campus connecting the entrances to the Reisner Dining Hall, the CUB, the Library, and across Dauphin Drive to Memorial and Huber Halls and on to Old Main.

Police report few pedestrian/vehicle accidents, most of which are caused by inattentive walkers stepping out into traffic. The two residential quads are reached by crossing Dauphin Drive to the west and Cumberland Drive to the east. The lower portion of Dauphin Drive where most students cross was closed to thru traffic following the recommendations of the 2008 Master Plan and development of the new student housing. Lancaster Drive is crossed to reach Heiges Field House, the Luhrs Arts Center, ShipRec, and the commuter lots. Students living in off-campus apartments to the west have three lighted crosswalks to aid in safely crossing Route 696. Two of these are more recent after the University conducted crossing counts and then received PennDOT approval for installing overhead pedestrian signage and lighting to these heavily travelled areas.

There are a few notable areas where improvements could be made to increase pedestrian safety and access:

- Students accessing ROC and the Robb Field sports complex from the academic quad typically cross York Drive at Harley Hall at the intersection of York and Allegheny Drives. There is a pedestrian walkway just beyond this intersection but is primarily used when transiting from Harley Hall and not by students coming from the quad. Further down past ROC, there are no sidewalks and students walk in the roadway.
- A prominent "goat path" has developed from the Middle Spring pedestrian crossing at 696 along the south side of the tennis courts.
- There is a gap in the sidewalk system along Adams Drive in the vicinity of Memorial Hall extending over near the Rowland/Shearer parking lot.
- There is gap in the sidewalk system between Seavers Hall and Mowrey Hall.
- There is not a sidewalk past the Heiges lot on Stadium Access Drive. The road at this point is single wide and used heavily by maintenance and athletic vehicles.
- Between the Horton Lot and the back side of Henderson Gym is a frequently used pedestrian/small vehicle route. Due to the use by athletic carts, this area is prone to turning to mud in the spring.
- The diagonal walk across the academic quad at the library is a crossing point for several walkways and can be very congested.
- At the intersection of Lancaster Drive and York Drive, there is not currently a painted crosswalk. This could easily be added to accommodate the number of students that cross at that point.

The University has made a concerted effort to improve the ADA accessibility on campus. This has included the replacement of numerous curb cuts to meet ADA guidelines. With the number of curb cuts that exist on campus, this effort should continue. Regular surveys for tripping hazards are also ongoing. The University uses a combination of sidewalk pumping, cutting or replacement to address these hazards.

6.2 REGIONAL TRANSPORTATION CIRCULATION

Raider Regional Transit (RRT) is a local bus system serving Shippensburg University and the Shippensburg community. RRT is jointly sponsored by the Shippensburg University Student Association, Shippensburg University, Shippensburg Borough, Shippensburg Township, Cumberland County, Southampton Township-Franklin County and Capital Area Transit with funds provided by the Pennsylvania Department of Transportation. The bus system has two routes connecting to off-campus locations and throughout campus. Ridership varies, and is heavier in the cold weather approaching 2,000 riders per month. Advertisement for the bus system could be more aggressive as this is an under-utilized resource.

6.3 VEHICLE CIRCULATION

University faculty, staff, and commuter students travel to Shippensburg using the greater Shippensburg transportation network. Additional vehicular traffic enters the campus during morning and afternoon hours delivering and retrieving children from the Luhrs University Elementary School located on campus. The primary roads into Shippensburg are Walnut Bottom Road and Olde Scotland Road, both intersecting with I-81, US Route 11, which becomes King Street in Shippensburg, and Newburg Road from the north.

Within Shippensburg, the primary roads to campus are North Prince Street from the south and Newburg Road from the north. North Queen Street ends just prior to entering campus at the Cumberland Valley Rail Trail that parallels Adams Drive. Pedestrian steps from the end of North Queen Street to Adams Drive allow pedestrian access to the campus from North Queen Street.

The University Campus is essentially bounded by Newburg Road (Route 696) on the west/northwest, Adams Drive on the south, and Fogelsonger Road on the east. Access points are: SU Foundation Drive that connects with the new Lancaster Drive extension (loop road), York Drive and Old Main Drive off of Newburg Road; North Prince Street to Adams Drive, with Dauphin Drive and Cumberland Drive off Adams Drive; and Burd Run Road off Fogelsonger Road.

The Burd Run Road access has been expanded since the previous master plan, the one lane bridge being replaced with a two-lane bridge, making Burd Run Road an important campus access from the east, with traffic able to easily access the commuter parking lots, the performing arts center and the athletic facilities via Adams Drive.

Another campus access has been completed since the last master plan connecting with the driveway adjoining the Shippensburg University Foundation Conference Center, and extends that drive to connect to Lancaster Drive near the commuter parking lots. This driveway allows direct access to the largest parking lots, as well as the athletic facilities from the north.

All roadways within the University campus are owned and operated by the University with speeds posted at 15 MPH. There are a few areas where speeds are frequently seen exceeding the posted limits:

- Lancaster Drive in the vicinity of Lackhove Hall coming down the hill
- Lancaster Drive in the vicinity of the athletic fields on the new "loop road".

The previous master plan called for elimination of roadways interior to campus with a reliance on a perimeter road around campus. The perimeter roads consists of Old Main Drive starting at 696, that transitions to Adams Drive all the way around to Lancaster Drive at the Performing Arts Center. Lancaster Drive connects back to 696 in both directions forming the perimeter of campus. The two roadways that were called for closure are Dauphin Drive and Cumberland Drive. This concept was partially adopted with the restriction of the lower portion of Dauphin Drive in the vicinity of the residence halls. It was determined the upper portion of Dauphin Drive was a vital connection between Adams Drive and the Reed Operations area and further restriction of this roadway is not being pursued. In regards to Cumberland Drive, the construction of the new residence halls and the continued used of McLean Hall, the alternate access to the Reisner loading dock thru the McLean site is not feasible and Cumberland Drive continues to be necessary for this access as well as access to Franklin Science Center for deliveries. Signage and visitor information direct vehicle access to Adams Drive and not Cumberland Drive to minimize traffic on this roadway.

The most notable traffic circulation issues are traffic volumes leading to queuing along Adams Drive its intersection with Prince Street and Old Main Drive, The previous master plan suggested converting this intersection to a two way stop with stops signs on North Prince Street except right turn and Old Main

Drive coming down from Stewart. This has not been implemented but remains potentially a viable alternative. Maintenance of campus roadways is vital for safe operation of vehicles and to best present the campus. This includes regular cleaning and striping as well as asphalt overlays when warranted.

A potential issue that requires further study is the parking lot area in the vicinity of Robb Softball Field and the Tennis Courts. Cars have been observed driving in the wrong direction, or disregarding the "Do Not Enter" signage which may lead to potentially dangerous situations. The addition of a functional bathroom at the complex will no doubt increase the traffic volumes there and a further analysis is advisable.

6.4 BICYCLES ON CAMPUS

Shippensburg University was recently awarded a Bronze Bicycle Friendly University designation by the League of American Bicyclists. This recognizes the University's commitment to integrating bicycle riders into the transportation web. From a facilities standpoint, this includes making bicycle racks readily available at multiple locations, and keeping roadways bicycle friendly.

Shippensburg University also has an active cycling club that takes an active role in helping promote bicycle use and in providing bicycle education for the entire campus community. The club maintains the university's free bike share bikes, hosts an annual youth bike rodeo on campus for elementary age kids, does free bike repair in the quad each Earth Day, hosts weekly "no one gets dropped rides" open to anyone, and promotes a USA Cycling collegiate road race weekend, which includes a campus criterium. Club members and advisors also spend countless hours providing free maintenance and other bicycle related service to all members of the campus community informally. Being good "bicycle advocates" is a core club value.

Additionally, the cycling club maintains a small fleet of "library bikes," race-ready road bikes loaned to students interested in giving competitive cycling a try. Various club training rides and other activities provide opportunity to educate riders on road manners and bicycle maintenance—learning while doing.

Recent bicycle friendly facility initiatives includes moving the bicycle storage at Harley, Seavers and Naugle Halls under the covered areas at these buildings. At Lackhove Hall a covered bike area is being installed and there are plans to cover additional ones.

7. Parking

Parking on the Shippensburg University Campus should meet the following criteria:

• Parking for students, faculty, and staff should be within a reasonable walking distance of destinations.
• Parking for visitors should be available for events, and should be easy to find for those unfamiliar with the campus.
• Parking should serve all members of the campus community, including those with limited mobility.
• The parking environment should not only be safe, but it should also feel safe.
• Parking should have a reasonable cost for the consumer.
• Parking should not be a visual blight and should not diminish the quality of campus open space.

The existing parking on campus is located both inside and outside the perimeter vehicular loop road around the campus core. In general there is an adequate quantity of parking spaces on campus but there is a perceived inconvenience in some instances where the parking space location in relation to the user's desired point of designation requires walking.

Shippensburg University has 4,373 existing parking spaces. See Shippensburg University Existing Parking Space Inventory on the following page. This includes parking that is being leased from the Foundation at the Queen Street lot. This includes 481 spaces near Queen Street and 282 spaces closer to the Spiritual Center. The quantity of parking spaces required on campus was confirmed as sufficient the previous master plan and also by the continued observation of numerous available parking spots during peak times. The available parking at peak times is primarily at the commuter and storage lots in the vicinity of the Performing Arts Center, a reasonable walk to any point on campus. The Queen Street lot has never been more than only slightly filled, and provides expansion for parking well into the future.

There are opportunities for expanding some parking and will be the recommendation of the 2018 Campus Master Plan:

- Parking at the C-1 Lot at the old Steam Plant site is consistently full. There is space to expand that lot providing additional parking on the southwest side of campus.
- Parking for the Cumberland Union Building is frequently full in the spots not specifically designated for the UPS store. Additional space does exist to expand CUB parking on the east end of Grove Hall.
- With the completion of the loop road project, the under-utilized northern most section of the storage parking lot was designated for use in conjunction with the recreation fields. This has helped to eliminate an issue primarily with baseball practice parking in the lawn areas. Parking for athletic practices in the vicinity of Seth Grove Stadium frequently exceeds the number of available spots in that closest lot. As a result, cars are parked in grass areas and with the right weather conditions can cause significant rutting and damage to the turf areas. There is space to expand this lot.
- The parking lot at the Reisinger House is currently mostly gravel and could be paved to reduce maintenance issues.

ADA Parking spots are distributed through all of the parking lots on campus with the primary ADA parking on the academic quad area being located at the Dauphin ADA lot. Historically, the number of ADA parking spots has been sufficient for students, faculty and staff. ADA accessible parking is regularly assessed and discussed at the ADA 504 Committee meeting, and as new requirements arise, new spots are added as lots are constructed or re-designed.

	Parking space numbers 1/10/2018															
Lot No.	**Location/Description**	**Meter**	**ADA**	**Faculty**	**Fac/Staff**	**Comm**	**Resid**	**Assigned**	**Visitor**	**General**	**Stg**	**Total**	**Bus**	**Temp Clo**	**Demo**	**Add spaces**
F-1	Franklin Science - Faculty parking		2	37								39				
F+S-1	Gilbert Hall - Fac/Staff parking		2		136			3				141				
F+S-2	Rowland/Shearer - Fac/Staff parking		2		22			1				25				
F+S-3	Memorial/Shippen - Fac/Sraff parking		3	8	162			3				176	5			
F+S-C4	ROC (NorthNE lots)-Fac/Staff/Com parking		2		20	20		27				69	5			
F+S-5	ROC (South lots) - Fac/Staff parking	12			26			2	6			46				
F+S-6	Hoffman Mills		1		90			26				117				
S-6	Harley (along York Dr.)- Staff parking		4		9			4				17				
F+S-7	Huber/Kriner - Fac/Staff parking		2		57							59				
F+S-9	Lehman Library - Faculty parking		2		4			2	2			10				
F+S-11	Heiges (Upper lot) - Fac/Staff parking		2		86							88				
F+S-12	Ship Rec (Behind HFH)- Fac/Staff parkg		2		24			4				30				
F+S-13	Performing Arts Center - Fac/Staff parkg		6		120			3				129	2			
F+S-14	Mowrey (Small lot) - Fac/Staff		2		37			7				46				
F+S-15	Reisner Dining Hall - Fac/Staff parking		7		72			3				82				
G-1	Queen Steet - general lot									481		481				
R-1	Huber/Kriner- Resident park+Kriner dock						35	7				42				
R-2	ROC-Multi Field Res parking						32					32				
R-3	McLean (End of Adams Dr.)- Resident		4				136		14			154				
R-4	Off York Drive (behind ROC)		1				22					23				
R-5	Route 696						69					69				
R-6	Mowrey						27					27				
L-1	Storage Lot (Recr. Fields) - Stg parking										835	835				
L-2	Spiritual Ctr. (Upper lot) - Stg parking										282	282				
C-1	Steam Plant - Commuter parking		1			34						35				
C-2	Rt. 696 Gravel lot - Commuter parking					15						15				
C-3	ROC- Multi-field - Commuter parking					32						32				
C-4	Lancaster Drive - Commuter parking					20						20				
C-5	Dauphin Drive (end Wright)- Commuter		1			5		1				7				
C-6	Ship Rec - Commuter parking		1			388						389				
C-7	Mowrey Hall - Commuter parking					427						427				
C-9	Adams Drive - Commuter/Staff parking		2		24	93		20				139				
C-10	Lancaster Drive - Commuter parking					79						79				
A-1	**ROC - North Lot - Assigned**							15				15				
A-2	**lortonHall - North Lot - Assigned**		4					14				18				
V-1	**Stewart Hall/Admissions - visitor parl**		4						28			**32**				
V-2	CUB/Book store - visitor parking		1					5	20			26				
V-3	Spiritual Ctr. Employee/Visitor															
	Alumni House							7				7				
	Dauphin Humanities ADA Parking Lot		11									11				
	Franklin Science (access road)		4									4				
	Grove Business Hall (rear deliveries)		2					3				5				
	Grove Stadium (along Baseball Access)							24				24				
	Heiges Field House (bldg access lot) rear		3									3				
	Henderson Drive at Old Main		3					3				6				
	Henderson Drive at Stewart Hall-Pres park							3				3				
	ROC - Facilities Shop vehicles							25				25				
	ROC (lower rear) at dock							3				3				
	Reisinger House - DGS lot							18				18				
	Stadium Access Road at HFH		2									2				
	Chilled water plant				6							6				
	Wright Hall/Dauphin (MR parking)							3				3				
Totals		12	83	45	895	1113	321	236	70	481	1117	**4373**				

Shippensburg University Existing Parking Space Inventory

Campus Parking Map August 2018

8. Utilities

The University has made a concerted effort to update and repair utility systems on campus to meet the expanding requirements of new and updated facilities. New construction including housing, ShipRec, Performing Arts Center, and major renovations and expansions to the CUB, Huber, Dauphin, Rowland/Shearer, and Reisner have included studies and revisions to the existing utility systems.

All major utility systems are functioning without significant issues and are in a condition to provide service for years to come.

8.1 ELECTRICAL DISTRIBUTION

The current electrical distribution system originates with a single 23kV service feeder from Penelec which enters the main substation on the west end of campus and splits to feed two 23 kV load interrupter switches. Each of these switches feeds a 4000MVA transformer. The 12.47 kV secondaries of these transformers feed a two-bus 1200A secondary selective switchgear line-up in the main substation. From these buses, feeders 1201, 1202, 1203, and 1204 branch out and distribute power to campus buildings through an underground duct and manhole system. At each building, the 12.47 kV power is transformed to low voltage for distribution within the building.

A major capital project (DGS 412-55 Electric and Telecommunications Infrastructure) started in 2018 and finishing the summer of 2019 will essentially replace the distribution system from the Penelec feed to the building transformers. This project:

- Replaces the two existing main transformers with new 7,500 MVA transformers which are sized to allow for current and future (as depicted in the campus Facilities Master Plan) operation of the campus on one transformer.
- Replaces all campus feeders (these are: feeders 1201, 1202, 1203 and 1204) with new cabling, and upgrading the current capacities for present and future (as depicted in the campus Facilities Master Plan) needs.
- Removes all existing and abandoned power cabling, as well as any abandoned or unused telecommunications and other cabling located inside the underground electrical system.
- Replaces existing and constructs new duct banks as needed.
- Provides a minimum of two spare 4" power conduits between all electrical manholes
- Provides load breaks, dead breaks, and stress cones campus wide to allow electrical isolation of individual buildings as necessary.
- Upgrades unit substations, switchboards, secondary feeds, etc. for several campus buildings ; Wright Hall, Heiges Field House, Lehman Library, Old Main, and the old Steam Plant.
- Provides new building service to Stewart Hall from Old Main which is currently served from Shearer.
- Replaces existing undersized and/or dilapidated manholes and manhole lids as needed.
- Provides real time monitoring of the campus load at the main substation.

With the completion of this capital project, the electrical distribution system should be sized for anticipated growth for years to come and should not require any additional capital improvements into the foreseeable future.

8. 2 TELECOMMUNICATIONS PATHWAYS

The University is currently undergoing a capital project to expand pathways and replace and augment the fiber and copper distribution system. The current telecommunications distribution system originates from two separate buildings. The telephone system originates from the Reed Annex Building while data service originates from the Mathematics and Computer Technologies Center (MCT). Both systems are routed throughout the University via a manhole/duct bank system. The capital project will provide service for a backup data center to be established within the Reed Annex building. At the conclusion of the ongoing telecommunication upgrade project, the distribution system will consist of 24 strands of underground single mode optical fiber run to each building on campus from the MCT and the Reed Annex data centers. Some of the smaller buildings, or buildings with limited connectivity requirements, only require 12 strands of fiber to each data center. Spare capacity will be built into the cabling for connection to future buildings. The routing of the cabling will be such that the paths shall be separate and distinct to eliminate the possibility of a duct bank being cut, thus severing all communication to a particular run of buildings. The University will construct a backup data center within the Reed Annex building within the next year. This back up data center will provide additional resources for business continuity and disaster recovery.

New conduit routes have been provided as necessary for the installation of new copper and fiber optical cabling to those locations which currently do not have a duct bank installed or those which no known spare conduits currently exist.

Currently, the following services come into the Campus from State Route 696 through the pathway within the Reed Operations Center to the Reed Annex Building:

1. Century Link - 600 pair telephone local telephone trunk lines and 24 strand fiber optic data cabling.
2. Century Link – 24 strand fiber optic cabling for data network and long distance telephone trunk lines.
3. Comcast – 12 strand fiber optic.
4. Verizon Wireless – Fiber optic cabling.

Within the Reed Annex building, there is a University owned Nortel Private Branch Exchange (PBX), which feeds the entire Campus telephone system. From the PBX, large count copper telephone cables are routed to the Reed Operations Center through the same pathway as incoming services. These large count cables are spliced in the Reed Operation Center and from there are distributed to Campus as follows:

1. 1800 pair routed to the north end of Campus along Delaware and Lancaster Drive past McCune Hall.
2. 1500 pair routed to the south end of Campus toward Old Main.
3. 1800 pair routed to the East side of Campus toward the Dauphin Humanities Center.

This Nortel system is slated to be replaced in January 2019, with a Cisco Unified Communications system. This system will have redundancy built into it, with servers located both in the Math and Computing Technologies Building and the Reed Annex building. The main services from the new UC solution runs over fiber optics and will take advantage of the new infrastructure to deliver services to campus.
The telecom project being completed in July 2019 will give the university high speed connectivity for the foreseeable future.

8.3 CAMPUS HEATING SYSTEM

The campus heating system is comprised of two major types. The new residence halls are heated with an electrical based variable refrigerant flow (VRF) system. While initially concerned with the adequacy of essentially a heat pump based system, the system has proven itself down to single digits with no back-up system. Make-up air is provided thru attic mounted air handlers and uses electrical coils for tempering the air. This system allows individual control of units in student rooms. The system is the largest of this type on the east coast at this time.

The campus steam and condensate distribution system that heated the rest of campus was completely replaced in 2014 with a system of distributed natural gas boilers located in heating nodes circulating hot water from Kriner Dining Hall, Franklin Science Center, Performing Arts Center, Ceddia Union Building with standalone systems at Reisner Dining Hall, Mowrey and a new standalone steam system at Memorial Auditorium. Kriner also provides steam to Horton, Gilbert and ROC where the buildings have not yet been modernized to utilize hot water. Stewart Hall is currently being renovated and taken from steam to hot water heat and will be taken off the steam and added to the hot water distribution system..

The new heating nodes were designed with redundancy in mind. The largest of the systems at Franklin consists of six (6) heating units, three of which will handle the current load at design degree days. Each of the nodes was also configured for expansion allowing additional condensing boilers and distribution pumps to be added as necessary. The new system is fully integrated into the building automation system (Automated Logic).

8.4 CAMPUS COOLING SYSTEM

The campus cooling system is also comprised of two major types. The VRF system installed for the residence halls also provides air conditioning and has proven to be a reliable system with the exception of the split units cooling the telecom spaces. The telecom spaces were separated from the VRF system in theory to allow these smaller spaces to continue to run when the residence halls were unoccupied. In practice though, they have proven to have extensive communication issues which have yet to be completely eliminated.

The series of chillers and cooling towers serving the majority of the other buildings on campus were eliminated in 2015 and replaced with a central chilled water plant. Installed on newly acquired property next to the Spiritual Center, the new chilled

water plant provides 3,000 tons of water cooled chilling capacity along with a 1.7 million gallon thermal storage tank that can be utilized to limit the electrical demand and shift the cost of cooling to off-peak electrical times. A 500-ton air cooled chiller provides shoulder season cooling when limited cooling is required.

The central chilled water plant currently operates at around 2,000 tons on peak days leaving 1,000 tons of excess capacity. The plant was designed for the addition of another 1,000 ton chiller and for expansion of the cooling tower to support it. Circulation pumps are sized for expansion as well with the chilled water plant poised to provide service well into the future.

8.5 NATURAL GAS

The University receives natural gas from two locations on campus and distributes it via a University owned gas system at around 10 psi. The natural gas distribution system was replaced in 2002 with a system of modern polyethylene piping. The second supply point was added and the system pressure was increased to 10 psi after a study for the new heating system showed the current distribution system would not be adequate throughout campus after the addition of the new boilers.

The new configuration has been tested to single digits and there are no issues with the delivery of gas to all locations on campus. The primary issue with the system is that some portions of the tracer wire system have been lost and exact location of the gas line cannot always be determined. That coupled with the shallow depth of parts of the system has resulted in breaks primarily during campus construction.

8.6 STORM SEWER

Shippensburg University operates a private storm water conveyance system to direct storm water runoff to Burd Run to the north and to a public system on Newburg Road (Route 696) to the south. The system has been expanded as the University has grown, more recent construction has integrated retention requirements to meet new storm water requirements. The system functions adequately throughout campus with minimal ponding on heavy storm events. Past isolated problems have been corrected.

One area that should be addressed however is the outflow for the ShipREC parking lot area. An underground retention system discharges to another retention structure that overflows to an open swale at the Storage Lot. At the south-west corner of the lot, that swale ends and water flows across the parking lot. This typically occurs during periods of repeated rain events.

Regular maintenance has not always been followed on cleaning of inlets and some parts of the system could benefit from regular cleaning.

8.7 SANITARY SEWER

Shippensburg University operates a private sanitary sewer conveyance system to direct sanitary sewerage flows to the public sewer collection system operated by the Shippensburg Borough Authority and CFJMA. Flows from the University are collected and conveyed to a 16" sewer main along Newburg Road (Route 696) and to a 20" main which runs through the University with the connection point in the vicinity of the Storage Lot. An upgrade in 1999 decreased infiltration and inflow into the system and replaced pressure sewer lines with a gravity system.

The new residence halls were added to the system utilizing gravity flow. To eliminate the need for a lift station, the Chilled Water Plant utilizes gravity flow and connects the CFJMA main on Briton Road. Billings are based on the water meter at that location. There is one remaining lift station that services McLean Hall and the old Naugle site at the corner of Cumberland and Adams Drives. Any future construction in that area should incorporate the elimination of the lift stations.

8.9 WATER

Shippensburg University operates a private fire protection and domestic water distribution system within the confines of the campus consisting of a 12" loop main and 1,000,000 gallon water tower. The private system is fed at two points from the public Shippensburg Borough Authority water system. The University consumes approximately 100,000 gallons per day on average.

The previous master plan investigated the feasibility of eliminating the water tower due to its close proximity to the new housing. It was determined it was needed to maintain adequate pressure in the loop for campus fire protection and that it was not feasible to relocate to anywhere else. As a result, the tower was recoated and a telemetry system added to allow monitoring of the tank levels.

This was coupled with a project that added automated control of the valves at the feed points with the Borough Authority. This was to address issues with stagnation of the water in the tank due to Borough meeting regular water demands without the tank water. A secondary benefit from this has been the ability to detect leaks in the system quicker. During the discharge and filling of the tank, the slope of the line representing the tank levels is a good clue if there is a system leak. Any suspected leaks are aggressively pursued using an outside consultant where needed with specialized sensing equipment.

8.10 SITE LIGHTING

Adequate lighting for the campus is paramount for safety and security of the students. A recent Student Safety Committee walk of campus found the lighting to be adequate on campus with no areas identified needing addition lighting. Lighting of campus roadways, parking and pedestrian areas is accomplished thru a variety of means.

Roadway lighting is principally provided by the electrical supplier Penelec as they own and maintain the majority of the roadway lighting. The University owns portions of the roadway lighting particularly on newer constructed areas. Penelec lighting is a combination of 200 and 400 watt sodium vapor lights. The lights are powered thru a high voltage distribution system to a series of local transformers. This arrangement has proven beneficial as Penelec powered lights remain on when the University electrical distribution system is not energized. Penelec does offer a program to change to LED lighting without upfront costs.

Parking lot lighting is primarily owned by the University. The typical model is a "shoebox" type fixture on a metal pole. In areas potentially impacted by vehicles, a concrete base is incorporated. Only one lot has been upgraded to LED fixtures.

Site lighting along walkways is primarily with a standard "candy cane" type lighting fixture from Sternberg. The original lights were metal halide but more recent ones have been shifted over to LED. Sternberg makes a retrofit for the original lights. A shade has been added to the standard light configuration to minimize unintended upward glare. This is a part of the Dark Skies Initiative to reduce the amount of light pollution. Retrofits to the original lights should include the addition of the shade. A number of pedestrian lighting initiatives have been executed in the recent past resulting in well lighted pedestrian paths on campus.

Additional site lighting is provided with building mounted lighting fixtures. As additional candy cane light fixtures have been installed, building mounted site lighting has been removed to prevent over lighting of areas.

8.11 UTILITY GIS LOCATION INITIATIVE

As part of the numerous recent construction projects, an initiative to better pinpoint the location of utilities on campus was started. A firm qualified in the location and mapping of utilities with a GIS mapping coordinate system was utilized for a number of different projects covering a significant portion of the campus. A recent contract was executed to map the utilities in the remainder of campus with the intent of having 100% of the campus utilities mapped in GIS coordinates.

The base map for the University was initially developed by aerial overflight in 1997. Since that time a number of significant structural changes have happened on the University including a number of new buildings, expansions to buildings and changes to roadway configurations. These changes have been pieced into the existing base map as best as possible. The ongoing GIS initiative needs to develop a new base map capturing all these changes.

8.12 ENERGY UTILIZATION

The January 2017 Sightlines report which compares the University against similar sized peer institutions found that energy consumption is currently 28% less than them and is also the second lowest among all the PASSHE schools being 31% below the PASSHE average. This can be directly attributed to the increased efficiencies and reduction in energy associated with the construction of the central chilled water system and the closure of the steam plant and the move to natural gas fired distributed heating system. The use of thermal energy storage operations a result of the central chilled water plant have reduced our electric utility capacity tag by 24% and our transmission tag by 18%. These translate into direct electrical savings of over $100K per year.

Another significant contributor to the University's aggressive energy savings was the completion of the Guaranteed Energy Conservation Agreement (ESCO) project in 2006. From this contract almost $6M in energy saving projects were executed resulting in an annual savings of over $600K. The cost of these energy savings initiatives were borne by the ESCO contractor and then paid back over a pre-determined period of time from the verified energy savings. That contract is now complete and the University continues to benefit.

The emergence of LED lighting presents another opportunity for continued reduction in the campus energy profile. The University has recently pursued over $100K in LED lighting initiatives that have directly netted almost $30K in direct utility rebates and annual savings of over $20K. This has provided the University an opportunity to evaluate different LED opportunities and applications. To expand on that initiative, it may be time to pursue another Guaranteed Energy Savings contract.

Following the completion of the project for the new central chilled water system and distributed natural gas heating system, the designer took a look at the major building HVAC systems with the eye of identifying those areas most in need of improvement. They discovered that all the building systems they looked at were operating within parameters and did not have any major issues to recommend pursuing. While this cursory review demonstrated that campus heating and cooling systems are functioning at a very good level, retro commissioning of the buildings may identify building systems that are not functioning per design specifications that could result in additional energy savings and improved performance. Larger and older buildings should be prioritized for retro commissioning.

