Meeting Agenda
State College Borough Design Review Board
July 19, 2016
Room 241 / 10 a.m.

I. **Call To Order**

II. **Roll Call**

III. **Approval Of Minutes**

IV. **Chair Report**

V. **Public Hour**

VI. **Land Development Plan**

A. Final Plan New Academic Building, Replacement Of Fenske Lab For Chemical Engineering And Biomedical Engineering, UPD Sub District 5 Zoning District, The Pennsylvania State University, Owner Sweetland Engineering, Engineer And HOK, Architect

VII. **Official Reports And Correspondence**

VIII. **Adjournment**

Documents:

Complete DRB Agenda Packet 7-19-16.pdf

Meeting Agenda
State College Borough Design Review Board
July 19, 2016
Room 241 / 10 a.m.

I. Call to Order

II. Roll Call

Richard Bryant, Chair
Bond Reinhardt, Vice-Chair
Richard Devon
Alexandra Staub
Vacant

III. Approval of Minutes - *June 7, 2016 and June 21, 2016*

IV. Chair Report

V. Public Hour - Hearing of Citizens

VI. Land Development Plan

A. Final Plan New Academic Building, Replacement of Fenske Lab for Chemical Engineering and Biomedical Engineering, UPD Sub district 5 Zoning District, The Pennsylvania State University, owner Sweetland Engineering, Engineer and HOK, Architect

The new Chemical Engineering and Biomedical Engineering Building will be constructed on the present site of Fenske Laboratory. The project will result in 194,500 square foot facility, providing programmable space to meet the growing needs of two departments.

The site will be serviced by proposed utility lateral extensions to existing PSU utility infrastructure.

Walkway extensions and connections, site planting and site lighting have been designed to extend and complement existing PSU amenities. Site work will include new concrete walks, porches, handrails, stairs, repair of lawn damaged during construction and utility infrastructure installation and connection. The proposal also includes the protection of existing major trees to be preserved, the removal of selected trees and shrubs surrounding the buildings to accommodate construction.

Attached to the agenda is an aerial view of the development site and select plan sheets on **pages 14-21**.

Design Review Board Action: This is a final plan. Comments or a recommendation to staff for approval may be made on the plan but are not required.

VII. Official Reports and Correspondence

VIII. Adjournment

Meeting Minutes
State College Borough Design Review Board
June 7, 2016

The State College Borough Design Review Board (DRB) met on Tuesday, June 7, 2016 in the State College Borough Municipal Building, 243 South Allen Street in Room 241. Chairman Rick Bryant called the meeting to order at 10:00 a.m.

Members present

Rick Bryant, Chairman; Richard Devon, Sandra Staub, and Bond Reinhardt.

Others Present:

Anne Messner, Planner/Zoning; Sarah Smith, Staff Assistant; Mark Saville, Sweetland Engineering; John Fisher, Sweetland Engineering; Steve Kirsch, Sweetland Engineering; John Sepp, PennTerra Engineering; Tom Flynn, Penn State University; Steven Watson, Penn State University; Margaret Gray, Penn State University; Tom Chinnock, Shepley Bulfinch; Dan Hrankowsky, CA Ventures; Susan Venegoni; Nate Watts, Penn Terra Engineering; Cassandra Lemon, Shepley Bulfinch; Michael Misselwitz, PennTerra Engineering; Mark Huncik; and David Stone.

Approval of Minutes

Mr. Devon made a motion to approve the April 5, 2016 minutes as submitted and Mr. Reinhardt seconded the motion. The vote was unanimously in favor.

Chair Report

Chairman Bryant noted that since Mr. Wheeler had resigned from the Board, there would need to be a new Vice-Chair. He nominated Mr. Reinhardt for the position and Ms. Staub seconded the nomination. The vote was unanimously in favor.

Public Hour

No one in the audience wished to discuss items not on the agenda.

Sign

Replacement Sign, University Drive Veterinary Hospital, 1602 University Drive, CP2 Zoning District

Ms. Messner requested that the Board review the replacement sign for comments and/or questions.

Boards' comments included:

- Suggested including the street number and/or address on the sign.

- Thought the red cross that was used for the 't' makes the sign confusing and that changing it to a normal 't' would make it clearer.

Chairman Bryant made a motion to approve the sign with the Board's comments and Mr. Reinhardt seconded the motion. The vote was unanimously in favor.

Ms. Messner noted that she would forward the Board's comments to the Applicant.

Land Development Plan

Final Plan Agriculture Engineering Replacement Building and renovation of Klauder Building, UPD Subdistrict 5 Zoning District, The Pennsylvania State University, owner Sweetland Engineering and Associates, Engineer.

Mr. Saville's highlights included:

- The initial Klouder building would be preserved while the back portion of the building would be demolished and rebuilt to increase capability.
- The project will preserve the existing trees and landscaping.
- The parking lot was being repurposed and the overhead doors into the building would be moved to the parking lot area to minimize pedestrian/equipment conflicts.
- The back of the first floor elevation would be raised to help deal with a storm water issue.
- The existing building footprint could not be extended due to significant utility corridors surrounding the building so the footprint would actually be slightly smaller so as to not disturb those utilities.
- The lighting plan for the project should not allow for any dark areas in order to increase pedestrian safety. There would be cameras at the North Hall project and at the building entrances as well.
- There would be some elevation differences in the first floor between the Klauder Building and the new addition.
- The project would address all ADA accessibility requirements.
- The second floor would have the same elevation across the Klauder building and the new addition and would include coordination of natural light within building.
- The third floor was planned to be mostly mechanical, but with some lab spaces.
- There was one glass lantern stairwell.

Boards' comments included:

- Inquired if there was an entrance at the stairwell. (Mr. Saville responded that there was one on the corner)
- Inquired about LEED status. (Mr. Saville noted that the project would be updating the rain gardens to allow for more efficient function)
- Approved of the clean roofline without the mechanical constructions sticking out.

Ms. Messner stated she would summarize the Board's comments to be a part of the plan review letter to the applicant.

Land Development Plan

Final Plan, 532 and 538 East College Avenue RISE at State College, Commercial Zoning District with Collegiate Overlay, CA Ventures, owner, PennTerra Engineering Inc., Engineer, Shepley Bulfinch, Architect.

Mr. Chinnock's and Mr. Hrankowsky's highlights included:

- There was not many changes from the preliminary plan, but they had instituted the change from the Design Review Board to add more glass to the structure.
- The project had added a grocery store component to the first floor and part of the second floor. This will coordinate with the residential component of the second floor. The first floor window space will have produce displays. The second floor would be a café. The loading dock for the store was planned to be on Calder Way.
- The project had moved the main lobby and added a secondary lobby on south side of building.
- There was some difficulty with the grade of the property and there was a seating area added on College Avenue to help level out some of that grade change.
- The parking situation had changed to be all below ground with some spaces being removed, but the project would still be meeting the parking requirements.
- The loading dock looked small, but it was designed by a grocery store designer and would be sufficient to handle the store's needs.
- There is an interior room to hold the refuse which wasn't moved, but there was an additional access door added to the room to provide access from the grocery store.
- There will be a bike parking area in the lower level parking, one space for ADA van parking, and additional ADA spaces included in the parking.
- The second floor retail would include a covered patio area with seating. It would be covered by the building, but open to the outside.
- The second floor residential would include a fitness center, a yoga room, showers, lockers, an outdoor fitness area, a spa, and a spa deck. There were still some areas to be determined.
- There would be a clear cordoning off between the public areas and the private areas on the second floor including a two sided fireplace.
- The plan to split the lobby in two locations was included to separate the commercial and residential areas.
- The dumpsters for the property would be in the interior room with the loading dock being closer to the grade of the alley.
- The third and fourth floors were planned to be for graduate students. There were two stair cores.

- The third floor plan included areas open to the outside and below. The corner units were lofted units with all other units being 1 or 2 bed units.
- The upper floors were 4 bedroom units.
- The roof plan included the mechanical units which would be pushed to the west side towards the interior of the building. These areas would be fully screened with plans to include ways to throw sound up or trap it.
- The building included variations in façade and different material changes including metal panel, resistance board, glass and fibrous cement product. There would be glass for the grand staircase and for the grocery area.
- The residential areas would have paneling, glass, and possibly metal panel or a type of privacy glass for the bedrooms.
- The utility service would be on the south elevation which would be metal panel and extends up higher in order to hide some of the mechanicals.
- The upper sections that might be visible from downtown would be paneled in a wood grain material.

Boards' comments included:

- Inquired where the loading dock would open into. (It opens into the grocery area. The loading area would allow for a semi to fit in completely. There would be steps and a lift inside the loading area.)
- Inquired if there would be charging stations in the parking areas. (This was not shown on the plan, but they were thought to be included since the property was planned to be LEED silver.)
- Inquired if there would be cameras at the property. (There were cameras planned.)
- Inquired about the makeup of the grocery store and noted that it would be in an area of town that did not have access to a grocery store. (The store was geared towards the downtown with a modern concept, fresh produce, and it would be geared towards a student population).
- Inquired what the ceiling height was on the first floor. (14 feet)
- Inquired where the mechanicals would be located and expressed concern about the sound for nearby residential units. (Portions would be located in the head space in ramp going down into the garage and the central mechanicals would be the top of the building.)
- Inquired if there would be a net decrease in imperviousness for the site. (There might be a slight decrease and they were reviewing possibilities for rain water harvesting.)
- Noted that Calder Way was being developed to be more upscale and that this site would fit in well with that shift in dynamic.
- Inquired about the layout of the higher floors and expressed concern that it might be confusing to get around the floors. (Explained that a person can get to all of the units on the upper floors, but the person might have to go all the way around.)
- Inquired about rates on the upper floors due to the better views. (The upper floors would be market rate.)
- Inquired if the wood grain was vertical. (The grain was vertical.)

- Expressed concern that the wind might make planned the outside space on the second floor unpleasant. (Explained that there's some plantings that should shield from some of the winds).
- Voiced concern that the glass corner would be too transparent.
- Expressed appreciation that it breaks with traditional tone and made it a gateway building.
- Inquired if there were any barriers that they encountered when working on the project. (Stated that the overlay ordinance gave guide to how to get to the building and enjoyed working with the incentive programs which allowed them to include things such as underground parking, LEED, etc. that would normally be cost prohibitive.
- Inquired about what kind of lighting was being used. (Low wattage and LED.)
- Inquired about heating and cooling. (This was still being discussed with possibly a water source or heat pump driven by electricity.)
- Expressed appreciation of the way that the project acknowledged pedestrian activity on Calder Way.
- Expressed appreciation for the interesting design elements and good functionality.
- Encouraged additional thought about the windows in the residential areas and adding a screening layer for privacy.
- Inquired if the windows were operable. (Portions of the windows are operable in the lower sections for venting. There would be a mechanical system that would draw interior air out. They were researching frosted glass or a roller shade.)
- Expressed concern that since the glass is on the North and East sides of the building, it might lose heat in the glass units.

Comments from community members:
Mr. Huncik inquired if there would be composting on site and expressed concern about the odors that would be produced by composting or storing refuse inside of the building. Mr. Hrankowsky stated that he did not believe there was any plan to compost. He also noted that he did not know the protocol, but he felt that they would schedule pickups frequently enough that there would not cause an odor problem. Mr. Huncik inquired how the refuse trucks would access the dumpster and Mr. Hrankowsky explained that it would be accessed by a loading area just to the West of the loading dock and that the refuse area was at grade and set back from the alley to allow space for the trucks.

Mr. Huncik inquired where a second truck would go if two vehicles would be on the premises at the same time and Mr. Hrankowsky stated that the deliveries would be coordinated to ensure there would not be that situation, but there was enough space that a second truck could pull into the refuse area to wait until the loading dock was available. Mr. Huncik noted that the fact that Calder Way has two way traffic behind the building could cause traffic conflicts.

Mr. Huncik inquired about the parking spaces in the underground garage and how a customer would know if there was a designated retail space was available prior to driving into the garage. Mr. Hrankowsky explained that they were still exploring options

for that issue and suggested possibly having an attendant or a digital sign or a drop arm to get a ticket. He also stated that this was an ongoing discussion as they were still negotiating with the tenant. Mr. Huncik inquired about the parking for the employees of the store and suggested that consideration be given for bus stop or bus unloading areas for one of the retirement community buses.

Mr. Huncik noted that there were large windows along College Avenue and inquired how those windows would not become full of large advertisements, beverage signs, etc. Mr. Hrankowsky explained that this would not be allowed in the lease, but he also noted that the tenant was very serious about keeping the store front clean without signs.

Mr. Huncik noted that there seemed to be more 3-4 bedrooms units than 1-2 units and that this may not be what would be needed with inclusionary housing. He stated that if the inclusionary housing would target single parent families then they may not need bigger units which could be unaffordable. He also noted that it might be beneficial to have some common area for the children. Mr. Hrankowsky explained that there would be a quantity of 1 and 2 bedroom units which would be declared as inclusionary housing. These units could be used for a recent graduate, or a young family, or a single family.

Mr. Huncik inquired about the trend that rooms become football rentals, short term rentals, or event weekend rentals and Mr. Hrankowsky explained that this would be precluded through the lease.

Ms. Venegoni inquired where the inclusionary housing units would be located within the building. Mr. Hrankowsky explained that there did not need to be a permanent location for the units, they just to keep a certain number and they needed to be spread out throughout the floors.

