### 1. Roll Call

### 2. Approval of the Minutes of Previous Meetings

Will the Board of Trustees approve the minutes of the meeting of the Board held on February 24, 2017?

Will the Board of Trustees approve the minutes of the meeting of the Board held on April 21, 2017?

### 3. <u>President's Report</u>

### 4. Reports from Standing Committees

Discussion of action and/or information items by the Standing Committees for consideration by the Board of Trustees:

- A. Committee on Academic Affairs and Student Life M. Abraham Harpster, Chair
  - 1) <u>Discussion of Consent Agenda Items Provided for Information or Approval of the Committee on Academic Affairs and Student Life:</u>

Information Items -

- a) Information on Undergraduate Programs
- b) Information on Graduate Programs

(See Appendix I)

- B. Committee on Audit and Risk Walter C. Rakowich, Chair
- **C. Committee on Compensation** Matthew W. Schuyler, Chair
- D. Committee on Finance, Business and Capital Planning Daniel S. Mead, Chair
  - 1) <u>Discussion of Consent Agenda Items Provided for Information or Approval</u> of the Committee on Finance, Business and Capital Planning:

Information Items -

- a) Eisenhower Auditorium Stage Abatement, University Park
- b) University Drive Extension Reconstruction, University Park
- c) Nittany Parking Deck Rehabilitation, University Park
- d) Nittany Apartments Renovation Phase IV, University Park
- e) First Floor Observation Unit Fitout, Penn State Health Milton S. Hershey Medical Center
- f) Renovation of Radiology 3D Imaging and Offices, Penn State Health Milton S. Hershev Medical Center
- g) Replacement of Air Handling Units, Penn State Health Milton S. Hershey Medical Center
- h) Hospital North Hallway West Reconfiguration and Second Floor Addition, Penn State Health Milton S. Hershey Medical Center
- i) Change the Name of the Recreation & Convocation Center to the "Athletic & Recreation Center," Penn State Fayette
- j) Naming of Rooms, Portions of Buildings, and Plazas
- k) Status of Major Construction Programs and Borrowing
- I) Long-Term Investment Pool Report for Calendar Year 2016

Action Items -

- m) Summary of Revised Funds
- n) Summary and Acknowledgement of New Funds and Major Commitments

(See Appendix II)

### 2) <u>Proposed Naming of the Lacrosse Stadium to "Panzer Stadium," University Park</u>

The Facilities Naming Committee has recommended that the Board of Trustees name the Lacrosse Stadium in recognition of a combined irrevocable commitment from the Panzer Foundation and The Irv and Martha Kaplan Family Foundation.

Will the Board of Trustees adopt the following resolution:

RESOLVED, That the Lacrosse Stadium at University Park is named "Panzer Stadium."

(See Appendix III)

### 3) <u>Proposed Appointment of an Architect for Children's Hospital Overbuild,</u> Penn State Health Milton S. Hershey Medical Center

At its January 2008 meeting, the Board of Trustees appointed Payette Associates as architects for the design of the Children's Hospital at the Penn State Health Milton S. Hershey Medical Center. The Children's Hospital was designed and constructed so that three additional floors could be added in the future. The approximately 114,000 square foot addition will be designed to house labor and delivery, post-partum patient rooms, pediatric patient rooms, and a neonatal intensive care unit. Vacated spaces in the hospital megastructure will be renovated and repurposed. This is in alignment with a plan to increase bed capacity to accommodate current shortages and projections through 2026.

Payette did a good job as the designer. The Office of Physical Plant and Hershey leadership support appointing them to design the three story addition. It is anticipated that Payette will be able to retain most of the same structural, mechanical, electrical, plumbing, civil, and other consultants who worked on the original project.

Will the Board of Trustees adopt the following resolution:

RESOLVED, That Payette Associates of Boston, Massachusetts, is the architect of record for the design of the Children's Hospital Overbuild at Penn State Health Milton S. Hershey Medical Center.

### 4) Proposed Appointment of an Architect, Final Plan Approval and Authorization to Expend Funds, Applied Research Laboratory Energy Science and Power Systems Test Facility, Benner Township

Applied Research Laboratory (ARL) Energy Science and Power Systems personnel and resources will be consolidated into a new 8,000 square foot testing facility next to an existing facility at the ARL Test site on Fox Hill Road in Benner Township. The building will have three concrete test cells, three control rooms, three specialty workshops, a large assembly room, two restrooms, a storage room,

and a mezzanine for equipment. It will share the domestic water, sanitary, smoke evacuation, and emergency power systems with the existing building. The power system will come from an upgraded service transformer.

Will the Board of Trustees adopt the following resolutions:

RESOLVED, That the Officers of the University are authorized to employ the firm of Hoffman Leakey Architects, of Boalsburg, Pennsylvania, to design the Applied Research Laboratory Energy Science and Power Systems Test Facility.

RESOLVED, That the final plans for the Applied Research Laboratory Energy Science and Power Systems Test Facility, as designed by Hoffman Leakey Architects, of Boalsburg, Pennsylvania, are approved.

FURTHER BE IT RESOLVED, That authorization to expend funds and award contracts to accomplish the project be approved at a cost of \$6,000,000.

### 5) <u>Proposed Final Plan Approval and Authorization to Expend Funds, Recital</u> Hall Addition and Music I Renovations, University Park

The School of Music in the College of Arts and Architecture lacks a proper recital space and large ensemble rehearsal space. Existing facilities are adequate multipurpose facilities, but not refined music spaces with excellent acoustics. The Recital Hall addition and Music Renovation project will enhance the current and future success of the School by providing facilities matching the excellence of the program.

Esber Recital Hall will be renovated into a large ensemble rehearsal space. A 400-seat, 14,000 square foot recital hall addition will be added to the east. The design of this addition was focused primarily on providing an excellent acoustic environment for recitals. The project scope includes replacement of aged and noisy HVAC building systems. In addition, patron support spaces will be improved, performer prep and storage areas will be created, and a new ticket and lobby space will greet the public. Site work includes seating and circulation spaces that connect to the existing campus sidewalk network.

Will the Board of Trustees adopt the following resolutions:

RESOLVED, That the final plans for the Recital Hall Addition and Music I Renovations at University Park, as designed by Bostwick Design Partnership of Cleveland, Ohio, are approved.

FURTHER BE IT RESOLVED, That authorization to expend funds to accomplish the project is approved in the amount of \$25,500,000.

### 6) Proposed Final Plan Approval and Authorization to Expend Funds, Parking Garage Expansion, Penn State Behrend

The University proposes to construct a two-and-a-half level expansion to the existing two-level parking garage at Penn State Behrend. The parking garage was originally designed by Weber Murphy Fox of Erie, Pennsylvania, in 2006. At that time, the design planned for this future expansion, and the deck was engineered and constructed to support the additional levels.

The 210-space expansion will support the parking requirements of Trippe Hall, opening in 2018, and the Advanced Manufacturing and Innovation Center.

Will the Board of Trustees adopt the following resolutions:

RESOLVED, That the final plans for the Parking Garage Expansion at Penn State Behrend, as designed by Weber Murphy Fox of Erie, Pennsylvania, are approved.

FURTHER BE IT RESOLVED, That authorization to expend funds to accomplish the project is approved in the amount of \$7,500,000.

### 7) <u>Consideration of Proposed Interim Operating Budget for the University for the Fiscal Year Beginning July 1, 2017</u>

In order for the University to have an approved fiscal operating plan for the year beginning July 1, 2017, it is proposed that an interim budget be adopted.

Due to the pending status of the State appropriation, it is recommended that no action be taken at this time on changes in tuition, salaries and wages, employee benefits, or other necessary expense increases. A final budget will be submitted at the July 21, 2017 Board of Trustees meeting when the State appropriation is clarified.

Will the Board of Trustees adopt the following resolution:

RESOLVED, That pending adoption of a new budget to reflect clarification of the amount and form of the State appropriation, and subsequent decisions regarding the amount of tuition charges, adjustments to salaries, wages, and employee benefits, and provisions for fuel and utilities and other cost increases, the Board of Trustees approves continuation for the interim period beginning July 1, 2017, total budget amounts at the level of the adjusted 2016-17 budget as follows:

	University Park and		Pennsylvania	
	Other Locations	College of Medicine	College of Technology	Total University
General Funds	\$ 1,993,459,000	\$ 137,694,000	\$ 109,403,000	\$ 2,240,556,000
Agricultural Federal Funds	21,866,000			21,866,000
Restricted Funds	553,854,000	98,000,000	13,025,000	664,879,000
Auxiliary Enterprises a	418,333,000	3,777,000	27,987,000	450,097,000
Total	\$ 2,987,512,000	\$ 239,471,000	\$ 150,415,000	\$ 3,377,398,000
Milton S. Hershey Medical Center				1,804,431,000
Total Funds				\$ 5,181,829,000

<sup>&</sup>lt;sup>a</sup> Includes increase in room and board charges as approved by the Board of Trustees, February 24, 2017.

### E. Committee on Governance and Long-Range Planning – Betsy E. Huber, Chair

### 1) <u>Proposed Appointment of Directors for Penn State Health and Penn State</u> Health Milton S. Hershey Medical Center

The Board of Directors of Penn State Health has recommended to the Board of Trustees the reappointment of Dennis Brenckle and Thomas Lenkovitz as Directors of Penn State Health Milton S. Hershey Medical Center ("Medical Center") for a term commencing July 1, 2017 and expiring June 30, 2020. Pursuant to the *Bylaws* of the Medical Center, the Board of Trustees has authority to confirm appointments to the Medical Center Board of Directors as recommended by Penn State Health.

The *Bylaws* of Penn State Health provide that appointments to the Board of Directors of Penn State Health are made by the Board of Trustees. It is recommended that Clifford Benson and Peter Tombros be appointed to the Board of Directors of Penn State Health, for a term commencing as of the date of approval by the Board of Trustees and expiring on March 14, 2018. If approved, these new directors will increase the size of the Penn State Health Board to ten members.

Will the Board of Trustees adopt the following resolutions:

RESOLVED, that the appointments of Dennis Brenckle and Thomas Lenkovitz to the Board of Directors of Penn State Health Milton S. Hershey Medical Center for a term commencing July 1, 2017 and expiring June 30, 2020 are hereby confirmed; and

FURTHER BE IT RESOLVED, that Clifford Benson and Peter Tombros are hereby appointed to the Board of Directors of Penn State Health for a term commencing as of the date of this resolution and expiring on March 14, 2018.