The University still has several buildings that rely on pneumatic control for building operation including the Ezra Lehman Library, Grove Hall, Mowrey and McLean Halls. Other buildings use direct digital control (DDC) which allows for enhanced oversight and control of the individual building components and the elimination of the air compressor and distribution system.

E. THE CAMPUS MASTER PLAN

1. Master Plan Concepts

Concepts for the development of the campus grew out of analysis of existing conditions and program needs, consideration of population growth over time, and an understanding of the unique culture and qualities of Shippensburg University.

- Coherence
  - Group like functions in geographic zones
  - Reduce need for duplicative functionalities
  - Increase sense of "communities" and inclusion

Drone Photo of the "Hill"

- Branding
  - Enhance colorization of the campus to a standard for both exterior and interior finishes that strengthens the Ship brand
  - Update signage (exterior and interior) to further reflect that branding

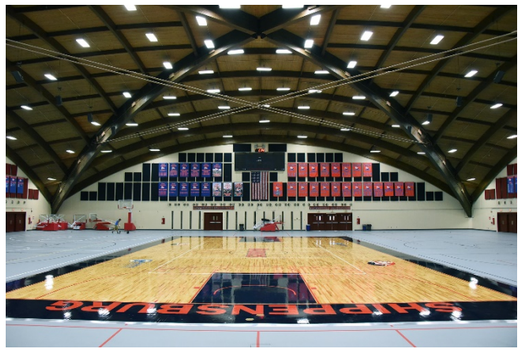
The Water Tower and Ship Logo

- Renewal
  - Gateway signage for campus entry
  - Power washing of selected buildings
  - Land/hardscape initiatives
  - SIGHTLINES ® recommended stewardship

- The Learning Environment
  - Explore Active Learning Spaces
  - Establish Center for Faculty Teaching and Learning

- Energy
  - LED Conversions
  - Motion Sensors
  - Expansion of building automation technology

- Athletics and Recreation
  - Optimization of athletics spaces and configuration for sustained uses
  - Integration of Recreational spaces within existing zones



New Arena Floor at Heiges Field House

- Technology
  - Retaining technological edge for both educational and institutional applications in the areas of computing, telephony, data, and building automation
  - Sustaining the infrastructure to maintain that edge both inside and outside of the wall
  - Utilizing technology (to include GIS) to improve both wayfinding and knowledge management

- Accessibility and Equity
  - Optimization of ADA accessibility to all spaces on campus
  - Optimization of Title IX across the athletics enterprise
  - End goal is simply equal access for all across the campus, in close coordination with all stakeholders (including OAR and people with disabilities), setting a higher standard above ADA, that is to be further developed

Newly Renovated ADA Accessible Front of Seth Grove Stadium

- Sustainability
  - Reduction of unneeded materials and responsible disposal/re-use
  - Optimization of policies and behaviors leading to reduced consumption

- Internal Circulation
  - Parking
  - Vehicular traffic
  - Bicycle traffic

- The Residential and Campus Experience
  - Total lifecycle planning of legacy and new residence halls and their utilization
  - Integration of land/hardscapes to improve that connection
  - Optimization of campus retail and dining venues

Residential Housing including Harley and Lackhove Halls

- Recapitalization
  - Planning for the School of Engineering
  - Planning for the renovation and construction of Stewart Hall and Franklin Science Center
  - Future capital planning

Old Steam Plant and Planned Laboratory Space for the School of Engineering

- Community Interaction
  - Expanding/linking existing outreach assets (including Ship Station and Cumberland Valley Rail Trail)
  - Expansion of outreach (physically and conceptually) within the fabric of the greater community

- Sesquicentennial
  - Define what that means to the institution at large
  - What conditions are required for its commemoration

Old Main Cornerstone from Construction and Centennial

1A. Master Plan Concepts nesting with University Priorities and Strategic Documents.

The Campus Master Plan exists within a framework of higher level strategic documents/priorities to include the Shippensburg University (SU) Strategic Plan (2016-2021), The SU Academic Master Plan, the President's Visioning Team Report (September 28, 2018) and the SU Strategic Enrollment Management Plan. The three aforementioned documents, some pre-dating the arrival of the current President must also be put into context of the Four Pillars:

- Student Success
- How We Tell Our Story
- Community Relations
- Quality of the Ship Experience

What is critical to the Campus Master Plan is that whatever may be contemplated, must be "nested" within those given Pillars and aforementioned documents. In the figures that follow, each strategic document is shown, with corresponding Goals and Objectives, and then how the concepts of this Campus Master Plan apply. Later in this document those correlations will bear the fruit of **proposed projects** (later in this document) which will show a clear relationship what is planned versus what is important.

			Nesting Objectives for the SU Campus Master Plan	
SU Strategic Plan 2016-2021 - Strategic Directions	**The Four Pillars**	**Goals (applicable to Campus Master Plan)**	**Objectives (applicable to Campus Master Plan)**	**Master Plan Concepts**
Student Learning and Engagement				
	Student Success/How We Tell Our Story/Quality of the Ship Experience/Community Relations			
		G1 - Support the central role of faculty in student learning and success and promote cross divisional as well as other collective and individual initiatives		
			O1 Innovate and scale up successful practices to enhance the learning experience	Coherence/The Learning Environment/Technology/Recapitalization

		G2 Encourage learning that engages students through innovative pedagogy and by providing additional outside of the classroom experiential learning opportunities.		
			O2 Promote the use of technology that increases students' engagement in learning and to access learning resources outside of the classroom (reserving class time for deeper analysis of the content)	Technology/The Learning Environment
		G3 Foster the notion that holistic education takes place outside as well as inside the classroom.		
			O3 Expand community service opportunities for all students and establish a center to coordinate these activities	Community Interaction
		G4 Promote academic success for students who come from a variety of backgrounds with a range of experiences		
		G5 Recruit, retain, and develop high quality students.		
			O4 Expand high-impact learning activities, e.g., living-learning opportunities and undergraduate research	Recapitalization/The Residential and Campus Experience/Accessibility and Equity
Excellence and Innovation				
	Student Success/Quality of the Ship Experience/How We Tell Our Story			
		G6 Develop and enhance academic programs and pedagogies of excellence that are simultaneously grounded in the hallmarks of a liberal arts education; develop independent, innovative, and analytical thinkers; are at the cutting edge of their field; and meet the workplace needs of the region		
			O5 Develop new and strengthen existing academic programs and **facilities** in science, technology, engineering, and math (STEM), and other programs, including professional doctorates that complement and support the 21st century information-based economy	Recapitalization/The Learning Environment

		G7 Develop innovative pedagogies and means to offer courses, programs, and services for new markets and audiences, and that are responsive to the changing needs and high-demand careers of regional and state communities and organizations		Recapitalization/The Learning Environment
		G8 Establish an environment and processes that facilitate and reward creativity and innovation that enhances the mission of the University		Recapitalization/The Learning Environment
		G9 Develop campus physical facilities to more adequately support current programs and services as well as future directions and maintain a facilities master plan to assure efficient and effective allocation and use of space, long-term viability of facilities through adequate maintenance and repair programs, and regulatory and statutory compliance		Recapitalization/The Learning Environment/Renewal/Energy/Technology
		G10 Continue to identify, examine, align, and allocate resources to meet institutional priorities while maintaining fiscal responsibility and enhancing academic excellence		Campus Master Planning
Community and Regional Engagement				
	Community Relations/How We Tell Our Story			
		G11 Leverage student, faculty and staff areas of interest and expertise to meet community needs and interests		Community Interaction
		G12 Promote multiple methods of student, faculty and staff community engagement including, but not limited to, service learning, community based research, professional service, volunteerism and civic engagement		Community Interaction/The Residential and Campus Experience
		G13 Coordinate and strengthen community-university relationships		Community Interaction

		G14 Recruit, retain, and develop high quality faculty, staff, and administrators to provide the administrative, educational, and student support services of the university that are essential to community and regional collaboration		Community Interaction/Recapitalization/The Learning Environment/Renewal/Coherence/Branding/Sustainability

Figure – Nesting Objectives for the Four Pillars and The SU Strategic Plan (2016-2021)

		Nesting Objectives for the SU Campus Master Plan	
SU Academic Master Plan: 2013-2018	**Goals (applicable to Campus Master Plan)**	**Objectives (applicable to Campus Master Plan)**	**Master Plan Concepts**
	Goal 1: Provide a curriculum and other learning experiences that creatively address the changing needs of a diverse, technology-based, global society		
		2. Offer programs of study that provide the intellectual foundation, context, and current state of the disciplines	Recapitalization/The Learning Environment/Renewal/Coherence
		3. Provide a core program that works in concert with major programs to lay the groundwork for self-directed exploration and lifelong learning	Recapitalization/The Learning Environment/Renewal/Coherence
		5. Prepare students to succeed in a world of rapidly changing technologies and global interdependencies	Recapitalization/The Learning Environment/Renewal/Coherence/Technology
		8. Provide pathways for the development of innovative programs, courses, and core experiences	Recapitalization/The Learning Environment/Renewal/Coherence/Technology/Sustainability
	Goal 2: Cultivate a learning-centered environment to facilitate students' intellectual growth and success		
		4. Offer small classes where students will receive personalized attention and evaluations that promote intellectual growth	Recapitalization/The Learning Environment/Renewal/Coherence/Technology/Sustainability
		5. Encourage and facilitate collaborative learning opportunities	Recapitalization/The Learning Environment/Renewal/Coherence/Technology
		8. Support the development of a **physical campus environment** that engages and inspires creativity and intellectual activity	Recapitalization/The Learning Environment/Renewal/Coherence/Technology/Sustainability

	Goal 3: Enrich connections among the liberal arts, professional and graduate education, and the community to deepen disciplinary and professional understanding		
		1. Promote and support experiential learning, including undergraduate and graduate research, field work, internships, service learning, and other creative learning activities beyond the classroom	Recapitalization/The Learning Environment/Renewal/Coherence/Technology/Sustainability
		3. Forge new bonds and strengthen existing connections between the university and the surrounding community	Community Interaction
	Goal 4: Foster a stimulating scholarly environment for students, faculty, and staff that advances knowledge and that enhances the quality of the curriculum		
		2. Support faculty research, scholarship, and professional development	Recapitalization/The Learning Environment/Renewal/Coherence/Technology/Sustainability
		5. Promote meaningful participation in campus and community life	The Residential and Campus Experience/Athletics and Recreation
	Goal 7: Cultivate an environment in which the curriculum and culture support accessibility for and inclusion of members of diverse and under-represented populations		
		3. Support the development of accessible physical spaces and technologies	Coherence/Technology/Accessibility and Equity/The Residential and Campus Experience/Renewal/Recapitalization

Figure – Nesting Objectives for the SU Academic Master Plan 2013-2018

	Nesting Objectives for the SU Campus Master Plan	
Visioning Team Report	**Recommendations (applicable to Campus Master Plan)**	**Master Plan Concepts**
Enrollment		
	R1 Blend academic and real world experience; best of both worlds	Recapitalization/The Learning Environment/Renewal/Coherence/Technology
	R2 Provide a one-stop student resource center for questions, student concierge style, and expand the services in Mowrey	Renewal/Technology/Accessibility and Equity

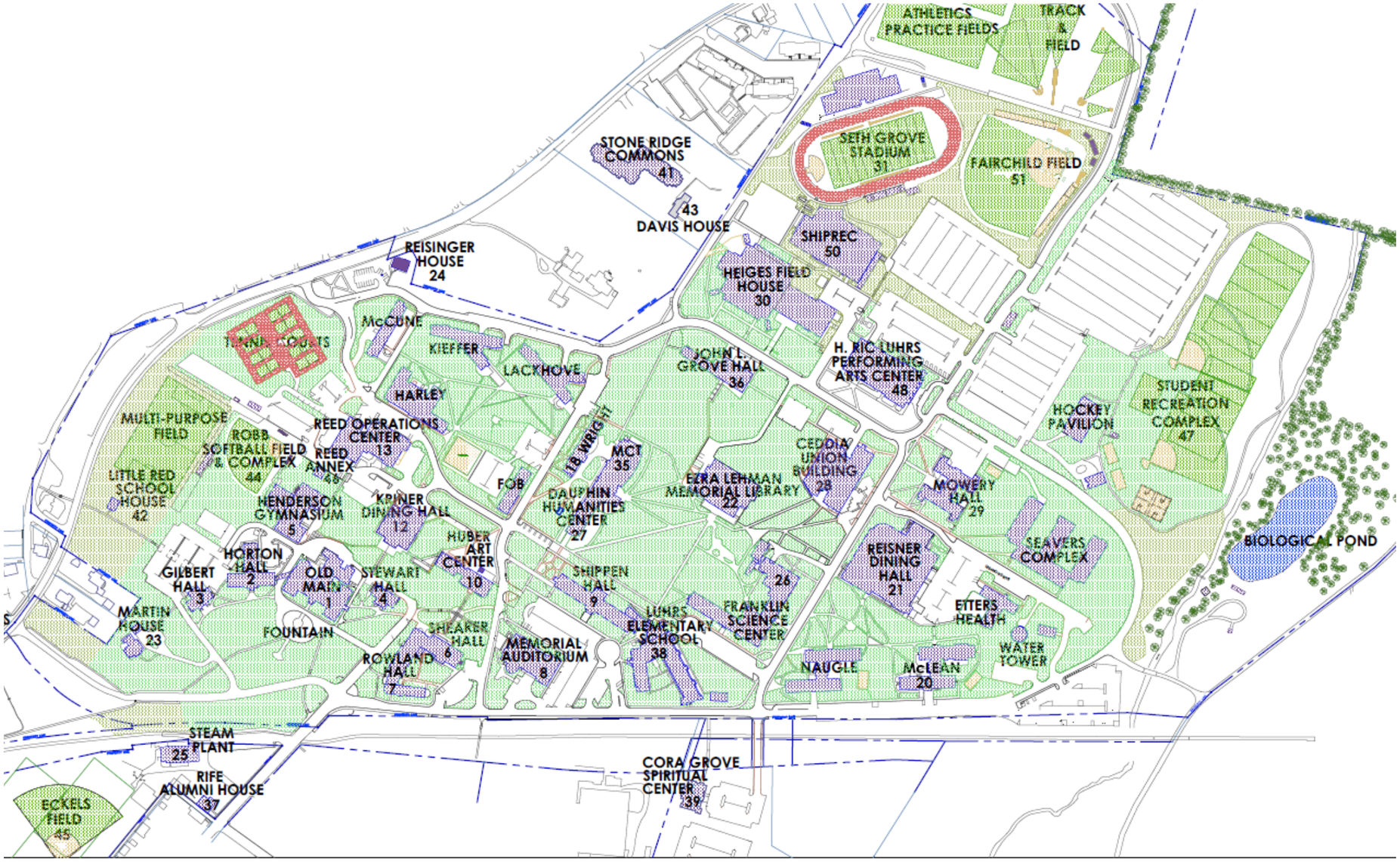
	R3 Use the 150th anniversary of the founding of the Cumberland Valley State Normal School to address the university past, present, and future	Sesquicentennial
	R4 Align programs to the job market	Recapitalization/The Learning Environment/Renewal/Coherence/Technology
	R5 Let's be unconventional in our reinvention as an institution	Recapitalization/The Learning Environment/Renewal/Coherence/Technology/Branding
	R6 Find out what makes us unique and showcase that	Branding
	R7 Forge into the health care field and nursing	Recapitalization/The Learning Environment/Renewal/Coherence/Technology/Branding
	R8 Focus on engineering	Recapitalization/The Learning Environment/Renewal/Coherence/Technology/Branding
How We Tell our Story		
	R9 Better parking for visitors, commuters, and alumni	Internal Circulation/Coherence/ Accessibility and Equity
Our Relationship With the Community		
	R10 Support partnership opportunities through academic departments and special projects/centers such as the SU Campus Farm and Shippensburg Community Resource Coalition	Community Interaction
	R11 Identify a campus-community project for each college of the university that will provide an experience for students and fulfill a need in the community	Community Interaction/Renewal
	R12 Expand parking access to visitors; specific ideas included open parking after 5:00 p.m., expand spots available to visitors, and offer alumni parking decal (which also serves as free advertising)	Internal Circulation/Coherence/ Accessibility and Equity
	R13 Consider opportunities for partnership at the border between campus and community; for example, extend Rail Trail to connect south and/or create a welcome center that would help visitors with parking, directions, and building access	Community Interaction/Renewal
	R14 Build a truly integrated community with stronger transportation connections, including a bicycle/pedestrian path to generate more flow back and forth	Internal Circulation/Coherence/Renewal/ Accessibility and Equity
The Quality of the Ship Experience		
	R15 Need to maintain/improve academic rigor, small class sizes, create environment of academic excellence, and raise student profile	Recapitalization/The Learning Environment/Renewal/Coherence/Technology/Branding
	R16 Upgrades to facilities, for example science/tech facilities, classrooms	Recapitalization/The Learning Environment/Renewal/Coherence/Technology/Branding/Technology/Sustainability/Accessibility and Equity
	R17 Need for green initiatives	Recapitalization/The Learning Environment/Renewal/Coherence/Technology/Branding/Technology/Sustainability/Accessibility and Equity/Sustainability

Figure – Nesting Objectives for the President's Visioning Team Report (September 28, 2018)

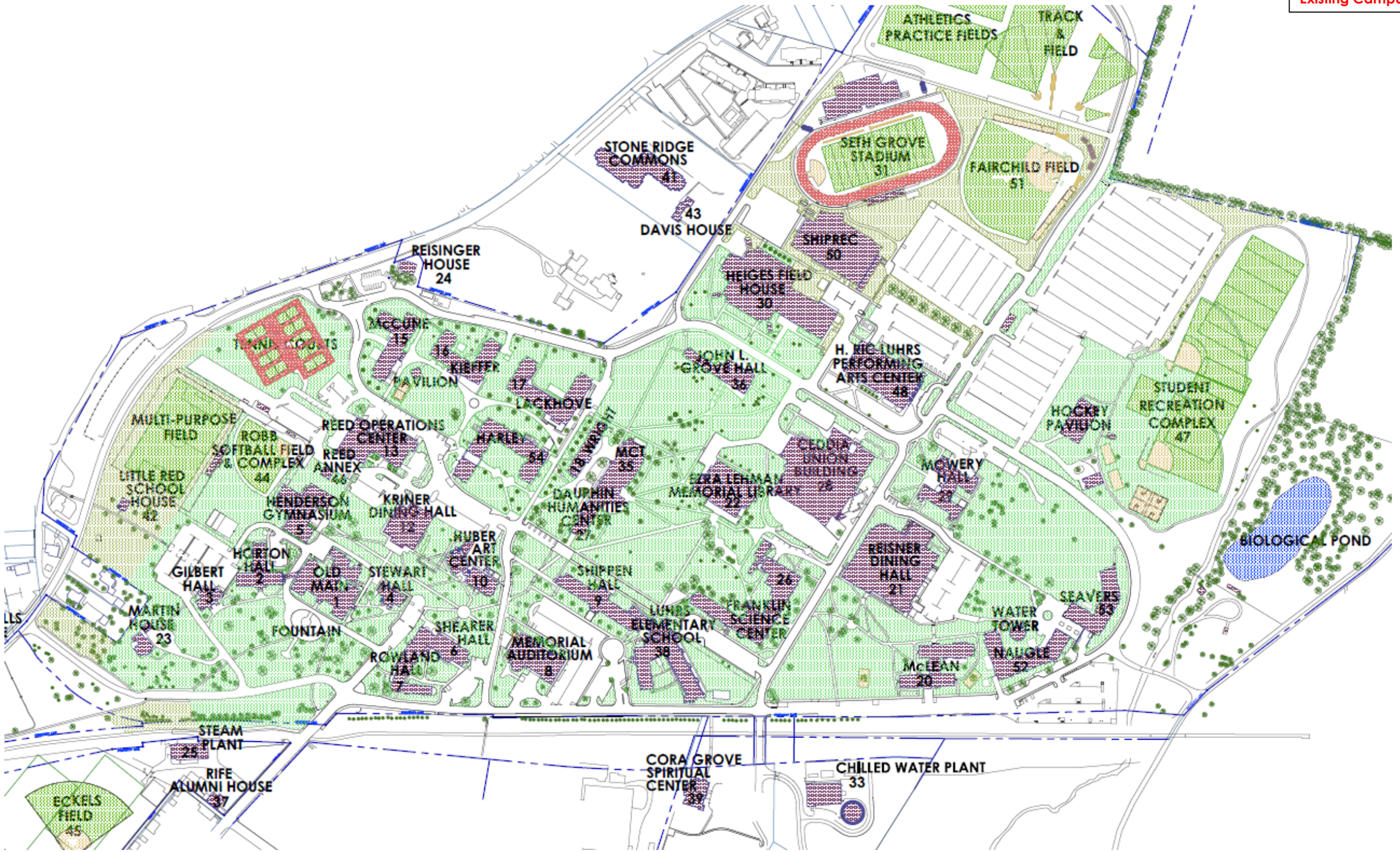
2. Master Plan Phases

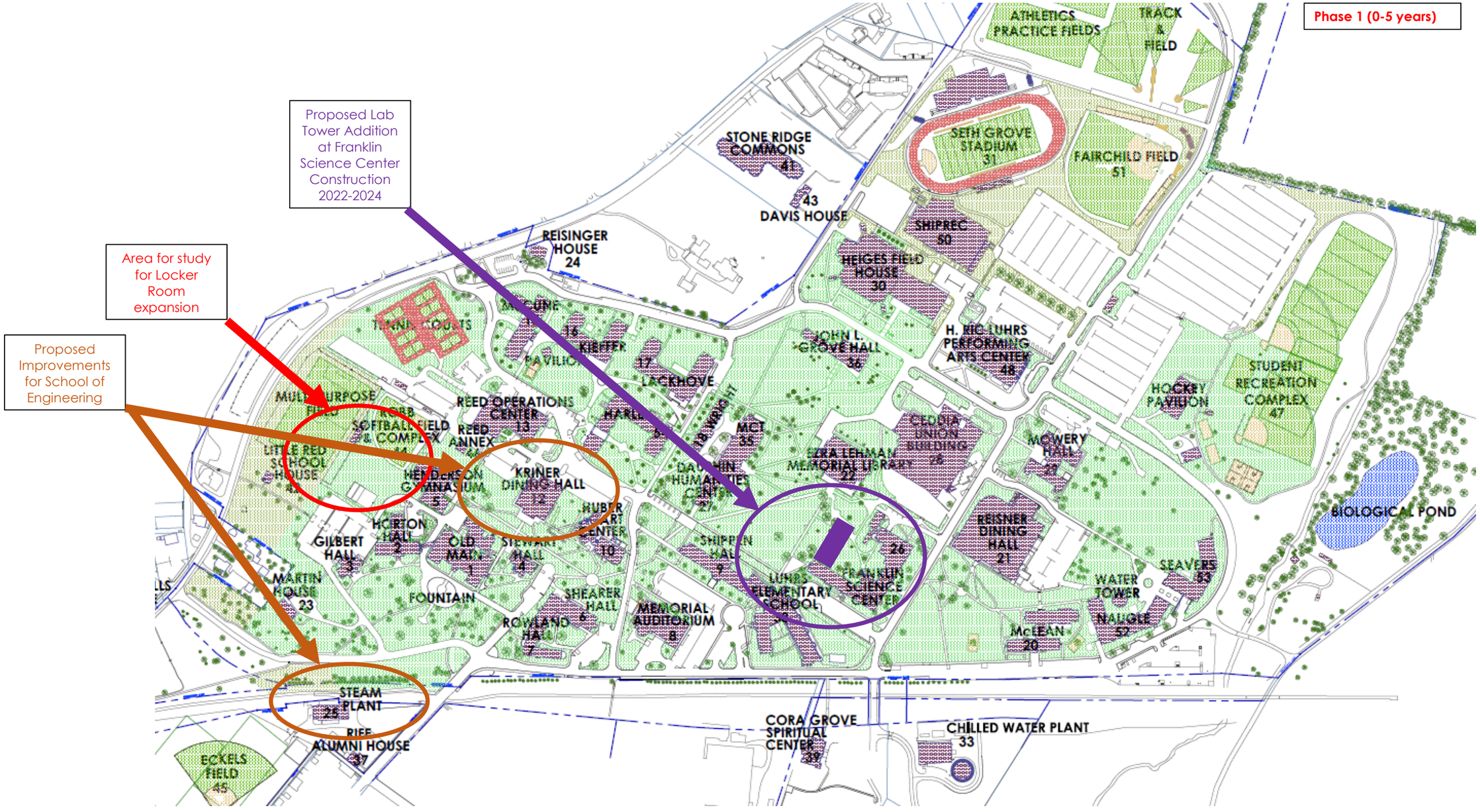
Master Plan recommendations for the development of the campus are presented in three phases: short term, medium term, and long term. It was agreed with the Master Plan Committee that short term—Phase 1, 0 to 5 years—would include projects already in planning or in the funding stream. Medium term—Phase 2, 5 to 15 years—would include projects that would essentially accomplish all Master Plan concepts. Long term—Phase 3, 15 to 25 years— would include projects that would respond to initiatives and lifecycle renewal. The planning for the three phases is entirely within the boundaries of the existing campus.