Ms. Venegoni inquired if the units would be rented by the apartment or by the bed and Mr. Hrankowsky responded that the units would be rented by the bed.

Mr. Stone inquired about how the property would be controlled regarding signage posted in the windows by the residents. Mr. Hrankowsky explained that would be stated in the lease and that management would be required to ensure that any signs were removed quickly.

Mr. Stone inquired about using less glass or making it more reflective and Mr. Hrankowsky explained that the type of glass had not be selected prior to the renderings and that management would choose the best product for the use.

Mr. Stone inquired about the increased pedestrian traffic in the area due to the addition of the grocery store to the project. He raised a concern about the possible need for additional traffic studies due to this change. In addition, he expressed a concern about the loss of parking and inquired as to how many parking stalls would be reserved for the grocery store. Mr. Hrankowsky responded that there would be approximately 13 spaces, but that could possibly be expanded by a contract with the public garages if the traffic to

the site would require additional parking. Mr. Stone expressed concern about people parking on Foster Avenue to visit the store.

Mr. Stone inquired if the simulated wood could be a darker color which might be a richer color. He stated that the residents might have liked to have expressed their opinions on what color palette would work best in the area. Mr. Hrankowsky noted that the simulated wood was an accent material and there was not much of it.

Mr. Hrankowsky inquired about procedures as the project moved forward and Ms. Messner explained that the Final Plan would be presented to the Planning Commission on June 23 for approval. The plans would not need to be reviewed by the Design Review Board again unless there were substantial design changes and those should be submitted to Ms. Messner for her to decide if there was a need to take the plans back to the Board.

Official Reports and Correspondence

Ms. Messner noted that there was a vacancy in the Historic Resources Commission and requested that the Board encourage anybody interest parties to apply.

Adjournment

With no further business to discuss, this meeting was adjourned at 12:31 p.m. by a motion from Mr. Reinhardt.

Respectfully submitted by,
Sarah E. Smith, Staff Assistant

Meeting Minutes
State College Borough Design Review Board
June 21, 2016

The State College Borough Design Review Board (DRB) met on Tuesday, June 21, 2016 in the State College Borough Municipal Building, 243 South Allen Street in Room 241. Chairman Rick Bryant called the meeting to order at 10:01 a.m.

Members present

Rick Bryant, Chairman; Richard Devon, Sandra Staub, and Bond Reinhardt.

Others Present:

Anne Messner, Planner/Zoning; Alan Sam, Arborist; Jenna, Planner; Sarah Smith, Staff Assistant; Chad Stafford, PennTerra Engineering, Inc.; Robert Khayat and other interested parties.

Approval of Minutes

Mr. Devon requested that the approval of minutes be deferred to the next meeting due to some technical difficulties with retrieving them online.

Chair Report

Chairman Bryant had nothing to report.

Public Hour

No one in the audience wished to discuss items not on the agenda.

Sign

Replacement Sign, Bagel Crust, 460 Westerly Parkway, CP3 Zoning District

Ms. Messner requested that the Board review the replacement sign for comments and/or questions.

Boards' comments included:

- Inquired if the bush in the picture was going to be trimmed down because it covered a good portion of the sign. (There was planned work for landscaping and updating some ADA accessibility concerns.)
- Suggested enhancing the logo in some way.
- Suggested adding the address to the sign.

Mr. Reinhardt made a motion to approve the sign with the Board's comments and Mr. Devon seconded the motion. The vote was unanimously in favor.

Land Development Plan

705 South Atherton Street, Penn Mobil Reconstruction and addition, Final Plan, CP-3 Zoning District, PennTerra, Site Engineer, Lichty Engineering, Building Engineer

Mr. Stafford's highlights included:

- Penn Mobil facility which burned down and the applicant had previously presented a Preliminary Plan to the Design Review Board and Planning Commission. The Final Plan took into account suggestions from the Arborist, the Zoning Officer and the Borough Engineer, but there were few changes to the original submission.
- The building site will be approximately the same size with a second story added on.
- The parking areas will be identified and will comply with parking requirements.
- At the previous meeting, the Design Review Board had requested a change of the color scheme to a brighter color and away from a residential color palette. In addition, the Board had requested that the faux second floor balcony and canopy be removed. The Applicant had updated his plan to incorporate those requests.
- The Borough Arborist had requested that the property owner try to recreate islands of plants. The property owner intended to keep two islands around the corner of the property, but was unable to create new ones along the road due to a number of problems.

Boards' comments included:

- Inquired as to what the difference was between the dark areas and light areas on the plans. (The dark areas were where the pavement would need to be milled up, graded, and then repaved.)
- Inquired about the plant islands along the road and if they would make it too difficult to get vehicles into the service bays. (Mr. Stafford explained that the depicted plant islands were added at the Arborists requests, but only the ones at the corner would be kept in the final renovations.)
- Suggested a façade greenery system such as a vertical wall system. (Additional greenery was always in the plans for the property prior to the fire, but salt and snow at the corner made it difficult to maintain.)
- Suggested making the property more eye catching to make it more noticeable so that drivers might better see the vehicles on Hamilton Avenue.
- Inquired if there had been any consideration for requesting a traffic light at the intersection. (It had been requested previously due to the number of accidents, but it was denied by PennDOT due to a number of reasons.)
- Inquired if the impervious space would be increased. (The impervious material would be slightly reduced to add a little additional green space.)

Mr. Sam inquired about putting grass in all the way around the corner and Mr. Khayat stated that there was not enough space at the corner.

Mr. Stafford stated that he had asked the Borough Engineer for a review of the stormwater and requested that Ms. Messner inquire about that review and have the Borough Engineer respond to them.

Official Reports and Correspondence

Borough Council (BC): Ms. Messner noted that there had been some feedback regarding the Corl Street Elementary School. BC discussed their thoughts and received public comments. Ms. Staub stated she thought that Corl Street Elementary School would be staying open. Ms. Messner noted that BC was going to draft a letter to the School Board to support keeping Corl Street Elementary School open.

Next, Ms. Messner explained that the Planning Department gave an update to BC regarding the Homestead Investment Program. She stated that the Borough has acquired three properties with the Program. Of those three, one property was sold and two should be under contract soon. In addition, the Borough was negotiating to purchase an additional property. Ms. Messner stated that BC wanted an update on the costs associated with the Program, but Planning was unable to determine all of the costs since only one property had been all the way through the process. Ms. Messner noted that the potential candidate houses that had been looked at seemed to be mostly in the Highlands area.

Mr. Devon inquired about building homes in the Borough with shipping containers. Ms. Messner stated that there were not many empty lots or buildable lots within the Borough, but the concept should not be prohibited provided a location could be found for such a home.

Mr. Reinhardt inquired about the projects on West College Avenue and suggested that the Streetscape Improvements might encourage redevelopment in the area. Ms. Messner noted that the West College Avenue area had a very limited right of way for the Borough to include in the improvements. Ms. Staub inquired as to how closely the Borough was reviewing the Ferguson Township plans in that area. Ms. Messner explained that the Borough traditionally does not review plans in other townships. But had attended open houses and provided some initial feedback since the township requested it.

Planning Commission (PC): Ms. Messner stated that the PC would be reviewing the Land Development Plans for Penn Mobil, the Penn State Agriculture Engineering Building, and the RISE.

Ms. Messner inquired about availability for the July meetings. There was no quorum for July 5, so that meeting would be cancelled. There was a quorum for July 19, but Mr. Bryant was unable to attend. Ms. Messner requested that the members contact her as soon as possible if they found out they would not be able to attend on July 19. Ms. Staub reminded the Board that she would not be available from August 21 through January.

Mr. Sam noted that the Borough would be holding a meeting in the Greentree Neighborhood to discuss the possible development of a skate park in Orchard Park with the design potentially in 2017 and the construction potentially in 2018.

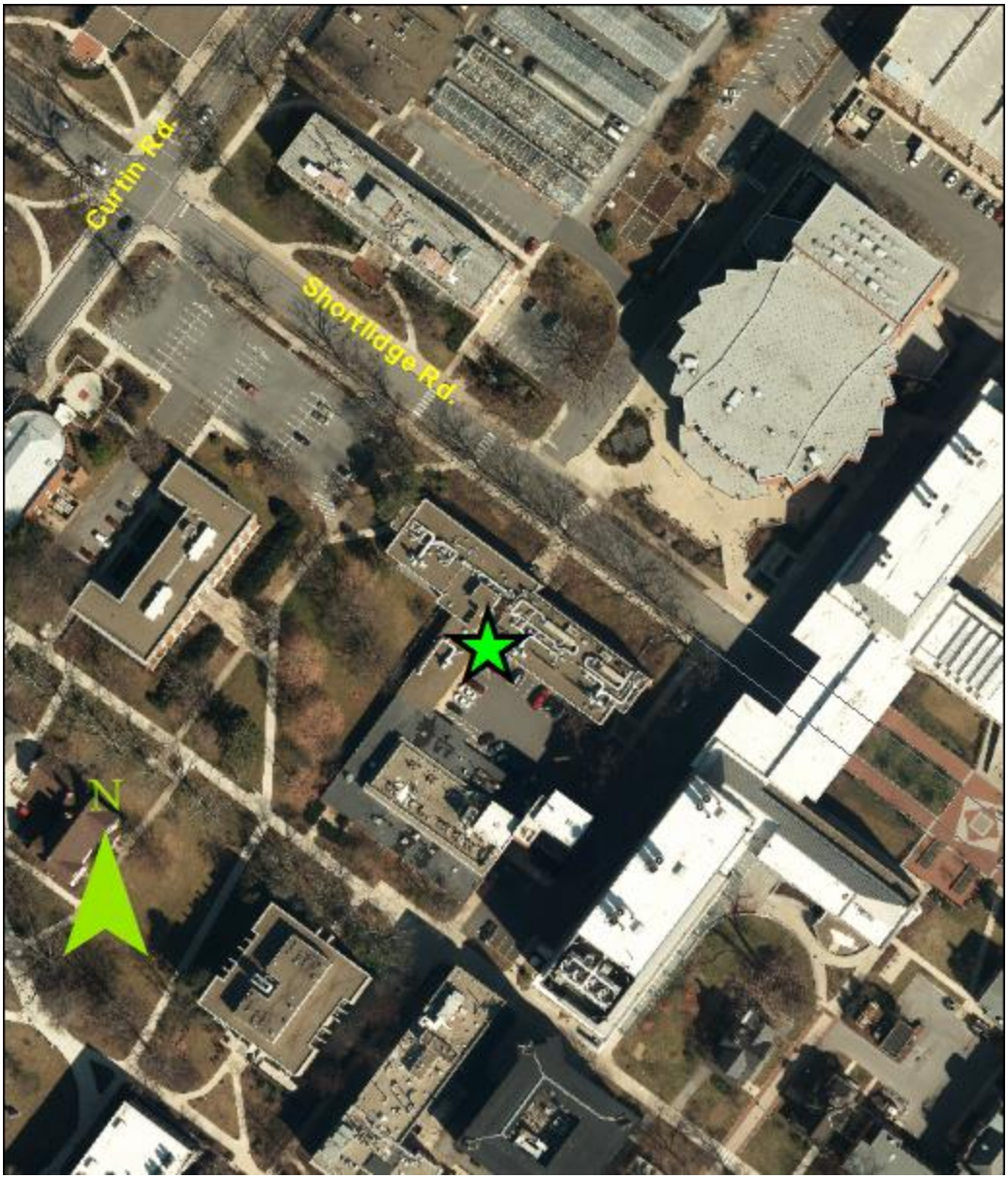
Mr. Sam also noted that he has been working on a potential Forest Restoration Plan in the Walnut Springs and Thompson Woods area. He stated that he would be meeting with neighborhood residents to discuss this effort as it would include many of the invasive plants that were in the area.

Finally, Mr. Sam noted that there were several park signs that were going to be refurbished soon as they were getting old.

Adjournment

With no further business to discuss, this meeting was adjourned at 10:36 a.m. by a motion from Mr. Reinhardt.