### 2) Proposed Election of the Student Trustee

The Committee on Governance and Long-Range Planning will recommend to the Board of Trustees the election of the Student Trustee for a two-year term beginning July 1, 2017.

### 3) Proposed Standing Order Amendments: Committee Representation

The Committee on Governance and Long-Range Planning recommends the following amendment to Section 9(a) of Order VII of the Board's *Standing Orders* to modify the process by which non-voting members of Standing Committees, subcommittees and special committees are selected and assigned.

Will the Board of Trustees adopt the following resolution:

RESOLVED, that the *Standing Orders* be amended by deleting Section 9(a) of Order VII in its entirety and replacing it with the following language:

(a) The Chair of the Board of Trustees shall invite a faculty representative and a student representative to serve as non-voting members of each standing committee (other than the Committee on Compensation). The Chair of the Board of Trustees may invite

other individuals to serve as non-voting members of standing committees (other than the Committee on Compensation), as determined in his or her discretion to be appropriate or advisable. The Chair of the Board of Trustees may invite individuals to serve as non-voting members of subcommittees or special committees, as determined in his or her discretion to be appropriate or advisable. A non-voting member of any standing committee, subcommittee or special committee may attend executive sessions of such standing committee, subcommittee or special committee or special committee at the discretion of the Chair of such standing committee, subcommittee or special committee. Representatives of student and faculty groups shall be selected in consultation with each respective group.

(See Appendix IV)

- F. Committee on Legal and Compliance Richard K. Dandrea, Chair
- **G.** Committee on Outreach, Development, and Community Relations Ryan J. McCombie, Chair

### 5. <u>Informational Report on the University Faculty Senate</u>

A report of this year's activities of the University Faculty Senate will be provided by James Strauss.

### 6. Report on the Election of Trustees by the Alumni

A report on the election of Trustees by alumni will be given by Trustee Doran.

### 7. Report on the Election of Trustees by Agricultural Delegates

A report on the election of Trustees by delegates from agricultural societies will be given by Trustee Hoffman.

### 8. <u>Election of Trustees Representing Business and Industry Endeavors</u>

The Selection Group on Board Membership for Business and Industry Trustees will recommend, to the Board of Trustees, two candidates for three-year terms beginning July 1, 2017.

### 9. <u>Election of At-Large Trustee</u>

The Selection Group on Board Membership for At-Large Trustees will recommend, to the Board of Trustees, a candidate for a three-year term beginning July 1, 2017.

### 10. Announcements by the Chairman of the Board of Trustees

### AA&SL

### 1. Information on Undergraduate Programs

### A. College of Arts and Architecture

### 1) Bachelor of Fine Arts in Acting: New Program

This program is an intensive training program for students who intend to pursue a career in acting for stage and film. Education in theatre and the general education curriculum provides depth to the actor's intellectual and artistic development. The new program will become effective Summer 2017.

### 2) Bachelor of Science in Dance: New Program

This program is designed as a comprehensive study of all elements of dance, focusing on elements of the artistry and sciences of the body to create a better-rounded performer. The new program will become effective Summer 2017.

### 3) Landscape Architecture: New Minor

This minor will provide students with a broad understanding of the history, practice, and theories how landscape architecture shapes the world, as well as the opportunity for more specialized study in selected topics. The new minor will become effective Summer 2017.

### 4) Photography: New Minor

This minor will provide students with the skills and knowledge necessary to identify and create professional quality photographic images. The new minor will become effective Summer 2017.

### B. College of Earth and Mineral Sciences

### 1) <u>Bachelor of Science in Meteorology to Bachelor of Science in Meteorology and Atmospheric Science; Atmospheric Sciences option to Atmospheric Science option: Name Changes</u>

The name of the major and the option are being changed to bring them in line with the department name which was changed in May 2016. The authorization for the program and option name change will become effective Summer 2017.

### C. College of the Liberal Arts

### 1) Creative Writing: New Minor

This minor offers students not majoring in English the opportunity to explore different forms of creative writing--fiction, poetry, and nonfiction--or to focus primarily on one of them. Students receive instruction and practice the art and craft of writing in small, workshop courses. The new minor will become effective Summer 2017.

### D. Penn State Harrisburg

### 1) Materials Science and Engineering: New Minor

This minor will prepare students to understand the materials properties, materials processing techniques, characterization methods, and selection criteria in implementing engineering solutions. The new minor will become effective Summer 2017.

### AA&SL

### 2. Information on Graduate Programs

### A. College of Engineering

### 1) Computational Materials: New Minor

The new Computational Materials minor will provide a fundamental graduate education in materials simulation techniques. The objectives of the coursework are to provide foundational courses in materials modeling, offered at various length scales, integrate both broad foundational courses for students interested in a wide range of modeling techniques and/or specialized courses allowing students to develop depth in a specific modeling technique/scale, and provide a flexible set of electives that will assure students are exposed to materials-related phenomena in their area of expertise. The minor will provide students the recognition of having built a background in Computational Materials, as well as the access and oversight of faculty in the minor to help them integrate these concepts with their doctoral research.

### 1. Eisenhower Auditorium Stage Abatement, University Park

The University intends to abate exposed asbestos fireproofing in the Eisenhower stage area including replacement of smoke ventilation hatches at roof level and fire sprinkler piping above the stage. Additional scope includes abatement of asbestos fireproofing in the loading dock and breakroom, abatement and structural connection points for future replacement of speaker system at end of life, and basement sprinkler work allowing installation of fire system backflow protection. The cost estimate for this project is \$1,530,000.

(See Appendix II.1)

### 2. University Drive Extension Reconstruction, University Park

The University intends to reconstruct University Drive Extension from Park Avenue to Services Road. The project scope includes removal of existing asphalt pavement, roadway grading, placement of concrete curb, new sidewalk on the west side, full-depth hot mix asphalt pavement, underground utilities, plantings, and relocation of the traffic signal poles on the north side of Park Avenue. The cost estimate for this project is \$2,090,000.

(See Appendix II.2)

### 3. Nittany Parking Deck Rehabilitation, University Park

The University Park parking decks are on a five year maintenance cycle to help extend the decks service life and minimize the need for more costly repairs. The Nittany Parking Deck, built in 1992, is scheduled for rehabilitation. This will include power washing and repairing concrete surfaces, repairing and painting stairwell railings, cleaning and galvanizing metal conduits, drain pans, lintels, and steel plates, repairing damaged double-tee connectors on levels two thru six, restriping parking stalls, repointing and sealing exterior brick, and replacing exterior sealant joint and bricks where necessary. Work will be done one level at a time in order to keep a majority of the parking deck operational during construction. The cost estimate for this project is \$1,034,000.

(See Appendix II.3)

### 4. Nittany Apartments Renovation Phase IV, University Park

The University intends to renovate twenty apartments, located in three buildings (23, 33 and 34), in the mid-1980s era Nittany Residence Area. Work includes kitchens, bathrooms, flooring, painting, and lighting. The first phase of this work (thirteen apartments) was completed in 2014, the second phase (twenty-one apartments) was completed in 2015 and the third phase (twenty apartments) was completed in 2016. The balance of the existing apartments will be addressed in subsequent phases. The cost estimate for this project is \$1,400,000.

(See Appendix II.4)

### 5. First Floor Observation Unit Fitout, Penn State Health Milton S. Hershey Medical Center

Patients requiring extended observation before being admitted or discharged will be served in a new first floor twelve-patient Observation Unit adjacent to the Emergency Department. The unit will improve the Emergency Department's patient capacity for incoming emergent patients.

Several offices and a small non-invasive vascular imaging suite will be relocated into other parts of the hospital as part of other projects. The new Observation Unit will provide twelve observation rooms, a nurse's station and associated support spaces.

In addition, this project will create approximately 1,370 net square feet of new enclosed space at the second floor level, replacing an existing roof. This new area will function as greatly needed storage space for supplies and equipment to support the main hospital Operating Room Suite. The cost estimate for

this project was mistakenly reported in the February BOT materials as \$3,000,000. The correct project cost estimate is \$4,800,000.

### 6. Renovation of Radiology 3D Imaging and Offices, Penn State Health Milton S. Hershey Medical Center

The Ground Floor of the Hospital primarily houses radiology and imaging services. These services have undergone major technological changes since the hospital construction in 1970 and the result has been many renovations scattered throughout the floor. Spaces that were built for specific imaging and treatment areas are no longer being used for that function and are inefficient for the current space needs. A reconfiguration of spaces is required to consolidate office areas and support functions in an efficient manner and also to make areas available for future clinical functions. The renovated area will include offices, work areas, training/conference rooms, and image reading rooms. The project will be built in multiple phases to allow clinical operations to continue through construction. The cost estimate for this project is \$3,500,000.

(See Appendix II.5)

### 7. Replacement of Air Handling Units, Penn State Health Milton S. Hershey Medical Center

Air handling units AC-113 and AC-114, installed in approximately 1991, have exceeded their anticipated useable life and will be replaced with a single, energy efficient air handling unit that will provide year-round heating and cooling to important areas of the Hospital. This replacement air handling unit will serve hospital areas including the Ground Floor of the East Addition. The approximate capacity of the replacement air handling unit will be 30,000 cubic feet per minute. In addition, twenty-seven (27) variable air volume (VAV) boxes will be upgraded as part of this project to increase reliability and temperature control capabilities. The cost estimate for this project is \$1,160,000.

(See Appendix II.6)

### 8. <u>Hospital North Hallway West Reconfiguration and Second Floor Addition, Penn State Health</u> Milton S. Hershey Medical Center

This project will reconfigure the existing Heart & Vascular Institute (HVI) non-invasive treatment area in the main Hospital. The work primarily consists of reconfiguring the space for office, conference and support space in an area that had been vacated by other realignment projects. This project will also establish a new waiting room for HVI. Two restrooms, built in 1970, will be fully renovated. The sizes of the current restrooms are inadequate and are in need of major cosmetic upgrades. The renovations to the restrooms will also improve ADA accessibility.

