PENNSTATE

Office of Physical Plant

The Pennsylvania State University
Physical Plant Building
University Park, PA 16802-1118

DATE: November 20, 2013

SUBJECT: Baker Engineering & Science Building Renovation,
Penn State Beaver

TO: A/E Works
Celli-Flynn Brennan Architects & Planners
DRS Architects
IKM
MKSD
Perfido Weiskopf Wagstaff + Goettel
Renaissance 3 Architects
Spillman Farmer Architects
Stantec
Strada
WTW Architects

Congratulations, your firm has been selected as one of the firms on a long list for the design of the above referenced project. The Selection Committee will review responses to this Request for Proposals and identify a short list of three firms to be interviewed.

It is necessary that you provide us with the information requested in the enclosed questionnaire no later than **December 18, 2013 at Noon.** Please answer all of the questions in the order requested. This will provide uniform information on all firms for evaluation and ultimate presentation to the Board of Trustees. We encourage you to be as brief as possible without sacrificing accuracy and completeness. A document not exceeding 40 8-1/2 x 11 pages should be more than adequate to provide the requested information. Please submit to my office **eleven** copies of all materials. In order to better understand our goals and the major issues driving this project, we encourage you to visit the site; please contact Cindy Platz at Penn State Beaver at 724-773-3546 to schedule your visit and arrange a meeting with the appropriate individuals involved in this project. Please contact Phil Popowicz, the Project Manager at 814-865-3790 or pmp13@psu.edu for any project management questions and contact me if you have any process or planning questions.

In addition to the questionnaire, in order to help you formulate a response, enclosed you will find relevant excerpts from the R3a feasibility study. Also included is a non-binding fee proposal form for you to fill out; please submit to me one copy of this form under separate cover; to assist you in filling out this form please assume a construction budget of $6,000,000 and an FF&E budget of $320,000. Finally, you will also find a copy of our Form of Agreement 1-P; please review this agreement to ensure that your firm accepts all terms and conditions as written. In submitting a proposal for this project, you acknowledge that you concur, without exception, with all terms, conditions and provisions of Form of Agreement 1-P.

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A decision regarding the firms to be interviewed will be made by January 7, 2014 and posted to our web site. Interviews with the three short-listed firms will be held on Tuesday January 14, 2014 at The Penn Stater Conference Center in University Park. Results of the interviews will be announced at the Board of Trustees meeting on Friday January 17, 2014 and posted to our web site.

We appreciate your cooperation and interest in preparing this material. If the Board selects your firm, we will be looking forward to working with you on the development of this important project.

Please do not hesitate to call me if you have any other questions.

Sincerely,

David Zehngut
University Architect
207 Physical Plant
University Park, PA 16802
(814) 863-3158, E-mail dxz3@psu.edu

Enclosures

cc: Selection Committee Members

QUESTIONNAIRE

Michael Baker Building Renovation
Penn State Beaver

The following items of information must be supplied to the University. We have made no attempt to provide sufficient space below for you to fill in blanks but expect that you will provide the information requested on your own letterhead paper. **Failure to answer all questions will be reason for disqualifying your team from further consideration.** Please provide **eleven copies** of all material submitted. The deadline for submission is **December 18, 2013 at Noon.**

1. Please describe your approach to this project. Include a description of the scope of work your team will provide.

2. In addition to any further thoughts you might have on the essence of this project, we would like to see further evidence of your firm's ability to translate design intentions into a meaningful project (including the site). Therefore, please discuss in detail, but in no more than one or two pages, an example from your portfolio relevant to our project that best indicates the appropriate resolution of an understanding of the uniqueness of a project, design intentions, and translation of those design intentions into a meaningful and synthesized final solution.

3. Qualifications and experience of the lead design team members, **including consultants**, to be assigned to this project. Provide a clear indication of the roles to be performed by each **individual**. Please be very specific regarding the personal involvement and on-site participation of each lead design **individual.**

4. Consultant firms, if any, proposed for this project:

Firm	No. of Projects Worked With Your Firm	Total Amt. Value
Structural Engineers		
Mechanical Engineers		
Electrical Engineers		
Landscape Architects		
Interior Designers		
Cost Estimators		
Others		

5. Experience of the firm and any consultants in the design of facilities similar to the ones proposed (college and other), completed or under construction during the past ten years. List for each the completion date, final construction cost and gross square feet provided, and be very specific about the services provided by your firm. Identify those specific projects included in the proposed design team experience listed in #3 above.

6. Experience of the firm and any consultants in the design of college and university buildings (not already included in # 5 above) completed or under construction during the

past ten years. List for each the completion date, final construction cost and gross square feet provided, and be very specific about the services provided by your firm. Identify those specific projects included in the proposed design team experience listed in #3 above.

7. Evidence of the team's commitment to sustainable design.

8. List five client references for similar scope projects completed during the past ten years, giving name and telephone number. In order to give us an indication of your cost control track record, please **provide accurate and complete data indicating the gross square foot area, the design estimated cost, bid cost, the final total construction cost and the bid date for each project.** Please explain the reason for any major discrepancies between estimated, bid and final construction costs. Please make sure the telephone number of each client reference is current.

9. Graphic examples of selected projects personally done by **the lead design architect**, including brief description and completion date.

10. Please provide a proposed design schedule for each component of this project in graphic form allowing one week for any necessary Penn State University review. Assume the design process will start in February, 2014.

11. List errors and omissions insurance coverage.

12. Number of personnel in present firm(s): Architects _____ Engineers _____
Interior Designers _____ Landscape Architects _____ Others _____

    Which of the above are professionally registered?

13. Briefly tell us how you address diversity within your team.

Penn State University, Beaver Campus

Michael Baker Building Feasibility Study

February 22, 2013

Renaissance 3 Architects, P.C.

Penn State University, Beaver Campus
Michael Baker Building
100 University Drive, Monaca, PA 15061
R3A Project No. 1207
PSU Project No. 00-01873.00

Executive Summary

This Feasibility Study report, completed for PSU, documents the visioning and programming process for a proposed renovation to support programmatic and code upgrades of the Michael Baker Building located at PSU's Beaver campus.

The Michael Baker Building is one of several buildings located around the PSU-Beaver campus quadrangle. The building is bound by University Drive to the East, College Drive to the South, the Library building towards the North and a large central quadrangle to the West. The existing 25,905 square foot building needs to be renovated to meet the functional and technological needs of the programs located within the building.

The current concept design layouts and report are derived from comments provided by the PSU committee and representatives from facilities, faculty and users at several review meetings. The scope proposed includes the renovation of both levels as well as addition of infrastructure such as an elevator, new rooftop air handling units and additional Men's and Women's restrooms at the Ground floor level. Classrooms and teaching spaces used by various programs have been consolidated for better usage of space as well as close proximity. Preferred adjacencies between certain teaching programs have been taken into account. Faculty offices have been consolidated in a single location for ease of access. Existing rest room entrances have been made more discreet and accessible. The new elevator is to be centrally located across from the central stairs in the building and will connect both levels and provide accessible circulation.

The Ground floor level will contain program areas including general classroom spaces, Computer Engineering labs, a Learning Factory/Multipurpose space, Physics classroom and lab, Multimedia classroom and studio as well as a new conference room. In addition, new men's and women's restrooms will be added along with the new elevator shaft and ancillary spaces. New windows are proposed to be added along the North and East facades. The first floor level will contain general classroom spaces, IST labs, Earth Sciences and General Chemistry labs, a new Students Lounge, consolidated faculty offices and the relocated Arts studio. In addition, men's and women's restrooms will be renovated. On the exterior, all existing windows and entry doors are to be replaced with new. Existing brick veneer is to be re-pointed and metal soffits are to be cleaned, prepped and painted.