Respectfully submitted by,
Sarah E. Smith, Staff Assistant



Aerial View

PENNSYLVANIA STATE UNIVERSITY

Chemical Engineering and Biomedical Engineering Building

Pennsylvania State University

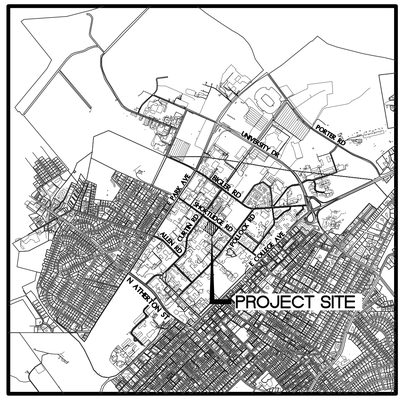
University Park, State College Borough, Centre County, Pennsylvania

Pennsylvania State University
207 Physical Plant Building
University Park, PA 16802–1118

Final Land Development Plan

May 16, 2016

PSU #00–04264.00



LOCATION MAP
SCALE: 1"=2000'

GENERAL NOTES:

1. NAME OF PROPOSED DEVELOPMENT: CHEMICAL ENGINEERING AND BIOMEDICAL ENGINEERING BUILDING
2. DATE OF APPLICATION FOR ZONING PERMIT: December 14, 2015
3. OWNER OF RECORD:
   THE PENNSYLVANIA STATE UNIVERSITY
   410 OLD MAIN
   UNIVERSITY PARK, PA. 16802
   SOURCE OF TITLE: D.B. "V", PG 22 (21–22)
4. UPI NUMBER: 36–006–,008C,0000 – STATE COLLEGE BOROUGH
5. ZONING DISTRICT: UPD SUBDISTRICT 5
6. EXISTING USE: CLASSROOMS
   PROPOSED USE: CLASSROOMS
7. MAXIMUM BUILDING HEIGHT: 90' WHERE STRUCTURE IS 250' OR GREATER FROM DISTRICT BOUNDARY.
   PROPOSED BUILDING HEIGHT (CHEMICAL ENGINEERING AND BIOMEDICAL ENGINEERING BUILDING)=89'–6"
8. NO FLOOD PLAIN OR WETLANDS EXIST ON OR NEAR THE SITE.
9. SANITARY SEWER SERVICE PROVIDED BY PENN STATE UNIVERSITY. PUBLIC WATER SERVICE PROVIDED BY PENN STATE UNIVERSITY.
10. UNDERGROUND UTILITY LOCATIONS, AS SHOWN ON THIS PLAN, ARE BASED ON ABOVE GROUND APPURTENANCES AND SUPPLEMENTAL INFORMATION SUPPLIED BY THE UTILITY PROVIDERS. NO LOCATION BY EXCAVATION WAS DONE.
11. THE PLAN WAS PREPARED IN ACCORDANCE WITH THE UNIVERSITY PLANNED DISTRICT REQUIREMENTS.
12. THE EXISTING FEATURES SHOWN HEREON ARE FROM FIELD SURVEY BY SWEETLAND ENGINEERING & ASSOCIATES, INC. COMPLETED IN NOVEMBER 2014. THE HORIZONTAL DATUM IS BASED ON NORTH AMERICAN DATUM 1983 (NAD83). THE VERTICAL DATUM IS BASED ON AN EARLY EPOCH OF THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29)–PSU DATUM.
    UTILITIES SHOWN HEREON ARE BASED PARTIALLY ON FIELD SURVEY, PROVIDED PSU UTILITY MAPPING.
13. EROSION AND SEDIMENT POLLUTION CONTROL APPROVAL FROM THE CENTRE COUNTY CONSERVATION DISTRICT IS REQUIRED PRIOR TO EARTH DISTURBANCE. ALL OF THE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE EROSION AND SEDIMENTATION CONTROL PLAN APPROVED FOR THIS PROJECT.
14. STATE COLLEGE BOROUGH AND THEIR AGENTS AND ASSIGNS HAVE THE RIGHT TO ENTER THE PROPERTY FOR THE PURPOSE OF INSPECTION OF THE STORMWATER FACILITIES.
15. LIGHTING WILL BE INSTALLED ACCORDING TO THE UPD ZONING DISTRICT GUIDELINES.
16. PRELIMINARY APPROVAL SHALL NOT AUTHORIZE CONSTRUCTION OR THE ISSUANCE OF ANY BUILDING OR ZONING PERMIT.
17. THE PROJECT DOES NOT REQUIRE A TRAFFIC IMPACT STUDY BASED ON THE FOLLOWING CRITERIA:
    – DOES NOT INCLUDE PARKING FACILITIES WHICH WOULD GENERATE 100 NEW VEHICLE TRIPS DURING THE PEAK HOUR.
    – DOES NOT INCLUDE THE ADDITION, REMOVAL, OR RELOCATION OF A STREET. IS NOT A NON–UNIVERSITY DEVELOPMENT.
18. PARKING SUMMARY:

CURRENT CONDITIONS:

20 REGULAR PARKING SPACES DESIGNATED FOR STAFF PARKING, 15 SPACES DESIGNATED FOR SERVICE PARKING, 1 SPACE DESIGNATED FOR ADA.

ANTICIPATED LOSS AND PARKING RESPONSE:

REGULAR PARKING SPACES WILL BE REDUCED FROM 20 TO 13, OUR PLAN WILL BE TO ABSORB THESE 7 PERMIT HOLDERS INTO THE YELLOW F/EISENHOWER DECK (TOTAL CAPACITY 1000 SPACES).

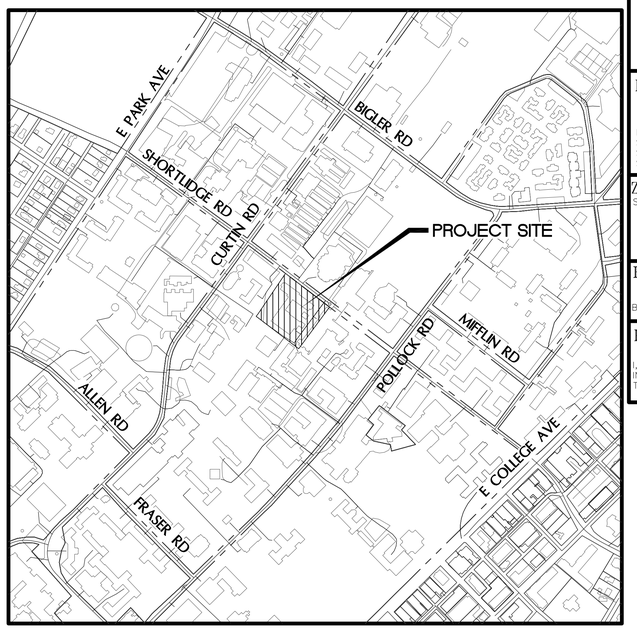
SERVICE SPACES WILL BE REDUCED FROM 15 DOWN TO 10 (ASSUMING THE 5 ALONG THE SOUTH SIDE OF THE DRIVE IS APPROVED). SERVICES SPACES ARE DESIGNED TO ALLOW ACCESS TO THE FACILITIES, AND ARE NOT ASSIGNED TO ANY ONE VEHICLE, 12 ADDITIONAL SERVICE DESIGNATED PARKING SPACES ARE LOCATED IN LOT BROWN C BEHIND OSMOND LAB, 9 ADDITIONAL SERVICE DESIGNATED PARKING SPACES ARE LOCATED BEHIND THE EISENHOWER AUDITORIUM, BOTH LOCATIONS WITHIN A SHORT DISTANCE OF THE TARGET BUILDINGS. IN ADDITION SERVICE DESIGNATED VEHICLES ARE AUTHORIZED TO USE ANY LEGAL SPACE THE EISENHOWER DECK. CUMULATIVELY THESE OPTIONS SHOULD OFFER MORE THAN AMPLE SERVICE ACCESS.

ADA ACCESS WILL BE INCREASED BY ONE, AND THIS MEETS ALL AMERICAN DISABILITY ACT REQUIREMENTS PROVIDING TWO SPACES BOTH BEING VAN ACCESSIBLE.

SUBDISTRICT DEVELOPMENT DATA TABLE
SUBDISTRICT 5

ZONING SUBDISTRICT INFORMATION	
ZONING SUBDISTRICT:	ZONING SUBDISTRICT: UPD SUBDISTRICT 5
TOTAL SUBDISTRICT AREA:	19,863,400 SQ.FT.
PROJECT AREA:	127,630 SQ.FT.
LAND USE INFORMATION	
EXISTING LAND USE:	CHEMICAL ENGINEERING AND BIOMEDICAL ENGINEERING BUILDING
PROPOSED LAND USE GENERAL:	CHEMICAL ENGINEERING AND BIOMEDICAL ENGINEERING BUILDING
PROPOSED LAND USE DESIGNATED:	NONE
PROPOSED LAND USE ACCESSORY:	NONE
FLOOR AREA INFORMATION	
EXISTING SUBDISTRICT FLOOR AREA:	14,380,783 SQ.FT.
EXISTING FLOOR AREA RATIO:	0.742
EXISTING SUBDISTRICT DESIGNATED USE FLOOR AREA:	476,149 SQ.FT.
EXISTING FLOOR AREA TO BE DEMOLISHED:	70,000 SQ.FT.
PROPOSED ADDITIONAL FLOOR AREA (TOTAL):	193,272 SQ.FT.
GENERAL USE FLOOR AREA:	193,272 SQ.FT.
DESIGNATED USE FLOOR AREA:	0
GROUND FLOOR AREA:	32,068 SQ.FT.
RESULTING SUBDISTRICT FLOOR AREA	14,504,055 SQ.FT.
RESULTING FLOOR AREA RATIO:	0.730
MAXIMUM ALLOWABLE FLOOR AREA RATIO:	1.00
IMPERVIOUS AREA INFORMATION	
EXISTING SUBDISTRICT IMPERVIOUS AREA:	9,480,780 SQ.FT. (48%)
PROPOSED INCREASE IN IMPERVIOUS AREA:	–5,425 SQ.FT.
RESULTING SUBDISTRICT IMPERVIOUS AREA:	9,475,355 SQ.FT. (48%)
MAXIMUM ALLOWABLE IMPERVIOUS AREA:	10,924,870 SQ.FT. (55%)
OPEN SPACE AREA INFORMATION	
EXISTING SUBDISTRICT OPEN SPACE AREA:	10,382,620 SQ.FT. (52%)
OPEN SPACE WITH PROPOSED CHANGES:	10,388,045 SQ.FT. (52%)
MINIMUM AMOUNT OF OPEN SPACE REQUIRED:	8,938,530 SQ.FT. (45%)
BUILDING HEIGHT INFORMATION	
MAXIMUM ALLOWABLE BUILDING HEIGHT:	90 FEET >250' FROM DISTRICT BOUNDARY
PROPOSED MAXIMUM BUILDING HEIGHT:	89.6'

THE BASE FIGURES ARE FROM THE AGRICULTURAL ENGINEERING BUILDING DATED 04/21/16.



LOCATION MAP
SCALE 1"=400'

CALL BEFORE YOU DIG !!
PENNSYLVANIA LAW REQUIRES
(3) WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND
10 WORKING DAYS IN DESIGN STAGE
–– STOP & CALL ––
Pennsylvania One Call System, Inc.
1–800–242–1776 OR 811

SERIAL #20151191422

PA ONE CALL 811 DATA

COMPANY: COLUMBIA GAS OF PA
ADDRESS: 501 TECHNOLOGY DR SOUTHPOINTE INDUSTRIAL PARK CANONSBURG, PA. 15317
CONTACT: U GRANT YORK

COMPANY: COMCAST
ADDRESS: 60 DECIBEL ROAD STATE COLLEGE, PA. 16801
CONTACT: WWW.COMCAST.COM

COMPANY: VERIZON PENNSYLVANIA INC
ADDRESS: STRAWBERRY SQUARE 11TH FLOOR HARRISBURG, PA. 17101
CONTACT: FLORENCE WINSTEAD

COMPANY:WINDSTREAM
ADDRESS: STATE COLLEGE, PA. 16803
PHONE: (877)-759-9066

COMPANY: WEST PENN POWER
ADDRESS: 2800 EAST COLLEGE AVENUE STATE COLLEGE, PA. 16801

COMPANY: PENN STATE UNIVERSITY - TELECOMMUNICATIONS
ADDRESS: 112 UNIVERSITY SUPPORT BLDG 2 UNIVERSITY PARK, PA. 168021013
CONTACT: JAMES A GALIO
EMAIL: jimg@psu.edu

COMPANY: PENNSYLVANIA STATE UNIVERSITY - WATER AND SEWER
ADDRESS: 113 PHYSICAL PLANT UNIVERSITY PARK, PA. 16802
CONTACT: PSU WATER-SUPERVISOR WATER SERVICES, 863-8187
EMAIL: jkh12@nw.opp.psu.edu
CONTACT: PSU WASTEWATER-SUPERVISOR WASTEWATER SERVICES, 865-8710
EMAIL: jgs14@nw.opp.psu.edu

COMPANY :STATE COLLEGE BOROUGH WATER AUTHORITY
ADDRESS 1201 :W BRANCH RD
STATE COLLEGE ,PA 16801 .
PHONE (814)-238-6766

RECORDING CERTIFICATE

CERTIFICATION OF OWNERSHIP

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF CENTRE

ON THIS THE ____ DAY OF _____, 20____ BEFORE ME, THE UNDERSIGNED OFFICER PERSONALLY APPEARED:

WHO, BEING DULY SWORN ACCORDING TO LAW, DEPOSE AND SAY THAT THEY ARE THE OWNERS AND/OR EQUITABLE OWNERS OF THE PROPERTY SHOWN ON THIS PLAN, AND THAT THEY ACKNOWLEDGE THE SAME TO BE THEIR ACT AND PLAN, AND DESIRE THE SAME TO BE RECORDED AS SUCH, ACCORDING TO LAW.

NOTARY PUBLIC: _____

MY COMMISSION EXPIRES: _____

OWNER: _____

DESIGN ENGINEER STORMWATER CERTIFICATION

I, _____ HEREBY CERTIFY THAT THE STORMWATER MANAGEMENT PLAN MEETS ALL THE DESIGN STANDARDS AND CRITERIA OF THE STATE COLLEGE BOROUGH STORMWATER MANAGEMENT ORDINANCE.

LANDOWNER STORMWATER CERTIFICATION

I, _____, ACKNOWLEDGE THAT THE STORMWATER MANAGEMENT SYSTEM IS TO BE A PERMANENT FIXTURE WHICH CAN ONLY BE ALTERED OR REMOVED AFTER APPROVAL OF A REVISED PLAN BY THE STATE COLLEGE BOROUGH. I SHALL BE RESPONSIBLE FOR MAINTENANCE OF SAID SYSTEM ON MY PROPERTY.