In addition, this project will create approximately 1,370 net square feet of new enclosed space at the second floor level, replacing an existing roof. This new area will function as greatly needed storage space for supplies and equipment to support the main hospital Operating Room Suite. The cost estimate for this project is \$2,850,000.

(See Appendix II.7)

### 9. Change the Name of the Recreation & Convocation Center to "Athletic & Recreation Center," Penn State Fayette

The University intends to change the name of the Recreation & Convocation Center at Penn State Fayette to more closely reflect the use of the facility and align with the name of the other athletic support building. The new building name will be *Athletic & Recreation Center*.

(See Appendix II.8)

### 10. Naming of Rooms, Portions of Buildings, and Plazas

The Facilities Naming Committee has made certain recommendations to the President on the naming of rooms, portions of buildings and plazas. In accordance with the Policy on Naming University Facilities, the Board of Trustees is hereby informed that the President has approved the following naming actions:

1. Name Collaborative Learning Room #3 (Room 008) in the Morgan Academic Support Center/Greenberg Complex in recognition of a commitment from John and Denise Gilliland. The recognition plaque will read:

John and Denise Gilliland Family Foundation Collaborative Learning Room

 Name Collaborative Learning Room #7 (Room 012) in the Morgan Academic Support Center/Greenberg Complex in recognition of a commitment from David and Sherry Weidman. The recognition plaque will read:

> David, Sherry, and Alexa Weidman Collaborative Learning Room

3. Name the conference room (Room 100) in the Knowledge Center at Penn State Behrend for retiring Dr. Robert Light, Senior Associate Dean of Research and Outreach and Chief Operating Officer. The recognition plaque will read:

Dr. Robert W. Light Boardroom Named in honor of Dr. Robert W. Light, Iongtime senior leader of Penn State Behrend and founder of Pennsylvania Sea Grant

4. Name the engineering laboratory (Room DEF 111) in the Workforce Development and Technology Building at Penn State DuBois in recognition of a gift from Charles E. Snapp. The recognition plaque will read:

Engineering Lab
In Recognition of Charles E. Snapp '63

5. Name Room 318 in Deike Building in recognition of a commitment from Randall and Donna Cygan. The recognition plaque will read:

Cygan Family Geochemistry Laboratory

Name the BBH Garden located between the BBH Building and Henderson Building in recognition of a commitment from Vincent J. and Suzann Andrews Tedesco. The recognition plaque will read:

The Suzann Andrews Tedesco Family Garden
Proud Penn Staters
We bloom where we are planted

- 7. Name the Student Advising Reception Area (Room 225) in the east wing of Ritenour Building in recognition of a commitment from Lou Martarano. This naming is a change to a previously approved request to name a student meeting room (Room 22) in Ritenour. The naming will be moved from the less visible location to this reception area. The recognition plaque will read:

  In memory of Catherine Spiotto Martarano
- Name a training room (Room 116) in the Joe and Rosie Ruhl Student Community Center at Penn State York in recognition of a commitment from Bill and Kim Kerlin. The recognition plaque will read:

Kerlin Family Training Room

Honoring Bill Kerlin's passion for Penn State sports and
enhancing the student-athlete's experience

### FB&CP

9. Name the coach's office (room 108D) in the Joe and Rosie Ruhl Student Community Center at Penn State York in recognition of a group fundraising effort led by a realized bequest from Creston F. Ottemiller, Jr. The recognition plaque will read:

Ronald Trimmer Coach's Office Dedication, Integrity, Leadership and Positive Reinforcement Making an Impact Beyond Athletics

10. Name the student life office (Room 212) in the Joe and Rosie Ruhl Student Community Center at Penn State York in recognition of a binding pledge from Deborah Koller. The recognition plaque will read:

Gunnery Sergeant Randy Koller Ret. USMC Office for the Director of Student Affairs Remembering a life dedicated to leadership and service

11. Name the community room (Room J101) in the Joe and Rosie Ruhl Student Community Center at Penn State York in recognition of gifts from Gary Butler and John Frieling. The recognition plaque will read:

Precision Custom Components (PCC) Community Room
In Recognition of PCC's Historic Presence In York's Manufacturing Community
Promoting Campus and Community Engagement that Brings Both Groups Together at
Penn State York.

12. Combine the Multi-Purpose Building (gymnasium and locker rooms) with the Joe and Rosie Ruhl Student Community Center, thereby eliminating the Multi-Purpose Building name.

### 11. Status of Major Construction Programs and Borrowing

(See Appendix II.9)

### 12. Long-Term Investment Pool Report for Calendar Year 2016

Appendix II.10 is a report of the University's endowment and similar funds as of December 31, 2016.

(See Appendix II.10)

### 13. Summary of Revised Funds

Will the Committee on Finance, Business and Capital Planning recommend to the Board of Trustees adoption of the following resolution:

RESOLVED, That the conditions governing certain existing scholarships, fellowships, awards, and similar funds previously established at the University, identified in the *Summary of Revised Funds* for the period January 30, 2017 to April 7, 2017, be revoked and that the Officers of the University are authorized to put into effect the revised regulations as requested by the donors.

### 14. Summary and Acknowledgement of New Funds and Major Commitments

The Committee on Finance, Business and Capital Planning is advised that for the period January 30, 2017 through April 7, 2017, 38 new funds totaling approximately \$1,771,500 were accepted by the University, including scholarships, fellowships, etc. All of these items conform to established University policies and regulations.

For the period January 1, 2017 through February 28, 2017, 47 major commitments were accepted by the University totaling approximately \$22,359,647.

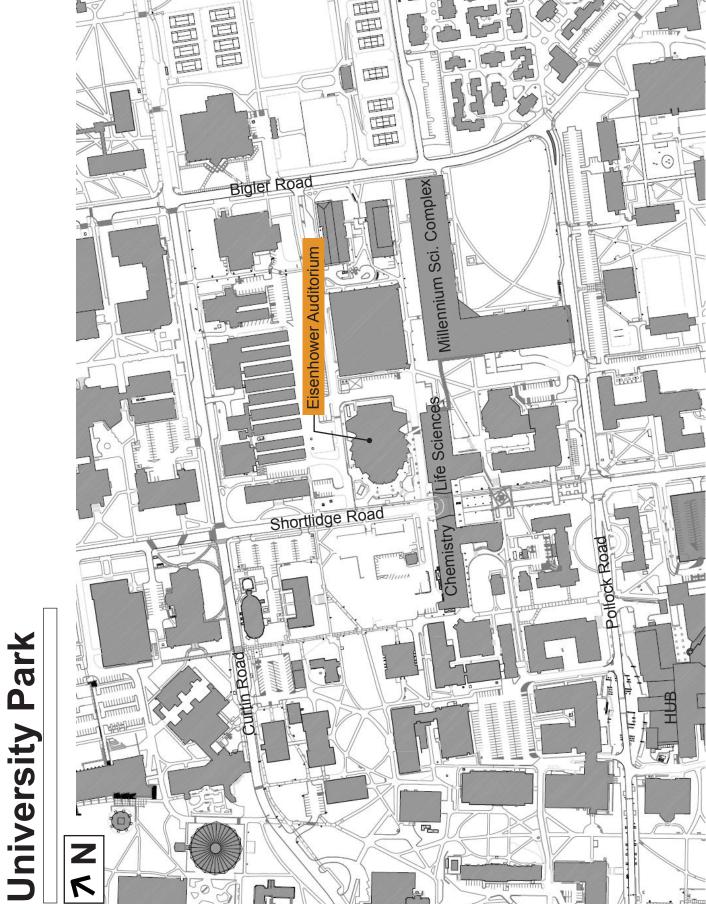
### 5/5/2017 Consent Agenda

### FB&CP

Will the Committee on Finance, Business and Capital Planning recommend to the Board of Trustees adoption of the following resolutions:

RESOLVED, That the Board of Trustees gratefully acknowledges the generous contributions of the many friends of the University identified in the *Summary and Acknowledgement of New Funds and Major Commitments*, in support of endowments, funds, and other major commitments as reported to the Committee on Finance, Business and Capital Planning at its meeting of May 4, 2017.

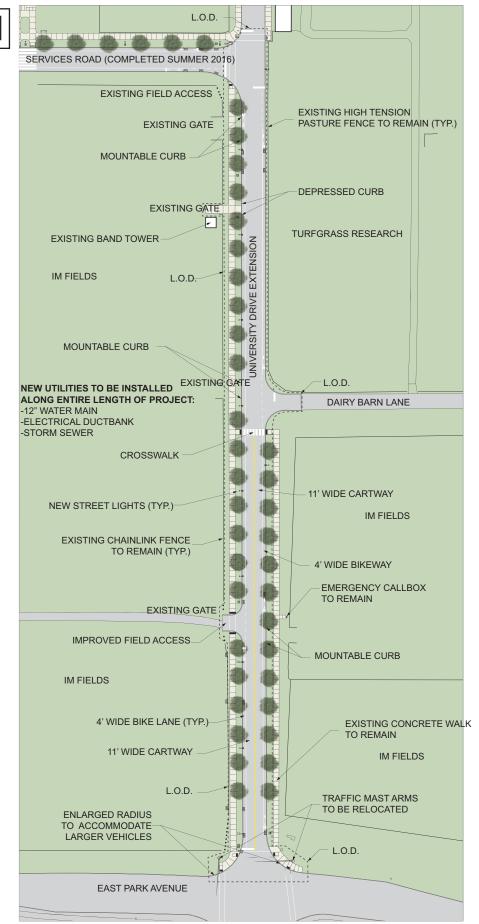
FURTHER BE IT RESOLVED, That the Officers of the University are authorized to convey the Board's appreciation to these generous benefactors who provide opportunities for many students to receive a quality education.