Campus as of 2008 Campus Master Plan



Existing Campus

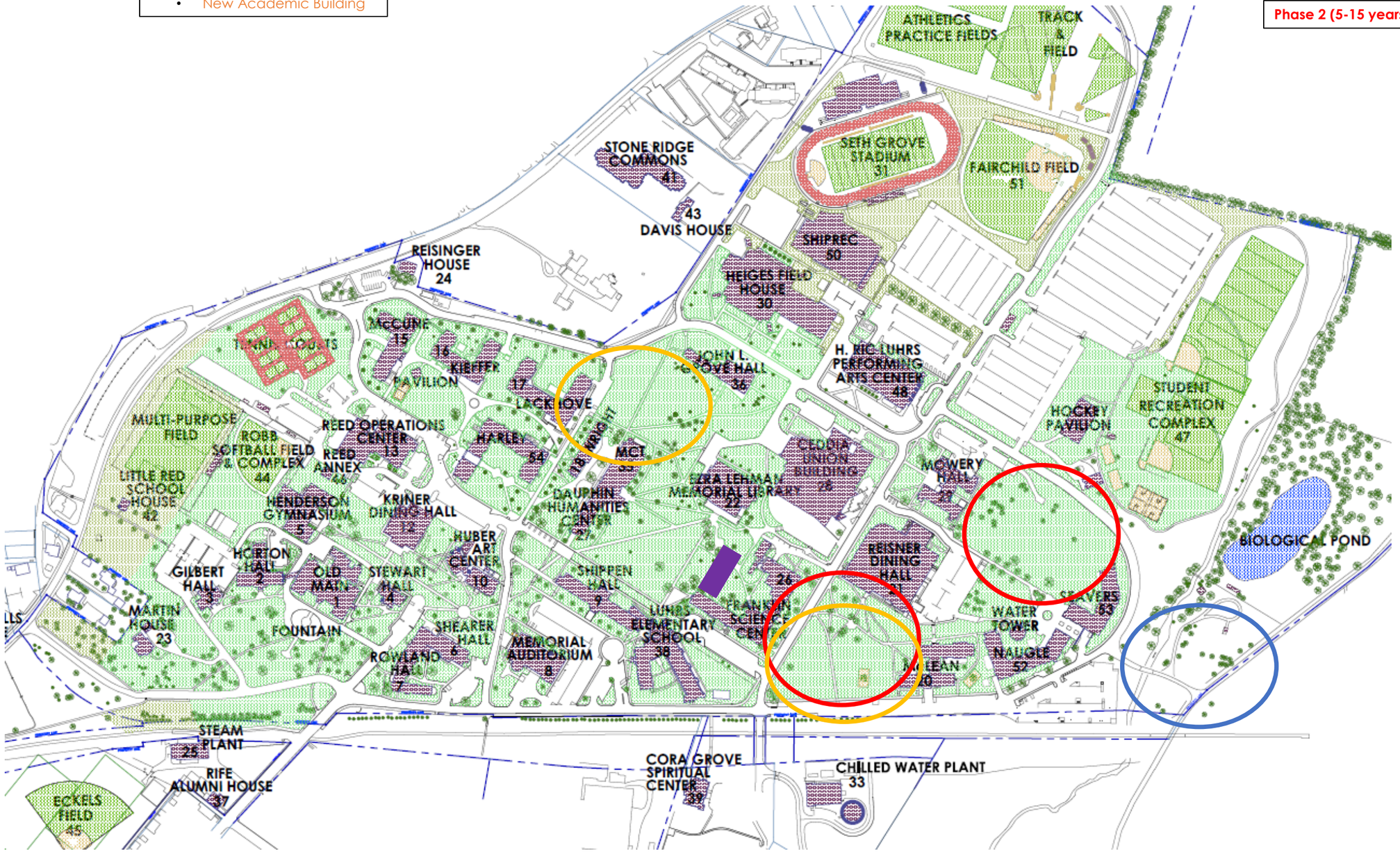



Phase 1 (0-5 years)
Proposed Lab Tower Addition at Franklin Science Center Construction 2022-2024
Area for study for Locker Room expansion
Proposed Improvements for School of Engineering
ATHLETICS PRACTICE FIELDS
TRACK & FIELD
SETH GROVE STADIUM 31
FAIRCHILD FIELD 51
STONE RIDGE COMMONS 41
43 DAVIS HOUSE
REISINGER HOUSE 24
SHIPREC 50
HEIGES FIELD HOUSE 30
H. RIC LUHRS PERFORMING ARTS CENTER 48
JOHN L. GROVE HALL 36
STUDENT RECREATION COMPLEX 47
HOCKEY PAVILION
REED OPERATIONS CENTER 13
REED ANNEX
KRIENER DINING HALL 12
MCT 35
CEDRIA UNION BUILDING 25
MOWERY HALL 27
BIOLOGICAL POND
GILBERT HALL 3
HORTON HALL 2
OLD MAIN 1
STEWART HALL 4
SHIPPEN HALL 9
REISNER DINING HALL 21
MARTIN HOUSE 23
FOUNTAIN
SHEARER HALL 6
ROWLAND HALL 7
MEMORIAL AUDITORIUM 8
LUNDS ELEMENTARY SCHOOL
FRANKLIN SCIENCE CENTER 26
WATER TOWER
SEAVERS 53
NAUGLE 52
McLEAN 20
STEAM PLANT 25
RIFE ALUMNI HOUSE 37
ECKELS FIELD 45
CORA GROVE SPIRITUAL CENTER 39
CHILLED WATER PLANT 33

Contemplated Areas of study for:

- New Residential Housing
- New Reed Operations/Public Safety
- New Academic Building

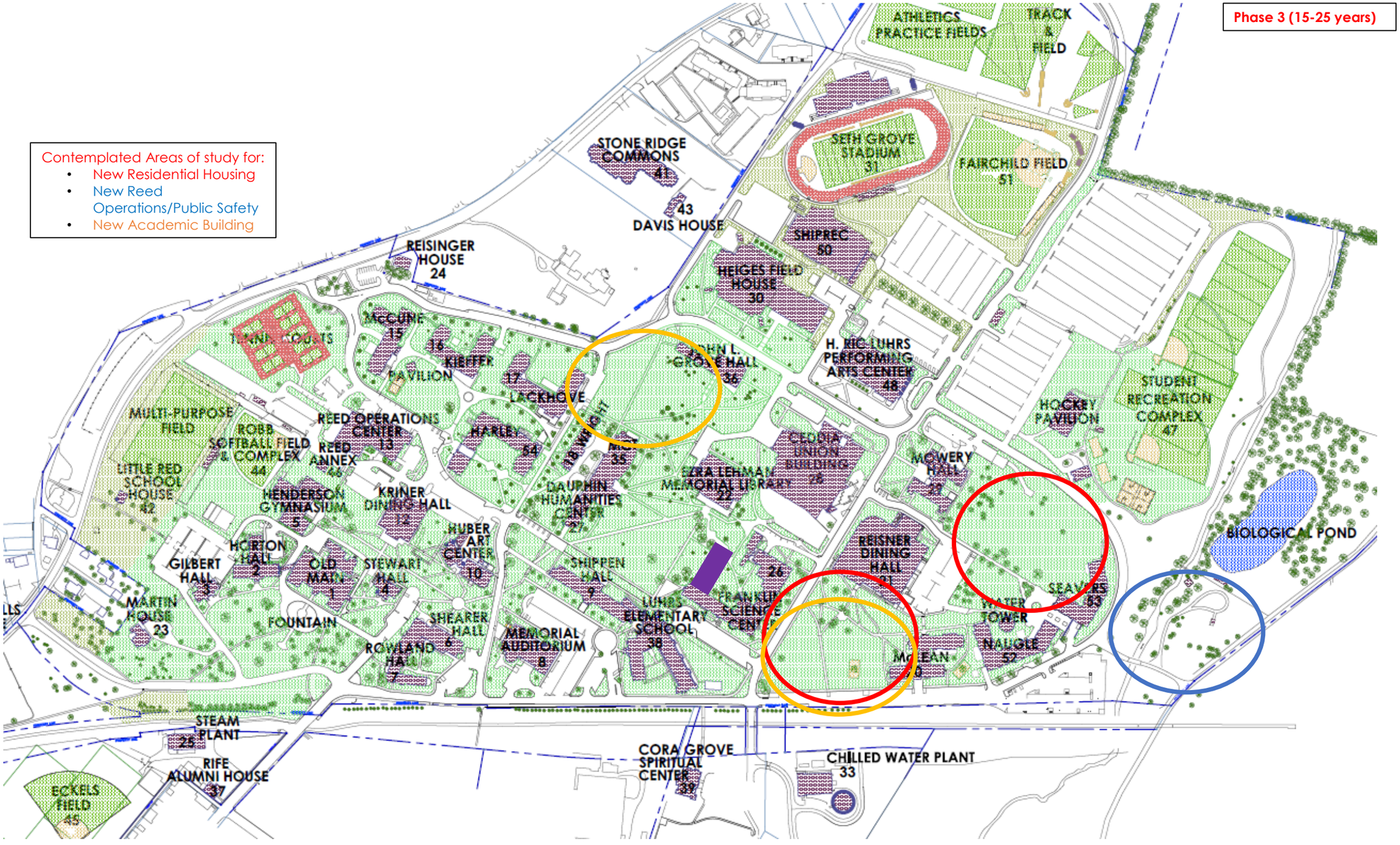
Phase 2 (5-15 years)



Phase 3 (15-25 years)

Contemplated Areas of study for:

- New Residential Housing
- New Reed Operations/Public Safety
- New Academic Building



3. Pedestrian Circulation, Roadways and Parking

3.1 PEDESTRIAN CIRCULATION

A number of changes are proposed to improve pedestrian circulation:

- To address the issue with crossing York Drive at Lancaster from the academic quad, provide a continuous pedestrian path from the sidewalk at Harley Hall in the vicinity of the area in the parking lot hatched out to the sidewalk at ROC.
- To address the issue of continuing past ROC to Robb Field, investigate the feasibility of adding a designated walkway in this area.
- Formalize the "goat path" in the vicinity of the tennis courts. Look at routes and lighting.
- Address the gap in the sidewalk along Adams Drive in the vicinity of Memorial Hall by installing sidewalk.
- Address the lack of sidewalk between the Heiges lot and Seth Grove stadium by adding sidewalk.
- Investigate the feasibility and requirements for a pedestrian/small vehicle pathway between the Horton lot and the back side of Henderson Gymnasium.
- Investigate adding a node along the diagonal walk across the academic quad in front of the library to accommodate the high pedestrian use in this area.
- Continue replacement and improvements to pedestrian curb cuts. As areas are renovated, included replacement of these curb cuts to be ADA compliant.
- Develop a project to eliminate the gap in the sidewalk system between Seavers Hall and Mowrey Hall.
- Continue survey and correction of tripping hazards on campus thru pumping, cutting or replacement of damaged sections.
- Add pedestrian striping at the Lancaster/York intersection.

3.2 ROADWAYS

With the completion of the housing master plan, outside of future major construction that would impact a roadway, there are minimal structural changes to the existing roadway system that are envisioned. Campus roadways loop around the heart of campus to the extent that is practical providing extensive pedestrian friendly walking areas.

To address the issue with excessive speeds along Lancaster Drive in the vicinity of Lackhove Hall and Lancaster Drive in the vicinity of the athletic fields, the installation of "Traffic Calming Devices" also known as "speed humps" could be investigated. These are not "speed bumps" but structures designed to calm traffic without damaging cars.

Maintenance of the existing roadways should continue to include annual striping of roadway lines and pedestrian crossings, to regular cleaning and initiating projects to overlay and reconstruct sections as conditions warrant.

The previous Master Plan recommended a future project to connect Queen Street to Adams Drive in alignment with Dauphin Drive. This would allow a secondary entrance/exit from the campus loop road to/from the town. This connection crosses the Cumberland Valley Rail Trail and would require a bridging of the trail and to meet existing grades on Adams Drive and Queen Street. This will be studied further as safety concerns have manifested on the current steps connecting the two roads or potentially a walking path.

3.3 BICYCLE ACCOMODATIONS

Future project planning should continue to integrate convenient and secure bicycle storage into the design. Where possible, covered bicycle parking should be provided, especially in areas where bicycles are stored overnight such as at residence halls. Future sidewalks could be designed to provide additional space dedicated for bicycles, especially on heavily travelled pedestrian corridors.

3.4 PARKING

With the completion of the housing master plan, outside of future major construction that adds additional buildings to the University, there are minimal structural changes to the existing parking system that are envisioned. Based on available parking during peak times, parking appears to be sufficient for current and growth in the near future.

There are a couple of locations that should be studied for additional parking:

- C-1 Lot at the old Steam Plant
- CUB parking at the east end of Grove Hall
- Seth Grove Stadium lot

3.5 RAIDER REGIONAL TRANSIT (RRT)

The Raider Regional Transit local bus system represents a tremendous resource for convenient transportation that if fully utilized could lessen parking and circulation issues on campus. The system is currently free to ride for students and should be aggressively marketed to incoming freshman as well as commuters and those students as they move off-campus into the surrounding housing market.

4. University Identity/Branding

Former Shippensburg University Logo

Since the publishing of the Campus Master Plan of 2008, the University has made huge strides towards a change in its branding. The change started with the new logo which was incident to the publishing of the 2008 document.

Current SU Logo

The Master Plan recommendations included a multitude of improvements that served to unify the campus. This spanned the spectrum from campus gateways, to wayfinding and directional signage, and building identification. Some examples of those recommendations realized are shown as follows:

CAMPUS GATEWAYS

Prince Street Gate Main Entrance

Entrance from Burd Run and Fogelsonger Road

WAYFINDING/DIRECTIONAL SIGNS

INTERIOR WAYFINDING

BUILDING IDENTIFICATION

The signage shown depicted numerous nautical and maritime themes, using waves and arcs. The architecture was also influenced by these nautical themes as shown below:

Grove Hall "Portholes"

Arc Marquis at Kieffer Residence Hall

The last part of the 2008 Master Plan turned a liability into a strategic marketing asset. The existing water tower, having valving deficiencies and sorely in need for rust remediation and painting was transformed to what hs become a beacon that can be seen throughout the Cumberland Valley.

The Water Tower by Seavers-Naugle Residence Halls

4.1 MOVING FORWARD

The challenge to branding in a campus that has buildings that range in construction date from 1871 to 2013 is that they all have differing architectural styles. Something was needed that tied every architectural style from Victorian, to Art Deco, to mid- century post modern, to present contemporary institutional construction. The use of color was seen as a means of providing that thread of continuity that united the structures and made them "uniquely Ship" and expanded the brand and brand identity.

In the Fall of 2017, Shippensburg University took bold steps in the use of color, and reimaging that identity. The first example was the interior painting of the first two floors of Old Main. The change from a legacy green color scheme, to one that included bright reds and blues, complemented by grey tones immediately made the spaces more welcoming, and contemporary.

2d Floor of Old Main

This color scheme then started to see inception at other locations. In the Spring and Summer of 2018, the SU Student Success Center was established at Mowrey Hall, a residence hall whose color scheme dated back to 1970. With the addition of the new "Ship" colors, the space was immediately transformed into an inviting space that exuded Student Success.

These were changes that were materially affecting how a building's relevance was perceived, but was internal to the structure. During that time frame, SU also started the use of banners that helped create a common thread of identity across the campus.

Light Pole Banners on the Main Academic Quad

The last initiative undertaken during early master planning efforts was to actually create banner signage to better identify it as "Ship", but equally tie identification of function and purpose for both the new visitor as well as upper class student. The following building banner, served as the initial wave of what will become better building identification.

Mowrey Hall Pictured Prior to Renovation

This very dated and non-descript frontage did not attract people to want to see what is inside.

Mowrey Hall Today

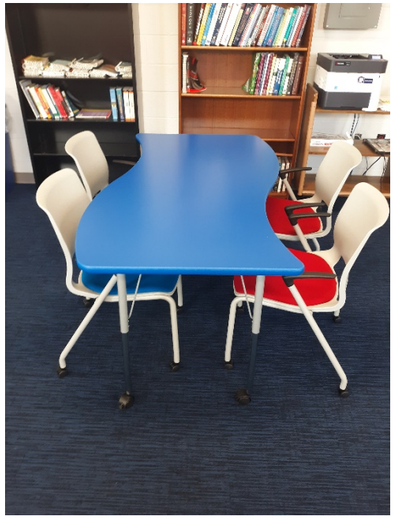
Home of the Student Success Center

Those banners have started to be seen around the campus, signifying the home building of the colleges within the University as shown by these examples:

Shippen Hall – Home of the College of Education and Human Services

Dauphin Humanities Center – Home of the College of Arts and Sciences

Lastly the Student Success Center at Mowrey combined branding with flexible functionality. The wave table was chosen for the new Learning Center, as it offered an alternative to the plain wooden tables that were previously at the library, and could offer more personalized service for a student or small group, or due to the shape of the table, could also be "swarmed" into larger clusters for group discussions. This formed the nexus between branding and functionality.



Wave Table in Learning Center

Moving forward the 2018 Campus Master Plan recommends the following expansion projects:

- Continue a deliberate process of interior branding painting as building painting renewal is planned for the future on a programmatic basis.
- Pursue the replacement of the green (and rapidly deteriorating) terrazzo flooring on the first floor of Old Main and replace with an epoxy-based product supporting the current Ship branding color palette.
- Continue to update all exterior building signage eventually to the new darker "Ship Blue"
- Continue to determine best locations for building banners and the message they convey
- Expand interior branding painting to the Athletics enterprise. Numerous instances of legacy coloring for outside structures need to be programmed and executed as well.
- Explore the use of photographic imagery at Seth Grove Stadium Rear to turn a visual liability into a quality first impression.
- Piloting of web-based wayfinding kiosks for interior wayfinding in high visitor traffic areas (based on pilot project at Grove Hall College of

Business) and potentially utilizing students in development of virtual reality prototypes
- Removal and/or upgrade of all legacy masonry-based signage (Memorial Hall/Heiges Field House)
- Exploration of a GIS-based wayfinding system that is app-based that can extend to knowledge management

5. Accessibility and Equity

While Shippensburg University is fully committed to meeting the intent of the Americans with Disabilities Act, we prioritize the need to move beyond mere compliance to a state of proactively reviewing, with input from the disability community, every new construction and renovation project for its excellence in inclusion and accessibility as part of the early planning process. We also agree to the ongoing removal of existing accessibility barriers in order to provide inclusion and equal opportunity.

5.1 A STATEMENT OF PHILOSOPHY

In keeping with the principles of universal design, facilities should strive for a built environment to be aesthetic and usable to the greatest extent possible by everyone, regardless of their age, ability, or status in life. The following principles, as developed by the National Disability Authority, may serve as a guide:

- Equitable use - The design is useful and marketable to people with diverse abilities. This means that designs should: provide the same means of use for all users whenever possible, and equivalent means when not; avoid segregating or stigmatizing any users; ensure equal provisions for privacy, security, and safety; and make the design appealing to all users.
- Flexibility in use – The design accommodates a wide range of individual preferences and abilities, providing choice in methods of use and adaptability to the user's pace and abilities.
- Simple and intuitive – The design is easy to understand and use, providing clear information accommodated to a variety of literacy and language skills and eliminates unnecessary complexity and hardship.
- Perceptible information – The design communicates necessary information effectively to the user, regardless of ambient conditions or user's sensory abilities. More specifically, information is relayed using different modes (pictorial, verbal, tactile, audio) for redundant presentation of essential information, with adequate contrast between essential information and its surroundings, and in terms that are easily understood.
- High tolerance for error – The design minimizes hazards and adverse consequences of use or unintended use, and provides warnings of hazards.
- Low physical effort – The design can be used efficiently and comfortably and with a minimum of sustained physical effort or repetitive motions, adaptable to people of varying bodies and abilities.
- Size and space for approach and use – Appropriate distance, space, and size is provide for use, including minimizing unnecessary distance, provide a clear line of sight to important elements for any seated or standing user, making reach to all components comfortable for any seated or standing user, accommodating variations in hand and grip size, and provide adequate space for the use of assistive devices and/or personal assistance.

While focused on the physical built environment, we must also consider the ways that signage, imagery, and use of space invites and welcomes people into a community or discourages participation.

5.2 A STATEMENT OF COMMUNITY

Inclusive design considers the needs, preferences, and abilities of diverse groups. Accessibility often targets a few select groups such as wheelchair users and people who are blind. In contrast, we commit to considering the needs of many diverse groups. For example,

- People with mobility disabilities who do not use wheelchairs for whom distance is an issue
- The transgender and non-binary community, in particular with respect to bathroom, dorm, and locker facilities
- People who require quiet spaces to eat or to recuperate after stressful situations
- People who require easy, convenient access to medical and therapeutic supports
- People who require low physical exertion such as push-button entry
- People who need spaces for their service animals

The above list is not exclusive, but rather a sampling of the communities to consider in design and space usage.

Moreover, we tend to focus accessibility on key places such as academic buildings and dorms. However, community happens all around us. We must also consider:

- Social spaces, such as where students eat, meet for clubs, "hang-out", etc…
- Access to the community, including adequate transportation and accessibility to internship sites, public services, volunteer opportunities….

Again this list is not exclusive, but rather a sampling.

A Statement of Process

People with disabilities are deeply affected by the design of physical spaces and, as such, must be a recognized stakeholder and included in the decision-making processes of facilities management.

5.3 PRIORITIES

Reviewing the specifics of this plan, several priorities stand out.

- With regard to pedestrian circulation and transportation, we should study the impact of moving parking to the periphery, areas of need for increased ADA parking, places where more direct routes are preferable, the accessibility of transportation around and off campus and promote adequate access to parking and transportation.
- With regard to entrances, we should study and increase the number of ADA entrances; minimize the distance between ADA parking, curb cuts, and ADA entrances; add push-button entry; and consider the equity of use of entrances (are people with disabilities being asked to go to the back of the building, is the ADA entry-way ugly)
- With regard to building use, we must consider effective elevator access and the locked-elevator policy, the ways people with disabilities can and cannot move around within buildings, the barriers they face, and the inclusivity of the internal environment.
- With regard to social spaces, from the perspective of design and from the perspective of users, social spaces should be identified, assessed, and modified for accessibility to increase inclusivity on campus
- Audit and address bathrooms for ADA and transgender and non-binary needs
- ADA access should be incorporated into all wayfinding kiosks, GIS way-finding systems, and signage, both ensuring that the kiosks, GIS systems, and signs are accessible and that they provide information on accessibility such as accessible pathways, entrances, bathrooms, etc…
- Maintain, update, and expand accessibility features on the accessibility map
- Ensure basic maintenance such as snow removal, leaf removal, and clear communication and signage during construction
- Ensure easy, convenient access to medical and therapeutic supports on and potentially off campus.
- Ensure the participation of people with disabilities in decision-making processes

6. Athletics and Recreation

Indoor athletic facilities at Shippensburg University are Henderson Gymnasium (1937), Heiges Field House (1971), Seth Grove Stadium (1972), and the Student Recreation Center (2008). Henderson, Heiges, and Seth Grove are outdated and in need of renovation to meet changing program needs and current standards for accessibility and comfort. A feasibility study for Heiges was completed in 2001 but some of its recommendations were superseded by the implementation of the Recreation Center project. A study for Seth Grove was completed in 2008.

Outdoor athletic facilities are the practice fields and Fairchild baseball field north of Seth Grove; the recreation fields at the east campus; Robb softball field, tennis and the multi-purpose field to the west of Henderson; and Eckels Field south of Rails to Trails.

Master Plan recommendations:

6.1 CAMPUS

a. Field Lighting: Provide night lighting at Fairchild baseball field and Robb softball field.

b. Develop an Athletics Branding Master Plan that denotes a single standard for branding (banners, wind screens) and their maintenance, times for erection and demounting. Additionally prioritize painting of all surfaces (interior and exterior) in a common color scheme consistent with Ship branding colors and painting scheme. The painting project for Seth Grove Stadium (Summer 2019) will be reflective of that methodology.

c. Commission a locker room study that encompasses all campus Athletics facilities. The scope of the study will include the potential of manufacturing space at both Seth Grove Stadium as well as in the area behind Henderson Gymnasium, and the potential for a connector between the Heiges Field House and the ShipREC, and the complete renovation of the Henderson Gym locker room space. The potential of a new Field House (potentially in the vicinity of Seth Grove Stadium) will also be explored and weighed against potential gains in existing buildings and spaces.

d. Replace (as part of lifecycle management) turf fields at both Seth Grove Stadium and the Multi-Purpose Field.

e. Determine feasibility of changing both Baseball (Fairchild Field) and Softball (Robb Field) from grass to turf. If staying with grass, pursue renovation projects to correct grade and natural turf irregularities.

f. Determine best location to construct a new Astroturf field to generate needed capacity.

g. Recreation Fields Improvements: Reconfigure the jogging path around the recreation fields to accommodate an additional softball field. A report by TETHYS Consultants Inc. dated February 28, 1995 delineated a wetland in the area of the proposed softball field home plate. An updated wetland delineation study would need to be conducted to clearly determine the potential impacts.

h. Coaches offices will be studied after the completion of the campus-wide office census and attempt to consolidate for functionality where possible.

6.2 SETH GROVE STADIUM

a. Field Lighting: Install night lighting for 24 hour use and television capability.

b. Grandstand Structure Improvements: Renovate the grandstand structures on the west side of the field to provide space within the structure for:

1. Improved and enlarged home team facilities. This may be included in the Locker Room study using a pre-fabricated structure under the grandstand area.

2. Football Storage as well as Track, and potentially Band and Camps and Conferences.

3. Renovate and expand press box to provide ADA accessibility, media hookups, and more/ safer space for media.

4. Provide SU identity on highway side of grandstand structure using photographic imagery.

5. Paint Seth Grove Stadium on all exterior surfaces for the Summer of 2019.

6. Existing natural turf field area at Eckels Field, primarily used for rugby practices and by the community with limited restroom availability. Current restrooms should be removed or replaced due to their condition.

7. The interior chain link fence between the running track and the playing field at Seth Grove Stadium is worn, has lost its aesthetic appeal, and may require replacement.

8. The median strip of grass in between the running track and the playing field perimeter fence at Seth Grove Stadium should be considered for replacement with a less maintenance intensive covering to include poured rubber in consideration.

9. Additional storage requirements at Seth Grove Stadium should be included in the Locker Room Study.

10. A tent is habitually erected at the rear of Seth Grove Stadium annually for extended periods of time. Consideration should be given to the construction of a more permanent pavilion that could serve the practice field.

11. The practice field at the rear of Seth Grove Stadium is actually three separate fields, with separate grades. The field in total should be renovated to a single playing surface and should be considered for a perimeter fence once completed (to avoid the annual establishment of a near perimeter fence to support activities at Seth Grove Stadium).

6.3. NEW FIELD HOUSE

a. Commission a study to determine the feasibility of a new Field House. The scope would include potential construction of a new two-story 36,000 sf Field House at the south end of Seth Grove Stadium to accommodate multiple sports and potentially link back to Heiges Field House:

1. Visitor team facilities.

2. Football Coaches' Suite and Classrooms/ Meeting Rooms (6,000 sf).

3. Sports medicine (3,500 sf).

4. Fitness center/weight room for varsity athletes (Existing 6,015sf in Heiges).

5. Classrooms/Meeting Room (Existing 2,386sf in Heiges).

6. Storage.

7. Administrative space.

8. Social space.

6.4 HEIGES FIELD HOUSE IMPROVEMENTS

a. As part of the locker room study, determine the feasibility of the relocation of Administrative Offices, Football Coaches Suite to a 2d floor office suite (with potential team film room) and analysis of both visitor's restrooms and expansion of locker room facilities can be accommodated.

b. Also as part of the locker room study, determine if a connector between Heiges Field House and ShipREC is feasible to "manufacture" more locker room space.

6.5 HENDERSON GYMNASIUM IMPROVEMENTS

a. As part of the locker room study, determine if entire locker room space can be renovated, giving exclusivity at the team level, and the potential use of pre-fabricated buildings behind Henderson Gymnasium.

6.6 ATHLETIC PRACTICE FIELD IMPROVEMENTS

a. Study renovation to the fields to provide a continuous surface between the three fields This would permit multiple field layout options.

a. Study replacement of tent for events wth a pavilion.

b. Study installation of a low fence between the Foundation and the practice fields to replace the temporary needed for large track events.

6.7 ECKELS FIELD IMPROVEMENTS

a. Address issue with restroom facilities at Eckels Field.

6.8 eSPORTS

a. Pursue investigation of scoping on an eSports facility within existing space, technology needs, and timelines and resourcing required.

7. Academic Space Planning

7.1 SPACE NEEDS ANALYSIS

Shippensburg University, a member of the 14-school State System, conducts annual inventories of all assignable square footage (ASF). The Space Guidelines reports serve as a benchmark that leads to further analysis and study. The purpose of this chapter is to better understand not only our needs for both Education and General (E&G) as well as Auxiliary (AUX), but also to contextualize that data in terms of the trends of enrollment, the future of the institution, and the combination of both quantitative and qualitative analysis required to set the infrastructural conditions for the Shippensburg university of 2043 (25 years hence), and beyond. What is pertinent for the Campus Master Plan is also to further explore the changing demographics of the population of student learners that we serve (to include adult learners). The PASSHE Chancellor's Vision, together with recent documents (NCHEMS/RAND Reports) set conditions (for future) discussions of what physical infrastructure and space is required to attract and retain those new populations.

7.2 SPACE GUIDELINES

PASSHE Space Guideline

University: Shippensburg

Space Guideline Fiscal Year: 2018-2019

Building Type: E & G

The Space Guideline Report is based on online, non-leased, non-removed buildings that is assigned for allocation formula calculation.Equals

Category		Inventory	Space Guideline	Excess/Shortfall
000	Unclassified	29,684	0	29,684
110/115	Classroom	83,213	66,648	16,565
210/215/220/225	Teaching Laboratory/Open Laboratory and Laboratory Service	71,794	90,716	-18,922
250/255	Research/Nonclass Lab	12,557	13,080	-523
300	Office/Conference Room	157,157	138,314	18,843
400	Study	55,744	62,421	-6,677
510/515	Armory	1,930	1,930	0
520	Athletic or Physical Education	61,724	74,336	-12,612
523	Athletic Spectator Seating	0	0	0
525	Athletic/Physical Education Service	19,793	31,336	-11,543
530/535	Media Production	2,444	5,556	-3,112
540/545	Clinic	2,530	2,222	308
550/555	Demonstration	19,632	19,632	0
560	Field Building	0	0	0
570/575	Animal Quarter	1,545	1,111	434
580/585	Greenhouse	1,023	2,778	-1,755
590	Other (All Purpose)	0	0	0
610/615	Assembly	50,458	40,546	9,912
620/625	Exhibition	3,294	5,841	-2,547
640/645	Day Care	0	0	0
650/655 and 660/665	Lounge/Merchandising and Service	8,151	6,698	1,453
680/685	Meeting Room	3,661	5,556	-1,895
700	Support	45,201	36,916	8,285
790	Utility Production	10,161	10,161	0
800	Health Care	0	2,767	-2,767
970	House	9,715	5,000	4,715
975	Apartment/Guest Quarter	0	0	0
976	Stand-alone Living Unit	0	0	0
	Total	**651,411**	**623,565**	**27,846**

Under the PASSHE E&G Space Guideline report, there are a few areas that require additional analysis and discussion.

Excess

Usage Code 110/115 (Classroom Space) is showing an excess of 16,565 ASF. Later in this chapter, the Paulien Study will be mentioned in depth. This was both a quantitative and qualitative analysis of all classroom and laboratory space within the University, and was completed in 2015. Within the qualitative portion of the study, class rooms were rated as being either "A" (as best condition), "B" (less than optimal condition), and "C" (should be repurposed for other than academic use). There were a total of 12 classrooms rated as Class "C". If all of those classrooms were to be taken offline, (a total of 5,608 ASF) it would bring down the excess to 10,957 ASF (a 34% decrease), The remaining excess classroom space should be **retained** as the First Year seminar requires upwards of 90 classroom spaces (albeit not simultaneously) and a class size of about 20. The master plan recommends a revalidation of the viability of all Class "C" classroom space, and those not meeting current requirements would be considered for repurpose towards other needs.

Usage Code 300 (Office Facilities) – The report shows an excess of 18,843 ASF. The renovation of Mowrey Hall into the University Student Success Center (creating an additional 13,386 ASF of "new" office space recoded from 910 (Sleep/Study)) which would actually create a larger excess of 32,229 ASF. The Master Plan recommends a Census of all campus office spaces and to bring more coherence to where faculty (and other offices) are in comparison to where they interact with students, and to rebalance where necessary and eliminate space as required.