FIRE CHIEF CERTIFICATION

I HAVE REVIEWED AND HEREBY CERTIFY THAT THE LOCATION OF FIRE LANES AND FIRE HYDRANTS SHOWN ON THIS PLAN ARE ADEQUATE AND MEET MY APPROVAL.

FIRE CHIEF _____ DATE _____

BOROUGH ENGINEER STORMWATER CERTIFICATION

I, _____, HAVE REVIEWED THIS STORMWATER MANAGEMENT PLAN IN ACCORDANCE WITH THE DESIGN STANDARDS AND CRITERIA OF THE STATE COLLEGE BOROUGH STORMWATER MANAGEMENT ORDINANCE.

ZONING OFFICER APPROVAL

STATE COLLEGE BOROUGH ZONING OFFICER APPROVED

ZONING OFFICER _____ DATE _____

BOROUGH ARBORIST APPROVAL

BY: _____ DATE: _____

PROFESSIONAL LAND SURVEYOR CERTIFICATION

I, _____, A PROFESSIONAL LAND SURVEYOR IN THE COMMONWEALTH OF PENNSYLVANIA DO HEREBY CERTIFY THAT THE PLAN CORRECTLY REPRESENTS THE TRACT OF LAND SHOWN.

Drawing List:

LD–1	COVER/SIGNATURE SHEET
LD–2	EXISTING CONDITIONS PLAN
LD–3	DEMOLITION PLAN
LD–4	SITE GEOMETRY PLAN
LD–5	SITE GRADING AND STORMWATER PLAN
LD–6	SITE UTILITY PLAN
LD–7	SITE DETAILS
LD–8	SITE DETAILS
LD–9	SITE DETAILS
LD–10	SITE DETAILS
A500	BUILDING ELEVATION NORTH
A501	BUILDING ELEVATION EAST
A502	BUILDING ELEVATION SOUTH
A503	BUILDING ELEVATION WEST
A700A	SITE SECTIONS
L601	PLANTING PLAN
L610	PLANTING DETAILS
L611	PLANTING SCHEDULE
L800	SITE LIGHTING AND PHOTOMATRIC CALCULATIONS

See also:

C400	EROSION AND SEDIMENTATION CONTROL PLAN – EXISTING
C401	EROSION AND SEDIMENTATION CONTROL PLAN – PROPOSED
C402	EROSION AND SEDIMENTATION CONTROL NOTES
C403	EROSION AND SEDIMENTATION CONTROL DETAILS

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Vibration & Acoustics Consultants
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P.O. Box 2070
Brisbane, CA 94005
415-570-0350

Key Plan

Professional Seals

No.	Description	Date
	SC BOROUGH PRELIMINARY LD PLAN	2015.12.14
	FINAL LD PLAN SUBMISSION	2016.06.02

Date of First Issue:

Project No: 15-07032.00

Sheet Title

FINAL LAND DEVELOPMENT PLAN

COVER/SIGNATURE SHEET

Original drawing is 42 x 30. Do not scale contents of this drawing.

Sheet Number

LD1

SEA# E–5189

10/28/2015 7:22:49 PM

EXISTING LINETYPES

- CONTOUR MAJOR
- CONTOUR MINOR
- UNDERGROUND ELECTRIC LINE
- GAS LINE
- SANITARY SEWER LINE
- MANHOLE
- STORM LINE
- STORM INLET
- UNDERGROUND TELECOMMUNICATIONS LINE
- HEDGE
- STEAM LINE
- CHILLED WATER RETURN
- CHILLED WATER SERVICE
- WATER LINE
- WATER VALVE
- FIRE HYDRANT
- SIGN
- SANITARY STRUCTURE LABEL
- ELECTRIC STRUCTURE LABEL
- TELCOM STRUCTURE LABEL
- STORM MANHOLE LABEL
- FINISHED FLOOR

- STORM INLET LABEL
- STEAM STRUCTURE LABEL
- LIGHT STANDARD
- HANDHOLE
- AC UNIT
- BOLLARD
- CONCRETE HATCH
- TUNNEL HATCH
- DECIDUOUS TREE
- CONIFEROUS TREE

STORM INFORMATION

INLET IDENTIFIER	TOP OF GRATE	INVERT	INVERT	INVERT	INVERT
219.1	T/C=1206.40	1204.45 6"CMP ARTS COTTAGE	1198.63 12"CMP 219.1		1192.62 15"CMP 219.1
515.4	T/C=1187.40	1186.18 4"PVC 515.5			1186.20 4"PVC 515
213.5	T/C=1184.65				1180.76 6"METAL BC
515.3	T/C=1184.37				1180.76 6"PVC 515.2
515.2	T/C=1183.72	1180.12 8"PVC 515.3			1180.12 8"PVC 515.1
515.1	T/C=1180.79	1187.30 8"PVC 515.2			1175.29 10"PVC 515
515	T/C=1181.94	1174.38 10"PVC 515.1	1172.02 8"PVC 515.4		1172.18 15"PVC 515.7
224.1	T/C=1182.26				1179.93 8"METAL 224
224	T/C=1183.08	1178.08 8"METAL 224.1	1178.65 10"TC FENSKE	1176.57 6"METAL FENSKE	1176.29 15"PVC 227
227	T/C=1183.05	1175.21 15"RCP 224	1175.97 10" 227		1175.21 12"CMP 494.3
227.2	T/C=1181.63				1179.79 12"CMP BC
494.1	T/C=1182.80	1180.63 8"PVC	1180.70 6"PVC BC		1179.95 12"HDPE 494.3
494.1	T/C=1182.11	1179.77 12"HDPE 494.A			1177.28 12"HDPE 494.2
494.2	T/C=1181.38	1175.22 18"RCP 494.3			1175.15 18"HDPE 494.1
494.1	T/C=1180.17	1174.52 18"RCP 494.3			1172.93 18"HDPE 494
494	T/C=1180.93	1171.69 18"HDPE 494.1	1170.82 24"RCP 494.8		1170.72 24"RCP 494.7.1
226.3	T/C1183.64				1179.67 8"PVC BC
494.29	T/C1182.23				FILLED 494.3
494.8	T/C=1182.79	1173.46 12"CMP 227	1172.49 24"CMP 494.9		1172.29 24"CMP 494
494.7.1	T/C=1179.72	1169.99 24"CMP 494			1169.88 24"CMP
494.9	T/C=1192.10	1179.72 24"CMP 494.10			1179.59 24"CMP 494.8
226	T/C=1198.99				1189.01 12"PVC 131
131	T/C=1190.19	1182.53 12"PVC 226	1186.32 8"PVC 131.1		1181.88 18"HDPE 268
131.1	T/C=1190.20				1186.96 8"PVC 131
494.7	T/C=1197.27				1195.10
494.2	T/C=1197.26				1194.88
494.4	T/C=1197.52				1194.64 8"METAL
225.2	T/C=1197.35				1196.01 4"PVC 225.1
225.1	T/C=1193.15	1191.27 225.2			1189.87 6"METAL 226
225	T/C=1193.93	1188.51 6" METAL 225.1	1180.52 6" FENSKE	1192.22 4"PVC 225.A	1180.19 10" 227
225A	T/C=1193.44				1192.29 4"PVC 226

SANITARY MANHOLE INFORMATION

STRC. NUMBER	TOP OF CASTING	INVERT IN FROM	INVERT IN FROM	INVERT IN FROM	INVERT OUT TO
467	T/C1210.49				466
466	T/C=1202.24	1188.72 8"DI 467			1188.52 8"DI 465
465	T/C=1189.96	1181.07 8"DI 466			1180.82 8"DI 448
448	T/C=1187.92	1179.64 8"DI 465			1179.14 8"DI 444
444	T/C=1182.02	1175.79 8"DI 448	1175.76 6"TC 451	1174.70 6"TC 445	1175.57 8"PVC 442
451	T/C=1183.41	1176.41 6"DI FENSKE LABORATORY	1176.36 4"DI FENSKE LABORATORY		1176.21 6"TC 444
438	T/C=1205.51				438
439	T/C=1193.64	1180.86 6" 446			1180.53 6" FENSKE LABORATORY
439	T/C=1190.79	1179.95 6"DI FENSKE	1180.22 6"DI FENSKE	1180.18 4"DI FENSKE	1179.86 6"DI 445
450	T/C=1186.58	1179.95 6"DI EISENHOWER			1180.11 6"TCP 443
449	T/C=1186.12	1178.44 6"TCP 450			1178.30 6"TCP 445
443	T/C=1182.38	1176.92 6"DI 439	1176.92 6"TCP 449		1176.81 6"TC 444

TELECOMMUNICATIONS

164	T/C=1205.25
12	T/C=1195.32 T/C=1195.32
11	T/C=1188.38
156	T/C=1187.93
9	T/C=1181.88
298	T/C=1181.49 T/C=1181.39
12	T/C=1192.03 T/C=1192.00
13	T/C=1190.98

ELECTRIC

267	T/C=1198.35
362	T/C=1195.92
475	T/C=1181.90 T/C=1181.78
478	T/C=1181.98
133	T/C=1186.56
139	T/C=1192.14
134	T/C=1193.65
41	T/C=1193.53
359	T/C=1196.95

STEAM

236	T/C=1182.66 T/C=1182.22
235	T/C=1181.50 T/C=1181.63
270	T/C=1186.38 T/C=1186.21

1. ALL EXISTING UNDERGROUND UTILITY INFORMATION HAS BEEN APPROXIMATELY LOCATED FROM FIELD SURVEYS OF EXISTING ABOVE GROUND STRUCTURES, PA ONE CALL 811 DATA UNDERGROUND UTILITY MARKOUT, OR AVAILABLE UTILITY COMPANY RECORDS. THE UTILITY DATA IS A COMPILATION OF SURVEY DATA AND DATA SUPPLIED BY OTHERS, NO LOCATION BY EXCAVATION HAS BEEN PERFORMED. SWEETLAND ENGINEERING & ASSOCIATES, INC. ASSUMES NO RESPONSIBILITY FOR THE LOCATION OF ANY UNDERGROUND UTILITY DERIVED FROM INFORMATION PROVIDED BY OTHERS AS DEPICTED ON THIS PLAN.

2. HORIZONTAL DATUM BASED ON PENNSLYLVANIA NORTH AMERICAN DATUM OF 1983 (PA NAD83) U.S. FEET. ELEVATION DATUM BASED ON NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29).

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

10/28/2015 7:22:49 PM

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Project
CHEMICAL ENGINEERING / BIOMEDICAL ENGINEERING BUILDING
Shortlidge Road
University Park PA 16802

Prepared For
THE UNIVERSITY OF PENNSYLVANIA STATE UNIVERSITY
207 Physical Plant
University Park PA 16802

PSU Project No: 00-04264.00
PSU Building No: 40500
LEED Project ID: 10000623890062389

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Brisbane, CA 94005
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Key Plan

Professional Seals

No.	Description	Date
	SC BOROUGH PRELIMINARY LD PLAN	2015.12.14
	FINAL LD PLAN SUBMISSION	2016.06.02

Date of First Issue:

Project No: 15-07032.00

Sheet Title

FINAL LAND DEVELOPMENT PLAN

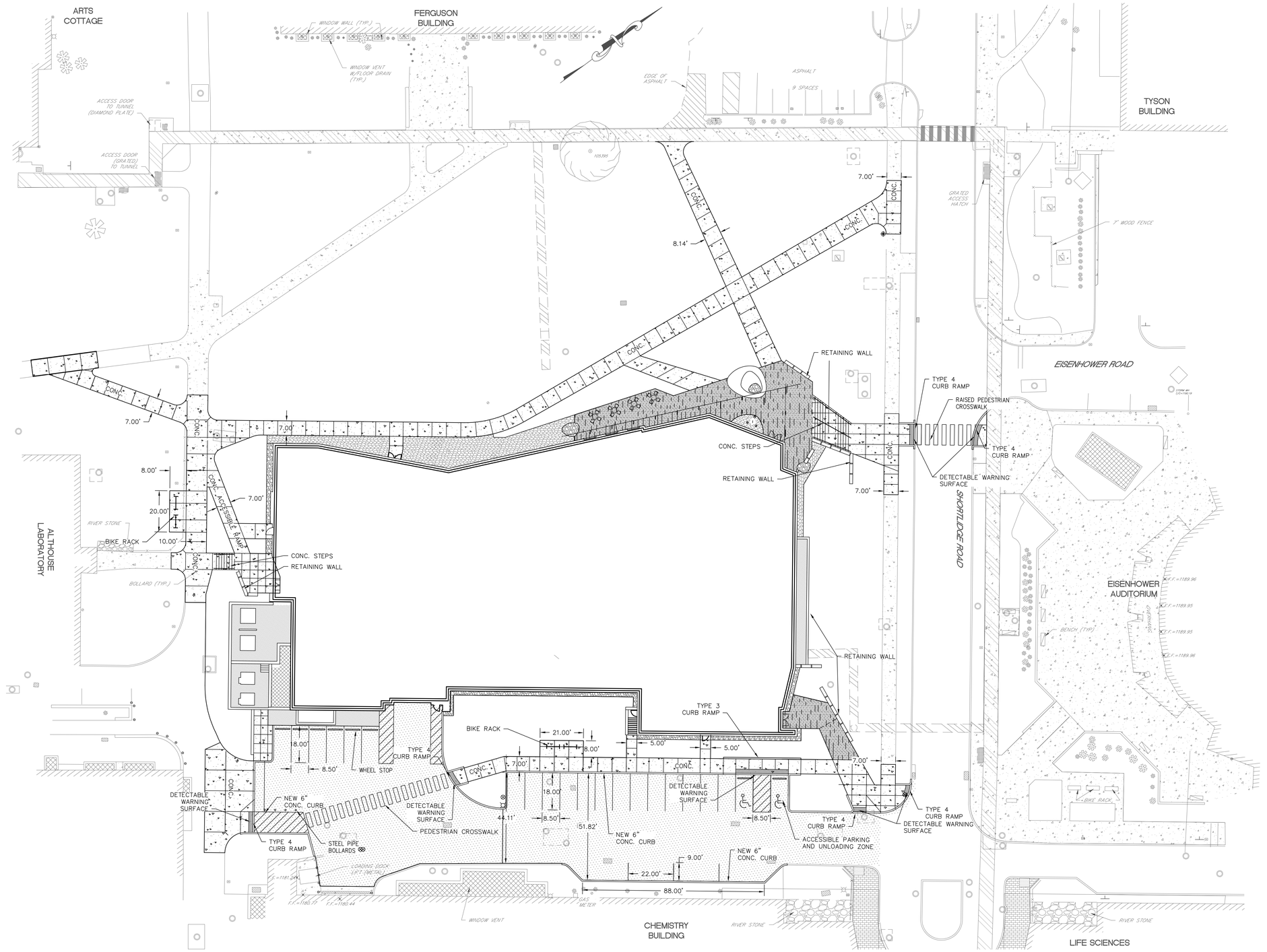
EXISTING CONDITIONS PLAN

Original drawing is 42 x 30. Do not scale contents of this drawing.