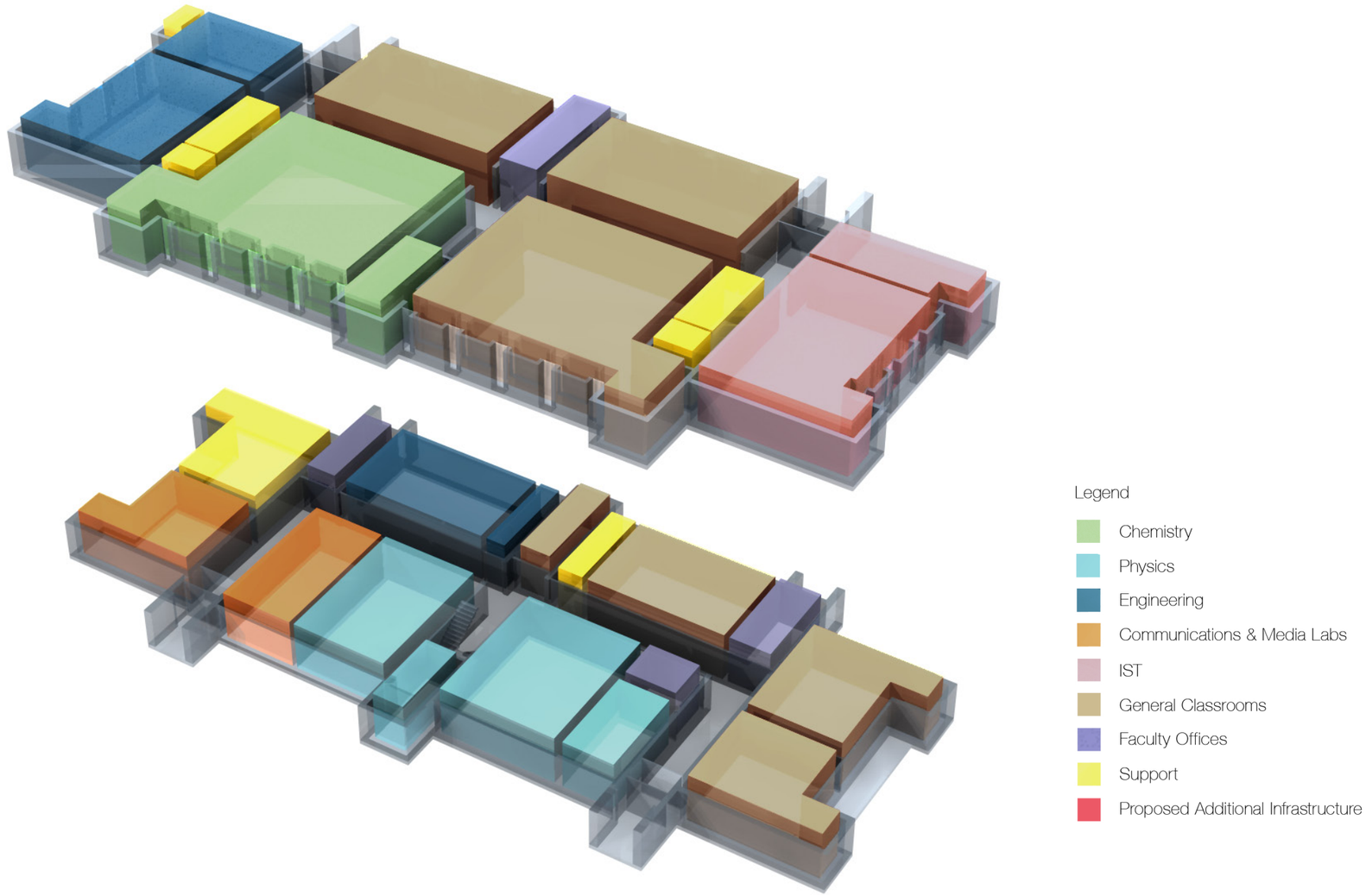
Per a cursory review performed by PSU's consultant, Florida Consulting, the roof membrane is a single ply rubber membrane with a white coating. The coating is peeling in some areas. The existing roof is approximately 4 years old and is still under a 10 year warranty. There is an area of water infiltration and the source may be at the wall or roof. It is recommended that repairs be requested from the manufacturer.
During the renovation, if there will be any new roof penetrations (vent stacks, HVAC equipment), there is concern regarding flashing new material to the old material. The white coating will have to be cleaned to allow for a proper bond. A contractor approved by the warranty holder to maintain the warranty should be used. If the renovations require significant roof top penetrations, PSU should consider a roof replacement during the renovation. If PSU considers a roof replacement due to a large number of roof top equipment units, it is suggested that PSU consider a modified bitumen (multi-ply) roof system as opposed to a single ply system. The modified bitumen systems are typically more durable when it comes to maintenance of roof top equipment.

In addition to improving the functionality and aesthetics, the design will improve the building's environmental quality and accessibility. Environmental improvements include adding new windows in several spaces to provide natural daylight and upgrading existing mechanical, electrical and plumbing infrastructure with more efficient systems.

Existing Program Stack

Existing First Floor

Existing Ground Floor



Legend

- Chemistry
- Physics
- Engineering
- Communications & Media Labs
- IST
- General Classrooms
- Faculty Offices
- Support
- Proposed Additional Infrastructure

Existing Program of Requirements

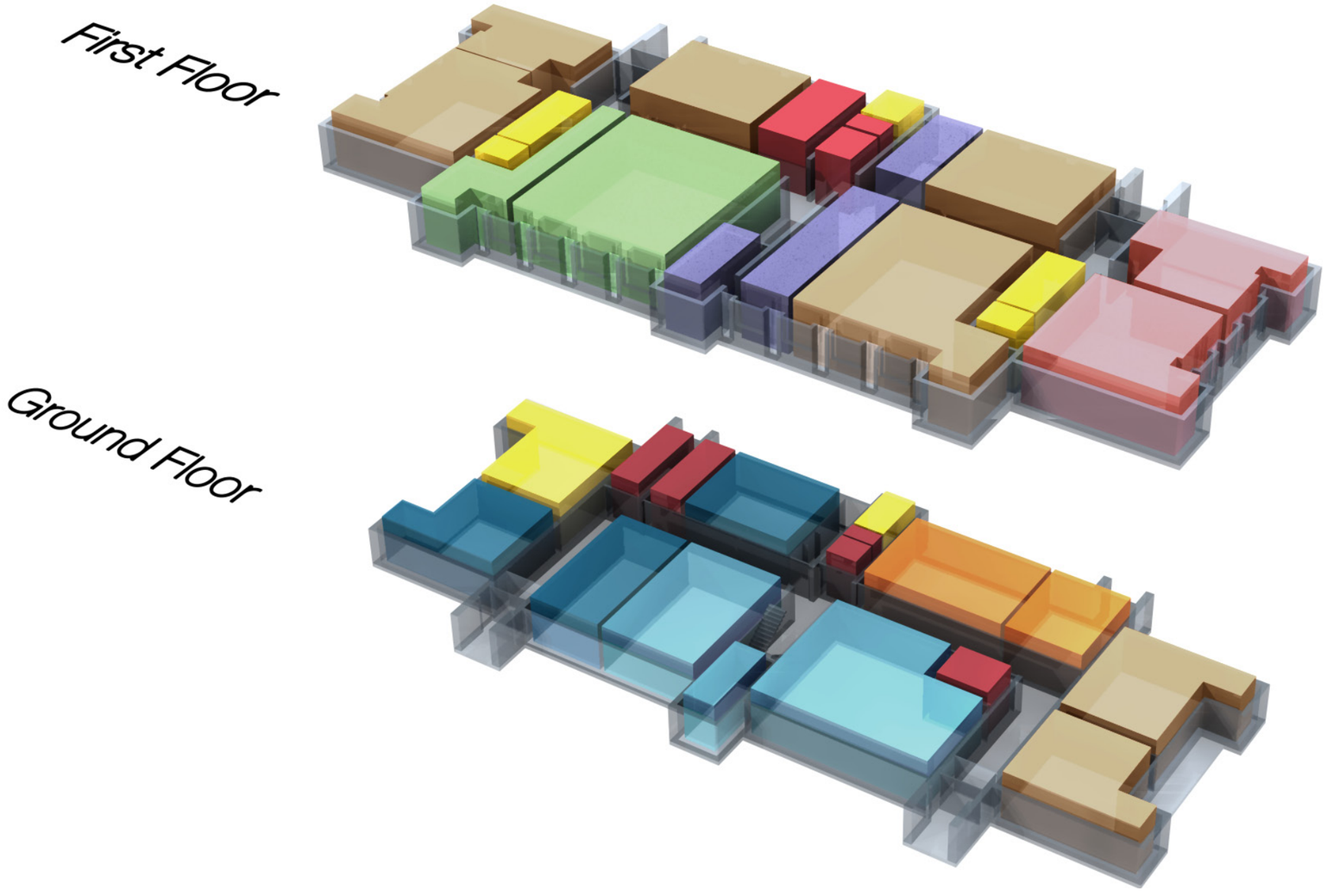
Item No.	Space	Occupants	Qty.	Net Area (sf)	Total Net Area (sf)	Notes
Group 1	**Chemistry**					
104	Chemistry Lab	24	1	1,225	1,225	ExistingTwelve 4' fume hoods. ACM countertops. Poor visibility
103	Chem Prep Room	1	1	400	400	
103A	Chemical storage	0	1	165	165	
105A	Chem Lab storage	0	1	226	226	
	Subtotal - Group 1	**25**	**4**		**2,016**	
Group 2	**Physics**					
13	Physics demo classroom	50	1	870	870	Main entrance lobby. Serves as gathering space prior to events
14	Physics Lab	40	1	1,092	1,092	
14A	Prep Room	0	1	210	210	Physics Storage
14B	Storage	0	1	340	340	Physics storage
	Subtotal - Group 2	**90**	**4**		**2,512**	
Group 3	**Engineering**					
6	Computer Science Lab	28	1	940	940	
6A	Instrument Room	0	1	105	105	Comp Science storage
101	Engineering Lab	30	1	1,210	1,210	28 computers
101A	Engineering Shop	2	1	375	375	
	Subtotal - Group 3	**60**	**4**		**2,630**	
Group 4	**Communications & Media**					
11	Communications (Apple) Lab	16	1	580	580	16 Apple computers on 8 tables
11A	Storage	0	1	76	76	
12	Green screen lab	4	1	373	373	Blue screen media room
012A	Media lab	6	1	334	334	6 computers
	Subtotal - Group 4	**26**	**4**		**1,363**	
Group 5	**IST**					
107	Info. Science Comp Lab	26	1	1,210	1,210	24 Computers
107A	Info. Science Lab	8	1	375	375	
	Subtotal - Group 5	**34**	**2**		**1,585**	
Group 6	**General Classrooms**					
1	Classroom	38	1	575	575	
1A	Storage Room	0	1	76	76	
2	Classroom	44	1	738	738	
2A	Storage Room	0	1	76	76	Communications storage
4	Arts Studio	20	1	930	930	
5	Storage Room	0	1	190	190	Arts Storage
105	Earth Sciences	36	1	1,275	1,275	Six existing tables
105E	Earth science storage	0	1	246	246	
105C	Equipment room	0	1	100	100	
105D	Storage	0	1	60	60	
108	Classroom	60	1	1,060	1,060	
111	Classroom	60	1	1,060	1,060	
	Subtotal - Group 6	**258**	**12**		**6,386**	