Usage Code 610 (Assembly) - The report shows an excess of 9,912 ASF. The assembly space at Memorial Auditorium is 9,977 ASF, which by eliminating would essentially bring the excess to zero. A deeper analysis of the usage (and resourcing) of Memorial Auditorium is required to determine the next steps forward.

PASSHE Space Guideline

University: Shippensburg

Space Guideline Fiscal Year: 2018-2019

Building Type: Auxiliary

The Space Guideline Report is based on online, non-leased, non-removed buildings that is assigned for allocation formula calculation.Equals

Category		Inventory	Space Guideline	Excess/Shortfall
300	Office/Conference Room	0	0	0
400	Study	0	0	0
610/615	Assembly	0	0	0
630/635	Food Facility	72,821	57,069	15,752
650/655 and 660/665	Lounge/Merchandising and Service	0	0	0
670/675	Recreation	60,421	49,197	11,224
680/685	Meeting Room	0	0	0
900	Residential Facilities	122,763	0	122,763
980	Student Union	98,857	55,560	43,297
	Total	**354,862**	**161,826**	**193,036**

Shortfall

Usage Code 210/215/220/225 (Teaching Laboratory/Open Laboratory and Laboratory Service) – shows a shortfall of 18,922 ASF. The upcoming renovation of the Franklin Science Center will be utilizing the 18,922 number as the design goal (commencing in 2019) as all new lab space as part of an additional "lab tower" to be built onto the existing structure to get to parity on laboratory space.

Usage Code 520 (Athletic or Physical Education) and 525 (Athletic or Physical Education Service) show shortfalls of 12,612 ASF and 11,543 ASF (respectively), for a total shortfall of 24,155 ASF. Further discussion in this document regarding athletics and future growth projects will be using this deficit in mind.

Under the PASSHE AUX Space Guideline report, there are a few areas that require additional analysis and discussion.

All areas are shown as excess. The excess of 43,297 in the Ceddia Union Building (CUB) is not anticipated to be altered as part of this Master Plan. What does require further investigation is the 15,752 ASF excess in Usage Code 630/635. Two possibilities for reduction of this number include the proposed usage of Kriner Hall to support Classroom and Laboratory space for the new School of Engineering in the Fall of 2019. Kriner Hall is in excess of 33,272 ASF which would then lead to an overall shortage as one option. The Campus Master Plan recommends the commissioning of a study for all dining/retail venues, to include quiet space, on campus to see

where duplication exists and perhaps better placement based on need.

Usage Code 670/675 (Recreation) shows an excess of 11,224 ASF. As previously stated, Athletics is experiencing a shortfall of 24,155 ASF. The Campus Master Plan recommends a study on the potential for either conversion of recreational spaces to support the Athletic enterprise, or for future joint usage opportunities.

Usage Code 900 (Residential Facilities) shows an excess of 122,763 ASF; however, this does not factor in the conversion of two floors of Mowrey Hall to 100 and 300 series space to support the University Student Success Center. Assuming that a full two floors were converted to other space, that reduction of 33,426 ASF would bring the excess to 89,337. Discussed later in this document is the ResLife enterprise and the requirement for second year residency starting in 2020. This will considerably increase the number of beds. Currently McLean Hall is 99,854 ASF (and is only used for the offices of ResLife), and the remaining three floors of Mowrey Hall (57,586) may very well be required in the future (to include upgrade and renovation projects) and the Campus Master Plan recommends retaining both legacy Residence Halls until further study is conducted by the Housing Study Group.

Space Needs Summary

There are current requirements (based on either new space or inadequate space at current location) to support the following functions as part of the academic mission and will be further analyzed by the Campus Master Plan:

- Conduct a campus-wide office space census to ensure optimal utilization and key control
- Exploration of space requirements for the establishment of the new School of Engineering using Kriner Hall and the Old Steam Plant, and the immediate need for swing space to accommodate classes in Fall semester 2019
- Exploration of space requirements to support
- Development of allied health programs
- A deeper discussion is required regarding growth, requirements, proximity for all academic areas to ensure coherence is sustainable. The
- proximity of classrooms, faculty offices, faculty/student work areas and the location of the department are integral to the quality of the academic experience.
- Establishment of office space for the Doctorate of Business Administration program under the College of Business
- Establishment of a Maker Space to support the Charles H. Diller Center for Entrepreneurial Leadership and Innovation
- Office Space for Ship Votes
- Establishment of an HCS Speech lab in Dauphin Humanities Center
- Space for the Center for Educational Leadership
- Space for the Center for Early Childhood Education
- Space for Shippensburg Community Resource Coalition
- Reorganized and contiguous space for the Institute of Public Service
- Establishment of seasonal manufacturing space for the Robotics Competition
- Relocation of the Small Business Development Center (SBDC)
- Reorganized space for the Office of Equity, Inclusion, and Compliance

7.3 CLASSROOM AND LABORATORY CONDITION EVALUATION

Shippensburg University commissioned a Space Planning Study with Paulien & Associates Inc. that was published in October, 2016. This is informally known as the "Paulien Study". The study took a comprehensive look at both classrooms and laboratories across the campus from both a quantitative and qualitative basis. The analysis was done from Fall 2014 and Fall 2015 data. The Campus Master Plan realized that the data from three years ago did not adequately reflect the current student enrollment, nor did it take into account the new required First Year Seminar (with its requirement for 90 classes in rooms with a capacity of 20 students), What is still valid from Paulien was the qualitative analysis with those classrooms being rated a "C", recommending they be repurposed for other missions. A revalidation of those 12 classrooms is necessary to determine their future viability. Those 12 class "C" classrooms are being provided for reference:

What is compelling about the analysis is that, despite the Paulien condition assessment as substandard, these spaces are still being utilized for academic purposes. Classroom utilization is assessed on a 50 hour per week student contact hour potential, of which 37.5 student contact hours must be attained in order to achieve the PASSHE standard of 75% utilization.

Shippensburg University Study Data showing Class "C" Classrooms for Spring (above) and Fall (below)

The Paulien-rated Class "C" classrooms are shown below:

Dauphin Humanities Center

- Room 205/207/307
- Room 305 which the Campus Master Plan recommends being converted to the HCS Speech lab

Horton Hall

- Room 128

Gilbert Hall

- Room 210
- Room 220/230 have since been air conditioned by a project in the Spring of 2018. The condition

			Class "C" Classrooms Fall 2018						
Bldg	**Rm**	**Type**	**/kly Contact Hou**	**PASSHE Std**	**PASSHE Std**	**Actual%**	**Class%**	**Lab%**	
DHC	205	Classroom	0	37.5/50		0	NOT USED		
DHC	207	Classroom	0	37.5/50		0	NOT USED		
DHC	305	Classroom	22.75	37.5/50	75%	45.5	Fails to meet PASSHE Standard of 75%		
DHC	307	Classroom	30.25	37.5/50	75%	60.5	Fails to meet PASSHE Standard of 75%		
GH	210	Classroom	5	37.5/50	75%	10	Fails to meet PASSHE Standard of 75%		
GH	220	Classroom	21.66	37.5/50	75%	43.32	Fails to meet PASSHE Standard of 75%		
GH	230	Classroom	21.65	37.5/50	75%	43.3	Fails to meet PASSHE Standard of 75%		
HH	128	Classroom	15	37.5/50	75%	30	Fails to meet PASSHE Standard of 75%		
SPH	110G	Classroom	14.5	37.5/50	75%	29	Fails to meet PASSHE Standard of 75%		
WRI	012	Classroom	15.04	37.5/50	75%	30.08	Fails to meet PASSHE Standard of 75%		
WRI	017	Classroom	2.5	37.5/50	75%	5	Fails to meet PASSHE Standard of 75%		
WRI	106	Classroom	7.5	37.5/50	75%	15	Fails to meet PASSHE Standard of 75%		

- of this classroom needs to be monitored as well as the future space needs of the exercise Science program who is the principal user of the space.
- Hold on window renewal project at Gilbert Hall until its functionality can be fully assessed

Shippen Hall

- Room 110G

Wright Hall

- Room 012/017/106 – with the potential decommissioning of nearly all of the classrooms in Wright Hall (save Room 111 which could conceivably remain in service), the building could be converted to a combination Faculty Office Building (with upgrades), coupled with new uses for space to include potentially for tutorial, social, networking. The deeper discussion regarding the growth requirements at the department level will be the venue for this further discussion and development of future use.

As we look at what comprised the Shippensburg Physical Plant Department Study, we examine a sample building, the Franklin Science Center. Using Spring COGNOS data, with the rare exception of Room 226, no room has attained the PASSHE standard of 75% utilization for classroom (based on 37.5 Student Contact Hours out of a possible 50) or for laboratories (23 Student Contact Hours out of a possible 50). The second challenge underlying this data, leading to the appearance of a lack of adequate utilization, lies with how the space is being utilized in the current pedagogy. In numerous interviews with Department Chairs of the Physical Sciences, laboratory utilization is much higher. The challenge is that frequently the labs are being used in times outside of what is scheduled in COGNOS/Banner. Because of this inconsistency (and a lack of capture of actual utilization based on the academic mission (and the pedagogy that underlies it)) all utilizations are underreported. A means of capture of utilization (utilizing electronic means) must be found that will get not only to true utilization, but equally for safety and accountability purposes.

Class "C" Classrooms Spring 2018									
Bldg	**Rm**	**Type**	**Wkly Contact Hours**	**PASSHE Std**	**PASSHE Std**	**Actual%**	**Class%**	**Lab%**	
DHC	205	Classroom	0	37.5/50		0			NOT USED
DHC	207	Classroom	0	37.5/50		0			NOT USED
DHC	305	Classroom	15.25	37.5/50	75%	30.5			Fails to meet PASSHE Standard of 75%
DHC	307	Classroom	25.5	37.5/50	75%	51			Fails to meet PASSHE Standard of 75%
GH	210	Classroom	0	37.5/50	75%	0			NOT USED
GH	220	Classroom	25.25	37.5/50	75%	50.5			Fails to meet PASSHE Standard of 75%
GH	230	Classroom	20.83	37.5/50	75%	41.66			Fails to meet PASSHE Standard of 75%
HH	128	Classroom	20	37.5/50	75%	40			Fails to meet PASSHE Standard of 75%
SPH	110G	Classroom	8.5	37.5/50	75%	17			Fails to meet PASSHE Standard of 75%
WRI	012	Classroom	7.92	37.5/50	75%	15.84			Fails to meet PASSHE Standard of 75%
WRI	017	Classroom	0	37.5/50	75%				NOT USED
WRI	106	Classroom	5	37.5/50	75%	10			Fails to meet PASSHE Standard of 75%

A separate issue as it relates to utilization is simply *what constitutes utilization*? Frequently, spaces are utilized for events outside of normal academic classes but may either be peripherally associated with that class, or critical for the overall Ship Experience. These events are to be scheduled in the Event Management System (EMS); however, there is no standard for its use, leading again to unaccounted for space utilization in existing spaces. A stronger emphasis on the use of EMS (and the associated data capture which can be linked to each space), would give a clearer picture as to utilization as well as if needs are being supported by the existing space inventory.

The last item for discussion lies in the utilization of Lecture Halls. From the attached utilization, Rooms 030, 108, 156, 256, and 356 all are at 50% or lower utilization, with one exception at 55%. The question is deeper than simply a scheduling issue. Here too, the question as to whether the current pedagogy can still be supported having a group looking at a single speaker, rather than a collaborative space. The question may also simply be one of awareness of that room's availability. Current scheduling methods may not be sufficient and new methods including the Center for Faculty Excellence in Scholarship and Teaching (CFEST) may be appropriate.

	Franklin Science Center Classroom Study (using Fall 2018 COGNOS Data)									
Semester	Bldg	Rm	Type	Wkly Contact Hours	PASSHE Std	PASSHE Std	Actual%	Class%	Lab%	
Fall2018	FSC	012	Lab	17.5	23/50	46%	35		35	Fails to meet PASSHE Standard of 46%
Fall2018	FSC	016	Classroom	23.33	37.5/50	75%	46.66	46.66		Fails to meet PASSHE Standard of 75%
Fall2018	FSC	030	Lecture	27.75	37.5/50	75%	55.5	55.5		Fails to meet PASSHE Standard of 75%
Fall2018	FSC	102	Lab	17.75	23/50	46%	35.5		35.5	Fails to meet PASSHE Standard of 46%
Fall2018	FSC	104	Classroom	24.5	37.5/50	75%	49	49		Fails to meet PASSHE Standard of 75%
Fall2018	FSC	108	Lecture	24.58	37.5/50	75%	49.16	49.16		Fails to meet PASSHE Standard of 75%
Fall2018	FSC	110	Lab	0	23/50	46%	0		0	NOT USED
Fall2018	FSC	120C	Conference	0	37.5/50	75%	0			NOT USED
Fall2018	FSC	122	Lab	15.25	23/50	46%	30.5		30.5	Fails to meet PASSHE Standard of 46%
Fall2018	FSC	132	Lab	3.67	23/50	46%	7.34		7.34	Fails to meet PASSHE Standard of 46%
Fall2018	FSC	134	Lab	3.67	23/50	46%	7.34		7.34	Fails to meet PASSHE Standard of 46%
Fall2018	FSC	140	Lab	5.5	23/50	46%	11		11	Fails to meet PASSHE Standard of 46%
Fall2018	FSC	150	Lab	13.75	23/50	46%	27.5		27.5	Fails to meet PASSHE Standard of 46%
Fall2018	FSC	156	Lecture	19.16	37.5/50	75%	38.32	38.32		Fails to meet PASSHE Standard of 75%
Fall2018	FSC	202	Lab	1.83	23/50	46%	3.66		3.66	Fails to meet PASSHE Standard of 46%
Fall2018	FSC	206	Lab	25.66	23/50	46%	51.32		51.32	Exceeds PASSHE Standard of 46%
Fall2018	FSC	208	Lab	17	23/50	46%	34		34	Fails to meet PASSHE Standard of 46%
Fall2018	FSC	210	Lab	0	23/50	46%	0		0	NOT USED
Fall2018	FSC	214	Lab	0	23/50	46%	0		0	NOT USED
Fall2018	FSC	216	Lab	0	23/50	46%	0		0	NOT USED
Fall2018	FSC	218	Lab	0	23/50	46%	0		0	NOT USED
Fall2018	FSC	226	Classroom	30.75	37.5/50	75%	61.5	61.5		Fails to meet PASSHE Standard of 75%
Fall2018	FSC	228	Classroom	23.5	37.5/50	75%	47	47		Fails to meet PASSHE Standard of 75%
Fall2018	FSC	230	Lab	17.33	23/50	46%	34.66		34.66	Fails to meet PASSHE Standard of 46%
Fall2018	FSC	238	Lab	14.66	23/50	46%	29.32		29.32	Fails to meet PASSHE Standard of 46%
Fall2018	FSC	242	Lab	9.83	23/50	46%	19.66		19.66	Fails to meet PASSHE Standard of 46%
Fall2018	FSC	246	Lab	3.67	23/50	46%	7.34		7.34	Fails to meet PASSHE Standard of 46%
Fall2018	FSC	248	Conference	1.67	37.5/50	75%	3.34			Fails to meet PASSHE Standard of 75%
Fall2018	FSC	256	Lecture	23	37.5/50	75%	46	46		Fails to meet PASSHE Standard of 75%
Fall2018	FSC	302	Lab	0	23/50	46%	0		0	NOT USED
Fall2018	FSC	308	Lab	0	23/50	46%	0		0	NOT USED
Fall2018	FSC	310	Lab	2.83	23/50	46%	5.66		5.66	Fails to meet PASSHE Standard of 46%
Fall2018	FSC	312	Classroom	25.83	37.5/50	75%	51.66	51.66		Fails to meet PASSHE Standard of 75%
Fall2018	FSC	316	Lab	2.83	23/50	46%	5.66		5.66	Fails to meet PASSHE Standard of 46%
Fall2018	FSC	318	Lab	8.5	23/50	46%	17		17	Fails to meet PASSHE Standard of 46%
Fall2018	FSC	324	Lab	16.67	23/50	46%	33.34		33.34	Fails to meet PASSHE Standard of 46%
Fall2018	FSC	328	Lab	3.5	23/50	46%	7		7	Fails to meet PASSHE Standard of 46%
Fall2018	FSC	334	Lab	15	23/50	46%	30		30	Fails to meet PASSHE Standard of 46%
Fall2018	FSC	336	Classroom	19.92	37.5/50	75%	39.84	39.84		Fails to meet PASSHE Standard of 75%
Fall2018	FSC	342	Lab	7.33	23/50	46%	14.66		14.66	Fails to meet PASSHE Standard of 46%
Fall2018	FSC	356	Lecture	21.67	37.5/50	75%	43.34	43.34		Fails to meet PASSHE Standard of 75%
						Average	23.87268	47.99818	15.98071	

The Campus Master Plan has been in discussion and rudimentary design to transform the legacy Lecture Hall into an Active Learning Space in Shippen Hall 224. This space takes the either tiered or sloped flooring, and then appends furniture that is grouped into smaller groups of four to six students. They would have access to a computer and monitor for group work, but would also have visibility of the faculty member who can be in front, or elsewhere in the room. This is prescient for many reasons, in that it literally transforms the pedagogy, meaning that syllabi would need to change as much as the structure itself. But what is more prescient is that we have not only five lecture halls in Franklin Science Center, but they are ubiquitous throughout the campus, many not well utilized. The Franklin Science Center Working Group, a collaborative and inclusive body established by the University President, will continue to explore this possibility for inclusion into the renovation of the Franklin Science Center as parallel efforts are undertaken with Shippen Hall 224 and the inclusion of the CFEST.

As we continue to go further out on our scope of the Physical Plant Department Study, we know look at each of the University's buildings in aggregate. The data presented herein is from both the Spring and Fall of 2018 semesters. Despite having 15 academic buildings, 91 classrooms, and 58 (Spring) and 57 (Fall) laboratories, a number of conclusions can be drawn.

- The academic building with the highest amount of student visits remains constant with Dauphin Humanities Center (Green connotes highest and Red connotes lowest). As improvements are made (renewal or recapitalization), this should be factored into analysis as to how many students a particular project touches
- Highest average aggregate utilization (both class and laboratories) moved from Grove Hall (Spring) to Shippen Hall. One attributable factor may be the demand for 90 classes for the First Year Seminar
- The highest average class utilization remained constant with Shearer Hall.
- The highest laboratory utilization remained constant with Grove Hall.
- The conclusion to be drawn is that as resourcing is further analyzed, those leaders in utilization

	Spring 2018			
	Avg Util	Avg Class	Avg Lab	Std Servd
DHC	45.2	45.2	0	5729
FSC	21.4	43.7	13.8	4705
GH	30.7	30.7	0	323
GRH	48.6	53	41.6	5056
HAC	15	40	11.4	459
HFH	35	35	0	491
HG	3.8	0	3.8	153
HH	40	40	0	138
MA	10	15	5	114
MCT	36.7	41.4	31	1184
PAC	39.8	54.8	10	439
RLH	34.6	40.2	25.3	1084
SRH	26.5	54.8	4.1	1244
SPH	39.3	43	0	2906
WRI	12.8	15.2	0	286
Average	29.29333	36.8	9.733333	24311
15 Academic Buildings				

	Fall 2018			
	Avg Util	Avg Class	Avg Lab	Std Servd
DHC	51.6	51.6	0	6350
FSC	23.9	48	16	4906
GH	33.9	33.9	0	567
GRH	49.6	52.6	45.3	5732
HAC	21.5	80	13.1	827
HFH	40	42.5	0	597
HG	16.2	0	16.2	174
HH	17.5	17.5	0	127
MA	7.5	10	5	90
MCT	40.8	53.7	24.7	1660
PAC	52	75.5	5	790
RLH	39	47.1	25.5	1431
SRH	32.7	65.8	13.7	1493
SPH	54.75	54.75	0	3682
WRI	27.9	27.9	0	453
Average	33.92333	44.05667	10.96667	28879
15 Academic Buildings				

(Grove, Shippen, and Shearer) as well as students served (Dauphin, Franklin Science Center and Grove) need to be adequately resourced for stewardship and sustainability

- The building with the lowest students served remains Horton Hall. It does lend credence to the elimination of Horton 128, a Class "C" classroom, moving forward, based on utilization. Henderson Gym and Memorial Auditorium serve as statistical outliers as they have small specialized space and are denoted in yellow.
- Lowest aggregate utilization in Spring 2018 was Wright Hall and Huber Arts Center. In the Fall of 2018 though Huber Arts Center remained, Horton Hall became the lowest.
- Lowest classroom utilization remained constant with Wright Hall and this will feed the deeper discussion opportunity of the future of Wright Hall as a potential Faculty Office Building (with upgrades) and also shared spaces developed for tutorial, networking, social, outreach etc. The Class"C" revalidation and condition assessment is also a factor in these future discussions. decisions.
- The lowest laboratory utilization changed from Huber Arts Center to Shearer Hall. More analysis needs to be conducted to determine if there are duplicative capabilities, not only between those buildings laboratory spaces, but for the entire campus.
- The larger question and analysis that is required is for the low utilization of classrooms and laboratory spaces overall. A deep analysis of classroom scheduling, not only within Colleges, but also across the entire campus is required to see where redundancies and missed opportunities may lie. The inception of the First Year Seminar became the truly first attempt at more centralized classroom scheduling, leading (in part) to higher classroom utilization as evidenced above).

Although further study is required for some of the aforementioned requirements, the Campus Master Plan recommends:

- All classroom and laboratory spaces must be re-examined for limitations that preclude ADA accessibility as well as inclusion, and should equally be surveyed for force protection vulnerabilities in an active assailant situation
- Conduct a campus-wide office space census to ensure optimal utilization and key control
- Continue to examine the benefits of the Active Learning Environment and its piloting in Shippen Hall 224, with potential for further expansion to the Franklin Science Center and elsewhere on campus
- Develop a means of capture of utilization (utilizing electronic means, swipe cards, proximity reader, or other technology) incident to the upcoming December 2019 upgrades, must be found that will get not only to true utilization, but equally for safety and accountability purposes.
- A stronger emphasis on the use of EMS (and the associated data capture which can be linked to each space), would give a clearer picture as to utilization as well as if needs are being supported by the existing space inventory and eventual inclusion into further in-house utilization studies.
- A stronger emphasis on more centralized scheduling (where possible) using the First Year Seminar scheduling methodology as a first step. Centralized scheduling should preclude spaces to go unused as they are perceived to be "owned" by one entity or another vice the University at large, leading to better utilization and potential elimination of unused space.
- A time-phased elimination of all Paulien Class "C" classrooms (once a revalidation of all Class "C" Classrooms occurs to determine their future viability)for repurposing including:
    - The establishment of the HCS Speech Lab in Dauphin Humanities Center in room 305
    - Elimination of Horton Hall 128 as an active classroom
    - The elimination of all classroom spaces in Wright Hall (and based on the office census) establishment as a combination Faculty Office Building and shared spaces
    - Examination of Gilbert Hall classrooms as they affect future Exercise Science programming and the future of Gilbert Hall as it relates to mission
- Retention of both McLean and Mowrey legacy Residence Halls until better granularity is determined for future requirements based on the 2d year residency requirement as well as future growth needs as determined by the Housing Study Group.
- The commissioning of a study for all dining/retail venues, to include quiet space, on campus to

see where duplication exists and perhaps better placement based on need
- Assessment of the current Lehman Library Archives and Special Collections Study and the impacts of a potential requirement for 24/7 access to the ground floor enabling study/collaboration during off-peak hours, especially for commuter students.
- The establishment of the Center for Faculty Excellence in Scholarship and Teaching (CFEST) to be established in Shippen Hall 224 and will be discussed further under The Learning Environment and Active Learning
- Deliberate design for the establishment of the new School of Engineering using Kriner Hall and the Old Steam Plant
- Exploration of space requirements to support development of allied health programs
- Deliberate planning for the use of temporary laboratory space at Franklin Science Center and the basement of Reed Operations Center to accommodate the immediate need for swing space to accommodate classes in Fall semester 2019
- Deliberate planning for reorganized and contiguous space in Horton Hall for the Institute of Public Service
- Establishment of seasonal manufacturing space in Wright Hall 012 (a Class "C" Classroom) for the Robotics Competition

8. Student Housing Master Planning

8.1 2008 to 2018

The changes that have occurred since the publishing of the 2008 Campus Master Plan are many and varied. They represent a commitment to the long-term health of the institution, and to the well-being of the students we serve. The demolition of legacy residence halls (Harley, Kieffer, Lackhove, McCune, Seavers Apartments and Naugle Halls) set conditions for renewal on a grand scale. The construction of Phase I housing (completed in 2012 – Presidents (Harley), Seavers, and Naugle Hall, and the Etter Health Center) marked a transition to contemporary suite-style living. Phase II was completed the following year (2013 – Kieffer, Lackhove and McCune Hall) and completed the ResLife footprint that we see today of six suite-style residence halls and two legacy residence halls (McLean and Mowrey Hall). What is noteworthy, is that despite a planned Phase III, conditions did not warrant their construction, and shows the flexibility of the 2008 Campus Master Plan.

Other major activities that helped bring the residential campus to today include:

- Fall 2011 – 2 Assistant Directors created to provide supervision of residence life staff – apartments in residence halls
- Fall 2011 – Bed Bug Policy Created
- Fall 2012 – ResLife moved all central offices to McLean Hall
- Fall 2013 – One Assistant Director for 6 New Living Learning Communities (LLC) was established to support the new suite residence halls
- Spring 2013- Housing Grant funding program created to assist students pay for suite housing
- August 2014 – Cable TV upgraded from analog to digital cable programming
- Fall 2014 – Phase III on hold for central office move, continued to offer traditional hall options (Mowrey Hall, McLean Hall)
- Since 2013, $50K spent on Furniture Replacement, $50K on Carpet Replacements (Phase I)
- 2014- 2015 – First Year Students in McLean Hall, Upperclassmen in Mowrey Hall
- Spring 2015 – Mowrey Hall was taken off line'
- Summer 2015 – Extensive ADA accessible Bathroom Renovations conducted for both McLean Hall & Mowrey Hall
- Summer 2016 – McLean Elevator renovation and System upgrades in McLean Hall
- July 2017 – Mowrey Hall taken completely off line
- Fall 2017 – Removed Stone Ridge apartments from on-campus housing
- Spring 2018 – Two Year Housing Requirement approved for Fall 2019
- Summer 2018: Student Success Center & Mowrey Grad Housing Option
- September 2018 - Purchase of privatized Phase I and Phase II Housing from SUSSI

8.2 2018

The 2018 Campus Master Plan is a document that is continually evolving. ResLife today has numerous initiatives that are being realized as this document goes to press. A very busy summer was able to compress some Student Success and First Year Experience initiatives into a few months what normally would be a year-long process. Some of those current initiatives and accomplishments are listed below:

- At Mowrey Hall, final projects are underway that support both the new University Student Success Center as well as future residential needs include:
  - The construction of an interior ADA access lift joining the lobby with the half floor on the left of the Mowrey lobby
  - The construction of a male ADA accessible bathroom on the half floor
  - The construction of a third floor kitchen servicing residents on floors 3-5
- Currently at 13 LLCs – proposing new living learning community for Fall 2019
- Designated Naugle & Seavers to First Year students only, supporting the First Year Experience
- Installed 2 new computer labs in Naugle & Seavers Hall
- Outdoor Projects initiated with completed projects including hammocks in both Phase I and Phase II areas, solar powered tables, and a disc golf course adjacent to the Seavers-Naugle Hall complex. Planning continues for the construction of an outdoor leadership course behind Mowrey Hall
- ResLife is staffing a proposal of a Card System software upgrade, card reader change from swipe to proximity, and camera upgrades
- Covered bike racks are anticipated completion in Winter of 2018

Fall Occ. Rates	Suites	Trad	SRC	Operating
2010	x	100.00%	98.29%	8 traditional, SRC
2011	x	99.24%	94.80%	8 traditional, SRC
2012	x	81.67%	96.15%	8 traditional, SRC
2013	93.04%	82.37%	88.93%	3 suite halls, 4 traditional, SRC
2014	96.90%	33.80%	94.47%	6 suite halls, 2 traditional, SRC
2015	100.49%	29.25%	56.17%	6 suite halls, 1 traditional, SRC
2016	99.62%	26.25%	43.70%	6 suite halls, 1 traditional, 1/2 SRC
2017	93.30%	x	x	6 suite halls
2018	98.04%	x	x	6 suite halls
2019	*100.00%*	*25-50%*		*project - 6 suite halls, 1 traditional*
2020	*100.00%*	*80-100%*	*x*	*project - 6 suite halls, 2 traditional*

10-Year Housing Occupancy Rates and Pro-Formas

8.3 OCCUPANCY, THEN, NOW AND IN THE FUTURE

The following is a historical perspective of housing occupancy since the last Master Plan and provides some insights into what housing will look like into the future.