Sheet Number

LD2

SEA# E-5190



LEGEND

PROPOSED CONCRETE

PROPOSED BITUMINOUS PAVEMENT

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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Sheet Title

FINAL LAND DEVELOPMENT PLAN

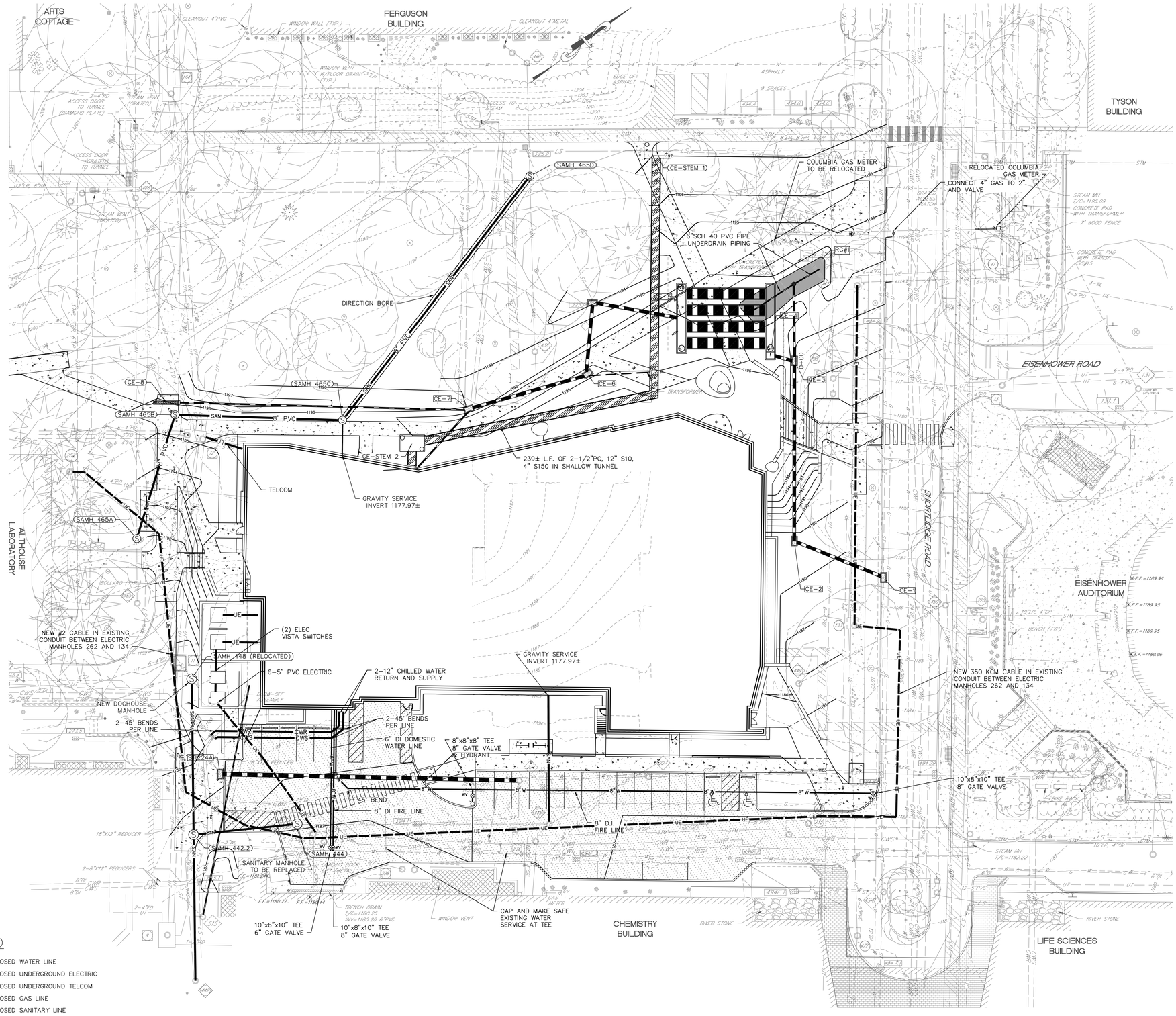
SITE GEOMETRY PLAN

Original drawing is 42 x 30. Do not scale contents of this drawing.

Sheet Number

LD4

SEA# E-5192



LEGEND

- W — PROPOSED WATER LINE
- UE — PROPOSED UNDERGROUND ELECTRIC
- UT — PROPOSED UNDERGROUND TELCOM
- G — PROPOSED GAS LINE
- SAN — PROPOSED SANITARY LINE
- C.O. — PROPOSED CLEAN OUT
- W.V. — PROPOSED WATER VALVE
- (E) — PROPOPSED ELECTRIC MANHOLE
- (T) — PROPOSED TELCOM MANHOLE
- PROPOSED STEAM IN SHALLOW TUNNEL

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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Sheet Title

FINAL LAND DEVELOPMENT PLAN

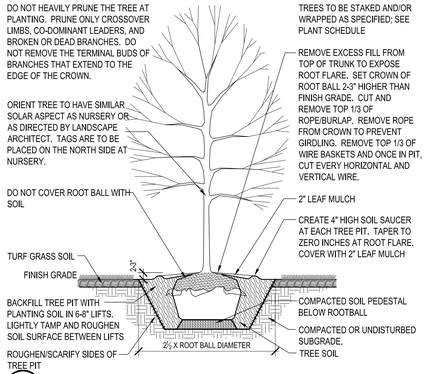
SITE UTILITY PLAN

Original drawing is 42 x 30. Do not scale contents of this drawing.

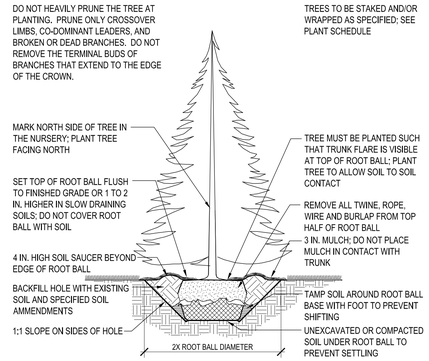
Sheet Number

LD6

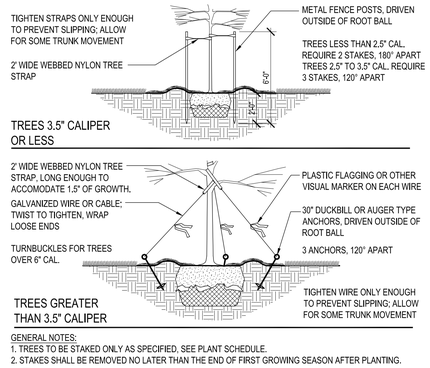
SEA # E-5194



1 DECIDUOUS TREE PLANTING IN LAWN
1/4" = 1'-0"

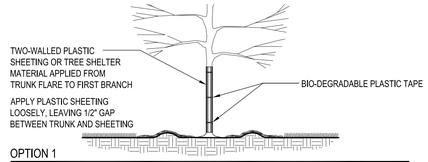


2 EVERGREEN TREE PLANTING
1/4" = 1'-0"



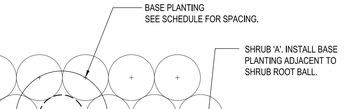
GENERAL NOTES:
1. TREES TO BE STAKED ONLY AS SPECIFIED, SEE PLANT SCHEDULE.
2. STAKES SHALL BE REMOVED NO LATER THAN THE END OF FIRST GROWING SEASON AFTER PLANTING.

3 TREE STAKING
1/4" = 1'-0"



GENERAL NOTES:
1. TREES TO BE WRAPPED ONLY AS SPECIFIED, SEE PLANT SCHEDULE.
2. TREE WRAP SHALL BE REMOVED NO LATER THAN THE END OF FIRST GROWING SEASON AFTER PLANTING.

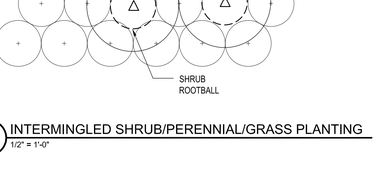
4 TREE WRAPPING
1/4" = 1'-0"



SHRUB SPACING (NTS)

SPACING "D"	ROW "A"	PLANTS PER SQ. FT.
24"	20.8"	.290
30"	26"	.185
36"	30"	.120
4'	41.5"	.073
5'	52"	.046

QUANTITY OF SHRUBS AND SPACING AS NOTED IN PLANTING SCHEDULE



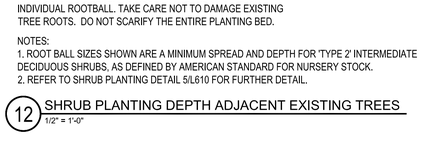
5 SHRUB PLANTING
1/4" = 1'-0"

PLANT SPACING (NTS)

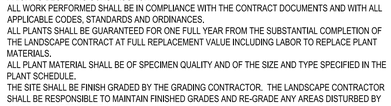
SPACING "D"	ROW "A"	PLANTS PER SQ. FT.
24" O.C.	20.8"	0.29
18" O.C.	15.6"	0.50
12" O.C.	10.4"	1.15
10" O.C.	8.7"	1.66
8" O.C.	6.9"	2.60
6" O.C.	5.2"	4.00

NOTES:
PLANT QUANTITIES WERE DETERMINED BY MULTIPLYING AREA (SQ. FT.) BY NUMBER OF PLANTS PER SQ. FT. FOR REQUIRED SPACING

QUANTITY OF PLANTS AND SPACING AS NOTED IN PLANTING SCHEDULE



6 PERENNIAL AND GRASS PLANTING
1/2" = 1'-0"

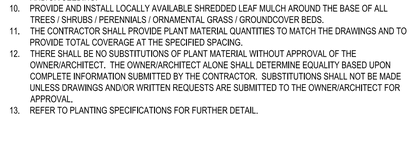


PLANT SPACING (NTS)

SPACING "D"	ROW "A"	PLANTS PER SQ. FT.
12" O.C.	10.4"	1.15
10" O.C.	8.7"	1.66
8" O.C.	6.9"	2.60
6" O.C.	5.2"	4.00

NOTES:
PLANT QUANTITIES WERE DETERMINED BY MULTIPLYING AREA (SQ. FT.) BY NUMBER OF PLANTS PER SQ. FT. FOR REQUIRED SPACING

QUANTITY OF GROUNDCOVER AND SPACING AS NOTED IN PLANTING SCHEDULE



7 GROUND COVER PLANTING
1/2" = 1'-0"

8 SPADE CUT EDGE AT PLANTING BED
1-1/2" = 1'-0"

9 MIXED PLANTING ADJACENT NEW TREE
1/4" = 1'-0"

10 MIXED PLANTING ADJACENT EXISTING TREE
1/4" = 1'-0"

11 INTERMINGLED SHRUB/PERENNIAL/GRASS PLANTING
1/2" = 1'-0"

IF ROOTBALL IS DEEPER THAN SCARIFICATION LAYER, LIGHTLY HAND SCARIFY DEEPER TO ACCEPT THE WIDTH OF EACH INDIVIDUAL ROOTBALL. TAKE CARE NOT TO DAMAGE EXISTING TREE ROOTS. DO NOT SCARIFY THE ENTIRE PLANTING BED.

NOTES:
1. ROOT BALL SIZES SHOWN ARE A MINIMUM SPREAD AND DEPTH FOR 'TYPE 2' INTERMEDIATE DECIDUOUS SHRUBS, AS DEFINED BY AMERICAN STANDARD FOR NURSERY STOCK.
2. REFER TO SHRUB PLANTING DETAIL 5/L610 FOR FURTHER DETAIL.