Item No.	Space	Occupants	Qty.	Net Area (sf)	Total Net Area (sf)	Notes
Group 7	**Faculty Offices**					
6B	Physics Office	1	1	236	236	Located adjacent to Comp Science lab
4A	Arts Office	1	1	236	236	Located adjacent to Arts studio
16	Physics office	1	1	140	140	Located adjacent to Physics lab
103B	Chemistry office	1	1	110	110	Located adjacent to Chemistry lab
105B	Earth sciences office	1	1	190	190	Located adjacent to Earth Sciences lab
110	Communications office	1	1	241	241	Located across from the stairs
	Subtotal - Group 7	**6**	**6**		**1,153**	
Group 8	**Support Spaces**					
4B	Storage Room	0	1	105	105	
M8	Mechanical Room	0	1	438	438	
9	Facilities Storage Room	0	1	160	160	
J10	Janitor Closet	0	1	155	155	
101B	Mechanical/IDF Room	0	1	45	45	
J102	Janitor Closet	0	1	38	38	
R102	Mens Room	0	1	140	140	
U103	Duct space	0	1	68	68	
U105	Duct Space	0	1	68	68	
R106	Womens Room	0	1	200	200	
	Corridors and circulation	0	1	3,567	3,567	
	Subtotal - Group 8	**0**	**11**	**4,984**	**4,984**	

Summary of Existing Spaces

Group 1	**Chemistry**	**25**	**2,016**	
Group 2	**Physics**	**90**	**2,512**	
Group 3	**Engineering**	**60**	**2,630**	
Group 4	**Communications & Media Labs**	**26**	**1,363**	
Group 5	**IST**	**34**	**1,585**	
Group 6	**General Classrooms**	**258**	**6,386**	
Group 7	**Faculty Offices**	**6**	**1,153**	
Group 8	**Support**	**0**	**4,984**	
Summary		**499 Occupant Load**	**22,629**	**Net Assignable SF**
Total GROSS Building SF			**25,905**	**GSF**

Proposed Program Stack



Legend

- Chemistry
- Physics
- Engineering
- Communications & Media Labs
- IST
- General Classrooms
- Faculty Offices
- Support
- Proposed Additional Infrastructure

Proposed Program of Requirements

Item No.	Space	Occupants	Qty.	Net Area (sf)	Total Net Area (sf)	Notes
Group 1	**Science Labs**					
13	Physics demo classroom	50	1	870	870	Main entrance lobby. Serves as gathering space prior to events
14	Physics Lab	40	1	1,092	1,092	
104	Chemistry Lab	24	1	1,225	1,225	ExistingTwelve 4' fume hoods. ACM countertops. Poor visibility
105	Earth Sciences	36	1	1,275	1,275	Six existing tables
	Subtotal - Group 1	**150**	**4**		**4,462**	
Group 2	**Communications & Media Labs**					
11	Communications Lab	16	1	580	580	16 Apple computers on 8 tables
12	Green screen lab	4	1	373	373	Blue screen media room
012A	Media lab	6	1	334	334	6 computers
2	Communications class	44	1	738	738	
	Subtotal - Group 2	**70**	**4**		**2,025**	
Group 3	**Engineering & IST Labs**					
6	Computer Science Lab	28	1	940	940	
101	Engineering Lab	30	1	1,210	1,210	28 computers
101A	Engineering Shop	2	1	375	375	
107	Info. Science Comp Lab	26	1	1,210	1,210	24 Computers
107A	Info. Science Lab	8	1	375	375	
	Subtotal - Group 3	**94**	**4**		**4,110**	
Group 4	**General Classrooms**					
4	Arts Studio	20	1	930	930	
108	Classroom	60	1	1,060	1,060	
111	Classroom	60	1	1,060	1,060	
1	Classroom	38	1	575	575	
	Subtotal - Group 3	**178**	**4**		**3,625**	
Group 5	**Offices**					
6B	Comp Science Office	1	1	236	236	Located adjacent to Comp Science lab
004A	Arts Office	1	1	236	236	Located adjacent to Arts studio
16	Physics office	1	1	140	140	Located adjacent to Physics lab
103B	Chemistry office	1	1	110	110	Located adjacent to Chemistry lab
105B	Earth sciences office	1	1	190	190	Located adjacent to Earth Sciences lab
110	Communications office	1	1	241	241	Located across from the stairs
	Subtotal - Group 5	**6**	**6**		**1,153**	

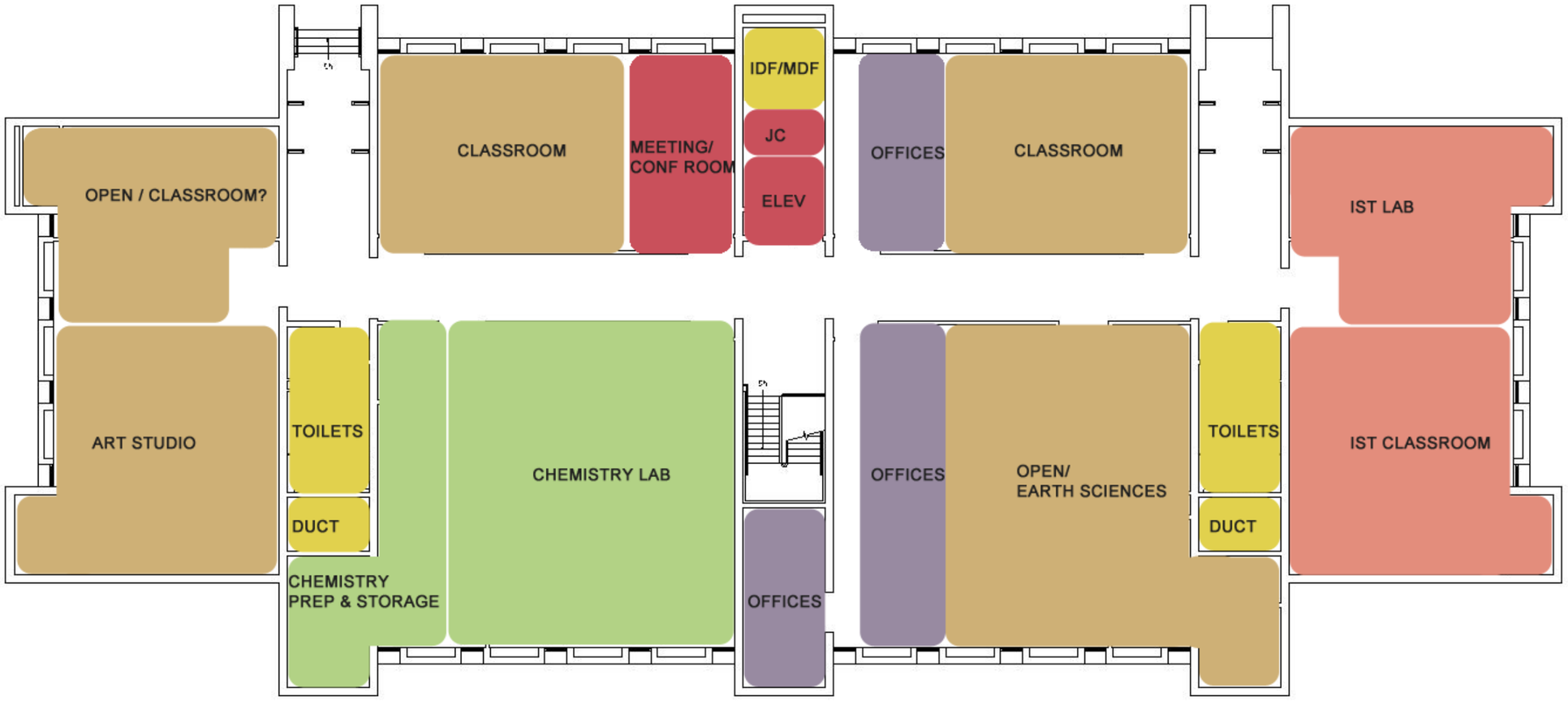
Item No.	Space	Occupants	Qty.	Net Area (sf)	Total Net Area (sf)	Notes
Group 6	**Support Spaces**					
1A	Storage Room	0	1	76	76	
2A	Storage Room	0	1	76	76	Communications storage
4B	Storage Room	0	1	105	105	Arts storage
5	Storage Room	0	1	190	190	
6A	Instrument Room	0	1	105	105	Comp Science storage
M8	Mechanical Room	0	1	438	438	
9	Facilities Storage Room	0	1	160	160	
J10	Janitor Closet	0	1	155	155	
11A	Storage	0	1	76	76	
14A	Janitor Closet	0	1	210	210	Physics Storage
14B	Storage	0	1	340	340	Physics storage
101B	Mechanical/IDF Room	0	1	45	45	
J102	Janitor Closet	0	1	38	38	
R102	Mens Room	0	1	140	140	
U103	Duct space	0	1	68	68	
103	Chem Prep Room	1	1	400	400	
103A	Chemical storage	0	1	165	165	
105A	Chem Lab storage	0	1	226	226	
105E	Earth science storage	0	1	246	246	
U105	Duct Space	0	1	68	68	
105C	Equipment room	0	1	100	100	
105D	Storage	0	1	60	60	
R106	Womens Room	0	1	200	200	
	Corridors and circulation	0	1	3,567	3,567	
	Subtotal - Group 6	**0**	**20**	**7,254**	**7,254**	