(Appendix II.1)

FB&CP 5/5/2017 Beaver Stadiun OPP MIND: DAHNHADINANAN HHHH HHHH 1999 BHHHHOHHHH OHHHHHOHHHHHO University Drive University Drive **Extension Reconstruction** GHAND **University Park** 

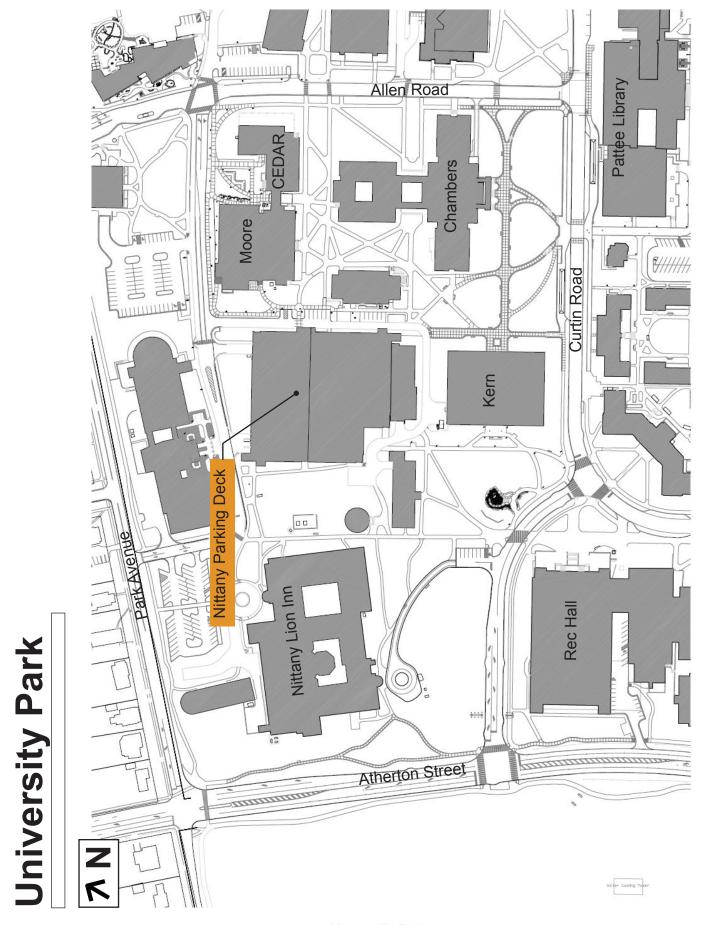
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(Appendix II.2)

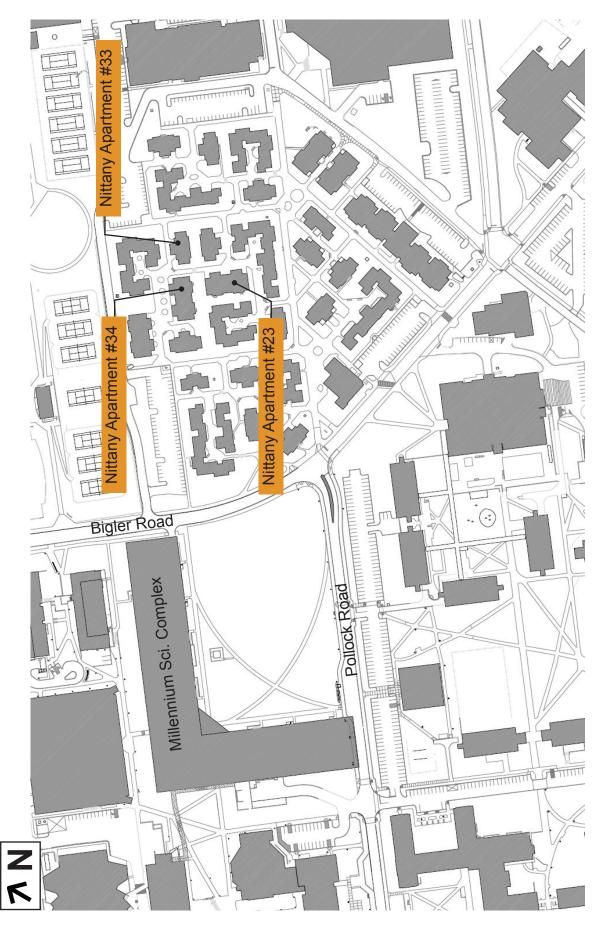
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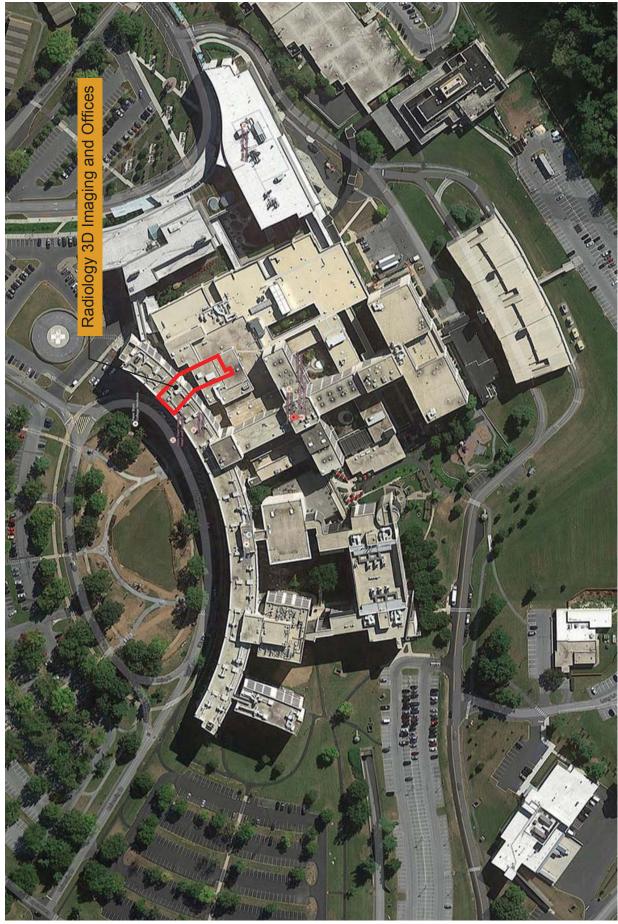


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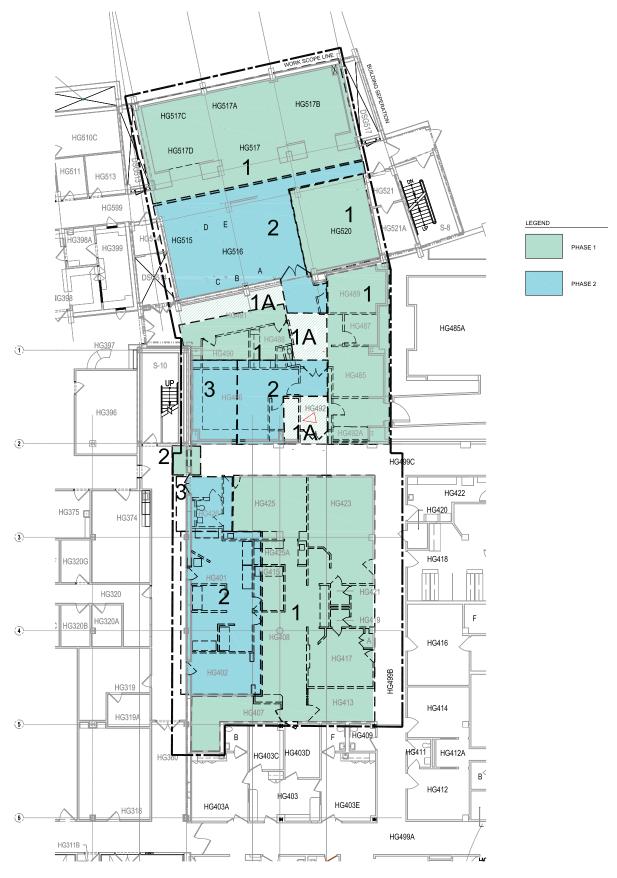
## **University Park**



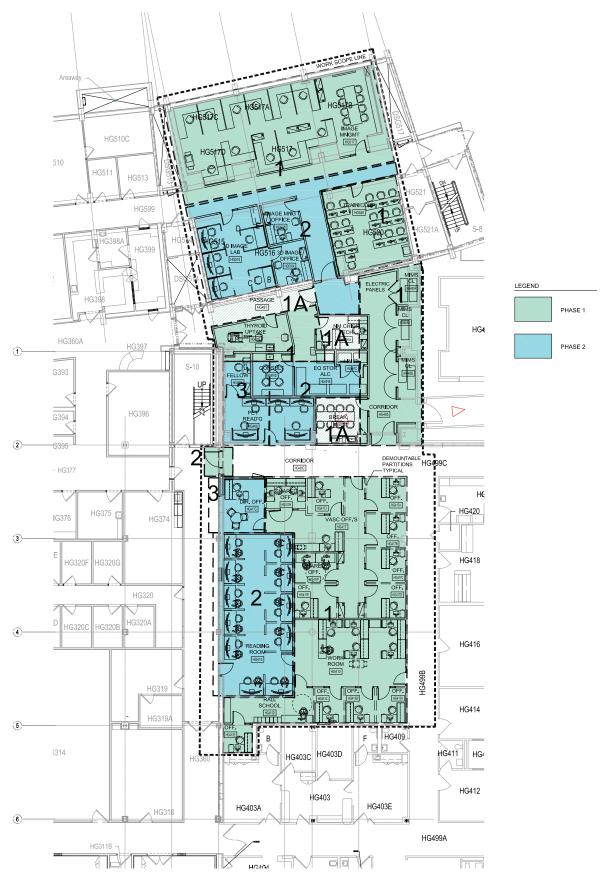
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(Appendix II.5) - 1 -