8.4 THE FUTURE

The numerous changes that have occurred as stated have created opportunities to relook the entire residential housing inventory. ResLife established a Housing Study Group to further analyze existing and future conditions, and the infrastructure required to meet those requirements. This process will continue after the publishing of this document. Using the Campus Master Plan methodology, the future will be broken down into three phases and serves as a benchmark for further detailed planning.

8.5 0-5 Years

The purchase of privatized housing from SUSSI creates opportunities. ResLife, together with the Physical Plant Department, conducts routine capital planning on lifecycle requirements for the Phase I

and II housing. From this point forward, that deliberate planning is fully integrated with the two legacy residence halls (Mowrey and McLean Hall). Initiatives and known requirements for the short term include:

- McLean Hall cosmetic and system upgrades (carpet, paint, furniture, AC, electrical/ lighting, cameras), common spaces & media room, 2nd elevator, open lounge space. Assess office usage spaces and create outside space options
- McLean Hall & Mowrey Hall and Phase I and II Housing staff apartments for future growth
- Mowrey Hall Graduate Student Housing top floors, examine electrical updates, AC, paint, kitchen construction to support remaining residents, laundry, cameras, upgrades to elevator
- Phase I and II - Upgrades for the Suites: Laundry, Computer Labs, outdoor upgrades, media rooms, room/suites/common space furniture and carpet replacement
- Continue to assess LLCs, physical changes that may need to come
- Multi-Purpose Rooms (MPR)s will be used more heavily with First Year Seminar and other Academic classes
- Continue to assess usage of study lounges/ tv lounges
- Examine parking for on-campus students
- Cycling repainting program for dedicated halls

8.6 5-15 Years

- Continued assessment of maintenance/renovation needs using the aforementioned capital planning methodology
- Determine if Phase III is required based on Enrollment
- Determine if Housing/Res Life Central Offices should move from McLean Hall
- Future study on type of Housing needed once Phase I and II reach their planned service life (debt service is 25 years)
- Laundry RFP 2021-2022
- New carpet/furniture in McLean Housing & Residence Life Offices

8.7 15-25 Years

As previously mentioned, Phase I and II housing will be nearing their service life and the aforementioned study will fuel what would be planned for their replacement.

8.8 MOVING FORWARD

The Housing Study Group will be looking at all of the aforementioned issues/initiatives/realities in the coming months. Those recommendations will then be fed into the continual master planning process, with emphasis on capital budget planning.

9. Outdoor Campus Recommendations

Improvements to the campus environment should continue with renewal of the more unsightly areas, replacement of exterior amenities as necessary and the addition of gathering spaces where appropriate. This is particularly true for the prominent sides of building, typically on the road side or at major entrances.

A few locations on campus could benefit from significant projects:

- CUB Amphitheatre: This expansive concrete area with the concrete seating areas is not particularly inviting. The function is divided between table seating for dining and hanging out and the other side for flexibility for large group activities. No shade is available for students using this area. One design concept would integrate in ground planters especially in the table seating side and could incorporate low walls for sitting and defining the space. Shade sails could be incorporated to add color and provide shade in the tiered seating areas. Artwork or differing textures could be incorporated in the walls of the seating area to provide visual relief. A design effort would be advantageous in development of this space.
- Reisner Entrance at Cumberland and Lebanon Drives: This expansive corner would be enhanced from grade alterations and retaining/sitting walls.
- PAC at Adams and Lancaster Drives: The iconic entrance to the Performing Arts Center could be enhanced with development of the grass area along the roadway at Adams and Lancaster Drives. This area could be graded and a wall providing additional color appropriate to set off the front of the PAC.
- Kriner Entrance: The patio at the entrance to the Kriner Dining Hall is a plain slab with picnic tables. The addition of a low wall, and a shade structure could significantly enhance the visual and function of this space.
- Old Main Front: The concrete in the vicinity of the flagpole and fountain along with the curb line on the circle could all be renewed to enhance the appearance of this well visited portion of campus. The grass portion around the fountain should be regraded to better accommodate weddings and social activities. The brick walkway on this side of Old Main should also be widened and improved for ADA accessibility allowing full access to this grand iconic entrance.

Potential Areas for Incorporation of an Outdoor Classroom

- John L. Grove Hall: The current hardscape outdoor area on the MCT side of Grove Hall is minimally sized and barely used. This area could be enlarged to create a hardscape outdoor classroom with sitting wall and space for additional seating.
- Rowland Shearer Outdoor Courtyard: The configuration of these two buildings creates a natural courtyard on the east side of the building. Previously the play yard for the lab school, it could certainly accommodate an outdoor classroom area with sitting wall and a space for additional seating. Additionally, the white metal siding on the nearby addition should be replaced with a more appealing finish.
- Academic Quad: Classes are occasionally held on the quad utilizing the Adirondack chairs. An area could be developed to facilitate additional use of this outside area with sitting wall and space for seating.

Other Areas on Campus for Renewal including updating of amenities (trees, shrubs, flower planters, benches, tables, trash/recycling receptacles):

- Heiges Entrance: Include removing the dated kiosk and replace if necessary
- Henderson Entrance
- Grove Entrances
- Dauphin Entrance
- Memorial Entrance: Include removing the dated kiosk and replace if necessary. Consider incorporation of an in-ground planter at the center of the plaza.
- Mowrey Entrance: Include updating of the façade
- Horton and Gilbert Entrances
- Dauphin Humanities Center: Include improvements to the highly trafficked area on the south end of the building facing Memorial Auditorium. This area could benefit from a cohesive plan for additional seating area and landscaping.
- Library/Franklin Science Center Quad: Improve existing outdoor gathering space.
- Wright Hall: Update the façade.

Outdoor Gathering Areas: Identify locations in existing mature landscape areas throughout campus for development. This could include the addition of hardscape surface where applicable with seating requiring minimal landscape additions.

Seasonal Color Planters: The Lehman Library (Academic) Quad and the quad between Memorial and Henderson along with other areas will benefit from seasonal color provided in above ground planters.

Student Recreation Center: this area gets extensive use by the students and will benefit from improvement:

- Burd Run pavilion upgrade/replacement: The pavilion is dated and not very attractive. It could be modernized and reconfigured to be more useful and inviting.
- Volleyball surface replace/improvement: The sand quality easily packs making the surfaces unsuitable for sand volleyball. The sand should be removed and replaced with the appropriate sand.
- Softball infield (2) replace/improvement: the infield for both of these fields could be made more player friendly and easier to maintain.
- Post and Chain: Survey campus and site locations needed for foot traffic control.

10. Infrastructure Recommendations

A number of large capital projects have addressed needed improvements to the utility infrastructure. As a result, most of this infrastructure is in good condition and not in need of capital improvements.

The following is a list of projects that should be addressed to further improve the University infrastructure.

10.1 STORM SEWER

Conduct a study to determine the best way to address the repeated flooding of the lower section of the Storage Lot due to the outfall from the ShipREC commuter lot retention basin.

Conduct regular cleaning of the storm inlets to keep the system able to handle peak flow conditions.

10.2 ENERGY SAVING INITIATIVES

BUILDING HEATING AND COOLING

Retro commissioning of campus buildings may identify building systems that are not functioning per design specifications that could result in additional energy savings and improved performance. Larger and older buildings should be prioritized for retro commissioning.

The remaining buildings with pneumatic controls should be evaluated for replacement with direct digital control for enhanced oversight and control of individual building HVAC components.

SITE LIGHTING RECOMMENDATIONS

LED retrofit for site lighting should be pursued for energy savings and increased reliability. The Penelec program for roadway lighting retrofits could be instituted in short order. Other site lighting LED change outs will require surveys and prioritization before execution.

GUARANTEED ENERGY SAVINGS INITIATIVE

With the close out of the 2006 Guaranteed Energy Saving Contract and the emergence of new technologies especially LED lighting, a new contract for guaranteed energy savings should be pursued. This would include relamping and lighting controls such as motion sensors.

UTILITY GIS LOCATION INITIATIVE

Accurate utility location is an on-going effort that must be kept up to date as new projects are completed and new information is made available. The current GIS mapping initiative represents a new way of doing business for Facilities and must be integrated into the operation and design processes. How that translates into the day to day has yet to be determined.

A new base map should be developed for the University to better capture the extensive changes made since the previous one in 1997. This is also a major goal for the Campus GIS Initiative.

11. Sustainability

11.1 SUSTAINABILITY, THE CAMPUS, AND THE CAMPUS MASTER PLAN

The inclusion of a chapter on sustainability is important to the overall campus master planning process, but it is much more than that. It is not its own chapter, but rather **interspersed** throughout every chapter and desires inclusion in not only how we plan, but rather also our **behaviors** and how we **live**. This chapter serves as that starting point for continuing that dialogue. What is most notable about this chapter, is that it is infused by so many comments, thoughts, and passions of our faculty, our Center for Land Use and Sustainability, and most importantly, our **students**. Many of the **aspirational** goals will be analyzed moving forward, and integrated into decision, and policymaking, processes moving forward.

11.2OVERVIEW:

We wish to stress that an increasing emphasis across the nation is being placed on "green and sustainable" colleges, and there is growth in demand for sustainability programs to meet the demand for sustainability careers, which is why Shippensburg University initiated development of an Environmental Sustainability major and minor in 2017. So while students still select college campuses for specific majors, an ***ever increasing number of students are now selecting colleges based on other factors which include facilities that readily promote on-campus culture of inclusion and social justice, openness to diversity and community development, as well as their green initiatives that impact on-campus quality of life (air, water, lighting, green spaces, etc.)*** as well as access to inviting off-campus communities and resources where students can develop and grow off campus. In fact, ***Princeton Review*** now recommends that students, regardless of major, consider the perks of institutions that provide:

1) residential/academic buildings and grounds that have updated buildings with clean air supplies, more natural lighting, inviting and exciting outdoor spaces, green or living roofs, and access to real-time energy/water consumption reporting systems, etc.,
2) Eco-friendly dining options (local, organic, campus farm-produced foods, etc.) that are free of plastics and limit waste production, and
3) easy, safe, and efficient commutes to class (i.e. walkable campuses, access to public transportation, bike/car-shares, etc.).

And it appears that more and more college students (and their family members) are making decisions on where to attend college on this basis.

Further engagement of students in the process of "greening" college campuses is now considered a high-impact practice that appears to be gaining traction on many campuses both private and public. In fact, AASHE (The Association for the Advancement of Sustainability in Higher Education) represents faculty, administrators, staff, and students from over 900 member institutions across the U.S. and beyond. They help institutions not only re-define sustainability, but they provide numerous resources so that partners can be effective change agents and innovators in sustainability. A growing list of campus best practices are emerging and it **is clear that Shippensburg is already doing some of them** including single steam, battery, and toner recycling. The conversion from steam heat to gas fed boilers, coupled with the role that our Environmental Steering Committee plays, all are examples of great things we continue to do. Additionally SU recycles all electronic waste in partnership with an R2 certified recycler which uses a zero-waste process. All metals and plastics in e-wastes are fully recycled without impact to the environment. SU offers this recycling service to the full campus community year-round and to the local community one day per year. But there is always room for improvement. In a growing number of cases, campuses directly employ students to assist in sustainability initiatives and many facilities offices now have a "sustainability projects director/coordinator" to help manage a wide-range of initiatives. Not only are these critical to meeting the ethical responsibility of improving campus climates for student success, but such positions often pay for themselves through increased savings, increased cross-division collaborations (celebrated by Middle States), and increased student recruitment and training. A recent search of a national job search website shows that over 500 "campus sustainability manager" jobs are available for positions with similar responsibilities, and this number will only continue to grow in both academic and industry sectors. ***So the work of providing a more sustainable, green campus, will ultimately improve outcomes for our students and will provide them with meaningful career training outside of the classroom.*** Note also that the Department of Geography & Earth Sciences hired Dr. Russell Hedberg as a new faculty member and he will help the department and other programs as the academic sustainability coordinator. His responsibilities will be to promote academic and pedagogical initiatives to improve stewardSHIP and sustainability in and out of the classrooms.

If Shippensburg University is serious about including sustainability in its mission (and we believe it should be), then the 2018 Master Plan will not only need to reflect a holistic view of sustainability (Economics, Ethics, and Environment) in its operations, but it will need to make stewardSHIP a priority across all divisions of the university and community and engage students in the process. Sustainability is a goal we are working toward, and we view stewardSHIP as the choices

and decisions that are made on a day-to-day basis that drive us toward sustainability. It is important to stress there are many resources and case studies are available to help. In fact, the Sierra Club has a national ranking of "Green Colleges" and a review of their "Scoring Key" made up of more than 65 different criteria (https://www.sierraclub.org/sierra/2014-5-september-october/cool-schools-2014/scoring-key) shows that Shippensburg University could most definitely be an eligible contender for the top 100 in the very near future (if not now)! The list includes behavioral, programmatic, academic and operation-based criterion and we are already doing many things well, but just behind the scenes. However, we don't do a good job telling our story on our successes, and this MUST be a key goal of the Campus Master Plan just as it is one of President Carter's 4 pillars. Moreover, given that our campus is located so close to the Appalachian Trail and Michaux State Forest, if leveraged wisely and marketed to perspective students and other stakeholders, we feel that ***this work will be a very effective way of improving student recruitment and retention for student success across many majors.*** So how do we use and improve campus facilities to tell our story, enhance our Master Plan for student success? The 2018 Campus Master Plan must include mechanisms to do this at every opportunity.

11.3 Student Focus Group:

To help inform this initial work, Sean Cornell brought the November 2018 Master Plan "kick-off" documents to the attention of a group of 11 students (Biology and Geoenvironmental Majors – mostly juniors and seniors) who traveled to the Chincoteague Bay Field Station (Wallops Island, VA) for a student research and stewardSHIP weekend. An additional 2 students were consulted after the main group brought their ideas forward. The "focus group" was presented with the documents and asked to comment on the major "concepts" of the Master Plan which include:

Strengthening the Academic Core of Campus, Transforming the Residential Environment, Improve Vehicle/Internal Circulation and Parking, Improve Campus Identity and Sense of Place, Remove Buildings/Renovate to Meet Changing Programs, Improve Athletic/Recreation Facilities, Improve Utility Generation & Distribution.

They were also informed of the complementary "functions" of the master plan that include: Coherence, Branding, Renewal, The Learning Environment, Energy, Athletics/Recreation, Technology, Accessibility and Equity, Recapitalization, and Community Interaction.

The "kick-off" pages were reviewed by the students and a lengthy discussion ensued over the course of the 2.5 days. Students were asked to consider their experiences at Ship, their experiences on other university/college campuses, and their wish list for a "greener and more inviting" Ship. A running matrix of comments is attached, but they are not organized in any particular way. Two additional students were asked to contribute feedback to the discussion, one is currently an intern at Volvo (in the environmental and safety office) and another is a non-traditional commuter student who expressed concerns regarding parking and lighting and campus access.

11.4 Student Focus Group "Main Theme" Areas:

In addition to the list of items attached, several major themes emerged in these discussions. These ranged from issues surrounding personal growth and changing perspectives/needs relative to campus facilities, to needed campus-wide "behavioral systems" changes, to facilities/design improvements that would be more obvious, more inviting, as inspired "green" campus environments that would promote the Shippensburg University brand.

- First, student needs for campus facilities change through time as they develop personally and professionally. *Sustainability and green campus concepts are important to them, but they are increasingly MORE important as they mature.* As incoming first year students, their interests are very different and limited in scope relative to their interests as upperclassmen. For most, living in the residence halls meant independence (from home). The new dorms, dining facilities, and Ship Rec center were a draw to Ship. However they commented that ***although the campus was inviting to them initially, it was not as user-friendly to them as upperclassmen***. Required meal plans, lack of access to kitchens to cook their own meals, easy in/out food options, distance to parking lots, lack of bike parking, suite housing, safety, control over their own costs, etc. were major concerns for them. These limitations pushed a majority (of traditional student-types) to move off campus, both to reduce costs, but also to have more independence. As they have matured, ***they are more resource conscious and want more independence which is not available to them on campus***. One student said that a sustainable housing center established in the residence halls (i.e. like the "Bio LLC, but better") would have been a way to inspire students like her to stay on campus and others agreed.
- Second, even though they feel "pushed off campus" they do want to participate in on-campus activities, programs, and co-curricular endeavors. This includes the non-traditional adult students. However ***they find it hard to do so due to logistics, accessibility, security, etc.*** They commented that there is much emphasis on "new on-campus students," but very little emphasis on returning student commuters (both those that walk/bike to campus and those that drive) and their needs. Commuter students who drive to campus especially feel out-casted. They expressed a need for better commuter options, parking, biking, and safety, and better communication. With upperclassmen spending more time "in their departments" collaborating, working on projects, papers, etc. (especially at off hours) these classroom, laboratory, and study spaces are MORE important to them as they mature. However, they are often "kicked-out" or "locked-out" of these buildings when the buildings close and faculty leave, or when other classes come in to use these spaces. They don't have easy access to student-centered "tinker/maker/performance spaces" that are increasingly the hallmarks of some other campuses, and they need access to multi-functional collaboration and hang-out spaces, which include outdoor learning areas and open, indoor, well-lit areas. Weekends are especially unwelcoming for off-campus students because there are few facilities options available to them other than the computer labs in DHC, the CUB, MCT and the student technology helpdesk in the library. More than a few commuter students said that they would spend more time on campus, if it was more open, inviting, and logistically easier for them to be on campus so they can collaborate and get work done.
- Third, ***they want to "see greener initiatives" happen in prominent spaces***. They don't hear about them regularly or don't see them as often and as prominently as they see them on campuses their friends attend, and even at their former high schools (many pointed to PV arrays, green roofs, and other green designs at their home school districts as examples). At Ship, they see beautiful athletic fields (used only by athletes and on-campus students for recreation/intramurals), but there is little to no access to natural landscapes for personal recreation, quiet study or simply places to "chill" outside (except off campus). They like the Adirondack chairs, but would like to see more diverse comfortable seating in more areas, and this includes more hammocks in academic quads and would like to see re-purposing of the CUB amphitheater. During visits to other campuses and to the campuses of large businesses, they see native plantings used in landscaping to encourage pollinators/wildlife, bio swales and rain gardens to improve water quality and infiltration, green roofs for energy efficiency and grey-water capture, PV solar arrays for power generation, composting to reduce landfill waste, and other practices. Yet they don't see them used on our campus. With this feedback, there is some disagreement however. Some students recognize that some of these initiatives have been employed, especially in the area of the Chilling Plant or at some of the parking lots behind the Spiritual Center, but not all students see them or know about them. The result is that there is a perception and PR problem, among students. At least some students believe that that campus does not engage in sustainability seriously, or when we do, it is not communicated effectively. A common commentary was that there is "no recycling," that there is a "plastic throw-away culture" on campus, and there is very little that encourages/incentivizes students to be more engaged in recycling and overall waste reduction. More than one member of the focus group felt it very important to see more "in your face initiatives" and perhaps "incentives" to be established across all of campus. One student commented on the move-in/move-out waste that is generated and said that something

should be done to curb the amount of waste produced at these times especially.

Listening to their comments, it is apparent that they want "to see" sustainability more not only behind the scenes in operations (i.e. economic sustainability), but they want to see it more prominently in buildings across campus where it can have a more obvious impact on them and fellow students. All but one of the focus-group students were commuter students (most live in near campus housing, but some drive more than a few miles to campus). Thus, the number of perspectives and insights varied greatly and their interests were significantly impacted by their level of involvement in on campus activities, clubs, organizations, and their participation in research, or other academic interests.

11.5 Specific Themes:

The following are a list of concrete actions that were mentioned and pulled together into a group of cogent topics. We recommend that these be strongly considered to help set and achieve realistic goals over the short-term, mid-term, and longer-term relative to this current Campus Master Plan.

- Near Term: It is critical to define a clear aspirational vision for where the University would like to be with regard to sustainability, and this includes establishing commitments to meet a goal of footprint neutrality within the context of internationally-recognized timelines to limit worsening climate change impacts, and reduce per-capita water demand.
    - Many universities and colleges are implementing strategies to participate in bulk purchasing, and carbon trading and carbon-offset programs and Shippensburg should consider ways to decrease footprints in all sectors and participate in development of PASSHE-wide energy reduction challenges.
- Near-Term: Initiate a marketing and PR campaign to celebrate our successes (utilize existing Sightlines Audits and awards) and market our green campus facilities and initiatives, proximity to the restored Burd Run Watershed, Michaux State Forest, and the Cumberland Valley Rail Trail to external organizations (in PA and beyond). Put Shippensburg on the map as a green campus, and establish Shippensburg University as a destination campus for students of all majors interested in attending a green/sustainability-oriented campus.
- Near Term: Feedback from the student intern at Volvo said that it was important to be able to acquire technology to implement hardware/software/data management systems where the entire university grid (i.e. building energy use, air quality, water use, waste streams, etc.) over specific time periods can be measured and openly shared. Many of these technologies are currently in use with Automated Logic ® by the Physical Plant Department as building systems are monitored on a 24/7 using a web-based (and mobile) application.
- Near Term: Once a data management/data sharing system is implemented, this information should be made regularly available to all stakeholders (including students, faculty, staff, administrators, facilities managers, and visitors) and within each building so the entire campus community can be informed.
    - Development and inclusion of annual "stewardSHIP/Sustainability" training/orientation programs and other informational programs in all divisions to improve awareness and role of active, informed, decision-making is also necessary.
- Near-Term: Expand recycling and waste management program to move toward Zero Waste by 2028.
    - There is significant interest among student groups for this work, and it provides significant opportunities for student involvement in facilities, including on-going course projects to monitor waste streams. This work can also facilitate campus-wide systems, with green waste supporting compost generation for the farm and natural areas, and the farm and natural areas supporting food service and the campus experience.
    - Example initiatives: https://zerowaste2020.universityofcalifornia.edu/
- Mid-Term: Data should be used to inform development of benchmark goals and establish development of KPI's (Key Performance Indicators) that can be assessed and modified as necessary to realize aspirational goals in the longer-term.
    - KPI's should be established for all waste streams, purchasing contracts to improve supply chains, reduce the number of high-footprint products, reduction of single-use plastics and packaging, reduce transportation/commuter costs, reduce imported energy demands while increasing onsite energy production, establish resource consumption thresholds and footprint reduction strategies for all divisions (academic, residential, recreational, athletics, etc.), etc.
- Mid-Term: Add and modify parking and campus outdoor lighting with solar PV-charged units
    - This will save campus money in the long-term, and provide a visible commitment to sustainability on campus. This transition will also allow us to provide more/brighter lighting on campus at night, greatly improving campus safety and improve the campus experience – especially for commuters that have expressed concerns.
- Mid-Term: Commit to converting at least 50% of suitable roof infrastructure to green roofing by 2028.
    - This will provide significant benefits to sustainable water management, building heating and cooling, and reduce the University's carbon footprint. Green roofing will also provide social-ecological connectivity between building infrastructure and campus grounds by providing habitat corridors, pollinator spaces, etc., and could potentially be used as productive spaces for food services.
    - By including instrumentation and ongoing assessments with these projects, there is significant potential to include student involvement and classroom exercises across multiple units on campus.
    - Green roofs are highly visible symbols of the University's commitment to sustainability, and can help shape the university brand and attract students to campus.
- Mid-Term: Redevelop green spaces to create a multifunctional campus landscape that manages water, stores carbon (to qualify for carbon-trading programs), produces food, and invites student engagement.
    - Restore/re-wild select campus areas with proper signage to create a 'Great Valley Walking Tour" of native ecosystems on campus. This can attract student and community members, increase biodiversity, and reduce the cost of grounds maintenance.
    - Use permaculture practices to redesign campus greenspaces to produce food and ornamental plantings that are lower-maintenance. This will create wildlife habitat on campus, and make for a more dynamic, beautiful, and welcoming campus environment.
    - Better incorporate opportunities/spaces for community engagement with campus green spaces (beyond the blue and red Adirondack chairs). This will improve the student experience, and invite student engagement and investment in the campus ecosystem.
    - Install innovative PV-outfitted hammock/seating areas in academic quads with charging stations, outdoor digital signage, Wi-Fi repeaters, etc.
- Mid-Term: Create/repurpose campus spaces to provide viable and welcoming 'third space' for students on campus – especially commuter students.
    - Commuter students have reported feeling out of place on campus since they do not have access to spaces that are not just 'study spaces.' Some even report that academic spaces are restrictive and difficult to access, especially on nights/weekends.
    - Creating social spaces on campus will build a more sustainable and welcoming community for ALL students.
    - CUB amphitheater should be re-envisioned to be an architectural center of outdoor, all-weather campus activities. Should include a high-tech

red/blue/white sail and shade structure outfitted with PV and artistically-designed wind turbines and moveable planters that can be used to create outdoor living spaces.

- Mid-Term: Redevelop campus transportation and parking infrastructure to improve bike and pedestrian access around campus and build connectivity corridors with the community.
    - Walkability of campus and ADA considerations are important.
    - Install charging stations for electric cars, and assign carpool-only parking spots/stations to encourage/incentivize car-pooling.
    - Redirect two-way campus traffic to one-way only during academic day or provide bike-only lanes.
    - Facilitate car-pooling using apps and public-private partnerships for quality-of-service solutions.
- Long-Term: Celebrate successes, and evaluate/establish new benchmarks and facilities improvements to exceed prior successes and continue innovation using new technologies. Explore the possibility of net 100% energy-independence from off-site energy production and 100% on-site energy production.