Summary of Existing Spaces

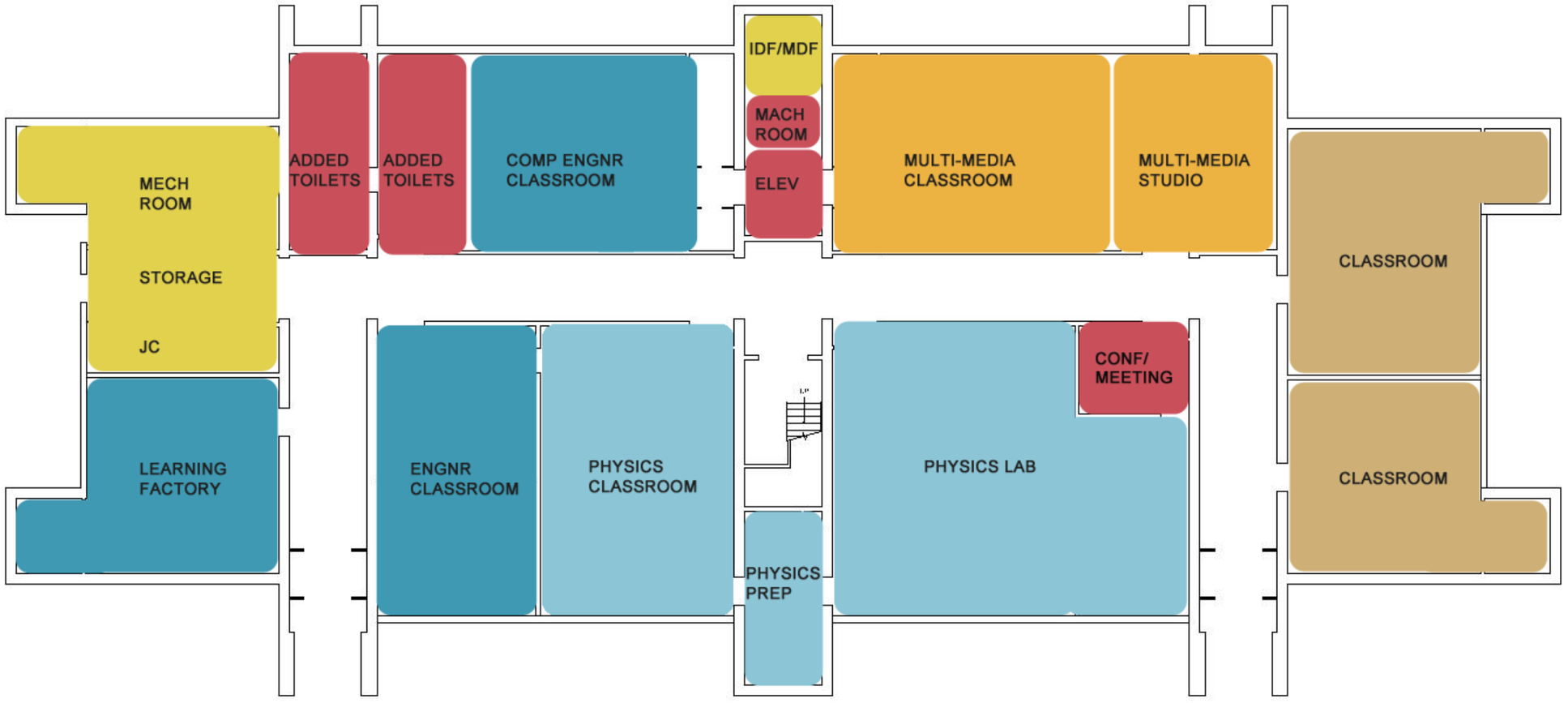
Group 1	**Science labs**	**150**	**4,462**	
Group 2	**Communications & Media L**	**70**	**2,025**	
Group 3	**Engineering & IST Labs**	**94**	**4,110**	
Group 4	**General Classrooms**	**178**	**3,625**	
Group 5	**Offices**	**6**	**1,153**	
Group 6	**Support**	**0**	**7,254**	
Summary		**498 Occupant Load**	**22,629**	**Net Assignable SF**

Total GROSS Building SF	**25,905**	**GSF**

Proposed Program Conceptual Summary



Proposed Program Conceptual Summary



Proposed Program Conceptual Summary

Item No.	Space	Occupants	Qty.	Total Net Area (sf)	Notes
Existing Group 1	**Chemistry**				
104	Chemistry Lab	24	1	1,225	ExistingTwelve 4' fume hoods. ACM countertops. Poor visibility
103	Chem Prep Room	1	1	400	
103A	Chemical storage	0	1	165	
105A	Chem Lab storage	0	1	226	
	Subtotal - Group 1	**25**	**4**	**2,016**	
Proposed group 1	**Chemistry**				
103	Chem Prep Room	1	1	400	
103A	Chem Storage	0	1	165	
104	Chemistry Lab	20	1	1,341	
	Subtotal - Group 1	**21**	**3**	**1,906**	
Existing Group 2	**Physics**				
13	Physics demo classroom	50	1	854	Main entrance lobby. Serves as gathering space prior to events
14	Physics Lab	20	1	1,092	
14A	Prep Room	0	1	210	Physics Storage
14B	Storage	0	1	340	Physics storage
	Subtotal - Group 2	**70**	**4**	**2,496**	
Proposed Group 2	**Physics**				
13	Physics Classroom	40	1	854	
14	Physics Lab	24	1	1,092	
014A	Physics Prep Room	0	1	210	
14B	Physics Storage	0	1	340	
	Subtotal - Group 2	**64**	**4**	**2,496**	
Existing Group 3	**Engineering**				
6	Comp Engineering Classroom	28	1	940	
6A	Instrument Room	0	1	105	Comp Science storage
101	Engineering Classroom	30	1	1,210	28 computers
101A	Engineering Shop	2	1	375	
	Subtotal - Group 3	**60**	**4**	**2,630**	
Proposed Group 3	**Engineering**				
(101) 012	Engineering Classroom	24	1	704	
6	Comp Engineering Classroom	16	1	704	
(101A) 11	Learning Factory/ Eng Shop	6	1	664	
	Subtotal - Group 3	**46**	**3**	**2,072**	

Item No.	Space	Occupants	Qty.	Total Net Area (sf)	Notes
Existing Group 4	**Communications & Media**				
11	Communications (Apple) Lab	16	1	580	16 Apple computers on 8 tables
11A	Storage	0	1	76	
12	Green screen lab	4	1	373	Blue screen media room
012A	Media lab	6	1	334	6 computers
	Subtotal - Group 4	**26**	**4**	**1,363**	
Proposed Group 4	**Communications & Media**				
(011) 04	Multi Media Classroom	24	1	863	
(12A) 004A	MM Studio	6	1	448	
	Subtotal - Group 4	**30**	**2**	**1,311**	
Existing Group 5	**IST**				
107	IST computer Lab	26	1	1,210	24 Computers
107A	IST classroom	8	1	375	
	Subtotal - Group 5	**34**	**2**	**1,585**	
Proposed Group 5	**IST**				
107A	IST computer Lab	28	1	575	
107	IST Classroom	28	1	988	
	Subtotal - Group 5	**56**	**2**	**1,563**	
Existing Group 6	**General Classrooms**				
1	Classroom	38	1	575	
1A	Storage Room	0	1	76	
2	Classroom	42	1	738	
2A	Storage Room	0	1	76	Communications storage
4	Arts Studio	20	1	930	
5	Storage Room	0	1	190	Arts Storage
105	Earth Sciences	36	1	1,275	Six existing tables
105E	Earth science storage	0	1	246	
105C	Equipment room	0	1	100	
105D	Storage	0	1	60	
108	Classroom	60	1	1,060	
111	Classroom	60	1	1,060	
	Subtotal - Group 6	**256**	**12**	**6,386**	
Proposed Group 6	**General Classrooms**				
1	Classroom	38	1	575	
1A	Storage Room	0	1	76	
2	Classroom	44	1	738	
2A	Storage Room	0	1	76	
(4) 101	Arts Studio	24	1	990	
101A	Open Classroom	34	1	515	
105	Earth Sciences	36	1	1,324	
108	Classroom	40	1	696	
111	Classroom	34	1	804	
	Subtotal - Group 6	**250**	**9**	**5,794**	