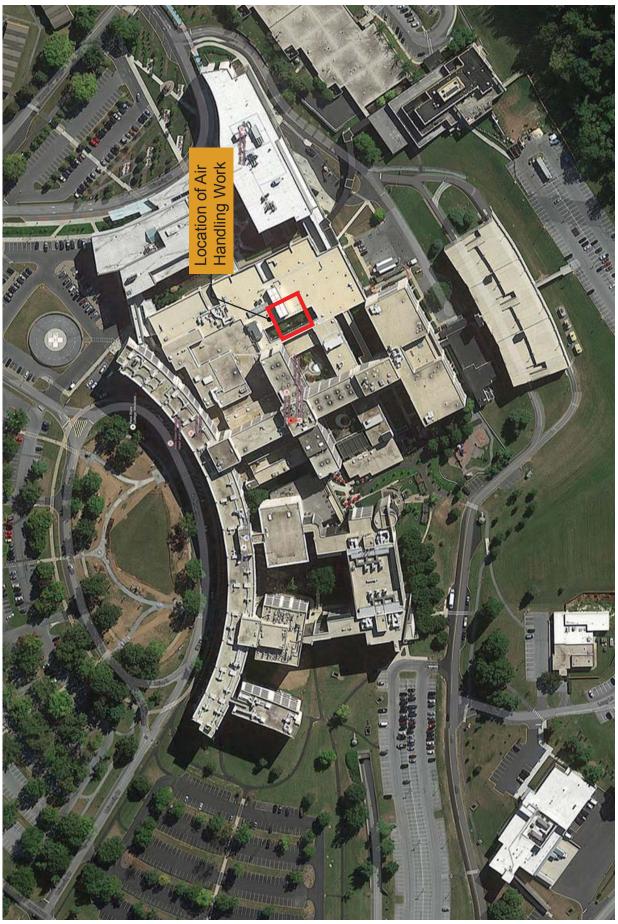


Demolition Plan - 3D Imaging and Offices Renovation (Appendix II.5)
- 2 -

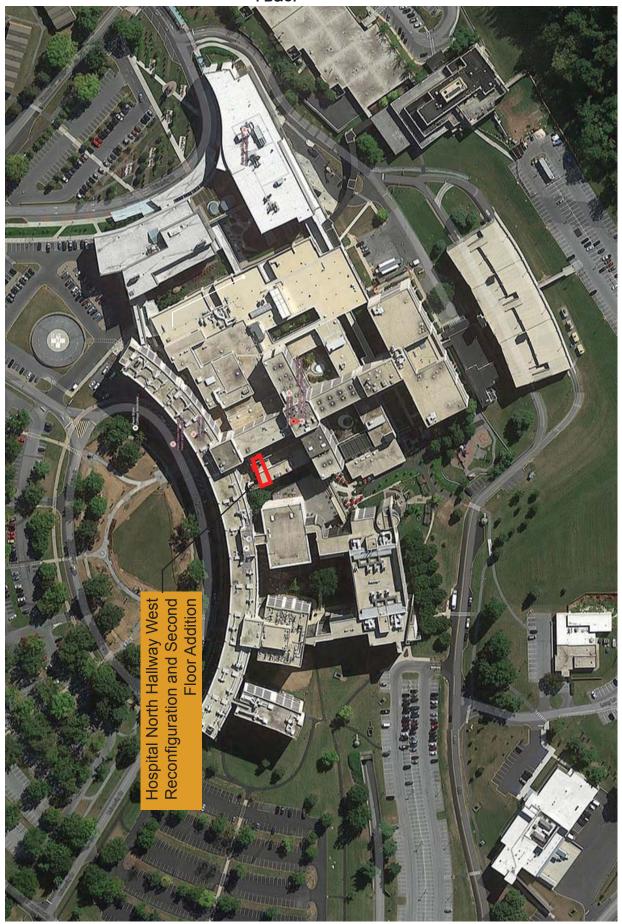


Layout Plan - 3D Imaging and Offices Renovation (Appendix II.5)

- 3 -

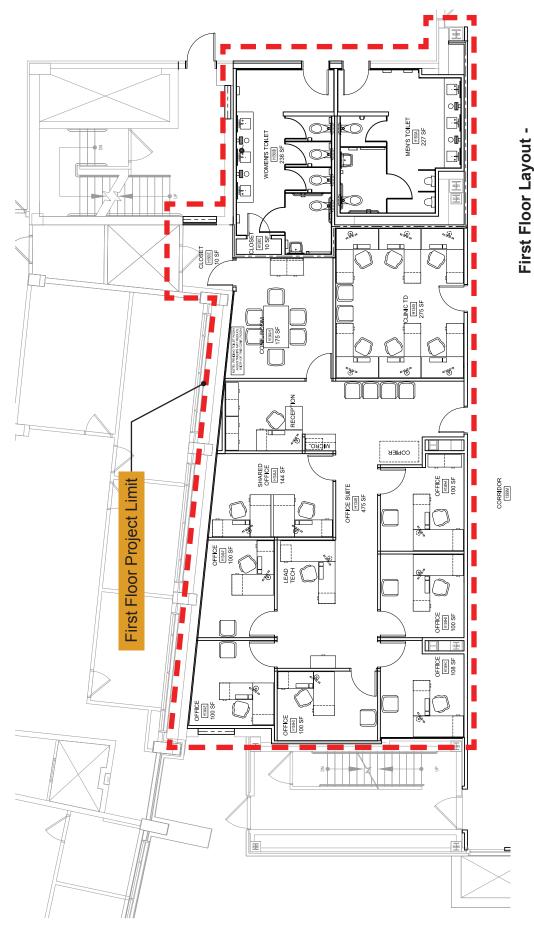


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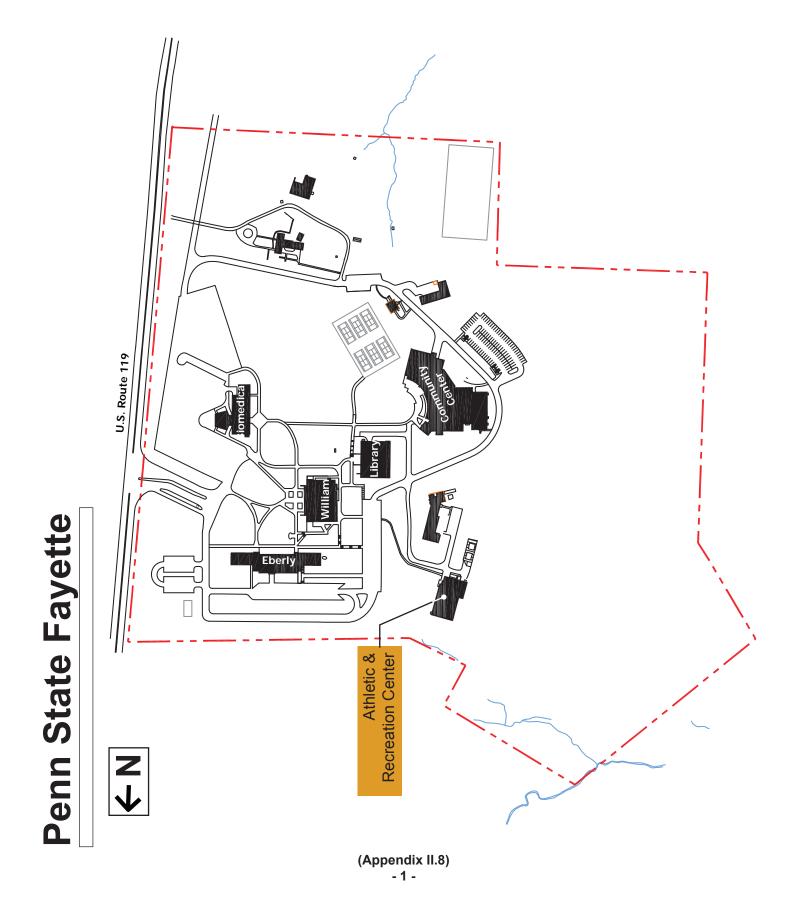


(Appendix II.7) - 1 -

# Penn State Health Milton S. Hershey Medical Center



(Appendix II.7) - 2 -



5/5/2017 FB&CP

STATUS OF MAJOR CONSTRUCTION PROGRAMS AND BORROWING (  $>\! 55$  Million ) March 31, 2017

Bold - Completed, Italics - Projected

	Project Data				BOT Milestones	tones	Construction	rction	
	Agricultural Digester and Dairy Bam Replacement	\$9,500,000	0\$	0\$	07/15	21/60	21/60	08/18	Project in design.
	Agricultural Engineering Building Renewal	\$44,500,000	0\$	0\$	01/15	05/16	08/16	12/17	Construction is approximately 20% complete.
	Airport Infrastructure and Site Improvements	\$10,700,000	0\$	0\$	05/15	05/15	06/16	07/17	Construction is approximately 80% complete.
	Chemical and Biomedical Engineering Building	\$144,000,000	0\$	\$10,000,000	03/15	91/60	09/16	12/18	Construction is approximately 15% complete.
	East Halls Phase 1a, Earle Hall and Stuart Renovation	\$65,100,000				02/16	03/16	03/18	Construction is approximately 60% complete.
	East Halls Phase 1b, New Building and McKean & Pennypacker Renovation	\$106,000,000	0\$	0\$	11/14	02/17	03/17	07/18	Construction is approximately 2% complete.
	East Halls Phase 1c, Brumbaugh, Tener, and Pinchot Renovation	\$81,300,000				02/18	05/18	61/20	Project in design.
	Environmental Improvements BFP Installations	\$10,500,000	\$7,000,000	0\$	W/A	A/N	80/90	21/80	Project program is approximately 95% complete.
	HR Shared Services Fit-Out	\$8,900,000	0\$	0\$	W/A	91/60	02/17	11/17	Construction is approximately 10% complete.
	IM Building Addition Phase III	\$29,340,000	0\$	0\$	03/13	02/16	05/16	21/80	Construction is approximately 65% complete.
	Lacrosse Facility Upgrades	\$8,400,000	0\$	\$8,400,000	03/15	TBD	TBD	TBD	On HOLD.
٩n	North Halls, Robinson Hall	\$33,500,000	0\$	0\$	09/14	02/16	03/16	21/10	Construction is approximately 70% complete.
	Recital Hall and Music I Renovation	\$22,100,000	\$19,000,000	0\$	12/15 (DGS)	05/17	05/17	08/18	Project in design.
	Recreational Facility Access Modifications	\$7,500,000	\$6,000,000	0\$	W/A	02/16	06/16	04/17	Construction is approximately 95% complete.
	Research Building West HVAC Renovations	\$7,800,000	0\$	0\$	01/15	91/60	12/16	12/17	Construction is approximately 25% complete.
	Roof Replacement Program	\$11,100,000	0\$	0\$	W/A	02/17	04/17	10/17	Construction to begin in April 2017.
	Shaver's Creek Environmental Center Renovation	\$5,800,000	0\$	\$1,700,000	N/A	02/17	04/17	01/18	Construction to begin in April 2017.
	Tower Road Data Center Whitespace Build-Out	\$8,000,000	0\$	0\$	W/A	91/60	11/16	21/20	Construction is approximately 80% complete.
	Transformer Replacement Program	\$11,100,000	\$1,000,000	0\$	W/A	A/N	20/90	21/10	Project program is approximately 92% complete.
	WCSP Steam Production Modifications	\$57,300,000	0\$	0\$	11/10	11/12	02/14	08/18	Construction is approximately 70% complete.