11.6 Student Focus Group Comments (in no particular order or ranking)

- Zero Land Fill Promise (i.e. see Volvo)
- Set Goal of Zero Net Emissions (Carbon Neutral)
- Set Goal of Water Conservation & Increase Water Quality Discharged from Campus
- Establish NEW Pillar 5 (Core Value of Environmental & Community StewardSHIP)
- Improve Energy Percentage Produced Onsite (Wind, Photovoltaic, etc.)
- Reduce Demand from Offsite Energy Sources
- Complete Building-Wide Energy Audits (Improve Energy Efficiency in Heating and Lighting)
- One-way traffic to allow bike lanes
- Establish and Promote Community-Wide Bike Share Programs
- Reduce Idle Energy (Heating, Lighting) Daily, Seasonally, Annually
- Charging Stations for Electric Cars
- Set Target KPI's (Key Performance Indicators) to reduce trash annually
- Set Target KPI's to renegotiate contracts to improve sustainable supply-chains
- Set Target KPI's to reduce purchasing high-footprint products annually
- Set Target KPI's for auxiliary services annually
- Set Target KPI's to reduce/remove single use plastics annually (Aggressive)
- Set Target KPI's to increase composting & recycling
- Set Target KPI's to reduce off-site energy supplies (develop greener energy portfolio)
- Set Target KPI's for each sector (Residential, Academic, Athletic, etc.)
- Set Target KPI's (Key Performance Indicators) for green space improvements
- Establish Required Orientation/Training on Footprint/Emissions/KPI's
- Establish Higher Parking Fees or Elective Parking Fees to Offset Carbon Footprints of Single Driver Vehicles
- Promote/Facilitate Car Pooling & Incentives
- Seek Energy Efficiency Rebates
- Install Building-Level Control/Monitoring Stations so all stakeholders can view energy use/consumption/savings
- Reduce mechanical mowing of campus green spaces, utilize horticulture and rotational grazing (i.e. goats?) to reduce footprints
- Increase functional green spaces (promote air quality - more trees, food production/orchards)
- Reduce runoff and improve infiltration (bio swales, rain gardens, storm water catchments) and reduce sink hole risk (more trees)
- Improve & Promote Use of Work Order System (open access to all stakeholders) - Too many hurdles to report problems promotes apathy
- Work Order Status Access (Open to all stakeholders)
- Promote Competitions to Advertise & Realize KPI Goals
- Promote Walkable Campus & Reduce "Dirt Path Short-Cuts" to Reduce Soil Erosion - Improve Building Cleanliness
- Provide more "maker spaces" "performance spaces" "tinkering spaces" that are open access
- Reduce hurdles to reserving/using existing spaces (improve communication & training)

Many spaces are over scheduled, and when open (and not in use) often are off limits

- Provide instrumentation/automation to facilitate KPI monitoring and assessment
- Provide Collaboration and Multi-Purpose Spaces (Tables on wheels, Clear Drawing Boards on Wheels) in all academic buildings
- Improve Building Access and Culture of Openness (Perception is that campus is "CLOSED" at 5:00 p.m. and on weekends). Students want open, friendly, accessible campus spaces
- Promote access and engagement to take advantage of Rail Trail & Appalachian Trail & Burd Run areas
- Provide more outdoor learning areas (Teaching Pavilion at Burd Run/Bio Pond/Campus Farm)
- Integrate Campus Farm onto Campus
- Reverse the "GO HOME ON WEEKENDS" culture
- Lecture/Lab Spaces are INFLEXIBLE - need to be more flexible and promote out-of-class interactions and access to study resources (especially in sciences)
- Classrooms are boring! Uninteresting!, Blank and Uninspiring!
- CUB Amphitheatre is UNUSABLE OUTDOOR SPACE, needs to be re-inspired (too hot, too bright and in inclement weather forces everyone inside)
- Installation of large "mast & sails" to promote the Ship brand and provide cover for amphitheater area (could be Photovoltaic covered, have unique wind turbines, could serve as area for outdoor films)
- Lehman Quad should be retrofitted as the "green-space center" of campus. Install more hammock poles, but with solar panels on them and charging stations (possibly with Wi-Fi amplification)
- Commuter students NEED THEIR WELCOME SPACE… Currently very little space to retain them between classes - promotes "sleeping in cars" "idling of cars in cold weather" and lots of on/off campus and additional driving
- Community spaces are not delineated little signage and guidance (faculty don't know, staff often don't know, and most students don't know what is available and where it is)
- Utilize new wind turbine technology designs (working art)
- ADA Compliance for outdoor spaces (Burd Run, Campus Farm)
- Promote Facilities in New Student Orientation, New Faculty/Staff Orientation, and Annual Training Programs
- Integrate Facilities Energy & Responsibility into University 101.
- Improve % of community members making StewardSHIP Pledge

12. Master Recommendations Listing

The summation of all recommendations of the Campus Master Plan is listed below. What is important for the reader to understand is the following:

- As in MASTER PLAN CONCEPTS, each of these recommendations have been nested within the Four Pillars, The SU Strategic Plan, the Academic Master Plan, and the Master Planning concepts of the 2018 Campus Master Plan. This listing gets to the "why" a project is important, and its consonance with University priorities as articulated in numerous authoritative documents
- These are recommendations and not necessarily (in their current form) immediately actionable projects
- Many of these recommendations will require performance of a study prior to solidification of an actual project
- Numerous recommendations require deconfliction with other recommendations to integrate into a larger (and more coherent) activity/project
- None of these recommendations have a definite cost, and it is the further analysis (studies/design) that will lead to bona fide costing and the decisions required to execute them

		MASTER PLAN RECOMMENDATION STRATEGIC LINKAGES			
Recommendation	**Supported Pillars**	**Supported Documents**	**Supported Goals or Recommendations**	**Suppported Objectives SUMP = SU Master Plan AMP=Academic Master Plan**	**Master Plan Concepts**
Continue a deliberate process of interior branding painting as building painting renewal is planned for the future on a programmatic basis.	How We Tell our Story Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G8 G2 R5	AMP O8	Branding
Pursue the replacement of the green (and rapidly deteriorating) terrazzo flooring on the first floor of Old Main and replace with an epoxy-based product supporting the current Ship branding color pallette.	How We Tell our Story Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G8 G2 R5	AMP O8	Branding Renewal
Continue to update all exterior building signage eventually to the new darker "Ship Blue"	How We Tell our Story Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G8 G2 R5	AMP O8	Branding Renewal
Continue to determine best locations for building banners and the message they convey	How We Tell our Story Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G8 G2 R5	AMP O8	Branding Community Interaction
Expand interior branding painting to the Athletics enterprise. Numerous instances of legacy coloring for outside structures need to be programmed and executed.	How We Tell our Story Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G8 G2 R5	AMP O8	Branding Renewal Athletics and Recreation
Explore the use of photographic imagery at Seth Grove Stadium Rear to turn a visual liability into a quality first impression.	How We Tell our Story Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G8 G2 R5	AMP O8	Branding Athletics and Recreation
Piloting of web-based wayfinding kiosks for interior wayfinding in high visitor traffic areas (based on pilot project at Grove Hall College of Business) and potentially utilizing students in development of virtual reality prototypes.	Student Success	SU Strategic Plan Academic Master Plan Visioning Team Report	G6 G2 R5, R16	SUMP O5 AMP O8	Techonology Coherence
Removal and upgrade of all legacy masonry-based signage (Memorial Hall/Heiges Field House)	How We Tell our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G6, G9 G1, G2 R16	SUMP O5 AMP O5, O8	Branding Renewal

Exploration of a GIS-based wayfinding system that is app-based that can extend to knowledge management	How We Tell our Story Student Success	SU Strategic Plan Academic Master Plan Visioning Team Report	G2, G5, G6, G9 G1, G2, G4 R1, R2, R5, R14, R16	SUMP O2, O4, O5 AMP 05, O8	Technology Coherence Community Interaction
All classroom and laboratory spaces must be re-examined for limitations that preclude ADA accessibility as well as inclusion, and should equally be surveyed for force protection vulnerabilities in an active assailant situation	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G1, G9 G2, G7 R16	SUMP O1 AMP 03, 08	Accessibility and Equity
Conduct a campus-wide office space census to ensure optimal utilization and key control	Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G1, G9 G2, G4 R16	SUMP O1 AMP O2, O8	Coherence
Continue to examine the benefits of the Active Learning Environment and its piloting in Shippen Hall 224, with potential for further expansion to the Franklin Science Center and elsewhere on campus	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G1, G2, G5, G6, G7/9 G1, G2, G4, G7 R5, R6, R15, R16	SUMP O1, O2, O4, O5 AMP O3, O5, O8	The Learning Environment Renewal Technology
Develop a means of capture of utilization (utilizing electronic means, swipe cards, proximity reader, or other technology) incident to the upcoming December 2019 upgrades, must be found that will get not only to true utilization, but equally for safety and accountability purposes.	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G1, G9, G10 G2 R15	SUMP O1 AMP O8	Coherence Technology
A stronger emphasis on the use of EMS (and the associated data capture which can be linked to each space), would give a clearer picture as to utilization as well as if needs are being supported by the existing space inventory and eventual inclusion into further in-house utilization studies.	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G1, G9, G10 G2 R15	SUMP O1 AMP O8	Coherence Technology
A stronger emphasis on more centralized scheduling (where possible) using the First Year seminar as a start, precluding spaces to go unused as they are perceived to be "owned" by one entity or another vice the University at large, leading to better utilization and potential elimination of unused space.	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G1, G9, G10 G2 R15	SUMP O1 AMP O8	Coherence Technology

A time-phased elimination of all Paulien Class "C" classrooms for repurposing (contingent upon a current revalidation of existing space to meet current needs) including: o The establishment of the HCS Speech Lab in Dauphin Humanities Center in room 305 o Elimination of Horton Hall 128 as an active classroom o The elimination of all classroom spaces in Wright hall (and based on the office census) establishment as a combination Faculty Office Building (with upgrades) and establishment of shared spaces to support tutorial, social, networking, outreach. o Examination of Gilbert Hall classrooms as they affect future Exercise Science programming and the future of Gilbert Hall as it relates to mission	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G1/2/4/5/6/8/9/10 G1, G2, G3, G7 R5, R6, R15, R16	SUMP O1, O2, O4, O5 AMP O1, O3, O5, O8	Coherence Technology Renewal
Retention of both McLean and Mowrey legacy Residence Halls until better granularity is determined for future requirements based on the 2d year residency requirement as well as future growth needs as determined by the Housing Study Group.	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G5, G9, G10 G2, G4, G7 R2, R15, R16	SUMP O4 AMP O8, O3, O5	The Residential and Campus Experience Renewal Recapitalization Accessibility and Equity Energy
The commissioning of a study for all dining/retail venues, to include quiet space, on campus to see where duplication exists and perhaps better placement based on need	Student Success Quality Community Relations	SU Strategic Plan Academic Master Plan Visioning Team Report	G8, G9, G10, G11 G2, G4 R5, R6, R15, R16	AMP O8, O5	Sustainability Coherence The Residential and Campus Experience
Assessment of the current Lehman Library Archives and Special Collections Study and the impacts of a potential requirement for 24/7 access to the ground floor enabling study/collaboration during off-peak hours, especially for commuter students.	Student Success Quality Community Relations	SU Strategic Plan Academic Master Plan Visioning Team Report	G2, 3, 8-10, 12, 13 G2, G4, G7 R16	SUMP O2, O5 AMP O5, O5, O3	Renewal Technology Coherence Accessibility and Equity The Learning Environment The Residential and Campus Experience Community Interaction

The establishment of the Center for Faculty Excellence in Scholarship and Teaching (CFEST) to be established in Shippen Hall 224	Student Success Quality How We Tell our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G1, 2, 5, 6, 9, 12 G1, G2, G4, G7 R1, R5, R6, R15, R16	O1, O2, O4, O5 O5, O4, O5, O8, O2, O3	Renewal Technology Accessibility and Equity The Learning Environment The Residential and Campus Experience Community Interaction
Deliberate design for the establishment of the new School of Engineering using Kriner Hall and the Old Steam Plant	Student Success Quality How We Tell our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G1 thru 9, 11, 13 G1, G2, G4 R1, 4-6, 8, 10, 15, 16	SUMP O2, O4 AMP O2, O3, O5, O8, O4	Renewal Technology Accessibility and Equity The Learning Environment The Residential and Campus Experience Sustainability Recapitalization Community Interaction
Exploration of space requirements to support development of allied health programs.	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G1, G3, G5, G10/13 G1, G2, G3 R7	SUMP O2/3/4/5/8 AMP O2, O3, O5, O8, O5	Renewal Recapitalization Technology
A deeper discussion is required regarding growth, requirements, proximity for all academic areas to ensure coherence is sustainable. The proximity of classrooms, faculty offices, faculty/student work areas and the location of the department are integral to the quality of the academic experience.	Student Success Quality How We Tell our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G1-G10 G2, G4, G7 R6	SUMP O1, O3, O5 AMP O5, O8, O5, O3	Renewal Technology Accessibility and Equity The Learning Environment The Residential and Campus Experience Sustainability Recapitalization Community Interaction
Exploration of the changing demographics of the population of student learners that we serve (to include adult learners). The PASSHE Chancellor's Vision, together with recent documents (NCHEMS/RAND Reports) set conditions (for future) discussions of what physical infrastructure and space is required to attract and retain those new populations.	Student Success Quality How We Tell our Story Community Relations	SU Strategic Plan Academic Master Plan Visioning Team Report	G1, G3, G5, G10/13 G1, G2, G3 R4, R7	SUMP O2/3/4/5/8 AMP O2, O3, O5, O8, O6	Renewal Technology Accessibility and Equity The Learning Environment The Residential and Campus Experience Sustainability Recapitalization Community Interaction

Deliberate planning for the use of temporary laboratory space at Franklin Science Center and the basement of Reed Operations Center to accommodate the immediate need for swing space to accommodate classes in Fall semester 2019	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G1 thru 9, 11, 13 G1, G2, G4 R1, 4-6, 8, 10, 15, 16	SUMP O2, O4 AMP O2, O3, O5, O8, O4	Renewal Technology Accessibility and Equity The Learning Environment The Residential and Campus Experience Sustainability Recapitalization Community Interaction
Deliberate planning for reorganized space in Horton Hall for the Institute of Public Service	Student Success Quality Community Relations	SU Strategic Plan Academic Master Plan Visioning Team Report	G3, G9/10, G12, G13 G7 R5, R6, R7, R10	SUMP O3	Renewal The Residential and Campus Experience Community Interaction Branding Coherence
Establishment of seasonal manufacturing space in Wright Hall 012 (a Class "C" Classroom) for the Robotics Competition	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G1 thru 9, 11, 13 G1, G2, G4 R1, 4-6, 8, 10, 15, 16	SUMP O2, O4 AMP O2, O3, O5, O8, O4	Renewal Technology Accessibility and Equity The Learning Environment The Residential and Campus Experience Sustainability Community Interaction
Commission an updated transportation study of the greater Shippensburg Area	Student Success Quality Community Relations	SU Strategic Plan Academic Master Plan Visioning Team Report	G4, G12, G13 G3, G4, G7 R13, R14	AMP O3, O5, O3	Internal Circulation The Residential and Campus Experience Community Interaction Accessibility and Equity
Explore an incremental facilities condition assessment	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G6, G9, G10 G2 R16	SUMP O5 AMP O8	Renewal Sustainability
Exploration of other space for new construction on the campus proper, while exploring the potential for grant funding for a Public Safety Center.	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G8, G9, G10 G2, G4 R16	AMP O8, O5	Coherence Recapitalization The Residential and Campus Experience
Explore design feasibility study for options at the concrete CUB amphitheater providing shade, balance, and inclusion	Student Success Quality How We Tell Our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G8, G9, G10, G11 G2, G4, G7 R5, R6, R16	AMP O8, O5, O3	The Residential and Campus Experience Coherence Renewal Accessibility and Equity
Conduct assessment of building entrances and enhance curb appeal including plantings, trash/recycling receptacles (Henderson, Dauphin, Memorial, Mowrey, Horton, Gilbert, Wright)	Student Success Quality How We Tell Our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G9 G2, G4, G7 R6, R16, R17	AMP O8, O5, O3	Branding Renewal The Residential and Campus Experience

Students accessing ROC and the Robb Field sports complex from the academic quad typically cross York Drive at Harley Hall at the intersection of York and Allegheny Drives. There is a pedestrian walkway just beyond this intersection but is primarily used when transiting from Harley Hall and not by students coming from the quad. Further down past ROC, there are no sidewalks and students walk in the roadway.	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G10 G2, G3, G7 R16	AMP O8, O3, O3	Athletics and Recreation Accessibility and Equity Internal Circulation The Residential and Campus Experience
A prominent "goat path" has developed from the Middle Spring pedestrian crossing at 696 along the south side of the tennis courts.	Student Success Quality Community Relations	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G10 G2, G3, G7 R16	AMP O8, O3, O3	Accessibility and Equity Internal Circulation The Residential and Campus Experience
There is a gap in the sidewalk system along Adams Drive in the vicinity of Memorial Hall extending over near the Rowland/Shearer parking lot.	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G10 G2, G3, G7 R16	AMP O8, O3, O3	Accessibility and Equity Internal Circulation The Residential and Campus Experience
There is gap in the sidewalk system between Seavers Hall and Mowrey Hall.	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G10 G2, G3, G7 R16	AMP O8, O3, O3	Accessibility and Equity Internal Circulation The Residential and Campus Experience
There is not a sidewalk past the Heiges lot on Stadium Access Drive. The road at this point is single wide and used heavily by maintenance and athletic vehicles.	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G10 G2, G3, G7 R16	AMP O8, O3, O3	Accessibility and Equity Internal Circulation The Residential and Campus Experience
Between the Horton Lot and the back side of Henderson Gym is a frequently used pedestrian/small vehicle route. Due to the use by athletic carts, this area is prone to turning to mud in the spring.	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G10 G2, G3, G7 R16	AMP O8, O3, O3	Athletics and Recreation Accessibility and Equity Internal Circulation The Residential and Campus Experience
The diagonal walk across the academic quad at the library is a crossing point for several walkways and can be very congested.	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G10 G2, G3, G7 R16	AMP O8, O3, O3	Athletics and Recreation Internal Circulation The Residential and Campus Experience
At the intersection of Lancaster Drive and York Drive, there is not currently a painted crosswalk. This could easily be added to accommodate the number of students that cross at that point.	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G10 G2, G3, G7 R23	AMP O8, O3, O3	Athletics and Recreation Internal Circulation The Residential and Campus Experience

A potential issue that requires further study is the parking lot area in the vicinity of Robb Softball Field and the Tennis Courts. Cars have been observed driving in the wrong direction, or disregarding the "Do Not Enter" signage which may lead to potentially dangerous situations.	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G10 G2, G3, G7 R24	AMP O8, O3, O4	Athletics and Recreation Internal Circulation The Residential and Campus Experience
Better advertizement for RRT and its service area	Student Success Quality Community Relations	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G11, G13 G2, G3, G4, G7 R13, R14, R17	AMP O8, O3, O5, O3	Accessibility and Equity Internal Circulation
Parking at the C-1 Lot at the old Steam Plant site is consistently full. There is space to expand that lot providing additional parking on the southwest side of campus.	Student Success Quality Community Relations	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G10 G2, G4, G7 R9, R12	AMP O8, O5, O3	Accessibility and Equity Internal Circulation Community Interaction
Parking for the Cumberland Union Building is frequently full in the spots not specifically designated for the UPS store. Additional space does exist to expand CUB parking on the east end of Grove Hall.	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G10 G2, G4, G7 R9, R12	AMP O8, O5, O3	Accessibility and Equity Internal Circulation
With the completion of the loop road project, the under-utilized northern most section of the storage parking lot was designated for use in conjunction with the recreation fields. This has helped to eliminate an issue primarily with baseball practice parking in the lawn areas. Parking for athletic practices in the vicinity of Seth Grove Stadium frequently exceeds the number of available spots in that closest lot. As a result, cars are parked in grass areas and with the right weather conditions can cause significant rutting and damage to the turf areas. There is space to expand this lot.	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G10 G2, G4, G7 R9, R12	AMP O8, O5, O3	Athletics and Recreation Internal Circulation The Residential and Campus Experience Community Interaction Accessibility and Equity
The parking lot at the Reisinger House is currently mostly gravel and could be paved to reduce maintenance issues.	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G10 G2, G4, G7 R9, R12	AMP O8, O5, O3	Accessibility and Equity Renewal Community Interaction
Resolve communications issues with HVAC for telecom spaces.	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G9 G2 R16	AMP O8	Technology Renewal

One area that should be addressed however is the outflow for the ShipREC parking lot area. An underground retention system discharges to another retention structure that overflows to an open swale at the Storage Lot. At the south-west corner of the lot, that swale ends and water flows across the parking lot. This typically occurs during periods of repeated rain events.	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G10 G2, G7 R9, R17	AMP O8, O3	Athletics and Recreation Internal Circulation The Residential and Campus Experience Community Interaction Accessibility and Equity Sustainability
Upgrade parking lot lighting to LED	Quality How We Tell Our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G2, G9 G2 R9, R16, R17	SUMP O2 AMP O8	Energy Sustainability Renewal Technology The Residential and Campus Experience
Transition buildings that rely on pneumatic control for building operation including the Ezra Lehman Library, Grove Hall, Mowrey and McLean Halls precluding its use by DDC	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G2, G9, G10 G2 R6, R16	SUMP O2 AMP O8	Energy Technology Sustainability Renewal
Investigate connecting Queen Street to Adams Drive in alignment with Dauphin Drive. This would allow a secondary entrance/exit from the campus loop road to/from the town. This connection crosses the Cumberland Valley Rail Trail and would require a bridging of the trail and to meet existing grades on Adams Drive and Queen Street, and study should include both vehicular and pedestrian bridge with branding enclosures.	Student Success Quality Community Relations	SU Strategic Plan Academic Master Plan Visioning Team Report	G8, G9 G2, G3, G7 R5, R13, R14, R17	AMP O8, O3, O3	Internal Circulation The Residential and Campus Experience Community Interaction Recapitalization Branding
Provide night lighting at Fairchild baseball field and Robb softball field	Student Success Quality Community Relations How We Tell Our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G13 G2, G3, G4, G7 R16	AMP O8, O3, O5, O3	Athletics and Recreation Branding The Residential and Campus Experience Community Interaction

Develop an Athletics Branding Master Plan that denotes a single standard for branding (banners, wind screens) and their maintenance, times for erection and demounting. Additionally prioritize painting of all surfaces (interior and exterior) in a common color scheme consistent with Ship branding colors and painting scheme. The painting project for Seth Grove Stadium (Summer 2019) will be reflective of that methodology.	Student Success Quality How We Tell Our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G13 G2, G3, G4 R6, R16	AMP O8, O3, O5	Athletics and Recreation Branding The Residential and Campus Experience Community Interaction
Commission a locker room study that encompasses all campus Athletics facilities. The scope of the study will include the potential of "manufacturing" space at both Seth Grove Stadium as well as in the area behind Henderson Gymnasium, and the potential for a connector between the Heiges Field House and the ShipREC, and the complete renovation of the Henderson Gym locker room space. The potential of a new Field House (potentially in the vicinity of Seth Grove Stadium) will also be explored and weighed against potential gains in existing buildings and spaces.	Student Success Quality How We Tell Our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G13 G2, G3, G4, G7 R6, R16	AMP O8, O3, O5, O3	Athletics and Recreation Accessibility and Equity The Residential and Campus Experience Community Interaction Recapitalization
Replace (as part of lifecycle management) turf fields at both Seth Grove Stadium and the Multi-Purpose Field.	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G5, G9 G2, G4, G7 R5, R6	SUMP O4 AMP O8, O3, O5	Athletics and Recreation The Residential and Campus Experience Community Interaction Renewal
Determine feasibility of changing both Baseball (Fairchild Field) and Softball (Robb Field) from grass to turf.	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G5, G9 G2, G4, G7 R5, R6	SUMP O4 AMP O8, O3, O5	Athletics and Recreation The Residential and Campus Experience Community Interaction Recapitalization
Determine best location to construct a new Astroturf field to generate needed capacity.	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G5, G9 G2, G4, G7 R5, R6	SUMP O4 AMP O8, O3, O5	Athletics and Recreation The Residential and Campus Experience Community Interaction Recapitalization

Recreation Fields Improvements: Reconfigure the jogging path around the recreation fields to accommodate an additional softball field. A report by TETHYS Consultants Inc. dated February 28, 1995 delineated a wetland in the area of the proposed softball field home plate. An updated wetland delineation study would need to be conducted to clearly determine the potential impacts.	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G5, G9 G2, G4, G7 R5, R6	SUMP O4 AMP O8, O3, O5	Athletics and Recreation The Residential and Campus Experience Community Interaction Internal Circulation Renewal
Coaches offices will be studied after the completion of the campus-wide office census and attempt to consolidate for functionality where possible.	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G1, G3, G8, G9 G2, G4 R15, R16	SUMP O1 AMP O8, O5	Athletics and Recreation The Residential and Campus Experience Renewal
Field Lighting: Install night lighting for 24 hour use and television capability.	Student Success Quality Community Relations How We Tell Our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G13 G2, G3, G4, G7 R16	AMP O8, O3, O5, O3	Athletics and Recreation Accessibility and Equity The Residential and Campus Experience Community Interaction Recapitalization
Grandstand Structure Improvements: Renovate the grandstand structures on the west side of the field to provide space within the structure for: 1. Improved and enlarged home team facilities. This may be included in the Locker Room study using a pre-fabricated structure under the grandstand area. 2. Football Storage.	Student Success Quality Community Relations How We Tell Our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G12, G13 G2, G3, G4, G7 R6, R16	AMP O8, O3, O5, O3	Athletics and Recreation Accessibility and Equity The Residential and Campus Experience Community Interaction Renewal
Renovate and expand press box to provide ADA accessibility, media hookups, and more/ safer space for media.	Student Success Quality Community Relations How We Tell Our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G12, G13 G2, G3, G4, G7 R6, R16	AMP O8, O3, O5, O3	Athletics and Recreation Accessibility and Equity The Residential and Campus Experience Community Interaction Renewal

Provide SU identity on highway side of grandstand structure using photographic imagery.	Student Success Quality Community Relations How We Tell Our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G12, G13 G2, G3, G4, G7 R6, R16	AMP O8, O3, O5, O3	Athletics and Recreation Branding The Residential and Campus Experience Community Interaction Renewal
Paint Seth Grove Stadium on all exterior surfaces for the Summer of 2019.	Student Success Quality Community Relations How We Tell Our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G12, G13 G2, G3, G4, G7 R6, R16	AMP O8, O3, O5, O3	Athletics and Recreation Branding The Residential and Campus Experience Community Interaction Renewal
The interior chainlink fence between the running track and the playing field at Seth Grove Stadium is worn, has lost its aesthetic appeal, and may require replacement.	Student Success Quality Community Relations How We Tell Our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G12, G13 G2, G3, G4, G7 R6, R16	AMP O8, O3, O5, O3	Athletics and Recreation Branding The Residential and Campus Experience Community Interaction Renewal
The median strip of grass in between the running track and the playing field perimeter fence at Seth Grove Stadium should be considered for replacement with a less maintenance intensive covering (to include poured rubber) in consideration.	Student Success Quality Community Relations How We Tell Our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G12, G13 G2, G3, G4, G7 R6, R16	AMP O8, O3, O5, O3	Athletics and Recreation Branding The Residential and Campus Experience Community Interaction Renewal
A tent is habitually erected at the rear of Seth grove Stadium annually for extended periods of time. Consideration should be given to the construction of a more permanent pavilion that could serve the practice field.	Student Success Quality Community Relations How We Tell Our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G12, G13 G2, G3, G4, G7 R6, R16	AMP O8, O3, O5, O3	Athletics and Recreation Branding The Residential and Campus Experience Community Interaction Renewal
The practice field at the rear of Seth Grove Stadium is actually three separate fields, with separate grades. The field in total should be renovated to a single paying surface and should be considered for a perimeter fence once completed (to avoid the annual establishment of a near perimeter fence to support activities at Seth Grove Stadium).	Student Success Quality Community Relations How We Tell Our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G12, G13 G2, G3, G4, G7 R6, R16	AMP O8, O3, O5, O3	Athletics and Recreation Branding The Residential and Campus Experience Community Interaction Renewal

Commission a study to determine the feasibility of a new Field House: Build a new two-story 36,000 sf Field House at the south end of Seth Grove Stadium to accommodate multiple sports and potentially link back to Heiges Field House: 1. Visitor team facilities. 2. Football Coaches' Suite and Classrooms/ Meeting Rooms (6,000 sf). 3. Sports medicine (3,500 sf). 4. Fitness center/weight room for varsity athletes (Existing 6,015sf in Heiges). 5. Classrooms/Meeting Room (Existing 2,386sf in Heiges). 6. Storage. 7. Administrative space. 8. Social space.	Student Success Quality Community Relations How We Tell Our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G10, G12 G2, G4, G7 R5, R15, R16	AMP O8, O5, O3	Athletics and Recreation Branding The Residential and Campus Experience Community Interaction Renewal Recapitalization Accessibility and Equity
As part of the locker room study, determine the feasibility of the relocation of Administrative Offices, Football Coaches Suite to a 2d floor office suite (with potential team film room) and analysis of both visitor's restrooms and expansion of locker room facilities can be accommodated.	Student Success Quality Community Relations How We Tell Our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G1, G2, G9, G12/13 G2, G3, G4, G7 R15, R16	AMP O8, O3, O5, O3	Athletics and Recreation Branding The Residential and Campus Experience Community Interaction Renewal Recapitalization Accessibility and Equity
Also as part of the locker room study, determine if a connector between Heiges Field House and ShipREC is feasible to "manufacture" more locker room space.	Student Success Quality Community Relations How We Tell Our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G1, G2, G9, G12/13 G2, G3, G4, G7 R15, R16	AMP O8, O3, O5, O3	Athletics and Recreation Branding The Residential and Campus Experience Community Interaction Recapitalization
As part of the locker room study, determine if entire locker room space at Henderson can be renovated, giving exclusivity at the team level, and the potential use of pre-fabricated buildings behind Henderson Gymnasium.	Student Success Quality Community Relations How We Tell Our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G1, G2, G9, G12/13 G2, G3, G4, G7 R15, R16	AMP O8, O3, O5, O3	Athletics and Recreation Branding The Residential and Campus Experience Community Interaction Recapitalization Renewal

Pursue investigation of scoping an eSports facility within existing space, technology needs, and timelines and resourcing required.	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G3, G5, G9-11/13 G3, R15, R16	SUMP O-5 AMP O8, O3	Athletics and Recreation The Residential and Campus Experience Community Interaction Renewal
Construction of an interior ADA access lift joining the lobby with the half floor on the left of the Mowrey lobby	Student Success Quality Community Relations How We Tell Our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G13 G2, G3, G4, G7 R2, R6, R16	AMP O8, O3, O5, O3	Accessibility and Equity The Residential and Campus Experience Community Interaction The Learning Environment
The construction of a male ADA accessible bathroom on the half floor of Mowrey hall	Student Success Quality Community Relations How We Tell Our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G13 G2, G3, G4, G7 R2, R6, R16	AMP O8, O3, O5, O3	Accessibility and Equity The Residential and Campus Experience Community Interaction The Learning Environment
The construction of a third floor kitchen servicing residents on floors 3-5 of Mowrey Hall	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G13 G2, G3, G4, G7 R2, R6, R16	AMP O8, O3, O5, O3	Accessibility and Equity The Residential and Campus Experience
Reisner Entrance at Cumberland and Lebanon Drives: This expansive corner would be enhanced from grade alterations and retaining/sitting walls.	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G9 G2, G3, G4, G7 R6, R16	AMP O8, O3, O5, O3	Accessibility and Equity The Residential and Campus Experience Renewal
PAC at Adams and Lancaster Drives: The iconic entrance to the Performing Arts Center could be enhanced with development of the grass area along the roadway at Adams and Lancaster Drives. This area could be graded and a wall providing additional color appropriate to set off the front of the PAC.	Student Success Quality Community Relations How We Tell Our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G9 G2, G3, G4, G7 R6, R16	AMP O8, O3, O5, O3	Accessibility and Equity The Residential and Campus Experience Renewal Branding
Kriner Entrance: The patio at the entrance to the Kriner Dining Hall is a plain slab with picnic tables. The addition of a low wall, and a shade structure could significantly enhance the visual and function of this space.	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G9 G2, G3, G4, G7 R6, R16	AMP O8, O3, O5, O3	Accessibility and Equity The Residential and Campus Experience Renewal