Proposed Program Conceptual Summary

Item No.	Space	Occupants	Qty.	Total Net Area (sf)	Notes
Group 7	**Existing Faculty Offices**				
6B	Physics Office	1	1	236	Located adjacent to Comp Science lab
4A	Arts Office	1	1	236	Located adjacent to Arts studio
16	Physics office	1	1	140	Located adjacent to Physics lab
103B	Chemistry office	1	1	110	Located adjacent to Chemistry lab
105B	Earth sciences office	1	1	190	Located adjacent to Earth Sciences lab
110	Communications office	1	1	241	Located across from the stairs
	Subtotal - Group 7	**6**	**6**	**1,153**	
Group 7	**Proposed Faculty Offices**				
	Offices on 1st floor (Average area = 132 sf)	1	7	930	
16	Meeting/Conf Room	9	1	138	
111A	Meeting/Conf Room	15	1	310	
	Subtotal - Group 7	**25**	**9**	**1,378**	
Group 8	**Existing Support Spaces**				
4B	Storage Room	0	1	105	
M8	Mechanical Room	0	1	438	
9	Facilities Storage Room	0	1	160	
J10	Janitor Closet	0	1	155	
101B	Mechanical/IDF Room	0	1	45	
J102	Janitor Closet	0	1	38	
R102	Mens Room	0	1	140	
U103	Duct space	0	1	68	
U105	Duct Space	0	1	68	
R106	Womens Room	0	1	200	
	Corridors and circulation	0	1	3,567	
	Subtotal - Group 8	**0**	**11**	**4,984**	
Group 8	**Proposed Support Spaces**				
	IDF/MDF	0	1	109	
	Janitor's Closet	0	1	55	
R106	Women's Toilet		1	180	
R102	Men's Toilet		1	187	
U103	Duct	0	1	68	
U105	Duct	0	1	68	
M8	Mechanical Room	0	1	438	
	IDF/MDF	0	1	120	
10	Janitor's Closet	0	1	155	
9	Facilities Storage Room	0	1	160	
	Elevator Machine Room	0	1	55	
(006)_	Women's Toilet		1	226	
(006B)_	Men's Toilet		1	212	
(110)_	Elevator		1	88	
(F002)	Elevator		1	88	
Q102	Corridor		1	1,613	
(105)_	Corridor		1	142	
Z101	Stairs		1	234	
Q002	Corridor		1	1,834	
(006)_	Corridor		1	88	
Z001	Stairs		1	176	
	Subtotal - Group 8		**10**	**6,296**	

Item No.	Space	Occupants	Qty.	Total Net Area (sf)	Notes
Summary of Existing Spaces					
Group 1	**Chemistry**	**25**		**2,016**	
Group 2	**Physics**	**70**		**2,496**	
Group 3	**Engineering**	**60**		**2,630**	
Group 4	**Communications & Media Labs**	**26**		**1,363**	
Group 5	**IST**	**34**		**1,585**	
Group 6	**General Classrooms**	**256**		**6,386**	
Group 7	**Faculty Offices**	**6**		**1,153**	
Group 8	**Support**	**0**		**4,984**	
Summary		**477**		**22,613**	**Net Assignable SF**
Total GROSS Building SF				**25,905**	**GSF**
Summary of proposed Spaces					
Group 1	**Chemistry**	**50**		**1,906**	
Group 2	**Physics**	**0**		**2,496**	
Group 3	**Engineering**	**0**		**2,072**	
Group 4	**Communications & Media Labs**	**0**		**1,311**	
Group 5	**IST**	**0**		**1,563**	
Group 6	**General Classrooms**	**1**		**5,794**	
Group 7	**Faculty Offices**	**0**		**1,378**	
Group 8	**Support**	**0**		**6,296**	
Summary		**51**		**22,816**	**Net Assignable SF**

Code Review Summary Sheet

Code Review Start Date	09/01/2012	Code Reviewed By:	Utkarsh Ghildyal	
Final Code Review Issue Date:	2012	Code Review Approved By:		
Project Name	Michael Baker Classroom and Lab Building Renovations Feasibility Study			
R3A Project No.	12075	Penn St. Project No.	#00-01873.00	
Owner	Penn State University			
Building Location:	City: Monaca	County: Beaver	State: PA	
Address:	100 University Drive, Monaca, PA 15061		Jurisdiction:	PA Labor & Industry
Previous Building Permits	Insert Previous Building Permit No.		Permit Date	
Relevant Codes:				
Building:	IBC 2009, IEBC 2009			
Plumbing:	IPC 2009			
Code Official	Ron Seiler			
Zoning:				
Code Official:				
Fire Department				
Fire Marshall				

Use and Occupancy and Level of Alteration:				
Use type:	B	Alteration Level;	Level -3	
Type of Construction:	Type I B	Other:		
Existing Area per floor: 13,655				
Floor	Area	Occupancy	Rate	Occupant Load
Ground Floor	12,800 GSF	B	100	260
First floor	13,650 GSF	A and B	15 & 100	260
Existing Building Total	26,450 GSF			520
Total Project Work scope: 26,450 SF				

Executive Summary

1. The construction type is assumed to be Type 1B per study of Fire Ratings of Archaic Materials & Assemblies IEBC 2009. The exterior walls are brick and CMU block (W-4-M-2 and W-8-M-82) for a combined fire endurance time of 3 hours and 45 minutes.
2. The project scope is an Alteration level 3 renovation of existing classroom and lab spaces.
3. An automatic sprinkler system is currently not existing. This system is required per code (IEBC section 704.2.2).
4. Stairs walls are minimum 1hr fire barriers.
5. The existing toilet rooms are not ADA accessible and the plumbing fixture count is not adequate per IPC 2009. Each men's room per floor requires at least 2 WC's, 3 sinks and 2 urinals. Each women's room per floor requires 4 WC's and 3 sinks. Each floors needs at least 3 drinking fountains per floor. However where it is technically infeasible to alter existing toilet facilities to be accessible, an accessible family or assisted-use toilet facility constructed in accordance with section 1109.2.2 is permitted. This shall be located on the same floor and in the same area as the existing facilities.
6. The International Existing Building Code applies to the work scope.

IBC 2009 Review by Code Section:

The code review is completed by code section. Code section number is listed in column one. A summary of the section is listed in column two. The building requirements specific for the relevant section are listed in column three.

Code reviewed IBC 2009

Section #	Section Summary	Building requirements
Chapter 2	**Definitions**	
	Fire Barrier	See 702.1 A fire resistance rated wall assembly of materials designed to restrict the spread of fire in which continuity is maintained.
Chapter 3	**Use and Occupancy Classifications**	
302.1	General	Structures shall be classified with respect to occupancy in one or more of the groups listed below.
304	Business Group B	Use of building for office, service type establishments, higher education.

Code Review Summary Sheet, cont...

Chapter 4	**Special Detailed Requirements**	N/A
401.1	Detailed use and Occupancy Requirements	The provision of this chapter apply to the special uses and occupancies described within the Chapter. Those include 1. Hazardous Materials, 414
Section 414	Hazardous materials	
414.1.3	Information required	A report shall be submitted to the building official identifying the maximum expected quantities of hazardous materials to be stored, used in a closed system and used in an open system, and subdivided to separately address hazardous material classification categories based on Tables 307.1(1) and 307.1(2). The methods of protection from such hazards, including but not limited to control areas, fire protection systems and Group H occupancies shall be indicated in the report and on the construction documents. The opinion and report shall be prepared by a qualified person, firm or corporation approved by the building official and provided without charge to the enforcing agency.
Chapter 5	**General Building Heights and Areas**	
501.1	Scope	The provisions of this Chapter control the height and area of new structures and additions to existing structures.
503	General Height and Area Requirements	The height and area for buildings of different construction types shall be governed by the intended use of the building and shall not exceed the limits of Table 503
505.3	Egress	Two independent means of egress where the common path of egress travel exceeds the limitations of Section 1014.3 **Exception:** A single means of egress shall be permitted in accordance with Section 1015.1
508.3.2	Allowable building area and height	The allowable building area and height of the building or portion thereof shall be based on the most restrictive

Chapter 6	**Types of Construction**			
602.1	General	Buildings erected shall be classified in one of the five construction types defined in 602.2 thru 602.5. The bldg elements shall have a fire rating not less than that specified in Table 601.		
602.2	Types I and II	Construction contains only non-combustible materials, except as permitted.		
Table 601	Existing Ratings for building elements	For Type 1B Bldg Element	Fire Rating Required	Fire Rating Existing
		Structural Frame	2 hrs	3 hrs+
		Exterior Bearing Wall	2hr	2 hrs+
		Interior Bearing Wall	2hr	2
		Exterior Non Bearing Walls	0	0
		Interior Non Bearing Walls	0	0
		Floor Construction	2hr	2 hrs +
		Roof Construction	1hr	1 hrs +
Table 602	Fire Rating for Exterior Walls based on Fire separation distance	0 hr		
707.6	Openings	Openings in a fire barrier shall be as per 715. Openings shall be limited to a maximum aggregate width of 25% of the length of the wall and a max area of any single opening shall not exceed 156 sf **Exceptions:** 1. Not limited to 156 square feet where adjoining floor areas *sprinkler* 2. Not limited to 156 square feet or an aggregate width of 25 percent of wall length at opening protective *fire door* serving an *exit* enclosure. 3. Not limited to 156 square feet or an aggregate width of 25 percent of wall length at opening protective has been tested & a minimum *f rating* not less than the *rating* of the wall. 4. Fire window assemblies permitted in atrium separation walls Not limited to 156 square feet or an aggregate width of 25 percent of wall length at 5. Not limited to 156 square feet or an aggregate width of 25 percent of wall length at the opening protective is a *fire door* assembly in a *fire barrier* separating an *exit* enclosure from an *exit* passageway		

Code Review Summary Sheet, cont...