12 SHRUB PLANTING DEPTH ADJACENT EXISTING TREES
1/2" = 1'-0"

PLANTING PLAN NOTES

1. VERIFY ALL DIMENSIONS AND SITE CONDITIONS PRIOR TO STARTING CONSTRUCTION AND IMMEDIATELY NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES.
2. VERIFY THE LOCATION OF ALL UTILITIES INCLUDING SANITARY AND STORM SEWER + ROOF DRAINS PRIOR TO BEGINNING CONSTRUCTION.
3. ALL WORK PERFORMED SHALL BE IN COMPLIANCE WITH THE CONTRACT DOCUMENTS AND WITH ALL APPLICABLE CODES, STANDARDS AND ORDINANCES.
4. ALL PLANTS SHALL BE GUARANTEED FOR ONE FULL YEAR FROM THE SUBSTANTIAL COMPLETION OF THE LANDSCAPE CONTRACT AT FULL REPLACEMENT VALUE INCLUDING LABOR TO REPLACE PLANT MATERIALS.
5. ALL PLANT MATERIAL SHALL BE OF SPECIMEN QUALITY AND OF THE SIZE AND TYPE SPECIFIED IN THE PLANT SCHEDULE.
6. THE SITE SHALL BE FINISH GRADED BY THE GRADING CONTRACTOR. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN FINISHED GRADES AND RE-GRADE ANY AREAS DISTURBED BY LANDSCAPE OPERATIONS.
7. ANY CLEAN, EXCESS SOIL FROM LANDSCAPE OPERATIONS SHALL BE WASTED ON SITE AT THE DISCRETION OF THE CONTRACTOR OR DISPOSED OF OFF SITE. ALL CONSTRUCTION DEBRIS FROM LANDSCAPE OPERATIONS SHALL BE DISPOSED OF OFF SITE.
8. REFER TO SPECIFICATION FOR SOD/SEED TYPE. ALL AREAS INDICATED IN THE PLANS TO BE SODDED SHALL BE GUARANTEED FOR A PERIOD OF ONE MONTH. SOD SHALL BE MOWED JUST PRIOR TO INSTALLATION. ALL SOD AREAS ARE TO BE WATERED DAILY FOR ONE WEEK AND EVERY OTHER DAY FOR THE NEXT TWO WEEKS.
9. ALL PLANTING AREAS MUST BE FREE OF ALL WEEDS AND DEBRIS BEFORE PLANTING, SODDING, AND/OR SEEDING.
10. PROVIDE AND INSTALL LOCALLY AVAILABLE SHREDDED LEAF MULCH AROUND THE BASE OF ALL TREES / SHRUBS / PERENNIALS / ORNAMENTAL GRASS / GROUNDCOVER BEDS.
11. THE CONTRACTOR SHALL PROVIDE PLANT MATERIAL QUANTITIES TO MATCH THE DRAWINGS AND TO PROVIDE TOTAL COVERAGE AT THE SPECIFIED SPACING.
12. THERE SHALL BE NO SUBSTITUTIONS OF PLANT MATERIAL WITHOUT APPROVAL OF THE OWNER/ARCHITECT. THE OWNER/ARCHITECT ALONE SHALL DETERMINE EQUALITY BASED UPON COMPLETE INFORMATION SUBMITTED BY THE CONTRACTOR. SUBSTITUTIONS SHALL NOT BE MADE UNLESS DRAWINGS AND/OR WRITTEN REQUESTS ARE SUBMITTED TO THE OWNER/ARCHITECT FOR APPROVAL.
13. REFER TO PLANTING SPECIFICATIONS FOR FURTHER DETAIL.

PennState

Project
CHEMICAL ENGINEERING / BIOMEDICAL ENGINEERING BUILDING
Shortlidge Road
University Park PA 16802

Prepared For
THE UNIVERSITY OF PENNSYLVANIA STATE UNIVERSITY
207 Physical Plant
University Park PA 16802

PSU Project No: 00-04264.00
PSU Building No: 0405-002
LEED Project ID: 10000623890062389

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East Pittsburgh, PA 15112
412-823-0400

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Brisbane, CA 94005
415-570-0350

Key Plan

Professional Seals

No.	Description	Date
	70% SCHEMATIC DESIGN	2015.11.02
	PAGE TURN REVIEW	2015.11.19
	100% SCHEMATIC DESIGN	2015.12.14
	75% DESIGN DEVELOPMENT	2016.03.11
	100% DESIGN DEVELOPMENT	2016.04.15
	FINAL LD PLAN SUBMISSION	2016.05.16

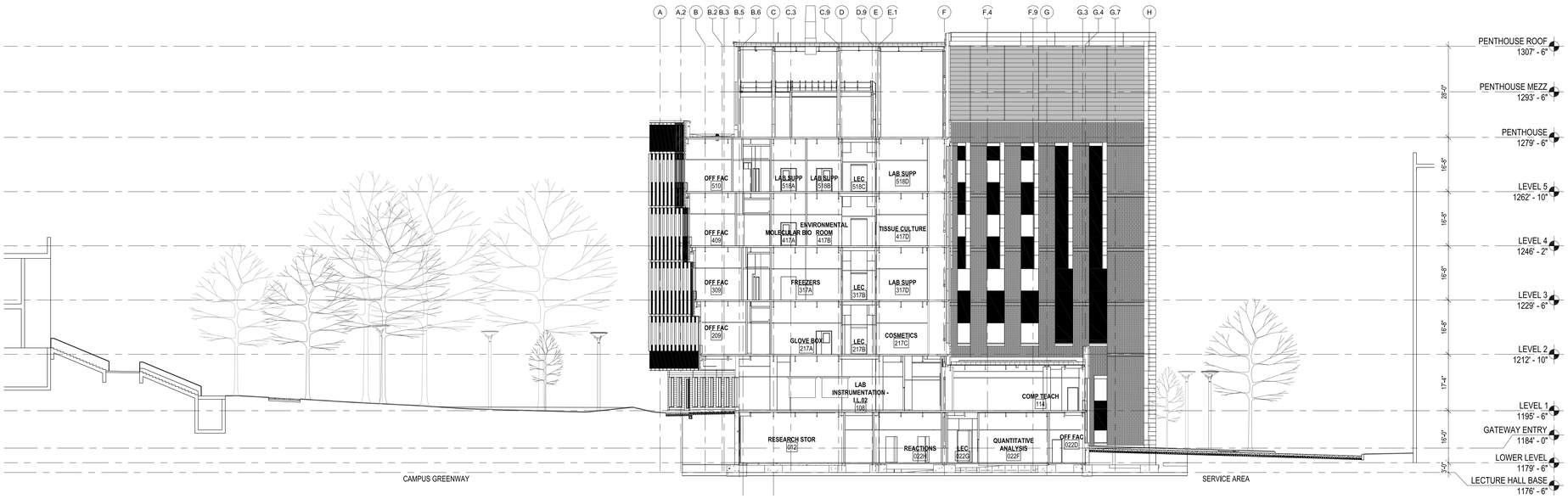
Date of First Issue:

Project No: 15-07032.00

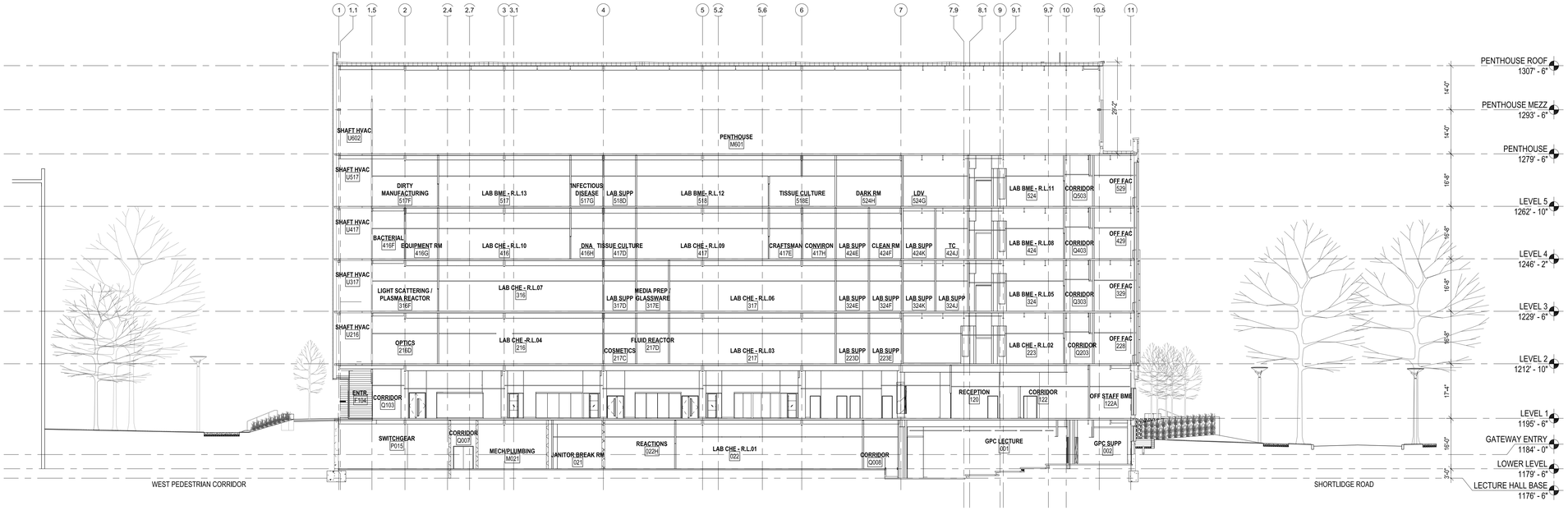
Sheet Title
Planting Details

Original drawing is 42 x 30. Do not scale contents of this drawing.

Sheet Number
L610



2 SITE SECTION - NORTH TO SOUTH
1/16" = 1'-0"



1 SITE SECTION - EAST TO WEST
1/16" = 1'-0"

5/13/2016 4:18:05 PM

PennState

Project
PENN STATE CEBME BUILDING

The Pennslyvania State University
University Park PA

Prepared For
PENN STATE UNIVERSITY

207 Physical Plant
University Park PA 16802

PSU Project No: 00-04264.00
PSU Building No: 0405-002
LEED Project ID: 10000623890062389

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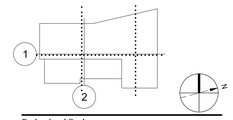
415-570-0350

Key Plan



Professional Seals

No.	Description	Date
1	FINAL LD PLAN SUBMISSION	2016.05.16

Date of First Issue:

Project No: 15-07032.00

Sheet Title

SITE SECTIONS

Original drawing is 42 x 30. Do not scale contents of this drawing.

Sheet Number

A700A

S1

		Design Layers											
		Structural Plants					10-15%	Seasonal Theme Plants					25-40%
% Mix by Category		15%						30%					
Botanical Name		Baptisia 'Purple Smoke' (ba)	Panicum Virgatum 'Northwind' (pv)					Nepeta faassenii 'Cat's Meow' (ne)	Echinacea purpurea 'Kim's Knee High' (ec)	Agastache 'Blue Fortune' (ag)	Allium anglosum 'Summer Beauty' (al)	Calamintha nepeta subsp. Nepeta (cl)	
Flowering / Interest		SP-SU	SU-W					SP-SU	SU	SU-F	SU	SU-F	
% Mix by Plant		60%	40%				100%	20%	25%	15%	25%	15%	100%
Spacing		36	36					18	18	24	12	18	
# / SF		0.11	0.11	#N/A	#N/A	#N/A		0.44	0.44	0.25	1	0.44	
AREA	SF	QTY	QTY	QTY	QTY	QTY		QTY	QTY	QTY	QTY	QTY	
S1.1	297	3	2	-	-	-		8	10	3	22	6	
TOTAL		Baptisia 'Purple Smoke' (ba)	Panicum Virgatum 'Northwind' (pv)	0	0	0		Nepeta faassenii 'Cat's Meow' (ne)	Echinacea purpurea 'Kim's Knee High' (ec)	Agastache 'Blue Fortune' (ag)	Allium anglosum 'Summer Beauty' (al)	Calamintha nepeta subsp. Nepeta (cl)	
		3	2	0	0	0		8	10	3	22	6	

		Functional Layers											
		Ground Cover Plants					50%	Filler Plants					5-10%
% Mix by Category		50%						5%					100%
Botanical Name		Sesleria autumnalis (se)	Carex flacca 'Blue Zinger' (cf)					Coreopsis verticillata 'Zagreb' (co)					
Flowering / Interest		SP-W	SU-FA					SU-F					
% Mix by Plant		70%	30%				100%	100%					100%
Spacing		12	18					18					
# / SF		1	0.44	#N/A	#N/A	#N/A		0.44	#N/A	#N/A	#N/A	#N/A	
AREA	SF	QTY	QTY	QTY	QTY	QTY		QTY	QTY	QTY	QTY	QTY	
S1.1	297	104	20	-	-	-		7	-	-	-	-	
TOTAL		Sesleria autumnalis (se)	Carex flacca 'Blue Zinger' (cf)	0	0	0		Coreopsis verticillata 'Zagreb' (co)	0	0	0	0	
		104	20	0	0	0		7	0	0	0	0	