5/5/2017

Bold - Completed, Italics - Projected

FB&CP

\$108,607

(\$325,026)

Future Capitalized Leases & Other Anticipated Commit (\$316,367)

Estimated Authority Remaining

Capital Leases, Bonds, & Notes Issued

Authorized Borrowing Status - \$(000) (excluding PCT)
Borrowing Authority per September 2013 Board of Trus \$750,000

STATUS OF MAJOR CONSTRUCTION PROGRAMS AND BORROWING (> \$5 Million) March 31, 2017

	Project Data				BOT Milestones	ones	Construction	ıction	
		Budget	Commonwealth	Gift	Arch/Eng	Final Plan	Start	Completion	Notes
Campus	Project Name	Amount	Funding	Amount	Selection	Approval	Date	Date	
Abington	Student Apartment Building	\$50,600,000	\$0	\$0	07/14	12/15	12/15	21/10	Construction is approximately 85% complete.
Altoona	Adler Building Addition and Renewal	\$24,500,000	\$13,710,000	0\$	12/13 (DGS)	11/15	02/16	10/17	Construction is approximately 70% complete.
or inches	New Residence Hall	\$31,500,000	0\$	0\$	07/14	12/15	03/16	21/20	Construction is approximately 70% complete.
Dianaywine	Student Union	\$19,600,000	0\$	\$0	07/14	12/15	03/16	21/20	Construction is approximately 80% complete.
200	Parking Deck Expansion	\$7,100,000	0\$	0\$	11/16	21/50	05/17	12/17	Project in design.
	Тпрре Наш	\$28,400,000	\$0	\$0	11/15	11/16	12/17	07/18	Construction is approximately 8% complete.
Hazleton	Kostos Building Renewal	\$15,500,000	\$12,000,000	\$0	10/14 (DGS)	02/16	05/16	10/17	Construction is approximately 55% complete.
	Combined Heat and Power Plant	\$22,500,000	0\$	0\$	11/15	09/16	04/17	81/01	Construction to begin in April 2017.
Hershey	Emergency Department Expansion	\$24,500,000	0\$	\$0	02/17	09/17	09/17	61/80	Project in design.
	Women's Health Inpatient Renovations, Phase II	\$11,000,000	0\$	\$0	11/15	05/16	06/16	03/18	Construction is approximately 40% complete.

Summary of University Long-Term Debt - \$(000) (excluding PCT)

Total Bonds, Notes and Capital Leases as of June 30, 2016

Bonds, Notes, and Capital Leases Issued Year to Date Fiscal Year 2016/17

Year to Date Principal Payments and Premium Amortizations

Total Bonds, Notes and Capital Leases as of March 31, 2017

\$1,030,893

\* Related Interest Expense Totals Approximately \$31,426

(Appendix II.9) - 2 -

### **Jniversity Park**

## Ritenour Student Center - Final Construction Report



Ground Floor collaborative learning space/learning labs

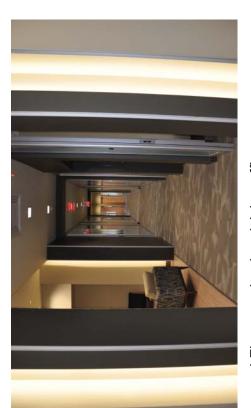


New 24/7 Main Entrance Lobby

- Completion February 2017
  - \$6,510,000 Authorized \$7,000,000 Final Cost

### SCOPE:

Approximately 21,000 SF in Ritenour was renovated to consolidate and expand academic advising for the College of Science. The renovations include a learning space and private learning labs on the ground floor, a new Office of Digital Learning and Center for Excellence in Science Education on the first floor, with a cademicad vising of fices and conference rooms on the second floor. Funding came from gifts and College of Science reserves. The increase in final sost was for added Major Maintenance and Energy Savings.



Second Floor academic advising offices

### **University Park**

## Water Treatment Plant - Final Construction Report



South East Elevation from Big Hollow Road



Microfiltration area treates bacterial/protozoan contaminants

- Completion March 2017
  - \$62,000,000 Authorized
    - \$58,700,000 Final Cost

### SCOPE:

The project includes a new water treatment plant and water distribution system upgrades to meet regulatory requirements, operational demands, and fire protection water storage standards. The main level of the new plant is made up of microfiltration for bacterial/rotozoan treatment, nanofiltration for softening and removal of future contaminants, and granular activated carbon treatment facilities to remove chemical contamination. The majority of funding came from the Commonwealth. Elimination of a ground water storage tank resulted in a \$3.3M savings.



Granular Activated Carbon treatment facility removes chemical contamination

## **University Park**

# WCSP Steam Turbine Replacement - Final Construction Report



A view of the new Turbine two replacement



A view of the new Turbine three replacement

- Completion March 2017
  - \$9,200,000 Authorized \$9,200,000 Final Cost

### SCOPE:

built in 1947, were demolished and replaced. Replacing the turbines significantly increased their efficiency, resulting in asavings of \$1.26 million per year. We estimate that the cost to replace these turbines and the associated supporting For this project Turbine two, built in 1938, and turbine three, equipment will be paid back in less than seven years.



High/Low Pressure steam lines below the new turbines



### Long-Term Investment Pool & Similar Funds (LTIP)

### Investment Review for Calendar 2016

Submitted March 2017

This cover page provides a summary overview of the Pennsylvania State University Long-Term Investment Pool (LTIP) for Calendar Year 2016. The second page summarizes LTIP-related data that is discussed in detail on the remaining pages, along with performance analysis.

### **Executive Overview**

### **Long-Term Investment Pool (LTIP) Performance**

Annualized *net* investment returns for the Penn State University LTIP (adjusted for the impact of gifts and spending, and after external investment management expenses) for periods ending December 31, 2016 are:

Calendar 16	3 Years	5 Years	10 Years
5.9%	4.8%	8.4%	5.8%

### **Long-Term Investment Pool Market Value (pg 3)**

As of December 31, 2016, Penn State University's LTIP was valued at \$3.75 billion, which includes \$2.44 billion in endowment assets and \$1.31 billion in non-endowed funds. An additional \$130 million was held as Similar Funds (see page 2 for details). Endowment spending is reviewed on pages 2 and 3.

### **Review of Investment Markets (pg 4)**

The graph below compares respective returns for the 12-months ending December 31, 2016 and December 31, 2015 for the S&P 500, MSCI All Country World (ACWI) ex-US, Bloomberg Commodity Index, Bloomberg Barclays Aggregate Bonds, and publicly-traded Real Estate Investment Trusts (REITs) Indexes. As shown below, Calendar 2016 respective returns for all categories exceeded their 2015 performance.

### **Investment Diversification and Asset Mix (pg 5)**

At calendar year-end, 49% of LTIP assets were invested in public equities (domestic and foreign) and 23% in private equity and venture capital, for a combined 72% of LTIP representing growth-oriented assets. In addition, 15% was invested in fixed income/cash, 5% in real assets, and 8% in diversifying (hedged) strategies.

### **Comparative Fund Performance (pg 6)**

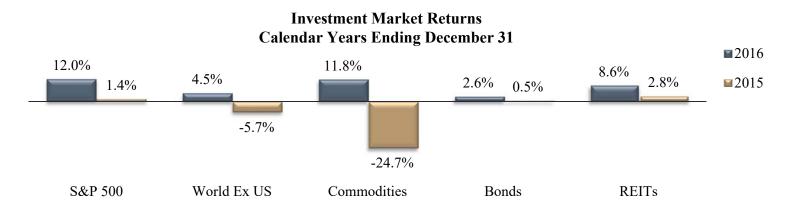
Penn State's LTIP returned 5.9% net for the year ending December 31, 2016, shy of the 6.8% return of the Passive Policy Portfolio, while LTIP's 3-yr and 5-yr relative performance was notably better than the respective passive benchmark returns.

### LTIP Performance and Spending (pg 7)

LTIP's average annual net returns of 5.8% and 7.5% for the last 10- and 20-year periods, respectively, have generally enabled LTIP to attain inflation-adjusted returns in excess of spending, achieving long-term intergenerational equity.

### LTIP Liquidity (pg 8)

With nearly one-half of assets convertible to cash in a matter of days, the LTIP maintains adequate liquidity to satisfy anticipated cash requirements.



5-Year LTIP Facts and Figures

		– Annual Pe	riods Ending	December 31	
	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>
Investment Performance					
Endowment <sup>1</sup>	5.9%	1.1%	7.6%	14.2%	14.0%
(annualized net returns)					
Market Values (\$ millions)					
Endowment <sup>1</sup>	2,443.0	2,340.3	2,310.1	2,120.7	1,859.0
Similar Funds <sup>2</sup>	<u>129.9</u>	<u>115.2</u>	<u>108.3</u>	<u>109.7</u>	<u>94.3</u>
Endowment and Similar Funds	2,572.9	2,455.5	2,418.4	2,230.4	1,953.3
Gifts & Other Additions (\$ mils)	68.8	122.4	120.1	87.3	52.6
Annual Spending (\$ mils)	97.1	95.1	79.6	73.1	71.2
Non-Endowed Funds <sup>3</sup>	1,306.7	1,286.8	1,121.3	1,081.0	717.3
Total LTIP <sup>4</sup> & Similar Funds	3,879.6	3,742.3	3,539.7	3,311.4	2,670.6

<sup>1)</sup> Endowment — donor-restricted gifts

### **Investment Market Returns for Calendar Years Ending 2016 and 2015**

The performance of major investment market indexes that impact Penn State University's Long-Term Investment Pool (LTIP) are illustrated on the previous page and discussed below for the calendar years ending 2016 and 2015:

- Equities: US Equities returned 12.0% and 1.4%, respectively, for the calendar years ended December 31, 2016 and 2015. Non-US Equities rebounded during Calendar 2016, returning 4.5% vs -5.7% for 2015.
- **Commodities:** The Bloomberg Commodities Index returned 11.8% in 2016, which was a marked improvement over the -24.7% return in 2015.
- **Fixed Income:** In Calendar 2016, the Bloomberg Barclay's US Aggregate Fixed Income index gained 2.6% outpacing bonds' 0.5% in 2015.
- **REITS:** Private Real Estate Investment Trusts continue a positive trend, returning 8.6% in 2016 versus 2.8% in 2015.