707.7	Penetrations	Shall comply with 712
707.9	Duct and transfer openings	Penetrations in a fire barrier by ducts and air transfer openings shall comply with 716.
708	Shaft Enclosures	Vertical shafts where they are required to protect openings and penetrations thru floor or roof assemblies. Shafts shall be constructed per 706 or horizontals as per 711 or both.
708.4	Fire Rating	Not less than 1 hour for less than four floors
708.5	Continuity	Shaft enclosures constructed as fire barriers
708.7	Openings	Openings shall be protected as per 715 and doors shall be self or auto closing by smoke detection.707.
708.8	Penetrations	Limited to those required for purpose of the shaft.
708.11	Enclosure at Bottom	If shaft does not extend to floor it must be in a room of the same fire resistance

708.9	Ducts and air transfer openings	Shall be protected as per 716
709.5	Exterior walls	Such walls shall comply with the requirements of Section 705 for exterior walls
Chapter 9	Fire Protection Systems	
901.6	Supervisory service	fire protection systems shall be monitored by an supervising station
902	Definitions	SUPERVISING STATION. A facility that receives signals and at which personnel are in attendance at all times to respond to these signals.
903	Automatic Sprinkler Systems	Auto sprinkler systems shall comply with this section. Sections from 903.2. thru 903.2.9 specify the requirements for each type of use. None existing.
903.2.1.2	Group B	Group A1 shall be provided with sprinklers if one of the following exists; 1. Fire area exceeds 12,000 sf 2. Fire area occupant load exceeds 300 3. Fire area is not on the level of exit discharge. 4. The fire area contains a multitheater complex.
903.2.10	Windowless stories	An auto sprinkler system shall be installed in the locations as per 903.2.10.1 thru 903.2.10.3. 10.1
906	Portable Fire Extinguishers	See International Fire Code. Section 906 of the IFC addresses portable fire extinguishers. The need and type are dependent on the building type and fire class. There are 3 fire classes: Class "A" fire – ordinary penetrating fire from carboceous material such as wood, textile, paper, etc Class "B" fire – surface fires from flammable liquids such as gasoline, alcohol, or other highly combustible chemicals Class "C" fire – fires caused by electric short circuits, exposed live wires, overheated electric appliances, etc

906.1 IFC	Where required	Fire Extinguishers shall be installed in Groups A,B,E,F,H,I,M,R1,R2,R4, and S. **Exception:** In new bldgs of A, B, and E equipped with sprinklers, extinguishers are required only as per 906.1.2 thru .6. .2 Within 30' of commercial cooking equipment. .3 Where flammable or combustible liquids are stored, used or dispensed. .4 On each floor of bldgs under construction. .5 As required by Table 906.1 .6 Special hazard areas where required by the fire code official.
	Table 906.1	Table of areas where additional required fire extinguishers. 1415.1 Buildings under construction or demolition 1504.4.1 Spray-finishing operations 1506.4.2 Powder-coating areas 1908.8 Recycling facilities 1909.5 Exterior lumber storage 2003.5 Organic-coating areas 2306.1 Rack storage 2604.2.6 Welding and other hot work 2903.6 Combustible fibers 3405.4.9 Solvent distillation units 3606.5.7 Flammable solids
906.2 IFC	General requirements	Portable fire extinguishers shall be selected, installed and maintained per this section and NFPA 10.
906.3 IFC	Size and distribution	Size and distribution of PFE's shall be per this section.
906.3.1 IFC	Class A fire hazards	For occupancies that involve Class A fire hazards the minimum size and distribution are per Table 906.3(1)

Table 906.3(1) Fire Extinguishers For Class A Fire Hazards

HAZARD OCCUPANCY	LIGHT (Low)	ORDINARY (Moderate)	EXTRA (High)
Minimum Rated Single Extinguisher	2-Ac	2-A	4-Aa
Maximum Floor Area Per Unit of A	3,000 sf	1,500 sf	1,000 s
Maximum Floor Area for Extinguisherb	11,250 sf	11,250 sf	11,250 sf
Maximum Travel Distance to Extinguisher	75 feet	75 feet	75 feet

Code Review Summary Sheet, cont...

906.3.2 IFC	Class B fire hazard	PFE's shall be selected and placed as per Table 906.3(2)		
Table 906.3(2)	Flammable Or Combustible Liquids With Depths Less Than Or Equal To 0.25 Inch	TYPE OF HAZARD	BASIC MIN EXTINGUISHER RATING	TRAVEL DIST TO EXTINGUISHERS (feet)
		Light (Low)	5-B 10-B	30 50
		Ordinary (Moderate)	10-B 20-B	30 50
		Extra (High)	40-B 80-B	30 50
906.3.3	Class C fire hazard	Shall be placed based upon Class A and B.		
906.3.4	Class D fire hazard	Shall be placed based uponNFPA 10		
906.5	Conspicuous location	conspicuous locations readily accessible and immediately available for use along normal paths of travel,		
906.6	Unobstructed and unobscured	not be obstructed or obscured from view		
906.9.1	Extinguishers weighing 40 pounds or less	tops are not more than 5 feet AFF		
906.9.2	Extinguishers weighing more than 40 pounds	tops are not more than 3.5 feet AFF		
906.9.3	Floor clearance	between the floor and the bottom 4 inches		
907	Fire Alarm and Detection System			
Chapter 10	**Means of Egress**			
1001.1	General	Buildings shall be provided with means of egress as required by this chapter.		
1002	Definitions- EXIT ACCESS	That portion of a means of egress that leads from any occupied portion of a building to an exit.		

	EXIT	That portion of a means of egress which is separated from other interior spaces by fire resistance rated construction and opening protectives as required to provide a protected path of egress travel between the exit access and the exit discharge. Exits include exterior exit doors, exit enclosures, exit passageways, exterior exit stairs and ramps and horizontal exits.
	EXIT DISCHARGE:	That portion of a means of egress between the termination of an exit and a public way.
	EXIT ENCLOSURE	An exit component that is separated from other interior spaces of a building or structure by fire-resistance-rated construction and opening protectives, and provides for a protected path of egress travel in a vertical or horizontal direction to the exit discharge or the public way
	EXIT, HORIZONTAL.	A path of egress travel from one building to an area in another building on approximately the same level, or a path of egress travel through or around a wall or partition to an area on approximately the same level in the same building, which affords safety from fire and smoke from the area of incidence and areas communicating therewith.
	EXIT PASSAGEWAY.	An exit component that is separated from other interior spaces of a building or structure by fire-resistance-rated construction and opening protectives, and provides for a protected path of egress travel in a horizontal direction to the exit discharge or the public way.
1003	General Means of Egress	The requirements specified in sections 1003 thru 1013 shall apply to all three elements of the means of egress. Those elements are exit access, the exit and the exit discharge
1003.2	Ceiling height	not less than 7 feet 6 inches
1003.4	Walking surface	Shall be securely attached and have a slip resistant surface.
1004	Occupant load	Means of egress requirements shall be determined by the occupant load.
1005	Egress Width	Not less than required by this section.0.3" for Stairways & 0.2" for components. Loss of one egress shll no reuce the capacity to less than 50%. Max capacity from any story shall be maintained to grade.
1005.2	Door encroachment	Fully open shall not reduce the egress width >7"
1006	Means of Egress Illumination	
1006.1		The means of egress shall be illuminated at all times the bldg is occupied.
1006.2	Illumination level	Minimum of 1 foot-candle
1006.3	Emergency power	Illumination devices shall be supplied with emergency electrical power. These devices are located in spaces that require 2 exits, corridors, exits and exit components, and exterior landings at exit discharge doors.
1007	Accessible Means of Egress	
1007.1	Required	Accessible means of egress shall comply with this section. Accessible spaces shall be provided with at least one accessible means of egress. Where more than one means of egress is required by 1015.1 or 1019.1 then at least two accessible means of egress shall be provided. Exceptions: Not required in alterations to existing bldgs.

Code Review Summary Sheet, cont...