Old Main Front: The concrete in the vicinity of the flagpole and fountain along with the curb line on the circle could all be renewed to enhance the appearance of this well visited portion of campus. The brick walkway on this side of Old Main should also be widened and improved for ADA accessibility allowing full access to this grand iconic entrance.	Student Success Quality Community Relations How We Tell Our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G13 G2, G3, G4, G7 R3, R6, R16, R17	AMP O8, O3, O5, O3	Accessibility and Equity The Residential and Campus Experience Renewal Branding
John L. Grove Hall: The current hardscape outdoor area on the MCT side of Grove Hall is minimally sized and barely used. This area could be enlarged to create a hardscape outdoor classroom with sitting wall and space for additional seating.	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G13 G2, G3, G4, G7 R3, R6, R16, R17	AMP O8, O3, O5, O3	Accessibility and Equity The Residential and Campus Experience Renewal Coherence The Learning Environment
Rowland Shearer Outdoor Courtyard: The configuration of these two buildings creates a natural courtyard on the east side of the building. Previously the play yard for the lab school, it could certainly accommodate an outdoor classroom area with sitting wall and a space for additional seating. Additionally, the white metal siding on the nearby additional should be replaced with a more appealing finish.	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G13 G2, G3, G4, G7 R3, R6, R16, R17	AMP O8, O3, O5, O3	Accessibility and Equity The Residential and Campus Experience Renewal Coherence The Learning Environment
Academic Quad: Classes are occasionally held on the quad utilizing the Adirondack chairs. An area could be developed to facilitate additional use of this outside area with sitting wall and space for seating.	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G13 G2, G3, G4, G7 R3, R6, R16, R17	AMP O8, O3, O5, O3	Accessibility and Equity The Residential and Campus Experience Renewal Coherence The Learning Environment
Library/Franklin Science Center Quad: Improve existing outdoor gathering space.	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G13 G2, G3, G4, G7 R3, R6, R16, R17	AMP O8, O3, O5, O3	Accessibility and Equity The Residential and Campus Experience Renewal Coherence The Learning Environment

Burd Run pavilion upgrade/replacement: The pavilion is dated and not very attractive. It could be modernized and reconfigured to be more useful and inviting.	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G13 G2, G3, G4, G7 R3, R6, R16, R17	AMP O8, O3, O5, O3	Accessibility and Equity The Residential and Campus Experience Renewal Coherence The Learning Environment
Volleyball surface replace/improvement: The sand quality easily packs making the surfaces unsuitable for sand volleyball. The sand should be removed and replaced with the appropriate sand.	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G9 G2, G4 R16	AMP O8, O5	Athletics and Recreation The Residential and Campus Experience Renewal
Softball infield (2) replace/improvement: the infield for both of these fields could be made more player friendly and easier to maintain.	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G5, G9 G2, G4, G7 R5, R6	SUMP O4 AMP O8, O5, O3	Athletics and Recreation The Residential and Campus Experience Renewal Community Interaction
Post and Chain: Survey campus and site locations needed for foot traffic control.	Student Success Quality	SU Strategic Plan Academic Master Plan Visioning Team Report	G9, G13 G2, G4, G7 R16	AMP O8, O5, O3	Internal Circulation The Residential and Campus Experience Accessibility and Equity Renewal
Sustainability Vision	Student Success Quality Community Relations How We Tell Our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G1/2/8/9/10/11/13 G1, G2, G3, G4 R1/4/10/11/13/16/7	SUMP O1, O2 AMP O5, O8, O1, O5	Sustainability Energy Technology The Residential and Campus Experience Community Interaction Renewal Recapitalization
Sustainability marketing and PR campaign	Student Success Quality Community Relations How We Tell Our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G1/2/8/9/10/11/13 G1, G2, G3, G4 R1/4/10/11/13/16/7	SUMP O1, O2 AMP O5, O8, O1, O5	Sustainability Energy Technology The Residential and Campus Experience Community Interaction Renewal Recapitalization Branding

Energy monitoring/sharing	Student Success Quality Community Relations How We Tell Our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G1/2/8/9/10/11/13 G1, G2, G3, G4 R1/4/10/11/13/16/7	SUMP O1, O2 AMP O5, O8, O1, O5	Sustainability Energy Technology The Residential and Campus Experience Community Interaction Renewal Recapitalization
Expand recycling and waste management program to move toward Zero Waste by 2028	Student Success Quality Community Relations How We Tell Our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G1/2/8/9/10/11/13 G1, G2, G3, G4 R1/4/10/11/13/16/7	SUMP O1, O2 AMP O5, O8, O1, O5	Sustainability Energy Technology
KPI's should be established for all waste streams, purchasing contracts to improve supply chains, reduce the number of high-footprint products, reduction of single-use plastics and packaging, reduce transportation/commuter costs, reduce imported energy demands while increasing onsite energy production, establish resource consumption thresholds and footprint reduction strategies for all divisions (academic, residential, recreational, athletics, etc.), etc.	Student Success Quality Community Relations How We Tell Our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G1/2/8/9/10/11/13 G1, G2, G3, G4 R1/4/10/11/13/16/7	SUMP O1, O2 AMP O5, O8, O1, O5	Sustainability Energy The Residential and Campus Experience Technology
Add and modify parking and campus outdoor lighting with solar PV-charged units	Student Success Quality Community Relations How We Tell Our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G2, G6, G9, G10/11 G2, G4 R9, R16	SUMP O2, O5 AMP O8, O5	Sustainability Energy The Residential and Campus Experience Technology Branding
Explore commitment to converting at least 50% of suitable roof infrastructure to green roofing by 2028.	Student Success Quality Community Relations How We Tell Our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G2/5/6/8/9/13 G1/2/3/4/7 R1/5/6/10/13/16/17	SUMP O2, O4, O5 AMP 05, O8, O3, O5, O3	Sustainability Energy The Residential and Campus Experience Technology Branding

Redevelop green spaces to create a multifunctional campus landscape that manages water, stores carbon (to qualify for carbon-trading programs), produces food, and invites student engagement.	Student Success Quality Community Relations How We Tell Our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G2/5/6/8/9/13 G1/2/3/4/7 R1/5/6/10/13/16/17	SUMP O2, O4, O5 AMP 05, O8, O3, O5, O3	Sustainability Energy The Residential and Campus Experience Technology Branding
Create/repurpose campus spaces to provide viable and welcoming 'third space' for students on campus – especially commuter students.	Student Success Quality Community Relations How We Tell Our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G2/5/6/8/9/13 G1/2/3/4/7 R1/5/6/10/13/16/17	SUMP O2, O4, O5 AMP 05, O8, O3, O5, O3	Sustainability Energy The Residential and Campus Experience Technology Branding Recapitalization Renewal
Redevelop campus transportation and parking infrastructure to improve bike and pedestrian access around campus and build connectivity corridors with the community.	Student Success Quality Community Relations How We Tell Our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G5, G9, G13 G2, G3, G4, G7 R5/9/12/13/14/16/7	SUMP O4 AMP O8, O3, O5, O7	Sustainability Energy The Residential and Campus Experience Technology Branding Recapitalization Renewal Internal Circulation
Celebrate successes, and evaluate/establish new benchmarks and facilities improvements to exceed prior successes and continue innovation using new technologies. Set a goal of net 100% energy-independence from off-site energy production and 100% on-site energy production.	Student Success Quality Community Relations How We Tell Our Story	SU Strategic Plan Academic Master Plan Visioning Team Report	G1/2/8/9/10/11/13 G1, G2, G3, G4 R1/4/10/11/13/16/7	SUMP O1, O2 AMP O5, O8, O1, O5	Sustainability Energy The Residential and Campus Experience Technology Branding Recapitalization Renewal

13. Stewardship and Capital Planning

13.1 Stewardship

Whereas many of the aforementioned recommendations may be aspirational (new concepts), or restorative (due to appearance or outmoded functionality), stewardship is equally important. As mentioned earlier, Shippensburg University utilizes SIGHTLINES ® for modeling for stewardship needs across the campus.

The simple truth is that, with all facilities, there are never enough funding resources to adequately address all maintenance needs over time. The risk that is posed by deferring maintenance is manifested in a maintenance backlog. The purpose of this chapter is to show (over time) the probabilistic modeling of potential maintenance failures (across the spectrum of building systems (both interior and exterior)). The following pages show what must eventually be done to keep what exists in a state of readiness, before contemplation of new construction. It is the tension between stewardship (renewal) and new construction (recapitalization) that this chapter will provide a deeper insight.

What is most important about the tabular data below, is that we have a backlog in excess of $81.3M. Again, this is probabilistic modeling, but gives an insight into what will be needed just to **sustain** our current readiness posture, before we also contemplate doing **new things**. The data has been limited to those items in excess of roughly $.45M, meaning that numerous other smaller projects have been omitted for brevity.

	Backlog	Backlog Detail	0-5	5-15	15-25	
Total	**$81.29M**		**$21.7M**	**$121.13M**	**$134.4M**	
CUB	0	0	$3.26M	$5.96M	$18.85M	2020/8 - $2.53M Interior Finishes/2032 $1.84
Chilled Water Plant	0	0	$.52M	$.79M	$.213M	
Dauphin Humanities Center	0	0	$.78M	$2.81M	$4.87M	2020 - $.78M Interior Finishes/2032 $1.763 M Fire Detection Systems /2037 $1.05M Bldg Hard Exteriors-$1.52M HVAC Distro Systems-$2.84M
Ezra Lehman Memorial Library	$6.2M	$2.44M HVAC Distro Systems/$1.98M Electrical Equipment/$.977 M Plumbing Rough in	$1.53M	$4.2M	$2.98M	2022 $1.533M Fire Detection Systems/2026 $1.255M Interior Finishes/2033 $1.69M Bldg Exteriors Hard/2043 $.977M Plumbing Rough in
Franklin Science Center	$4.73M	$1.6M Plumbing Rough in/$2.05M Interior Finishes/$1.09M Built in Specialties	$.7M	$15.66M	$8.66M	2023 $.696M Plumbing Fixtures/2026 $2.05M Interior Finishes/2028 $2.501M Fire Detection Systems + $1.09M Built in Equipment Specialties/2033 $2.75M Bldg Exteriors Hard/2034 $3.99M HVAC Distro Systems +$2.05M Interior Finishes
Grace B Luhrs School	$.88M	$.656M interior Finishes	$.223M	$5.01M	$1.92M	2026 $.802M Fire Detection Systems + $.656M Interior Finishes/2031 $1.28M HVAC Distro Systems + $.883M Bldg Exteriors Hard /2041 $1.04M Electrical Equipment
Gilbert Hall	$1.96M	$.463 HVAC Distro Systems/$.377M Electrical Equipment/$.320 M Bldg Exteriors Hard	$.82M	$.54M	$.79M	2026 $.238M interior Finishes
Grove Hall	0	0	0	$8.06M	$3.99M	2027 $1.49M Bldg Exteriors Hard + $2.17M HVAC Distro Systems + $1.36M Fire Detection Systems + $1.14M interior Finishes/2037 $1.764M Electrical Equipment

LPAC	$1.97M	$1.975M Interior Finishes	0	$10.13M	$10.2M	2026 $.671M Plumbing Fixtures + $1.975M Interior Finishes + $1.048M Built in Equip Specialties/2031 $2.413M Fire Detection Systems + $1.54M Plumbing Rough in/2036 $2.66M Bldg Exteriors Hard + $3.85M HVAC Distro Systems
Heiges	$9.95M	$3.32M HVAC Distro Systems/$2.7M Electrical Equipment/$1.3M Plumbing Rough in/$1.7M Interior Finishes	$2.21M	$7.63M	$6.02M	2020 HVAC Equipment and Controls/2025 $.579M Plumbing Fixtures/2026 $1.7M Interior Finishes/2028 $.9M Built in Equip Specialties/2033 $2.29M Bldg Exteriors Hard
Henderson Gym	$6.64M	$.889M Bldg Exteriors Hard/$1.3M HVAC Distro Systems/$.86M HVAC Equipment Controls/$.8M Fire detection Systems/$.661M Interior Finishes	0	$1.67M	$2.56M	2026 $.661M Interior Finishes/2043 $.81M Fire Detection Systems
Horton Hall	$9.6M	$1.3M Bldg exteriors Hard/$1.9M HVAC Distro Systems/$1.3M HVAC Equipment Controls/$1.2M Fire Detection Systems/$1.55M Electrical Equipment/$.76M Plumbing Rough in/$.98M interior Finishes	0	$2.22M	$3.28M	2026 $.981M Interior Finishes/2043 $1.2M Fire Detection Systems + $.764M Plumbing Rough in
Huber Arts Center	0	0	$1.05M	$.995M	$4.48M	2020/8 $.532M Interior Finishes/2037 $.65M Fire Detection Systems
Kriner Dining Hall	$.98M	$.478M Bldg Exteriors Hard	0	0	$.56M	2027 $.434M Fire Detection Systems/2032 $.692M HVAC Distro Systems
MCT	0	0	$2.73M	$3.88M	$3.28M	2021 $1.02M Fire Detection Systems + $.652M Plumbing Rough in/2026 $1.13M Bldg Exteriors Hard + $1.63M HVAC Distro Systems/2028 $.837M Interior Finishes/2036 $1.326M Electrical Equipment

McLean	$9.48M	$1.9M Bldg Exteriors Hard/$2.7M HVAC Distro Systems/$2.25M Electrical Equipment/$.477 M Plumbing Fixtures/$1.4M Interior Finishes/$.745M Built in Equipment Specialties	0	$5.75M	$4.08M	2026 $1.405 Interior Finishes/2029 $1.72M Fire Detection Systems/2034 $1.41M Interior Finishes/2038 $1.09M Plumbing Rough in
Memorial Auditorium	$3.76M	$.723M Bldg Exteriors Hard/$1.05M HVAC Distro Systems/$.85M Electrical Equipment/$.537 Interior Finishes	$.184M	$1.36M	$2.22M	2034 $.537M Interior Finishes
Mowrey Hall	$2.49M	$2.49M HVAC Distro Systems	0	$8.05M	$1.28M	2025 $1.56M Fire Detection Systems/2026 $1.28M Interior Finishes/2028 $1.72M Bldg Exteriors Hard/2030 $.997M Plumbing Rough in
Old Main	$12.96M	$2.5M Bldg Exteriors Hard/$3.6M HVAC Distro Systems/$2.4M HVAC Equipment and Controls/$.632M Plumbing Fixtures/$1.49M Plumbing Rough In/$1.86M Interior Finishes	0	$6.67M	$6.7M	2025 $2.95M Electrical Equipment/2026 $1.86M Interior Finishes/2035 $2.27M Fire Detection Systems/2043 $1.45M Plumbing Rough in
Presidents Hall	0	0	$4.5M	$5.5M	$21.9M	2021 $2.95M Interior Finishes/2023 $1.564M Built in Specialties Equipment/2033 $1M Plumbing Fixtures
ROC	$.88M	$.382M Building Exteriors Hard/$.284 Interior Finishes	$.49M	$1.37M	$1.1M	2020 $.347M Fire Detection Systems/2034 $.553M HVAC Distro Systems/2035 $.45M Electrical Equipment
Resiner Dining Hall	0	0	$.56M	$3.03M	$7.85M	2020 $.445M Built in Electrical Specialties/2026 $.84M Interior Finishes/2030

						$.445M Built in Equipment Specialties/2035 $1.03M Fire Detection Systems + $.654M Plumbing Rough in
Rowland Hall	0	0	$.451M	$1.62M	$1.934	2022 + 2030 $.451M Interior Finishes/2031 $.55M Fire Detection Systems/2036 $.61M Bldg Exteriors Hard + $.877M HVAC Distro Systems
Seth Grove Stadium	$2.53M	$.470M HVAC Distro Systems/$.313M HVAC Equipment and Controls/$.382M Electrical Equipment/$.241M Interior Finishes	0	$.611M	$.934M	
Shearer Hal	0	0	$.392M	$1.31M	$2.18M	2019/2027 $.392 Interior Finishes/20131 $.479 Fire Detection Systems/2036 $.527M Bldg Exteriors Hard + $.763M HVAC Distro Systems
Shippen Hall	0	0	$1.055M	$5.43M	$2.3M	2021/2029 $.787M Interior Finishes/2026 $.962 Fire Detection Systems + $.613M Plumbing Rough in/2031 $1.06M Bldg Exteriors Hard + $1.533M HVAC Distro Systems
Stewart Hall	$1.33M		0	$.28M	$.467M	
ShipREC	$1.28M	$1.28M Interior Finishes	$.678M	$6.56M	$6.603M	/2029 $.678M Built in Equipment Specialties/2025 $1.28M Interior Finishes/2029 $.434M Plumbing Fixtures
Wright Hall	$3.59M	$.583M Bldg Exteriors Hard/$.843M HVAC Distro Systems/$.562M HVAC Equipment and Controls/$.686 Electrical Equipment/$.433M Interior Finishes	$.529M	$.866M	$1.03M	2020 $.529M Fire Detection Systems/2026/2034 $.433M Interior Finishes

13.2 Stewardship and Capital Planning Influencers

Now that we have a better idea of what is required for the sustainability of our building fleet, it is now brought into the larger context of which buildings may in fact be more cost effective to fully renovate, rather than incrementally improve (catch up maintenance). This is where capital budget planning meets stewardship. The following is a listing of the building fleet overlaid with stewardship needs. Those buildings in GREEN represent bona-fide projects on the PASSHE Annual Capital Budget Submission. Those in YELLOW represent potential candidates for inclusion into the PASSHE Annual Capital Budget Submission.

CUB – No backlog, no major deficiencies, normal wear and tear lifecycle projects. Interior finishes within next two (2) years.

Chilled Water Plant - No backlog, no major deficiencies, normal wear and tear lifecycle projects

Dauphin Humanities Center - No backlog, no major deficiencies, normal wear and tear lifecycle projects; however, largest number of students served and should prioritize when possible. Interior finishes within next two (2) years. 51.6% average and classroom utilization, with a leading 6350 students served weekly making this our busiest academic building, and interior finishes should be considered for on time execution.

Ezra Lehman Memorial Library - $6.2M backlog making it a potential capital project candidate. Numerous improvements have been made in recent years, and coupled with the future uses of the library, impact and touch students, and further adds to its candidacy for a capital project.

Franklin Science Center - $4.73M backlog and will be funded for capital project from PASHE (design 2019, construction 2022-2024). 4906 students served weekly, but poor utilization. Will remain #1 capital project through entire construction phase.

Gilbert Hall – Serves MCSA and Exercise Science and backlog attributable to exteriors and mechanicals. Further use of this building must be defined (academic/administrative/other) before future funds are invested. Window replacement project is currently on hold. 33.9% utilization (predominantly Exercise Science) and 567 students served weekly in general, substandard (Class "C") classroom space. Room 210 used for storage and could be repurposed for expansion and coherence with other Arts spaces .

Grace B Luhrs Elementary School – Minor backlog attributable to painting and needs to be prioritized for painting. A new roof for the front portion of the school (which was leaking) is scheduled to be constructed this coming summer. No major updates for next 8 years.

Grove Hall - No backlog, no major deficiencies, normal wear and tear lifecycle projects. Interior finishes not due until 2026; however, the Forum will need updating sooner. Some updating required for potential DBA offices as well as possible maker space. Leads with 45.3% lab utilization, a 49.6% average utilization and 52.6% classroom utilization. Those statistics, plus 5732 students served weekly requires good stewardship to continue to attract and retain both students and faculty.

Luhrs Performing Arts Center - $1.97M backlog attributable solely to interior finishes, makes it an immediate candidate for investment. Updates to the Orrstown lobby over the past year have decreased this amount, but planning (and investigation) should be conducted for the remaining spaces immediately. No major deficiencies, normal wear and tear lifecycle projects. Plumbing and Built in Specialties not until 2026. Contains academic space with 52% average utilization, 75.5% average classroom and only 5% lab space utilization, with 790 students served weekly.

Heiges Field House – nearly $10M backlog in HVAC, Plumbing, and interior finishes. Must be weighed against future locker room study, and feasibility of moving admin offices upstairs, expanding both public restroom space as well as locker room space on the first floor. Additional consideration of connecting corridor with ShipREC as part of the locker room study. Both arena floor and pool environmental system have been renovated in 2018. Air conditioning for the arena needs to also be decided from existing study (2018). 40% average utilization, with 42.5% classroom utilization and 597 students (none of which are athletic classes in nature) served weekly. A strong candidate for capital project

Henderson Gymnasium - $6.64M backlog attributable to Bldg Exteriors, HVAC, Fire detection, and Interior Finishes. Will be major player for both locker room area (potential renovation) as well as space behind Henderson Gymnasium for pre-fabricated structures used initially for swing space during renovation and later for expansion of capacity. All will be after completion of a Locker Room study to comprehensively look at all locker space across the Athletics enterprise, and remains their #1 priority. 16.2% average utilization all attributable to labs used by the Exercise Science program as specialty lab space. 174 students served weekly. Once locker room study is complete, a strong candidate for capital project.

Horton Hall – Nearly $10M in backlog attributable to Hard Exteriors (window renovated 2017/2018), HVAC, Fire Detection, electrical, plumbing, and interior finishes. Only serves 127 students weekly in a single classroom (Room 128), a Class "C" classroom, with a 17.5% average utilization and should be taken offline. Entire building should be classified as administrative, and after campus-wide census, space allocated in functional clusters. The backlog alone makes it a strong candidate for capital project, but must be weighed against minimal student service.

Huber Arts Center - No backlog, no major deficiencies, normal wear and tear lifecycle projects. Interior finishes within next two (2) years. Only 21.5% average utilization, with 80% utilization for the one classroom in the building, but only 13.1% utilization for specialized lab space, 822 students served weekly.

Kriner Dining Hall – Nearly $1M in backlog due to hard exteriors. Is being considered as lab space for the new School of Engineering and would involve upgrade to interior finishes and power. This project (coupled with a decision to proceed and results of Campus Retail and Dining Study) would need to be ready for the Fall Semester of 2020.

MCT - No backlog, no major deficiencies, normal wear and tear lifecycle projects. Fire Detection and Plumbing Rough in within next three (3) years. 40.8% average utilization, with 53.7% average classroom and 24.7 average lab utilization, with 1660 students served weekly. If Kriner's renovation if so decided, this may create available space for other programs.

McLean Hall - $9.5M backlog attributable to most functionalities. As 2d year residency requirement is studied, this may need to go back online, making this a strong candidate for capital AUX project, weighed against the cost of newer construction. May be required for the Fall Semester of 2020.

Memorial Auditorium - $3.76M in backlog primarily attributable to HVAC. Has 7.5% average utilization with 75.5% classroom for the one classroom (specialty) and 5% lab space (also specialty). Synergies with the LPAC need to be explored, and refresh of the interior should occur if academic mission remains after excess capacity at LPAC ascertained.

Mowrey Hall - $2.5M in backlog due to HVAC and will need to be done as part of reopening the top three (3) floors to residents in anticipation of the 2d year residency requirement starting 2020. Numerous ADA/accessibility projects in planning and execution currently, and is the home of the University Student Success Center, which remains a University priority.

Old Main – A nearly $13M backlog covering nearly every system and finish. Hallway and selected interior finishes upgraded in 2017/2018. Fourth floor could be renovated to create swing space for an incremental renovation of individual remaining three (3) floors. This remains the single "existential" building for the campus, and is a strong candidate for capital project, and must be weighed against academic needs. As a historical building, the total of a renovation could exceed the backlog amount by multiples.

Presidents (Harley Hall) (plus Five (5) other "suite-style" residence halls - No backlog, no major deficiencies, normal wear and tear lifecycle projects. Interior finishes within next three (3) years. Planning must eventually be started for replacement buildings in the 5-15 year phase of the Campus Master Plan.

Reed Operations Center - $.88M in backlog in hard exteriors and interior finishes. Planning must be conducted for a replacement (Public Safety Center) that will house minimally the SU Police and the Physical Plant Department. The challenge will be to ensure continuity of service in what is an "essential" building with "24/7 essential" functions. ROC remains of the PASSHE demolition list.

Reisner Dining Hall - No backlog, no major deficiencies, normal wear and tear lifecycle projects. Built in specialties within next two (2) years. Would be affected by a potential closure of Kriner Dining Hall and upgraded to enhance capacity as needed.

Rowland Hall - No backlog, no major deficiencies, normal wear and tear lifecycle projects. Interior finishes within next four (4) years. 39% average utilization, with 47.1% classroom and 25.5% lab utilization, serving 1431 students weekly.

Seth Grove Stadium - $2.53M backlog attributable to HVAC, electrical and interior finishes. Much of that will have been remedied with the 2018 ADA Access Ramp project, and the locker room ventilation project. A project to paint the exterior of the stadium is planned for the summer of 2019.

Shearer Hall - No backlog, no major deficiencies, normal wear and tear lifecycle projects. Interior finishes this coming year (2019). 32.7% average utilization, and leads the campus with 65.8%

classroom utilization, and lowest lab utilization of 13.7%, and serves 1493 students weekly. Painting must be prioritized based on utilization.

Shippen Hall - No backlog, no major deficiencies, normal wear and tear lifecycle projects. Interior finishes within next three (3) years. Leads campus with 54.75% average utilization, and 54.75% classroom utilization, serving 3682 students weekly.

Steam Plant – The summer of 2018 saw the removal of all catwalk steel, leaving the open space of the Steam Plant for repurposing. The Physical Plant Department, in conjunction with the College of Arts and Sciences (and the School of Engineering), are in the design phase of transforming that space into the new lab space for both Mechanical and Civil Engineering for the Fall Semester of 2020. The Physical Plant Department is currently working on a swing manufacturing space in the basement of Reed Operations Center, and also swing lab space in the Franklin Science Center for the Fall Semester of 2019.

Stewart Hall - $1.33M in backlog which will be remedied by Renovation project commenced NOV 2018 and will anticipate completion in NOV 2019.

ShipREC - $1.28M backlog attributable to interior finishes. Synergies with Athletics should be sought as well for maximum utilization of this asset.

Wright Hall - $3.59 backlog attributable to hard exteriors, HVAC, electrical, and interior finishes. Three Class “C” classrooms (pending revalidation) could be taken offline (to include a fourth) which would make Wright Hall a Faculty Office Building with enhanced furnishings. Currently has 27.9% average utilization, all attributable to classrooms, making it the lowest utilization across campus.

14. Master Projects Listing and Space Utilization Opportunities

14.1 Project Listing

Once all recommendations are incorporated into a single matrix, we then overlay all stewardship requirements, and we get to a master projects listing that shows potential project execution over time. The reader should see that costs are deliberately not included in this matrix, as many of these projects require further study before a dollar value (at the time of construction) can be assessed. The projects that are listed contain capital projects (in excess of $5M and administered by DGS), minor capital projects (usually less than $5M and administered by the Physical Plant Department), Academic projects which are more behavioral, policy and scheduling based. Stewardship has been broken out into what are painting projects (forming the start of a campus painting master plan), and some of the major building components, all over time (Stewardship – SIGHTLINES ®). The remainder of what is listed can clearly be linked not only to the recommendations of the Campus Master Plan, but can equally be linked to higher level authoritative documents (SU Strategic Plan, Academic Master Plan, and The Visioning Team Report). There is one additional item of information of note that requires explanation. The university campus should be seen as a learning laboratory. The Physical Plant department in the past year has incorporated students into numerous projects to include:

- Utilization of drones for GIS mapping (using a student FAA-certified drone pilot)
- Conceptual design for First Year Experience student housing improvements (including hammocks, landscape design, and solar tables)

These are only a few examples of the unlocked potential of our students, and their ability to harness their creativity into not only projects that have a decidedly "student-focused flavor", this additionally sets conditions to take bona fide requirements and turn them into academic learning opportunities and enhancing the quality of the Ship experience. If the column reflects "YES" it is a candidate for student participation.

The 2018 Campus Master Plan is derivative of the passion of stakeholders across the campus. Collectively, we can use this plan as a starting point for the development, evolution, and yet undefined needs to set the conditions for a Shippensburg university well into the 22d century, and it will be all hands, included that will shape not only that future, but also honor and preserve the legacy of our forebears and for all of them this document is written.