PS1

		Design Layers											
		Structural Plants					10-15%	Seasonal Theme Plants					25-40%
% Mix by Category		15%						30%					
Botanical Name		Viburnum dentatum 'Blue Muffin' (vi de)	Calamagrostis brachytricha (cb)	Eupatorium maculatum 'Bartered Bride' (em)				Monarda bradburiana (mo)	Amsonia hubrichtii (ah)	Echinacea purpurea 'Kim's Knee High' (ec)	Pycnanthemum tenuifolium (pt)	Solidago flexicaulis (so)	
Flowering / Interest		SP-FA	SP-FA	SU-W				SP	SP	SU	SU	LSU-F	
% Mix by Plant		0%	0%	0%			0%	20%	20%	25%	20%	15%	100%
Spacing		48	36	24				18	24	18	18	12	
# / SF		0.06	0.11	0.25	#N/A	#N/A		0.44	0.25	0.44	0.44	1	
AREA	SF	QTY	QTY	QTY	QTY	QTY		QTY	QTY	QTY	QTY	QTY	
PS1.1	1096	0	0	0	-	-		29	16	36	29	49	
TOTAL		Viburnum dentatum 'Blue Muffin' (vi de)	Calamagrostis brachytricha (cb)	Eupatorium maculatum 'Bartered Bride' (em)	0	0		Monarda bradburiana (mo)	Amsonia hubrichtii (ah)	Echinacea purpurea 'Kim's Knee High' (ec)	Pycnanthemum tenuifolium (pt)	Solidago flexicaulis (so)	
		0	0	0	0	0		29	16	36	29	49	

		Functional Layers											
		Ground Cover Plants					50%	Filler Plants					5-10%
% Mix by Category		50%						5%					100%
Botanical Name		Carex appalachia (ca)	Carex pennsylvanica (cp)	Carex flacca 'Blue Zinger' (cf)	Heuchera villosa 'Autumn Bride' (hv)	Aster ericoides 'Snow Flurry' (ae)		Aquilegia canadensis (aq)					
Flowering / Interest		SP-FA	SP-FA	SP-FA	LSU-FA	FA		SP-SU					
% Mix by Plant		40%	15%	10%	20%	15%	100%	100%					100%
Spacing		12	12	18	18	18		18					
# / SF		1	1	0.44	0.44	0.44		0.44	#N/A	#N/A	#N/A	#N/A	
AREA	SF	QTY	QTY	QTY	QTY	QTY		QTY	QTY	QTY	QTY	QTY	
PS1.1	1096	219	82	24	48	36		24	-	-	-	-	
TOTAL		Carex appalachia (ca)	Carex pennsylvanica (cp)	Carex flacca 'Blue Zinger' (cf)	Heuchera villosa 'Autumn Bride' (hv)	Aster ericoides 'Snow Flurry' (ae)		Aquilegia canadensis (aq)	0	0	0	0	
		219	82	24	48	36		24	0	0	0	0	

PS2

		Design Layers											
		Structural Plants					10-15%	Seasonal Theme Plants					25-40%
% Mix by Category		15%						30%					
Botanical Name		Lindera benzoin (li be)	Descampsia cesoitosa 'Goldtau' (de)	Ilex verticillata 'Berry Heavy' (il ve)				Mertensia virginica (me)	Zizia aurea (zi)	Agastache 'Blue Fortune' (ag)	Ascelpias tuberosa (at)	Eurybia divaricata (eu)	
Flowering / Interest		SP	SU-FA	FA				SP	SP-SU	SU-F	SU	LSU-F	
% Mix by Plant		20%	50%	30%			100%	15%	25%	25%	20%	15%	100%
Spacing		60	24	60				24	18	24	24	18	
# / SF		0.04	0.25	0.04	#N/A	#N/A		0.25	0.44	0.25	0.25	0.44	
AREA	SF	QTY	QTY	QTY	QTY	QTY		QTY	QTY	QTY	QTY	QTY	
PS2.1	201	0	4	0	-	-		2	7	4	3	4	
TOTAL		Lindera benzoin (li be)	Descampsia cesoitosa 'Goldtau' (de)	Ilex verticillata 'Berry Heavy' (il ve)	0	0		Mertensia virginica (me)	Zizia aurea (zi)	Agastache 'Blue Fortune' (ag)	Ascelpias tuberosa (at)	Eurybia divaricata (eu)	
		0	4	0	0	0		2	7	4	3	4	

		Functional Layers											
		Ground Cover Plants					50%	Filler Plants					5-10%
% Mix by Category		50%						5%					100%
Botanical Name		Carex appalachia (ca)	Carex pennsylvanica (cp)	Geranium maculatum (ge)	Heuchera villosa 'Autumn Bride' (hv)	Carex oshimensis 'Everillo' (ce)		Spigelia marilandica (sg)					
Flowering / Interest		SP-FA	SP-FA	SP-SU	LSU-FA	SP-FA		SP					
% Mix by Plant		35%	15%	15%	25%	10%	100%	100%					100%
Spacing		12	12	18	18	12		12					
# / SF		1	1	0.44	0.44	1		1	#N/A	#N/A	#N/A	#N/A	
AREA	SF	QTY	QTY	QTY	QTY	QTY		QTY	QTY	QTY	QTY	QTY	
PS2.1	201	35	15	7	11	10		10	-	-	-	-	
TOTAL		Carex appalachia (ca)	Carex pennsylvanica (cp)	Geranium maculatum (ge)	Heuchera villosa 'Autumn Bride' (hv)	Carex oshimensis 'Everillo' (ce)		Spigelia marilandica (sg)	0	0	0	0	
		35	15	7	11	10		10	0	0	0	0	

PS3

		Design Layers											
		Structural Plants					10-15%	Seasonal Theme Plants					25-40%
% Mix by Category		15%						30%					
Botanical Name		Itea virginica 'Henry Garnet' (it vi)	Hydrangea arborescens 'Hayes starbusrt' (hy ar)	Calamagrostis brachytricha (cb)				Mertensia virginica (me)	Penstemon digitalis 'Husker Red' (pd)	Astilbe chinensis var. taquetii 'Purpurkerze' (as)	Scutelleria incana (si)	Solidago flexicaulis (sr)	
Flowering / Interest		SP-SU	SU	SP-FA				SP	SP-SU	SU	SU	LSU-F	
% Mix by Plant		30%	50%	20%			100%	15%	20%	30%	20%	15%	100%
Spacing		36	36	36				24	18	24	18	12	
# / SF		0.11	0.11	0.11	#N/A	#N/A		0.25	0.44	0.25	0.44	1	
AREA	SF	QTY	QTY	QTY	QTY	QTY		QTY	QTY	QTY	QTY	QTY	
PS3.1	133	1	1	0	-	-		1	4	3	4	6	
PS3.2	310	2	3	1	-	-		3	8	7	8	14	
TOTAL		Itea virginica 'Henry Garnet' (it vi)	Hydrangea arborescens 'Hayes starbusrt' (hy ar)	Calamagrostis brachytricha (cb)	0	0		Mertensia virginica (me)	Penstemon digitalis 'Husker Red' (pd)	Astilbe chinensis var. taquetii 'Purpurkerze' (as)	Scutelleria incana (si)	Solidago flexicaulis (sr)	
		2	4	1	0	0		5	12	10	12	20	

		Functional Layers											
		Ground Cover Plants					50%	Filler Plants					5-10%
% Mix by Category		50%						5%					100%
Botanical Name		Senecio obovatus (sv)	Carex appalachi (ca)	Carex pennsylvanica (cp)	Geranium maculatum (ge)	Aster ericoides 'Snow Flurry' (ae)		Euphorbia corollata (eh)					
Flowering / Interest		SP	SP-FA	SP-FA	SP-SU	FA		SU					
% Mix by Plant		35%	20%	15%	20%	10%	100%	100%					100%
Spacing		12	12	12	18	18		12					
# / SF		1	1	1	0.44	0.44		1	#N/A	#N/A	#N/A	#N/A	
AREA	SF	QTY	QTY	QTY	QTY	QTY		QTY	QTY	QTY	QTY	QTY	
PS3.1	133	23	13	10	6	3		7	-	-	-	-	
PS3.2	310	54	31	23	14	7		16	-	-	-	-	
TOTAL		Senecio obovatus (sv)	Carex appalachi (ca)	Carex pennsylvanica (cp)	Geranium maculatum (ge)	Aster ericoides 'Snow Flurry' (ae)		Euphorbia corollata (eh)	0	0	0	0	
		78	44	33	19	10		22	0	0	0	0	

SH1

		Design Layers											
		Structural Plants					10-15%	Seasonal Theme Plants					25-40%
% Mix by Category		15%						30%					
Botanical Name		Hamamelis x intermedia 'Arnold Promise' (HA IN)	Viburnum dentatum 'Blue Muffin' (vi de)					Polygonatum biflorum (po)	Hosta 'Gaucomole' (ho)	Heuchera villosa 'Autmun Bride' (hv)	Eurybia divaricata (eu)	Solidago rugosa (sr)	
Flowering / Interest		W-F	SP-FA									FA	
% Mix by Plant		0%	0%				0%	20%	25%	35%	10%	10%	100%
Spacing		60	36					12	24	18	18	24	
# / SF		0.04	0.11	#N/A	#N/A	#N/A		1	0.25	0.44	0.44	0.25	
AREA	SF	QTY	QTY	QTY	QTY	QTY		QTY	QTY	QTY	QTY	QTY	
SH1.1	1406	0	0	-	-	-		84	26	65	19	11	
TOTAL		Hamamelis x intermedia 'Arnold Promise' (HA IN)	Viburnum dentatum 'Blue Muffin' (vi de)	0	0	0		Polygonatum biflorum (po)	Hosta 'Gaucomole' (ho)	Heuchera villosa 'Autmun Bride' (hv)	Eurybia divaricata (eu)	Solidago rugosa (sr)	
		0	0	0	0	0		84	26	65	19	11	

		Functional Layers											
		Ground Cover Plants					50%	Filler Plants					5-10%
% Mix by Category		45%						10%					100%
Botanical Name		Erigeron pulchellus var. pulchellus 'Lynnhaven Carpet' (er)	Carex appalachia (ca)	Dryopteris marginalis (dr)	Asarum canadense (aa)	Senecio obovatus (sv)		Aquilegia canadensis (aq)	Spigelia marilandica (sg)				
Flowering / Interest								SP-SU	SP				
% Mix by Plant		15%	40%	10%	25%	10%	100%	60%	40%				100%
Spacing		18	12	18	12	12		18	12				
# / SF		0.44	1	0.44	1	1		0.44	1	#N/A	#N/A	#N/A	
AREA	SF	QTY	QTY	QTY	QTY	QTY		QTY	QTY	QTY	QTY	QTY	
SH1.1	1406	42	253	28	158	63		37	56	-	-	-	
TOTAL		Erigeron pulchellus var. pulchellus 'Lynnhaven Carpet' (er)	Carex appalachia (ca)	Dryopteris marginalis (dr)	Asarum canadense (aa)	Senecio obovatus (sv)		Aquilegia canadensis (aq)	Spigelia marilandica (sg)	0	0	0	
		42	253	28	158	63		37	56	0	0	0	

SH2

		Design Layers											
		Structural Plants					10-15%	Seasonal Theme Plants					25-40%
% Mix by Category		15%						35%					
Botanical Name		Viburnum dentatum 'Blue Muffin' (vi de)	Diervilla lonicera (di lo)					Smilacina racemosa (sm)	Scutelleria incana (si)	Actae racemosa (ac)	Hosta 'Gaucomole' (ho)	Solidago rugosa (sr)	
Flowering / Interest		SP-FA	SU									FA	
% Mix by Plant		0%	0%				0%	20%	30%	25%	15%	10%	100%
Spacing		36	36					18	18	30	24	24	
# / SF		0.11	0.11	0.11	#N/A	#N/A		0.44	0.44	0.16	0.25	0.25	
AREA	SF	QTY	QTY	QTY	QTY	QTY		QTY	QTY	QTY	QTY	QTY	
SH2.1	567	-	0	0	-	-		17	26	8	7	5	
SH2.2	137	-	0	0	-	-		4	6	2	2	1	
SH2.3	111	-	0	0	-	-		3	5	2	1	1	
SH2.4	52	-	0	0	-	-		2	2	1	1	0	
SH2.5	95	-	0	0	-	-		3	4	1	1	1	
TOTAL		Viburnum dentatum 'Blue Muffin' (vi de)	Viburnum dentatum 'Blue Muffin' (vi de)	Diervilla lonicera (di lo)	0	0		Smilacina racemosa (sm)	Scutelleria incana (si)	Actae racemosa (ac)	Hosta 'Gaucomole' (ho)	Solidago rugosa (sr)	
		0	0	0	0	0		30	44	13	13	8	