1007.2	Continuity and components	Each accessible means of egress shall be continuous to a public way and shall consist of one or more of the following; 1. Accessible routes as per 1104 2. Stairways complying with 1007.3 and 1020 3. Exterior stairs complying with 1007.3 and 1023 4. Elevators complying with 1007.4 5. Platform lifts complying with 1007.5 6. Horizontal exits complying with 1022 7. Ramps complying with 1010 8. Areas of refuge complying with 1007.6
1008.1	Doors	Means of egress doors shall meet the requirements of this section.
1008.1.1	Size of Doors	Minimum width shall be 32", maximum width 48". Height of doors shall be 80"
1008.1.1.1	Projections into clear width	No projections below 34", projections between 34" and 80" not more than 4"
1008.1.2	Door swing	Doors shall be side hinged swinging and in the direction of egress.
1008.1.6	Thresholds	Not exceeding 0.5in.
1008.1.7	Door arrangement	Space between doors in series = 48"+ door width
1008.1.8	Door operations	Readily openable from egress side
1008.1.8.1	Hardware	Shall not require tight grasping, tight pinching or twisting of wrist
1008.1.8.2	Hardware Height	Door handles, pulls, latches, locks, etc. installed 34" to 48" a.f.f.
1008.1.8.3	Locks and Latches	- Main exterior door permitted to be key-operated provided: Locking device readily distinguishable as locked Sign stating "THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED" Revocable by building official - In pairs, automatic flush bolts permitted, door leaf having flush bolts no knob or hardware
1008.1.9	Panic and fire exit hardware	Actuating portion extends at least one-half of width Maximum unlatching force of 15 lbs.
1009.1	Stairway width	Not less than 44" Unless occupant load is less than 50 =36"
1009.2	Headroom	Min. headroom clearance 80"
1009.4	Stair treads and risers	Risers: 7" max, 4" min Treads: 11" min Difference not more than 0.375"
1009.5	Stairway landings	Min. length equal to Stair width, need not be > 48"Door at landing cannot reduce landing width to less than ½ req width

Chapter 11	**Accessibility**	
1104.3	Connected Spaces	When a building or portion of building is required to be accessible, an accessible route shall be provided to each portion of the building, to accessible building entrances connecting accessible pedestrian walkways and the public way.
1104.4	Multilevel buildings	At least one accessible route shall connect each accessible level, including mezzanines, in multilevel buildings and facilities.
1105.1	Public entrances	In addition to accessible entrances required by sections 1105.1.1 through 1105.1.6, at least 60% of all public entrances shall be accessible. Exceptions: Loading and service entrances that are not the only entrance to a tenant space.
Chapter 27	**Electrical**	
2701.1	Scope	This chapter governs the electrical components, equipment and systems used in buildings. Electrical systems shall be designed and constructed as per the ICC Electrical Code.
Chapter 28	**Mechanical Systems**	
2801.1	Scope	Mechanical appliances, equipment and systems shall be constructed, installed and maintained as per the IMC and the IFGC.
Chapter 29	**Plumbing Systems**	
2901.1	Scope	This chapter and the IPC shall govern the erection, installation, alteration, repairs, relocation, replacement addition to, use or maintenance of plumbing equipment and systems.
Chapter 34	**Existing Structures**	
3401.4.1	Existing materials	Materials already in use in a building in compliance with requirements or approvals in effect at the time of their erection or installation shall be permitted to remain in use unless determined by the code official to be dangerous to life, health or safety.
3401.4.	Alternative compliance	Work performed in accordance with the IEBC shall be deemed to comply with the provisions of this chapter.

Code Review Summary Sheet, cont...

IEBC 2009 Review by Code Section:

The code review is completed by code section. Code section number is listed in column one. A summary of the section is listed in column two. The building requirements specific for the relevant section are listed in column three.

Code reviewed IEBC 2009

101.2	Scope.	The provisions of the International Existing Building Code shall apply to the repair, alteration, change of occupancy, addition and relocation of existing buildings
101.3	Intent.	The intent of this code is to provide flexibility to permit the use of alternative approaches to achieve compliance with minimum requirements to safeguard the public health, safety and welfare insofar as they are affected by the repair, alteration, change of occupancy, addition and relocation of existing buildings
101.4	Applicability	This code shall apply to the repair, alteration, change of occupancy, addition and relocation of all existing buildings, regardless of occupancy
Chapter 4	Classification Of Work	
Section 404	Alteration—Level 3	Scope.
Chapter 5	Repairs	
502.1	Existing Building materials	Materials already in use in a building in conformance with requirements or approvals in effect at the time of their erection or installation shall be permitted to remain in use unless determined by the Code official to render the building unsafe or dangerous.
704	Fire Protection	
704.2	Automatic sprinkler systems	Automatic sprinkler systems shall be provided in accordance with the requirements of sections 704.2.1 through 704.2.5.
704.2.2	Group B	Work areas that have exits or corridors shared by more than 1 tenant or that have exits or corridors serving an occupant load greater than 30 shall be provided with automatic sprinkler protection where all of the following conditions occur: 1.The work area is required to be provided with sprinkler protection in accordance with the IBC as applicable to new construction. 2. The work area exceeds 50% of the floor area 3. The building has sufficient municipal water supply for design of a fire sprinkler system available to the floor without installation of a new fire pump.
705.5.1	Corridor doors	Corridor doors in the work area shall not be constructed of hollow core wood and shall not contain louvers. All replacement doors shall be 1 3/4" solid bonded wood core or approved equal unless the existing frame will accommodate only a 1 3/8" door. Exception: 5. Door assemblies having a fire protection rating of at least 20 minutes.
Section 707	**Structural**	
707.2	New structural members	New structural members in alterations shall comply with IBC.
Section 708	**Electrical**	
708.1	New installations	All newly installed electrical equipment and wiring related to work done in any work area shall comply with the materials and methods requirements of Chapter 5.
Section 709	**Mechanical**	
709.1	Reconfigured Spaces	Existing mechanical ventilation systems shall comply with the requirements of Section 709.2
709.2	Altered existing systems	In mechanically ventilated spaces, existing mechanical ventilation systems that are altered, reconfigured or extended shall provide not less than 5 cfm per person of outdoor air and not less than 15 cfm of ventilation air per person; or not less than the amount of ventilation air determined by the IAQ procedure of ASHRAE 62.
709.3	Local exhaust	All newly introduced devices, equipment, or operations that produce airborne particulate matter, odors, fumes, vapor, combustion products, gaseous contaminants, pathogenic and allergenic organisms and microbial contaminants in such quantities as to adversely affect or impair health or cause discomfort to occupants shall be provided with local exhaust.
Section 710	**Plumbing**	
710.1	Minimum fixtures	Where the occupant load of the story is increased by 20%, plumbing fixtures for the story shall be provided in quantities specified in the IPC based on increased occupant load.

709.3	Local exhaust	All newly introduced devices, equipment, or operations that produce airborne particulate matter, odors, fumes, vapor, combustion products, gaseous contaminants, pathogenic and allergenic organisms and microbial contaminants in such quantities as to adversely affect or impair health or cause discomfort to occupants shall be provided with local exhaust.
Section 710	**Plumbing**	
710.1	Minimum fixtures	Where the occupant load of the story is increased by 20%, plumbing fixtures for the story shall be provided in quantities specified in the IPC based on increased occupant load.

Plumbing Fixtures Worksheet

Project Name	PSU-Beaver MBB Feasibility Report	Project No.	12075
Applicable Code	IPC 2009	Edition	
Type of Building	Business		

Building Population: 498

	Actual	Design
Male	249	260
Female	249	260
Total	498	520

Water Closets: Male: 1 per 25 for first 50 and 1 per 50 for remainder
Female: 1 per 25 for first 50 and 1 per 50 for remainder
Lavatories: 1 per 40 for first 80 and 1 per 80 for remainder
Drinking Fountain: 1 per 100
Service Sink: 1 per floor

Minimum Fixture Requirements:	Male	Female	Total
1. Water Closets	3	6	9
2. Urinals	3	-	3
3. Lavatories	5	5	10
4. Showers	-	-	-
5. Kitchen Sinks	-	-	-
6. Drinking Fountains	-	-	5
7. Service Sinks	-	-	2
8. Other	-	-	-

*Note: Number of urinals shall be at lest 50% of the total number of water closets (6 water closets required, equals 3 urinals required). Number of water closets may be decreased by the number of urinals which are used (-3), but the number of remaining water closets shall not be less than 50% of the original tabulated total. (50% of 6 is 3, remaining number of water closets not less than 50%)

Existing Site Photographs

Existing Campus Context

View from Quadrangle

View of the Quadrangle

View of adjacent Library

LCB, GCB and Library Buildings to the west

Parking lot to the right

View of the Bunker

New landscape elements

Existing Site and Exterior Photographs

West Elevation

North Elevation

Blank facade at South-West corner

First Floor Entry Steps

Concrete spalling- Site steps at North Building

Brick repointing needed

East Elevation

Existing Site and Exterior Photographs

Loading Dock at South Elevation

Concrete sidewalk from loading dock

Concrete sidewalk on the Eastern side

Paint peeling at underside of metal soffits

Entry at Ground Floor

Roof access hatch

Painted roof membrane

Existing Interior Photographs

Entry Vestibule


Main corridor


Existing central stairs


Classroom 002


Classroom 001

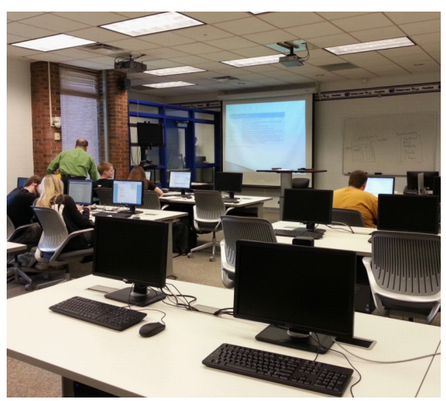

Arts Studio


Casework at Chemistry Lab


Chemistry Lab fume hood


Typical aisle in Chemistry Lab

Existing Interior Photographs



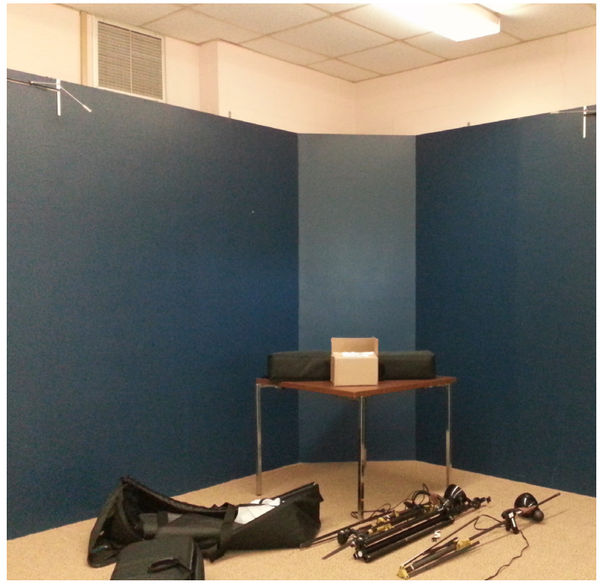
IST Lab

Computer Engineering Lab

Physics Lab

General Classroom

Earth Science Lab



Media Lab

Mechanical Interstitial Space

Mechanical Interstitial Space

PENNSTATE

1855

NON-BINDING ARCHITECT AND ENGINEER FEE SCHEDULE

Project: Baker Engineering & Science Building Renovation
Penn State Beaver

Firm Name: _____

	Hours	Fee
Programming/Site Analysis (confirmation)		
Schematics		
Design Development		
Construction Documents		
Bids		
Construction Administration		
Subtotal		
Reimbursements (allowance)		
Total		

Please include a listing of your billable rates that will be used for this project.