Projects Matrix				
PROJECT NAME	**PROJECT TYPE**	**YEAR**	**NOTES**	**Poss Student Project**
Franklin Science Center Renovation and Expansion	Capital	0-5	Funded by PASSHE	
Heiges Field House	Capital	5-15	Locker Room Study Required	YES
Old Main	Capital	5-15		
Henderson Gymnasium	Capital	5-15	Locker Room Study Required	YES
Academic Building	Capital	15-25		
Horton Hall	Capital	15-25	Explore existing on campus space (land)/funding opportunities	YES
ROC/Public Safety Center	Capital	15-25	Grant Funding Should be Pursued	
Lehman Library	Capital	15-25		
Construction of ADA accessible (automatic) front doorway to Mowrey Hall	Capital Minor	0-5	Currently in design for potential Winter Break 2018/2019 construction/Student Success Center Imperative	
Construction of ADA lift adjacent to Mowrey Hall Lobby for Internal Access to 1/2 floor	Capital Minor	0-5	Currently in design for potential Summer 2019 construction/Student Success Center Imperative	
Construction of male ADA accessible bathroom on the 1/2 floor of Mowrey Hall	Capital Minor	0-5	Currently in design for potential Summer 2019 construction/Student Success Center Imperative	
Lehman Archives and Special Collections and 24/7 student ground floor access	Capital Minor	0-5	Requires further assessment for synergies and rapid solution	
Establish School of Engineering Laboratory Facilities at Kriner Hall	Capital Minor	0-5	Currently in design - Decision dependency -needed Fall 2020	
Establish School of Engineering Laboratory Facilities at Steam Plant (Civil/Mech)	Capital Minor	0-5	Currently in design - needed for Fall 2020	
Establish School of Engineering Temp Laboratory Facilities at ROC	Capital Minor	0-5	Currently in design - needed for Fall 2019	
Establish School of Engineering Temp Laboratory Facilities at FSC	Capital Minor	0-5	Currently in design - needed for Fall 2019	
Stewart Hall FF&E	Capital Minor	0-5	Affix functionality	
Class/Lab space evaluation for accessibility limitations	Capital Minor	0-5	ADA 504 Committee	
Gender neutral Bathroom Study	Capital Minor	0-5	Accessibility/Equity	
Development of 3-D virtual modeling of FSC for ease of planning	Capital Minor	0-5	Supports the FSC Working Group	YES
Exploration of a GIS-based wayfinding system/knowledge mgt	Capital Minor	0-5	Planning underway/CLUS	YES
Exploration of Active Learning Environment piloting with Shippen 224/Establish Center for Faculty Excellence in Scholarship and Teaching	Capital Minor	0-5	Initial design work Kimmel-Bogrette	
Development of proximity reader system for better utilization capture	Capital Minor	0-5	Software for swipe cards expires December 2019	
Commission updated transportation study of greater Shippensburg Area	Capital Minor	0-5	Update to existing/include economic impacts	YES
Correction of drainage problem at commuter lot	Capital Minor	0-5	Impacted by ShipREC outflow during rain events	

Memorial Hall selected minor renovations	Capital Minor	0-5	After determination of LPAC capacity	
Expansion of vehicle charging stations	Capital Minor	0-5		
Stronger emphasis on use of EMS and uniform utilization across campus	Academic	0-5	Events Management System	
Stronger emphasis on centralized scheduling increasing utilization	Academic	0-5		
Class "C" Classroom Reduction - Establish HCS Speech Lab DHC 305	Academic	0-5	Revalidation of Class "C" Status required	
Class "C" Classroom Reduction - Elimination of Horton 128 as Active Classroom	Academic	0-5	Revalidation of Class "C" Status required	
Class "C" Classroom Reduction - Elimination of Wright Hall as Academic Building	Academic	0-5	Revalidation of Class "C" Status required	
Class "C" Classroom Reduction - Establish Wright Hall as Faculty Office Building	Academic	0-5	Based on campus-wide census results/ Revalidation of Class "C" Status required/explore shared space for multiple uses	
Class "C" Classroom Reduction - Examine Gilbert Hall future support to Ex Sci	Academic	0-5	Impacts to MCSA	
Exploration of space requirements to support development of allied health programs	Academic	0-5		YES
Exploration of the changing demographics of the population of student learners	Academic	0-5	Includes PASSHE Chancellor's Vision, NCHEMS/RAND Reports, etc	YES
Deeper discussion of role of departments, proximity, scheduling and sustainability	Academic	0-5	Assesses census data, utilization, scheduling, proximity, seminar	
Campus-wide Office Census/improve utilization/key control	Stewardship	0-5	Currently in execution/upgrade from manual system	
Gilbert Hall	Stewardship - Painting - Branding	0-5	**Backlog**	
Grace B Luhrs School	Stewardship - Painting - Branding	0-5	**Backlog**	
Old Main	Stewardship - Painting - Branding	0-5	**Backlog**	
Luhrs Performing Arts Center	Stewardship - Painting - Branding	0-5	**Backlog**	
Heiges Field House	Stewardship - Painting - Branding	0-5	**Backlog**	
Henderson Gymnasium	Stewardship - Painting - Branding	0-5	**Backlog**	
Horton Hall	Stewardship - Painting - Branding	0-5	**Backlog**	
McLean Hall	Stewardship - Painting - Branding	0-5	**Backlog**	
Memorial Hall	Stewardship - Painting - Branding	0-5	**Backlog**	
Ceddia Union Building	Stewardship - Painting - Branding	2020		
Dauphin Humanities Center	Stewardship - Painting - Branding	2020		
Huber Arts Center	Stewardship - Painting - Branding	2020		
Shippen Hall	Stewardship - Painting - Branding	2021		
All Phase I Housing	Stewardship - Painting - Branding	2021		
Rowland Hall	Stewardship - Painting - Branding	2022		
All Phase II Housing	Stewardship - Painting - Branding	2022		
Ezra Lehman Memorial Library	Stewardship - Painting	2026		
Grove Hall	Stewardship - Painting	2026		
Old Main First Floor Terrazo Replacement	Stewardship	0-5		
Explore incremental facilities condition assessment	Stewardship	0-5	Will aid in prioritization of projects (identification of newer)	YES
Resolve communications issues with HVAC in telecom spaces	Stewardship	0-5		
Grove Hall Forum upgrade retractable seating/curtains/painting	Stewardship	0-5	Possible matching contribution funding	
Lehman Library new ADA Accessible wider front doors	Stewardship	0-5		
Power Wash selected buildings	Stewardship	0-5		
Roofing - Grace B Luhrs Elementary School/Horton Hall/Seth Grove Stadium	Stewardship - SIGHTLINES ®	0-5	**Backlog** - GBLUES Roof Summer 2019/Horton repaired NOV 2018	
Building Exteriors Hard - Gilbert Hall/Henderson Gym/Horton Hall/Kriner Dining Hall/McLean Hall/Memorial Auditorium/Old Main/ROC/Seth Grove Stadium/Stewart Hall/Wright Hall	Stewardship - SIGHTLINES ®	0-5	**Backlog** - Stewart renovation NOV 2018/Gilbert window project on hold/	
HVAC Distro Systems - Ezra Lehman Memorial Library/Gilbert Hall/Heiges Field House/Henderson Gym/Horton Hall/McLean Hall/Memorial Auditorium/Mowrey Hall/Old Main/Seth Grove Stadium/Stewart Hall/Wright Hall	Stewardship - SIGHTLINES ®	0-5	**Backlog** - Gilbert Hall Classrooms 220/230/240 air conditioning added/Horton hall portions air conditioning added/Seth Grove Stadium locker room renovated/Stewart Hall 2018-2019 renovation	
HVAC - Equipment and Controls - Henderson Gym/Horton Hall/Old Main/Seth Grove Stadium/Stewart Hall/Wright Hall	Stewardship - SIGHTLINES ®	0-5	**Backlog** - Stewart Hall renovation 2018-2019/Seth Grove partial renovation Summer 2018	

HVAC - Electrical Equipment - Ezra Lehman Memorial Library/Gilbert Hall/Heiges Field House/Henderson Gym/Horton Hall/McLean Hall/Memorial Auditorium/Seth Grove Stadium/Stewart Hall/Wright Hall	Stewardship - SIGHTLINES ®	0-5	**Backlog** - Stewart Renovation 2018-2019	
Plumbing Fixtures - Ezra Lehman Memorial Library/Gilbert Hall/Henderson Gym/Horton Hall/McLean Hall/Memorial Auditorium/Old Main/Seth Grove Stadium/Stewart Hall/Wright Hall	Stewardship - SIGHTLINES ®	0-5	**Backlog** - Stewart Renovation 2018-2019	
Plumbing Rough-In - Ezra Lehman Memorial Library/FSC/Gilbert Hall/Heiges Field House/Henderson Hall/Horton Hall/Old Main/ROC/Seth Grove Stadium/Stewart Hall/Wright Hall	Stewardship - SIGHTLINES ®	0-5	**Backlog** - Stewart Renovation 2018-2019	
Fire Detection Systems - Gilbert Hall/Henderson Gym/Horton Hall/Seth Grove Stadium/Stewart Hall	Stewardship - SIGHTLINES ®	0-5	**Backlog** - Stewart Renovation 2018-2019	
Built-In Equipment and Specialties - FSC/Heiges Field House/Henderson Gym/Kriner Dining Hall/McLean Hall/Memorial Auditorium/Seth Grove Stadium	Stewardship - SIGHTLINES ®	0-5	**Backlog** - FSC Renovation 2022-2024/Kriner decision dependency on School of Engineering	
HVAC - Equipment and Controls - Heiges Field House	Stewardship - SIGHTLINES ®	2020		
Fire Detection Systems - ROC/Wright Hall	Stewardship - SIGHTLINES ®	2020		
Built-In Equipment and Specialties - ROC/Reisner Dining Hall	Stewardship - SIGHTLINES ®	2020		
Roofing - Huber Arts Center	Stewardship - SIGHTLINES ®	2021		
Elevators - MCT	Stewardship - SIGHTLINES ®	2021		
Plumbing Fixtures - Grace B Luhrs Elementary School/Shippen Hall	Stewardship - SIGHTLINES ®	2021		
Plumbing Rough-In - MCT	Stewardship - SIGHTLINES ®	2021		
Fire Detection Systems - MCT	Stewardship - SIGHTLINES ®	2021		
Plumbing Fixtures - Kriner Dining Hall	Stewardship - SIGHTLINES ®	2022	Will be updated if School of Engineering Project is executed	
Fire Detection Systems - Ezra Lehman Memorial Library	Stewardship - SIGHTLINES ®	2022		
Built-In Equipment and Specialties - Ceddia Union Building/Huber Arts Center	Stewardship - SIGHTLINES ®	2022		
Plumbing Fixtures - Franklin Science Center	Stewardship - SIGHTLINES ®	2023	Renovation 2022-2024	
Fire Protection Systems - Memorial Auditorium	Stewardship - SIGHTLINES ®	2023		
Built-In Equipment and Specialties - All Phase I/II Residence Halls	Stewardship - SIGHTLINES ®	2023		
Electrical Equipment - Old Main	Stewardship - SIGHTLINES ®	2025		
Plumbing Fixtures - Heiges Field House/Mowrey Hall/Reed Operations Center	Stewardship - SIGHTLINES ®	2025		
Fire Detection Systems - Mowrey Hall	Stewardship - SIGHTLINES ®	2025		
Elevators - Shippen Hall	Stewardship - SIGHTLINES ®	2026		
Building Exteriors Hard - MCT	Stewardship - SIGHTLINES ®	2026		
HVAC Distro Systems - MCT	Stewardship - SIGHTLINES ®	2026		
Plumbing Fixtures - LPAC/Rowland Hall/Shearer Hall	Stewardship - SIGHTLINES ®	2026		
Plumbing Rough-In - Grace B Luhrs Elementary School/Shippen Hall	Stewardship - SIGHTLINES ®	2026		
Fire Detection Systems - Grace B Luhrs Elementary School/Shippen Hall	Stewardship - SIGHTLINES ®	2026		
Fire Protection Systems - MCT	Stewardship - SIGHTLINES ®	2026		
Built-In Equipment and Specialties - Chilled Water Plant/LPAC	Stewardship - SIGHTLINES ®	2026		
Elevators - Grove Hall	Stewardship - SIGHTLINES ®	2027		
Elevators - Mowrey Hall	Stewardship - SIGHTLINES ®	2027		
Building Exteriors Hard - Grove Hall	Stewardship - SIGHTLINES ®	2027		
HVAC Distro Systems - Grove Hall	Stewardship - SIGHTLINES ®	2027		
Plumbing Fixtures - Dauphin Humanities Center/Grove Hall	Stewardship - SIGHTLINES ®	2027		
Plumbing Rough-In - Grove Hall/Kriner Dining Hall	Stewardship - SIGHTLINES ®	2027		
Fire Detection Systems - Grove Hall/Kriner Dining Hall/	Stewardship - SIGHTLINES ®	2027		
Fire Protection Systems - Grove Hall	Stewardship - SIGHTLINES ®	2027		

Elevators - Franklin Science Center	Stewardship - SIGHTLINES ®	2028	Will be part of FSC Renovation 2022-2024	
Building Exteriors Hard - Mowrey Hall	Stewardship - SIGHTLINES ®	2028		
Fire Detection Systems - Franklin Science Center	Stewardship - SIGHTLINES ®	2028	Renovation 2022-2024	
Built-In Equipment and Specialties - FSC/Heiges Field House	Stewardship - SIGHTLINES ®	2028	FSC Renovation 2022-2024	
Plumbing Fixtures - ShipREC	Stewardship - SIGHTLINES ®	2029		
Fire Detection Systems - McLean Hall	Stewardship - SIGHTLINES ®	2029		
Built-In Equipment and Specialties - ShipREC	Stewardship - SIGHTLINES ®	2029		
Elevators - Horton Hall	Stewardship - SIGHTLINES ®	2030		
Plumbing Fixtures - Reisner Dining Hall	Stewardship - SIGHTLINES ®	2030		
Plumbing Rough-In - Mowrey Hall	Stewardship - SIGHTLINES ®	2030		
Fire Protection Systems - Mowrey Hall	Stewardship - SIGHTLINES ®	2030		
Built-In Equipment and Specialties - ROC/Reisner Dining Hall	Stewardship - SIGHTLINES ®	2030		
Elevators - LPAC	Stewardship - SIGHTLINES ®	2031		
Building Exteriors Hard - Grace B Luhrs Elementary School/Shippen Hall	Stewardship - SIGHTLINES ®	2031		
HVAC Distro Systems - Grace B Luhrs Elementary School/Shippen Hall	Stewardship - SIGHTLINES ®	2031		
Plumbing Rough-In - Grove Hall/Rowland Hall/Shearer Hall	Stewardship - SIGHTLINES ®	2031		
Fire Detection Systems - LPAC/Rowland Hall/Shearer Hall	Stewardship - SIGHTLINES ®	2031		
Fire Protection Systems - Grace B Luhrs Elementary School/Shippen Hall	Stewardship - SIGHTLINES ®	2031		
Elevators - Dauphin Humanities Center	Stewardship - SIGHTLINES ®	2032		
Building Exteriors Hard - Ceddia Union Building	Stewardship - SIGHTLINES ®	2032		
HVAC Distro Systems - Kriner Dining Hall	Stewardship - SIGHTLINES ®	2032	May be earlier with School of Engineering Project	
Plumbing Fixtures - Ceddia Union Building/Huber Arts Center/	Stewardship - SIGHTLINES ®	2032		
Plumbing Rough-In - Dauphin Humanities Center	Stewardship - SIGHTLINES ®	2032		
Built-In Equipment and Specialties - Huber Arts Center	Stewardship - SIGHTLINES ®	2032		
Elevators - Heiges Field House	Stewardship - SIGHTLINES ®	2033		
Building Exteriors Hard - Lehman Memorial Library/FSC/Heiges Field House	Stewardship - SIGHTLINES ®	2033		
HVAC Distro Systems - Franklin Science Center	Stewardship - SIGHTLINES ®	2033	Renovation 2022-2024	
Plumbing Fixtures - All Phase I/II Housing	Stewardship - SIGHTLINES ®	2033		
Fire Protection Systems - Franklin Science Center	Stewardship - SIGHTLINES ®	2033	Renovation 2022-2024	
Built-In Equipment and Specialties - All Phase I/II Residence Halls	Stewardship - SIGHTLINES ®	2033		
Elevators - Reisner Dining Hall	Stewardship - SIGHTLINES ®	2034		
HVAC Distro Systems - Reed Operations Center	Stewardship - SIGHTLINES ®	2034		
Plumbing Rough-In - ShipREC	Stewardship - SIGHTLINES ®	2034		
Fire Detection Systems - ShipREC	Stewardship - SIGHTLINES ®	2034		
Fire Protection Systems - McLean Hall	Stewardship - SIGHTLINES ®	2034		
Electrical Equipment - Reed Operations Center	Stewardship - SIGHTLINES ®	2035		
Plumbing Rough-In - Reisner Dining Hall	Stewardship - SIGHTLINES ®	2035		
Fire Detection Systems - Heiges Field House/Old Main/Reisner Dining Hall	Stewardship - SIGHTLINES ®	2035		
Building Exteriors Hard - LPAC/Rowland Hall/Shearer Hall	Stewardship - SIGHTLINES ®	2036		
HVAC Distro Systems - LPAC/Rowland Hall/Shearer Hall	Stewardship - SIGHTLINES ®	2036		
Electrical Equipment - MCT	Stewardship - SIGHTLINES ®	2036		
Plumbing Fixtures - Chilled Water Plant/MCT	Stewardship - SIGHTLINES ®	2036		
Fire Protection Systems - LPAC	Stewardship - SIGHTLINES ®	2036		
Elevators - Huber Arts Center/Shearer Hall/Wright Hall	Stewardship - SIGHTLINES ®	2037		
Building Exteriors Hard - Dauphin Humanities Center	Stewardship - SIGHTLINES ®	2037		

HVAC Distro Systems - Dauphin Humanities Center	Stewardship - SIGHTLINES ®	2037		
Electrical Equipment - Grove Hall/Street Hockey Pavillion	Stewardship - SIGHTLINES ®	2037		
Plumbing Rough-In - Ceddia Union Building/Huber Arts Center	Stewardship - SIGHTLINES ®	2037		
Fire Detection Systems - Ceddia Union Building/Huber Arts Center/	Stewardship - SIGHTLINES ®	2037		
Fire Protection Systems - Dauphin Humanities Center	Stewardship - SIGHTLINES ®	2037		
Elevators - All Phase I/II Housing	Stewardship - SIGHTLINES ®	2038		
Roofing - Kriner Dining Hall	Stewardship - SIGHTLINES ®	2038		
Plumbing Fixtures - Ezra Lehman Memorial Library/Henderson Gym/Horton Hall/McLean Hall/Memorial Auditorium/Old Main/Seth Grove Stadium/Stewart Hall/Wright Hall	Stewardship - SIGHTLINES ®	2038	Stewart Renovation 2018-2019	
Plumbing Rough-In - McLean Hall/All Phase I/II Residence Halls	Stewardship - SIGHTLINES ®	2038		
Fire Detection Systems - All Phase I/II Housing	Stewardship - SIGHTLINES ®	2038		
HVAC Distro Systems - ShipREC	Stewardship - SIGHTLINES ®	2039		
Fire Protection Systems - Wright Hall	Stewardship - SIGHTLINES ®	2039		
Elevators - McLean Hall	Stewardship - SIGHTLINES ®	2040		
Building Exteriors Hard - Reisner Dining Hall	Stewardship - SIGHTLINES ®	2040		
HVAC Distro Systems - Reisner Dining Hall	Stewardship - SIGHTLINES ®	2040		
Fire Protection Systems - Reisner Dining Hall	Stewardship - SIGHTLINES ®	2040		
Electrical Equipment - Grace B Luhrs Elementary School/Shippen Hall	Stewardship - SIGHTLINES ®	2041		
Plumbing Fixtures - Grace B Luhrs Elementary School/Shippen Hall	Stewardship - SIGHTLINES ®	2041		
Building Exteriors Hard - Huber Arts Center/Ceddia Union Building	Stewardship - SIGHTLINES ®	2042		
HVAC Distro Systems - Ceddia Union Building/Huber Arts Center	Stewardship - SIGHTLINES ®	2042		
Electrical Equipment - Kriner Dining Hall	Stewardship - SIGHTLINES ®	2042		
Fire Protection Systems - Ceddia Union Building/Huber Arts Center	Stewardship - SIGHTLINES ®	2042		
Elevators - Memorial Auditorium/Old Main	Stewardship - SIGHTLINES ®	2043		
Elevators - All Phase I/II Housing	Stewardship - SIGHTLINES ®	2043		
HVAC Distro Systems - All Phase I/II Housing	Stewardship - SIGHTLINES ®	2043		
Electrical Equipment - Franklin Science Center	Stewardship - SIGHTLINES ®	2043	Renovation 2022-2024	
Fire Protection Systems - All Phase I/II Residence Halls	Stewardship - SIGHTLINES ®	2043		
Investigate connecting Queen St to Adams Drive in alignment with Dauphin Drive	Roadways	5-15	Requires air rights over CVRT for bridging/old Castings property	YES
Investigate traffic flow in the vicinty of Robb Field and tennins courts	Roadways	0-5		
Sidewalk extension (accessing ROC and Robb Field from Phase I Housing)	Pedestrian Circulation	0-5		
Formalize "goat path" by Tennis Courts connecting Middle Spring crossing (696)	Pedestrian Circulation	0-5		
Sidewalk extension near Memorial Auditorium along Adams Drive to RLH/SHR	Pedestrian Circulation	0-5		
Sidewalk extension between Seavers Hall and Mowrey Hall	Pedestrian Circulation	0-5		
Sidewalk extension past Heiges lot on Stadium Access Drive	Pedestrian Circulation	0-5		
Sidewalk/Emergency Vehicle road extension between Horton Lot and Henderson Rear	Pedestrian Circulation	0-5	Dependency on Locker Room Study and Pre-fab locker rooms	YES
Diagonal walk on academic quad library pedestrian congestion	Pedestrian Circulation	0-5		YES
Painted crosswalk at intersection of Lancaster Drive and York Drive	Pedestrian Circulation	0-5		
Post and Chain - survey campus for site locations needed for pedestrian traffic control	Pedestrian Circulation	0-5		YES

Expansion of C1 commuter lot (at Steam Plant)	Parking	0-5	Will also need to serve lab space for School of Engineering	
CUB parking expansion (allowing for UPS and others) near Grove Hall	Parking	0-5		
Expansion of parking near Seth Grove supporting practice fields	Parking	0-5		
Paving of parking at Reisinger House	Parking	5-15		
Paint Seth Grove Stadium on all exterior surfaces	Athletics and Recreation	0-5	Summer 2019 Project	
Commission a locker room study for entire Athletics Enterprise	Athletics and Recreation	0-5	Includes Henderson (total locker room renovation)/Heiges and potential connector to ShipREC and potential for relocation of Administrative Offices to 2d floor of Heiges, and expanding both public restrooms and locker room space on the 1st floor, fully addressing Title IX	YES
Commission a study for the potential of a new Field House near Seth Grove Stadium	Athletics and Recreation	0-5	May be included with Locker Room Study	
Provide night lighting and television capability at Seth Grove Stadium	Athletics and Recreation	0-5	Enhancements for PIAA/D3	
Provide night lighting at Fairchild Field (baseball) and Robb Field (Softball)	Athletics and Recreation	0-5		
Provide night lighting for throws area	Athletics and Recreation	0-5	May conflict with field house study area (semi-permanent?)	
Replace as part of lifecycle management turf at Seth Grove and Multi-Purpose Field	Athletics and Recreation	0-5	Is a "volume discount" possible?	
Improvements to Seth Grove grandstand structure, improve home locker facilities	Athletics and Recreation	0-5	May include pre-fabricated structures/expand storage for football/locker room study dependency	
Improvements to Seth Grove press box, ADA accessibility, media hook-ups	Athletics and Recreation	0-5		
Determine feasibility of changing baseball and softball fields to artificial turf	Athletics and Recreation	0-5		
Determine potential location of a new Astroturf field on unused (and proximate) land	Athletics and Recreation	0-5		
Reconfigure jogging path around Rec Fields to accommodate additonal SB field	Athletics and Recreation	0-5	Updated wetlands study required	
Study coaches' office locations once locker room study/census is complete	Athletics and Recreation	0-5	Consolidate for functionality where possible	YES
Volleyball surface/replacement/improvement - sand exchange to more suitable	Athletics and Recreation	0-5		
Softball infield replacement for player friendy/easier maintainable surface	Athletics and Recreation	0-5		
Air Condition Heiges Field House Arena	Athletics and Recreation	0-5		
Interior perimeter fence replacement at Seth Grove Stadium	Athletics and Recreation	0-5		
Grass median strip replacement at Seth Grove Stadium	Athletics and Recreation	0-5		
Pavillion at Practice Field	Athletics and Recreation	0-5		
Practice Field Renovation	Athletics and Recreation	0-5		
Convert Raquetball Courts into usable space	Athletics and Recreation	5-15	Limitations due to access for construction	
Investigate requirements for eSPORTS facility	Athletics and Recreation	0-5		
Construction of kitchen on 3d floor of Mowrey Hall	Student Support	0-5	In design for potential Summer 2019 construction	
Retention of McLean and Mowrey Halls supporting 2d year residency req't/future	Student Support	0-5	Housing Study Group Results dependency	YES
Commission Study on Dining/Retail Venues	Student Support	0-5	Kriner Hall dependency for School of Engineering	YES
Explore design options for revitalization of CUB concrete amphitheater	Student Support	0-5	Shade, balance, inclusion	YES
Seth Grove Stadium Rear Photo Mounted Imagery	Branding	0-5	Summer 2019 Project	
Piloting of Web-based wayfinding kiosks	Branding	0-5	Summer 2019 Project - Eventually include virtual reality CAS	YES
Upgrade all exterior signage to new "Ship Blue"	Branding	0-5		
Continue to determine best locations for banners	Branding	0-5		
Develop Athletics Branding Master Plan (painting/banners/wind screens/maintenance)	Branding	0-5	Using Ship Branding Colors to gain uniformity	
Better advertisement of RRT and its service area	Branding	0-5	Modification required/dependency on Transportation Study	
Potential Painting of legacy brick signs at Heiges Field House and Memorial Auditorium	Branding	0-5	Class Gifts	
Upgrade parking lot lighting to LED	Energy	0-5	Cost savings capture required for invest	
Transition pneumatically controlled buildings to DDC accessible	Energy	0-5	Library/Grove Hall/Mowrey and McLean Halls	

Assessment of building entrances/curb appeal	Outdoor Campus	0-5	Incl. trash/recycling receptacles, plantings	
Reisner entrance at Lebanon and Cumberland Drives enhancements	Outdoor Campus	0-5	Grade alternations and retaining/sitting walls	
LPAC at Adams and Lancaster Drives grade/landscaping enhancements	Outdoor Campus	0-5		
Kriner Entrance could be enhanced with sitting walls and shade structures	Outdoor Campus	0-5	Independent of Kriner use decision	
Old Main concrete frontage renewal/ADA accessibility/widening of walkway	Outdoor Campus	0-5		
Grove Hall enhance hardscape on building front for possible outdoor classroom area	Outdoor Campus	0-5		
Rowland/Shearer courtyard enhancements for potential outdoor classroom	Outdoor Campus	0-5	New siding for building extension in courtyard	
Academic Quad - further development for outdoor classrooms using Adirondak chairs	Outdoor Campus	0-5		
Library/Franklin Science Center- improve existing outdoor gathering space	Outdoor Campus	0-5		
Burd Run Pavillion upgrade/replacement	Outdoor Campus	0-5		
Develop Sustainability Vision in conjuction with entire campus community	Sustainability	0-5		YES
Deveop Sustainability Marketing and PR Campaign	Sustainability	0-5		YES
Energy Monitoring and Sharing as part of campus-wide building information system	Sustainability	0-5		YES
Expand waste management and recycling to zero waste by 2028	Sustainability	5-15		YES
Establish Key performance indicators (KPI) for waste streams, purchasing contracts, etc	Sustainability	5-15		YES
Add/modify parking and campus outdoor lighting with PV-charged units	Sustainability	5-15		YES
Explore commitment to convert 50% of roof infrastructure to green roofing	Sustainability	5-15		YES
Redevelop green spaces creating multifunctional landscape (water mgt/carbon storage/food production/inviting student engagement	Sustainability	5-15		YES
Create/repurpose spaces for "third space" esp commuter students	Sustainability	5-15		YES
Redevelop campus transpo and parking infrastructure, improving bike/pedestrian access and connectivity corridors with community	Sustainability	5-15		YES
Celebrate success, est new benchmarks, set goal of 100% energy independence from off-site energy production and 100% on site energy production	Sustainability	5-15		YES

14.2 Space Utilization Opportunities

Space Utilization Opportunities					
Bldg	**Space Name**	**Current Use**	**ASF**	**Relocate to:**	**Proposed Use**
Shippen	224	Lecture Hall		Renovate	Center for Educational Leadership/Active Learning Environment Pilot
Horton	2d Floor	Institute for Public Service		Horton Hall	Renovation and better aesthetics
Wright Hall	012	ROTC		Wright Hall	Manufacturing Space for Robotics