<sup>2)</sup> Similar Funds — deferred gifts and donor-restricted funds in transit to Endowment

<sup>3)</sup> Non-Endowed Funds earmarked for FAS 106 liability (employee post-retirement health care benefits) & President's Strategic Initiative Fund. These funds were phased in between 2009 and 2016.

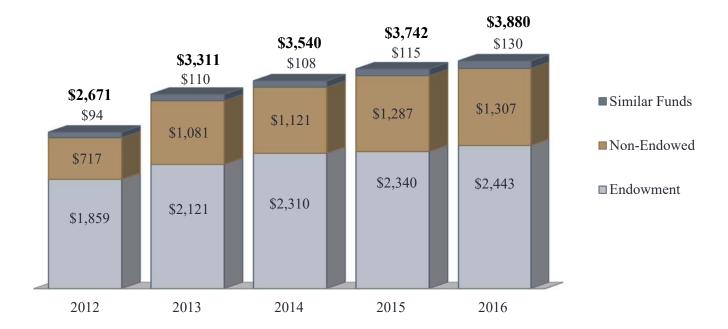
<sup>4)</sup> Commingled assets over which Penn State's Office of Investment Management (OIM) has investment responsibility, as approved by the Penn State Investment Council (PSIC), exclusive of Similar Funds

### **Long-Term Investment Pool Market Value**

As of December 31, 2016, Penn State's Long-Term Investment Pool was valued at \$3.75 billion, including non-endowed funds in the amount of \$1.31 billion that have been commingled into the LTIP. Non-pooled assets — charitable remainder trusts, charitable gift annuities, and other life income funds in addition to donor restricted funds — accounted for an additional \$130 million, shown below as Similar Funds, for a total \$3.88 billion in assets.

### **Long-Term Investment Pool Market Value Calendar Years Ending December 31**

(\$ millions)



### **Endowment Assets**

Endowment assets increased by \$102.7 million during Calendar 2016, from \$2.34 billion to \$2.44 billion. As seen in the table on page 2, endowed gifts added over the last 12 months totaled \$68.8 million, while endowment program support (spending) amounted to \$97.1 million. Current endowment spending has been approved by the Board of Trustees to remain at an annual rate of 4.5%.

### **Long-Term Investment Pool**

Excluding \$130 million in similar funds that are managed externally, the market value of the Long-Term Investment Pool (LTIP) totaled \$3.88 billion as of December 31, 2016. In addition to endowment assets of \$2.57 billion, LTIP includes \$1.31 billion in nonendowed assets that have been commingled for investment purposes, but are restricted to the ongoing funding of the University's FAS 106 liability. Also included in LTIP is \$200 million for the Presidents' Strategic Initiative Fund.

The remainder of this report will focus on the Long-Term Investment Pool, including all commingled funds.

### Review of Investment Markets in Calendar 2016

In the table below, representative financial market returns are listed for 1-, 3-, and 5-year periods covering four major asset categories: Global Equities (divided into US Equities and Non-US Equities), Fixed Income, Commodities, and Private Capital. The performance of investment markets that impact Penn State University's Long-Term Investment Pool (LTIP) is discussed below

nualized Percentage Returns as of December 31, 2016	1 Year	3 Years	5 Years
Global Equities U.S.			
S&P 500 Index (US Large Cap Equities)	12.0	8.9	14.7
Russell 3000 Index (Total US Equities)	12.7	8.4	14.7
Russell 2000 Index (US Small Cap Equities)	21.3	6.7	14.5
Global Equities Non-U.S.			
MSCI All Country Ex-U.S. Index (ACWI Ex-US)	4.5	-1.8	5.0
MSCI Developed Non-U.S. Index (EAFE)	1.0	-1.6	6.5
MSCI Emerging Markets Index (EME)	11.2	-2.6	1.3
Fixed Income			
Bloomberg Barclays US Aggregate Bond Index	2.6	3.0	2.2
Bloomberg Barclays US Treasury TIPS Bond Index	4.7	2.3	0.9
Citigroup World Global Bond Index (WGBI)	1.6	-0.8	-1.0
Commodities			
Bloomberg Commodities Index	11.8	-11.3	-9.0
Gold (SPDR GLD)	7.8	-2.0	-7.8
Private Capital (9/30/16)			
Venture Capital (Cambridge Associates)	2.2	15.9	14.1
Private Equity (Cambridge Associates)	8.7	10.8	13.1
Private Real Estate (Cambridge Associates)	9.2	11.3	11.2

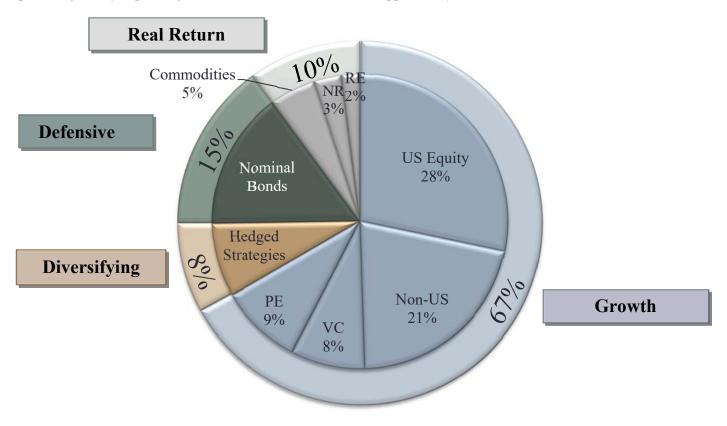
### **Market Notes:**

- Global Equities: US Equities recorded double-digit advances for the calendar year, as well as the 5-year period ending December 31, 2016. US Equities continued to outpace non-US Equities over all three periods. Non-US Equities in total were up 4.5% in Calendar 2016, with Developed Markets (EAFE) returning 1.0% and Emerging Market Equities (EME) returning 11.2%.
- **Fixed Income:** In Calendar 2016, US Aggregate Fixed Income gained 2.6%, while US TIPS returned 4.7%, and Citigroup WGBI posted 1.6%.
- Commodities: The Bloomberg Commodities Index climbed an impressive 11.8% for the year, while 3- and 5- years still posted declines, at -11.3%, and -9.0% respectively. Gold's 7.8% return struck a comfortable middle ground among commodities overall.
- **Private Capital:** Private Real Estate, Private Equity, and Venture Capital slowed to single digit returns for the last year, but continued with gains for each of the 3- and 5-year periods ending 9/30/2016, which is the latest reporting period for non-marketable investments.

On the following two pages, LTIP's broad and detailed asset mix is discussed, followed by the composite investment returns for each of the four above asset categories compared to corresponding LTIP returns.

### **Investment Diversification and Asset Mix**

Asset allocation is a primary determinant of investment performance and risk control. LTIP's asset mix combines four strategic investment themes – growth (economic-sensitive), diversifying (low sensitivity to economic/investment market fluctuations), real (inflation-sensitive), and defensive (counter-sensitive to market turbulence) – to maximize potential returns, while tempering volatility. In the graph below, the four macro investment themes are shown in the outermost ring with their December 31, 2016 allocations of 67%, 8%, 10%, and 15%, respectively. Over time, the percentages vary depending on market trends and allocations approved by the Penn State Investment Council.



At a more granular level, LTIP's diversified portfolio includes a variety of traditional asset classes that comprise the four strategic themes, as shown by the slices within the inner pie (percentages are rounded):

- Growth (67%): 28% in publicly-traded US and 21% in publicly-traded non-US common stocks, as well as 8% in venture capital (VC), and 9% in private equity (PE) funds.
- Diversifying (8%): 6% in credit-related, and 2% in equity-related strategies.
- Defensive (15%): 5% in investment grade bonds, 4% in global bonds, and 5% in short-term investments.
- Real Return (10%): 2% in real estate (RE), 3% in natural resources (NR), and 5% in commodities.

The above grouping by investment themes provides insight to the functional role of the various asset classes within LTIP. The relative allocations represent comparative long-term return expectations, tempered by risk-mitigating assets to offset capital market turbulence. Hence, the approximately 67% currently allocated to growth is intended to take advantage of the capital appreciation and purchasing power protection historically offered by higher returning equity investments. Given the sometimes volatile nature of equity returns, 15% is invested in defensive (fixed income) and 8% in various hedged strategies to provide stability and diversification during times of market turbulence and uncertain economic conditions. In addition, 10% of LTIP is allocated to real return in order to help neutralize inflationary episodes.

### LTIP Performance Compared to Passive Portfolio

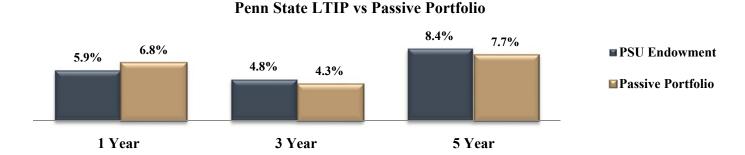
The Long-Term Investment Pool's investment performance is measured against a hypothetical *Passive Portfolio*, comprised of four broad asset categories: Public Equities (55%), Private Capital (20%), Fixed Income (20%) and Commodities (5%). This passive portfolio serves as a blended benchmark against which the performance of the actual, actively-managed, and more broadly-diversified LTIP portfolio is monitored. This approach represents practical implementation of investable targets based on the foregoing conceptual, strategic themes.

These categories are very broadly defined: the equity and fixed income categories include hedge funds whose strategies are equity and/or credit oriented, respectively, while commodities include hedged and long-only strategies. The custom index for Private Capital includes representative private equity, venture capital, and private real estate partnership time-weighted returns.

In the table below, the respective static weightings of the four asset categories are associated with corresponding market benchmarks and their respective index returns to generate *Passive Portfolio* returns over 1-, 3-, and 5-year horizons for the calendar years ending 12/31/2016:

			Beno	chmark Ret	turns
Asset Class	<b>Benchmark</b>	Weighting	1 Year	3 Years	5 Years
Public Equities	MSCI All Country World	55%	7.9	3.1	9.4
Total Private Capital	Custom Index	20	6.9	12.4	12.8
Fixed Income	Bloomberg Barclays Agg Bond	20	2.6	3.0	2.2
Commodities	Bloomberg Commodities	<u>5</u>	<u>11.8</u>	<u>-11.3</u>	<u>-9.0</u>
Total Passive Portfolio (no	et)	100%	6.8%	4.3%	7.7 %

Note: The weightings used above are assumed to be constant over the entire 5-year period.