		Functional Layers											
		Ground Cover Plants					50%	Filler Plants					5-10%
% Mix by Category		45%						5%					100%
Botanical Name		Carex pennsylvanica (cp)	Carex appalachia (ca)	Dryopteris marginalis (dr)	Lamiastrum galeobdolon (la)	Erigeron pulchellus var. pulchellus 'Lynnhaven Carpet' (er)		Spigelia marilandica (sg)					
Flowering / Interest								SP					
% Mix by Plant		20%	35%	10%	25%	10%	100%	100%					100%
Spacing		12	12	18	18	12		12					
# / SF		1	1	0.44	0.44	1		1	#N/A	#N/A	#N/A	#N/A	
AREA	SF	QTY	QTY	QTY	QTY	QTY		QTY	QTY	QTY	QTY	QTY	
SH2.1	567	51	89	11	28	26		28	-	-	-	-	
SH2.2	137	12	22	3	7	6		7	-	-	-	-	
SH2.3	111	10	17	2	5	5		6	-	-	-	-	
SH2.4	52	5	8	1	3	2		3	-	-	-	-	
SH2.5	95	9	15	2	5	4		5	-	-	-	-	
TOTAL		Carex pennsylvanica (cp)	Carex appalachia (ca)	Dryopteris marginalis (dr)	Lamiastrum galeobdolon (la)	Erigeron pulchellus var. pulchellus 'Lynnhaven Carpet' (er)		Spigelia marilandica (sg)	0	0	0	0	
		87	152	19	48	43		48	0	0	0	0	

SH3

		Design Layers											
		Structural Plants					10-15%	Seasonal Theme Plants					25-40%
% Mix by Category		15%						30%					
Botanical Name		Lindera benzoin (li be)	Viburnum dentatum 'Blue Muffin' (vi de)					Smilacina racemosa (sm)	Polygonatum biflorum (po)	Scutelleria incana (si)	Anemone virginiana (an)	Solidago rugosa (sr)	
Flowering / Interest												FA	
% Mix by Plant		0%	0%				0%	15%	35%	20%	20%	10%	100%
Spacing		60	36					18	12	18	12	24	
# / SF		0.04	0.11	#N/A	#N/A	#N/A		0.44	1	0.44	1	0.25	
AREA	SF	QTY	QTY	QTY	QTY	QTY		QTY	QTY	QTY	QTY	QTY	
SH3.1	412	0	0	-	-	-		8	43	11	25	3	
TOTAL		Lindera benzoin (li be)	Viburnum dentatum 'Blue Muffin' (vi de)	0	0	0		Smilacina racemosa (sm)	Polygonatum biflorum (po)	Scutelleria incana (si)	Anemone virginiana (an)	Solidago rugosa (sr)	
		0	0	0	0	0		8	43	11	25	3	

		Functional Layers											
		Ground Cover Plants					50%	Filler Plants					5-10%
% Mix by Category		45%						10%					100%
Botanical Name		Carex pennsylvanica (cp)	Carex appalachia (ca)	Meehania cordata (mc)	Epimedium x versicolor 'Sulphureum' (ep)	Senecio obovatus (sv)		Aquilegia canadensis (aq)					
Flowering / Interest								SP-SU					
% Mix by Plant		20%	30%	15%	20%	15%	100%	100%					100%
Spacing		12	12	12	12	12		18					
# / SF		1	1	1	1	1		0.44	#N/A	#N/A	#N/A	#N/A	
AREA	SF	QTY	QTY	QTY	QTY	QTY		QTY	QTY	QTY	QTY	QTY	
SH3.1	412	37	56	28	37	28		18	-	-	-	-	
TOTAL		Carex pennsylvanica (cp)	Carex appalachia (ca)	Meehania cordata (mc)	Epimedium x versicolor 'Sulphureum' (ep)	Senecio obovatus (sv)		Aquilegia canadensis (aq)	0	0	0	0	
		37	56	28	37	28		18	0	0	0	0	

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PLANT SCHEDULE

DECIDUOUS TREES

SYM	QTY	BOTANICAL NAME	CULTIVAR	COMMON NAME	SIZE	METHOD	MATURE HEIGHT	DETAIL	COMMENTS
AC RU	4	Acer rubrum	Armstrong	Red Maple	2.5" Cal.	B & B	45'+	1/L02	
LI TU	5	Liriodendron tulipifera	Arnold	Tulip Tree	2.5" Cal.	B & B	45'+	1/L02	
QU BI	2	Quercus bicolor		Swamp White Oak	2.5" Cal.	B & B	45'+	1/L02	

DECIDUOUS UNDERSTORY TREES

SYM	QTY	BOTANICAL NAME	CULTIVAR	COMMON NAME	SIZE	METHOD	MATURE HEIGHT	DETAIL	COMMENTS
AM AR	5	Amelanchier arborea		Downy Serviceberry	8-10' Ht.	B & B	25' - 30'	1/L02	Multi-Stemmed, 3 stems
CH VI	4	Chionanthus virginicus		Fringetree	2.5" Cal.	B & B	12' - 20'	1/L02	
HA VI	4	Hamamelis virginiana		Common Witchhazel	8-10' Ht.	B & B	15' - 25'	1/L02	Multi-Stemmed

EVERGREEN TREES

SYM	QTY	BOTANICAL NAME	CULTIVAR	COMMON NAME	SIZE	METHOD	MATURE HEIGHT	DETAIL	COMMENTS
TH PL	7	Thuja plicata SPRING GROVE	Grovepli	Western Redcedar	8-10' Ht.	B & B	20'-30'	2/L02	

EVERGREEN SHRUBS

SYM	QTY	BOTANICAL NAME	CULTIVAR	COMMON NAME	SIZE	METHOD	SPACING	DETAIL	COMMENTS
ta me	11	Taxus media	Densiformis	Yew	24" Ht.	Container	48" O.C.	5/L02	
ta me-hi	5	Taxus media	Hicksii	Yew	24" Ht.	Container	48" O.C.	5/L02	

DECIDUOUS SHRUBS

SYM	QTY	BOTANICAL NAME	CULTIVAR	COMMON NAME	SIZE	METHOD	SPACING	DETAIL	COMMENTS
ca fl	4	Calycanthus floridus	Aphrodite	Sweetshrub	24-30" Ht.	Container	48" O.C.	5/L02	
hy ar	34	Hydrangea arborescens	Hayes Starburst	Wild Hydrangea	24-30" Ht.	Container	36" O.C.	5/L02	
hy qu	21	Hydrangea quercifolia	Sike's Dwarf	Oakleaf Hydrangea	24-30" Ht.	Container	36" O.C.	5/L02	
it vi	22	Itea virginica	Henry's Garnet	Virginia Sweetspire	24" Ht.	Container	36" O.C.	5/L02	
vi de	16	Viburnum dentatum	Christom Blue Muffin	Arrowwood Viburnum	30-36" Ht.	Container	36" O.C.	5/L02	
vi nu	14	Viburnum nudum	Winterhur	Smooth Viburnum	24-36" Ht.	Container	48" O.C.	5/L02	

ORNAMENTAL GRASSES & SEDGES

SYM	QTY	BOTANICAL NAME	CULTIVAR	COMMON NAME	SIZE	METHOD	SPACING	DETAIL	COMMENTS
ca	699	Carex appalachcia		Appalachian Sedge	1 Quart	Container	12" O.C.	6/L02	
cb	72	Calamagrostis brachytricha		Korean Feather Reed Grass	1 Quart	Container	36" O.C.	6/L02	
cf	37	Carex flacca	Blue Zinger	Blue Zinger Sedge	1 Quart	Container	18" O.C.	6/L02	
ce	10	Carex oshimensis	Everillo	Evercolor Sedge	1 Quart	Container	12" O.C.	6/L02	
cp	232	Carex pennsylvanica		Pennsylvania Sedge	1 Quart	Container	12" O.C.	6/L02	
de	4	Deschampsia cespitosa	Goldtau	Tufted Hairgrass	1 Quart	Container	24" O.C.	6/L02	
pa	123	Panicum virgatum	Shenandoah	Switch Grass	1 Quart	Container	30" O.C.	6/L02	
pv	2	Panicum virgatum	Northwind	Switch Grass	1 Quart	Container	36" O.C.	6/L02	
se	190	Sesleria autumnalis		Autumn Moor Grass	1 Quart	Container	12" O.C.	6/L02	

HERBACEOUS PERENNIALS (FORBS)

SYM	QTY	BOTANICAL NAME	CULTIVAR	COMMON NAME	SIZE	METHOD	SPACING	DETAIL	COMMENTS
ac	13	Actea racemosa		Black Cohosh	1 Quart	Container	36" O.C.	6/L02	
ae	36	Aster ericoides	Snow Flurry	Heath Aster	1 Quart	Container	18" O.C.	6/L02	
ag	7	Agastache	Blue Fortune	Giant Hyssop	1 Quart	Container	18" O.C.	6/L02	
ah	12	Amsonia hubrichtii		Arkansas Blue Star	1 Quart	Container	24" O.C.	6/L02	
al	22	Allium anglosum	Summer Beauty	Ornamental Onion	1 Quart	Container	18" O.C.	6/L02	
an	25	Anemone virginiana		Tall Thimbleweed	1 Quart	Container	12" O.C.	6/L02	
aq	72	Aquilegia canadensis		Wild Columbine	1 Quart	Container	12" O.C.	6/L02	
as	10	Astilbe chinensis var. taquetti	Purpurkerze	Chinese Astilbe	1 Quart	Container	24" O.C.	6/L02	
at	3	Asclepias tuberosa		Butterfly Weed	1 Quart	Container	24" O.C.	6/L02	
ba	3	Baptisia	Purple Smoke	Wild Indigo	1 Quart	Container	36" O.C.	6/L02	
cl	6	Calamintha nepeta subsp. Nepeta		Calamint	1 Quart	Container	18" O.C.	6/L02	
co	7	Coreopsis verticillata	Zagreb	Whorled Tickseed	1 Quart	Container	18" O.C.	6/L02	
ec	36	Echinacea purpurea	Kim's Knee High	Purple Coneflower	1 Quart	Container	18" O.C.	6/L02	
eh	22	Euphorbia corollata		Flowering Spurge	1 Quart	Container	12" O.C.	6/L02	
er	85	Erigeron pulchellus var. pulchellus	Lynnhaven Carpet	Robin's Plantain	1 Quart	Container	18" O.C.	6/L02	
eu	23	Eurybia divaricata		White Wood Aster	1 Quart	Container	24" O.C.	6/L02	
ge	26	Geranium maculatum		Spotted Geranium	1 Quart	Container	12" O.C.	6/L02	
ho	39	Hosta	Guacomole	Plantain Lily	1 Quart	Container	48" O.C.	6/L02	
hv	111	Heuchera villosa	Autumn Bride	Hairy Alumroot	1 Quart	Container	30" O.C.	6/L02	
la	48	Lamiastrum galeobdolon		Yellow Archangel	1 Quart	Container	18" O.C.	6/L02	
me	7	Mertensia virginica*		Virginia Bluebells	1 Quart	Container	12" O.C.	6/L02	
mo	21	Monarda bradburiana		Bee balm	1 Quart	Container	18" O.C.	6/L02	
ne	8	Nepeta fassenni	Cat's Meow	Catmint	1 Quart	Container	18" O.C.	6/L02	
pd	12	Penstemon digitalis	Husker Red	Beardtongue	1 Quart	Container	18" O.C.	6/L02	
po	127	Polygonatum biflorum		Solomon's seal	1 Quart	Container	12" O.C.	6/L02	
pt	21	Pycnanthemum tenuifolium		Slender Mountain Mint	1 Quart	Container	18" O.C.	6/L02	
sg	114	Spigelia marilandica		Indian Pink	1 Quart	Container	12" O.C.	6/L02	
si	67	Scutelleria incana		Hoary Skullcap	1 Quart	Container	18" O.C.	6/L02	
sm	38	Smilacina racemosa		Falso Solomon's Seal	1 Quart	Container	18" O.C.	6/L02	
so	36	Solidago flexicaulis		Zig Zag Goldenrod	1 Quart	Container	24" O.C.	6/L02	
sr	42	Solidago rugosa	Fireworks	Rough-leaved Goldenrod	1 Quart	Container	30" O.C.	6/L02	
sv	169	Senecio obovatus		Round-leaved Ragwort	1 Quart	Container	12" O.C.	6/L02	
zi	7	Zizia aurea		Golden Alexander	1 Quart	Container	18" O.C.	6/L02	

GROUNDCOVER

SYM	QTY	BOTANICAL NAME	CULTIVAR	COMMON NAME	SIZE	METHOD	SPACING	DETAIL	COMMENTS
aa	158	Asarum canadense		Wild Ginger	1 Quart	Container	12" O.C.	7/L02	
ep	37	Epimedium x versicolor	Sulphureum	Bishop's Hat	1 Quart	Container	12" O.C.	7/L02	
mc	28	Meehania cordata		Meehan's Mint	1 Quart	Container	12" O.C.	7/L02	

FERNS

SYM	QTY	BOTANICAL NAME	CULTIVAR	COMMON NAME	SIZE	METHOD	SPACING	DETAIL	COMMENTS
dr	47	Dryopteris marginalis		Evergreen Shield Fern	1 Quart	Container	18" O.C.	6/L02	

*Provide 2 plants per symbol.

NOTE: All plantings to be installed in a random, naturalistic pattern. Install ornamental grasses and perennials at a rate of 5 or 7 per grouping.

PennState

Project
CHEMICAL ENGINEERING / BIOMEDICAL ENGINEERING BUILDING
Shortlidge Road
University Park PA 16802

Prepared For
THE UNIVERSITY OF PENNSYLVANIA STATE UNIVERSITY
207 Physical Plant
University Park PA 16802

PSU Project No: 00-04264.00
PSU Building No: 0405-002
LEED Project ID: 10000623890062389

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Key Plan

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Professional Seals

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Sheet Title
Planting Schedule

Original drawing is 42 x 30. Do not scale contents of this drawing.

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