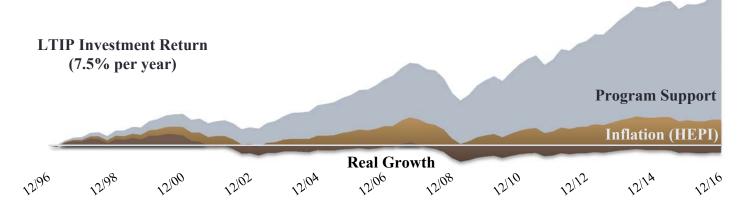
As shown above, Penn State's LTIP returned 5.9% net for Calendar 2016, lagging the 6.8% return of the Passive Portfolio over the trailing 12 months. For the 3- and 5-year periods, the Long-Term Investment Pool's annualized returns of 4.8% and 8.4% outpaced the Passive Portfolio's returns of 4.3% and 7.7%, respectively. These returns indicate that, over the long term, LTIP was able to outperform passive indexes through selection of active investment managers and broad diversification of assets as shown on the previous page.

The Passive Portfolio provides a guidepost to help achieve long-term results that are consistent with the twin objectives of purchasing-power preservation, along with stable LTIP spending. LTIP's performance varies from the *static* Passive Portfolio as a consequence of several factors, including, but not limited to, the timing of cash-flows, tactical shifts in asset mix, and individual investment manager performance and turnover

**Annualized** 

### **Long-Term LTIP Growth and Spending**

In the chart below, the top line represents the cumulative net investment return of the Penn State Long-Term Investment Pool (LTIP) over the last 20 years, averaging 7.5% per year. The layers illustrate investment returns apportioned to program support (spending, as previously discussed on pages 2 and 3) and inflation (as measured by the Higher Education Price Index [HEPI]), with the remaining residual representing net, real (inflation-adjusted) growth.



### **Cumulative 20-year Returns**

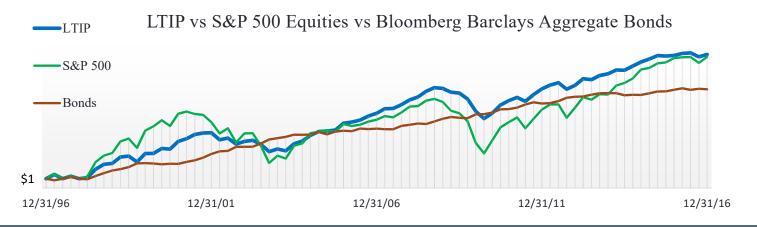
LTIP's primary investment goal is to earn a long-term rate of return sufficient to support *current* spending <u>and</u> to preserve *future* purchasing power. This two-pronged objective is illustrated by apportioning total nominal (i.e., before adjusting for inflation) investment return (topmost line above) into discrete layers, representing program support and inflation, along with a residual layer corresponding to net *real* growth.

Because investment returns periodically fluctuate (illustrated by the jagged topography above), real growth, which nets out program support and inflation from total LTIP return, oscillates around the horizontal line, which represents "intergenerational equity". While market fluctuations have caused real growth to swing positive and negative across the horizontal line, intergenerational equity has largely been achieved.

### 20 Years of LTIP Growth Relative to Equities and Bonds

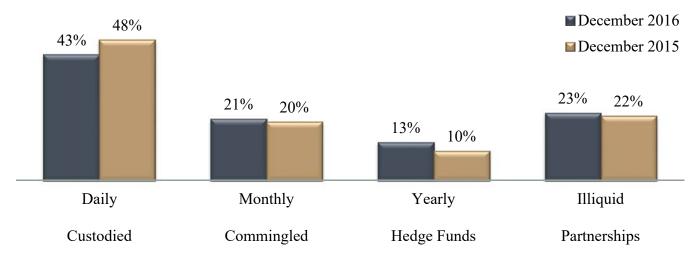
The top line of the chart above, representing the growth of \$1 compounded at LTIP's average annual return of 7.5% for 20 years ending 12/31/2016, is compared in the chart below (LTIP- thick blue line) to the same period cumulative returns for the S&P 500 Index (S&P 500- green line) and Bloomberg Barclays Aggregate Bonds (BBAGG- brown line).

As shown, the 20-year cumulative growth for LTIP's diversified portfolio has essentially matched that of the S&P 500 Index with less-pronounced oscillations, indicating that LTIP was less volatile than equities over the same period. Both have clearly outpaced the growth of \$1 invested in bonds (BBAGG). LTIP's return also outpaced the blended return of a hypothetical balanced portfolio comprised of 70% equities and 30% bonds, as represented on the previous page.



### **Long-Term Investment Pool Liquidity**

Financial crises are characterized, among other considerations, by lack of liquidity, as institutions are unable to meet current obligations due to lack of available cash. In the graph below, LTIP assets are classified according to how quickly they can be converted to cash. Securities listed on exchanges or traded over-the-counter, and held in custody as separately managed accounts, can be liquidated on a daily basis (typically 1- and 3-day settlement for bonds and stocks, respectively). Commingled portfolios, i.e., collectively-managed investment pools of publicly-traded securities, are eligible for purchase or sale at least once a month. Hedge fund partnerships are typically open for at least partial liquidation once a year, with a few having more and/or less frequent liquidity "windows." Non-marketable partnerships are considered illiquid primarily because of the inability of limited partner investors to transact at will.



Observations from the blue (left) bars of each of the four pairs above for the period ending December 31, 2016:

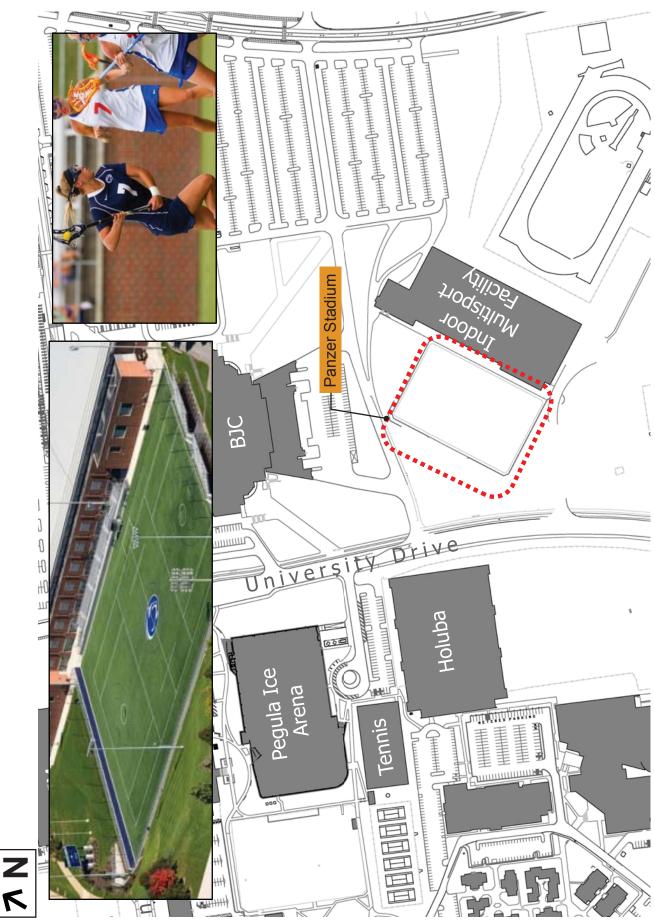
- 43% percent of LTIP assets are invested in stocks and bonds that can be converted to cash in a matter of days. Of this, 6% is currently held in money market accounts and short-term fixed income investments.
- Commingled portfolios, primarily non-US public equities, comprise 21% of LTIP assets and can be converted to cash within 30 days or, in some cases, sooner. Commingled investment structures are used for non-US holdings in lieu of registering in individual countries where foreign companies are headquartered.
- 13% of LTIP assets are invested in various diversifying hedge fund partnerships and can be at least partially converted to cash annually or, in many cases, quarterly.
- 23% percent of LTIP assets are invested in more than 120 different partnership funds or other non-marketable investments that are considered illiquid because underlying holdings are typically not readily marketable or the timing of future realizations into cash distributions is uncertain.

The foregoing indicates that LTIP maintains sufficient liquidity to satisfy anticipated cash requirements.

### **Liquidity Trends**

As shown above, the liquidity profile of Penn State's LTIP has shifted somewhat from the end of Calendar 2015 (tan bars) to the end of Calendar 2016 (blue bars). Daily liquidity dipped slightly to 43% with increased short-term investments, while monthly liquidity increased from 20% to 21%. Yearly liquidity rose to 13%, while illiquid non-marketable alternative assets increased from 22% to 23%. Over time, stepped up commitments to partnerships will gradually result in larger representation by non-marketable investments.

## **Jniversity Park**



(Appendix III) - 1 -

5/5/2017 G&LRP

### Order VII, Section 9(a) Current Language

(a) The Chair of the Board of Trustees or the President of the University shall be authorized to invite non-voting faculty representatives, non-voting student representatives or other constituent representatives to attend and participate in the meetings of standing committees, subcommittees and of special committees, except executive sessions. The representatives shall be selected by the Chair of the Board of Trustees in such manner as he/she deems appropriate.

### Order VII, Section 9(a) Proposed Language

(a) The Chair of the Board of Trustees shall invite a faculty representative and a student representative to serve as non-voting members of each standing committee (other than the Committee on Compensation). The Chair of the Board of Trustees may invite other individuals to serve as non-voting members of standing committees (other than the Committee on Compensation), as determined in his or her discretion to be appropriate or advisable. The Chair of the Board of Trustees may invite individuals to serve as non-voting members of subcommittees or special committees, as determined in his or her discretion to be appropriate or advisable. A non-voting member of any standing committee, subcommittee or special committee may attend executive sessions of such standing committee, subcommittee or special committee at the discretion of the Chair of such standing committee, subcommittee or special committee. Representatives of student and faculty groups shall elected in consultation with each respective group.