Please return completed form by December 18, 2013 @ Noon to:

David Zehngut
University Architect
The Pennsylvania State University
200 Physical Plant Building
University Park, PA 16802-1118
Phone (814) 863-3158

Note: Include any costs for consultants within amounts listed, not separately.

Form of Agreement 1-P

THE PENNSYLVANIA STATE UNIVERSITY

OWNER AND PROFESSIONAL

AGREEMENT

THIS AGREEMENT made this _____ day of _____

in the year Two Thousand _____, by and between THE PENNSYLVANIA STATE UNIVERSITY, a non-profit corporation and an instrumentality of the Commonwealth of Pennsylvania, having its principal offices at University Park, Centre County, created and existing under the laws of the Commonwealth of Pennsylvania, hereinafter called the "Owner," and

_____

_____

_____

hereinafter called the "Professional," for the following Project:

_____

_____

PSU Project No. _____.

(Title of Project should match the documents, must include project number)

In consideration of the promises set forth herein, and with intent to be legally bound, the parties agree to the terms set forth within this Agreement.

TABLE OF CONTENTS

12.10 Amendments

ARTICLE 13: SCHEDULE OF EXHIBITS

DEFINITIONS:

Contract Documents consist of the General Conditions of the Contract, Drawings, Specifications, Addenda issued prior to receipt of Trade Contract bids, Form of Proposal, other documents listed in the Agreement and those modifications to the Contract as follows: Owner's written authorization to the Contractor for changes to the Scope of Work, a Change Order, and a written order for a minor change in the Work issued by the Professional.

Contractor means the person or entity retained by the Owner to perform Work for the project and includes the Contractor's Representative.

Construction Budget means the project construction cost limit established by the Owner.

Construction Cost Estimate means a detailed breakdown of all costs associated with the scope of work required to meet the project requirements projected to the mid-point of construction.

Final Completion means the point at which the project is fully completed in accordance with the Contract Documents (this includes *all* physical/construction obligations, administrative obligations, and punch list obligations).

The **Owner** is The Pennsylvania State University, a non-profit corporation created and existing under the laws of the Commonwealth of Pennsylvania, and an instrumentality of the Commonwealth of Pennsylvania; this term shall include the Owner and/or the Owner's authorized representative.

The **Pennsylvania State University Design and Construction Standards** means those design and construction standards as set forth at: http://www.opp.psu.edu/planning-construction/design_and_construction_standards/standards-and-forms.

The **Professional** is the person lawfully licensed to practice architecture or engineering, or the firm employed to provide architectural or engineering services, for the referenced project. The term "Professional" shall mean the Professional or the Professional's authorized representative.

The **Project** shall comprise the Work defined by the Contract Documents and may include work by the Owner or other Separate Contractors, Trade Contractors, Sub-Trade Contractors or the Professional.

The **Scope of Work** means the work reasonably contemplated, required, implied, or reasonably inferable by the Contract Documents or normal standards of the building trades, whether or not explicitly contained in the Contract Documents.

Services means the services provided by the Professional and/or by consultants retained by the Professional for the Project.

Substantial Completion shall mean that stage in the progression of the Work when the Work is sufficiently complete in accordance with this Contract that the Owner can enjoy beneficial use or occupancy of the Work and can utilize the Work for its intended purpose.

Work means the construction and services necessary or incidental to fulfill the Contractor's or Professional's obligations for the Project in conformance with the agreement between the Owner and Contractor or the Owner and Professional.

ARTICLE 1: PROFESSIONAL'S RESPONSIBILTIES

1.1 General Responsibilities

1.1.1 The Professional shall furnish or provide the architectural and engineering services as outlined herein, and any other relevant data, specifications or documents, as necessary for a complete project. The Professional shall expeditiously perform said services in a manner consistent with professional skill, care, and the orderly progress of the work. In carrying out all obligations pursuant to this Agreement, including the furnishing of Construction Documents, the Professional shall in all respects conform to the applicable professional standard of care.

1.1.2 By executing this Agreement, the Professional represents to the Owner that the Professional possesses the requisite skill, expertise, and credentials to perform the required services, and that Professional is licensed to practice by all public entities having jurisdiction over the Professional and the Project. The Professional further represents to the Owner that the Professional will maintain all necessary licenses, permits, or other authorizations necessary to act as Professional for the Project until the Professional's remaining duties hereunder have been satisfied. The Professional assumes full responsibility to the Owner for the negligent acts and omissions of the Professional's consultants or others employed or retained by the Professional in connection with the Project.

1.1.3 Execution of this Agreement by the Professional constitutes a representation that the Professional has become familiar with the Project site and the local conditions under which the Project is to be implemented.

1.1.4 The Professional shall provide the services required by this agreement in conformance with the most recent project schedule approved by the Owner.

1.1.5 The Professional shall provide Professional Services, per Exhibit A and per this agreement, in accordance with The Pennsylvania State University Design and Construction Standards referenced in Exhibit C.

1.1.6 The Professional is responsible for additional submission and presentation requirements as outlined for Board of Trustee approval or other administrative approval.

1.1.7 If a Construction Manager is hired by the Owner it will be the responsibility of the Professional to collaborate and work in concert with the Construction Manager throughout the duration of the project. Furthermore, the Professional shall reconcile all cost estimates with the Construction Manager.

1.1.8 (OPTIONAL) Payment of the Professional's fees, as per in Article 9, is contingent upon completion of the documents per the attached schedule. (NOTE: Attach Schedule as Exhibit D if schedule has been developed.)

1.1.9 (OPTIONAL) Adherence to Time Schedule. The Professional shall strictly adhere to submission schedules as set forth in this Agreement. Should the Professional become aware that he will be unable to meet any of the dates set forth in this Agreement, the Professional shall immediately notify the Owner in writing.

- The Professional shall include in the notice the reason(s) for the Professional's inability to meet the date(s) and a request that the Owner amend the time schedule.
- The Owner shall review the Professional's notice and determine whether or not to amend the time schedule.

If the Owner determines that the delay is **due to the fault of the Professional**, the Owner may amend the schedule and direct the Professional to expeditiously proceed with the design of the project, in which case **the Owner may hold the Professional responsible for any costs attributable to the delay**, or terminate the Agreement for default of the Professional, in accordance with the provisions of this Agreement.

If the Owner determines that the delay is not due to the fault of the Professional, the Owner may amend the time schedule. The Professional agrees that such an amendment of the time schedule is his

exclusive remedy for a delay and that he may not make any claims against the Owner for increased costs due to the delay.

1.1.10 Building Information Modeling (BIM). The project will be designed, constructed, and operated using Building Information Modeling (BIM). The BIM project scope is defined in The Pennsylvania State University Office of Physical Plant BIM Contract Addendum (BIM Addendum). This addendum applies to all projects exceeding a Total Project Cost of $5 Million new construction, substantial renovation, or as directed by the Office of Physical Plant Project Manager. On qualifying projects, professionals shall use BIM application(s) and software to develop project designs and assist in the coordination of construction.

The Pennsylvania State University is committed to utilizing BIM technologies and processes to execute the design, construction, and operations of its new High Performance buildings and the updating of all existing structures and infrastructure. The intent is to achieve the following goals: facilitate a collaborative project environment between all project stakeholders beginning at project conception through facility operations; improve facility system coordination to streamline design and constructions processes and minimize change orders; deliver a better overall facility design, visualize construction processes, avoid field conflicts, develop building life cycle costs, accurately project cost estimates, and seamlessly transition into facilities operations; develop high performance buildings in accordance to The Pennsylvania State University sustainability goals; incorporate the Record Model and As-Built Models, including infrastructure and building systems, into the existing Enterprise Asset Management system (EAM) to create an As-Maintained Facilities Management Model; and establish a technology platform and provide continuous support to incorporate future technologies into existing processes.

The Professional shall provide all deliverables in compliance with the BIM Addendum at stages described in the BIM Plan. The BIM Model is an instrument of service and is considered to be a component of Design and Construction Documents governed by Article 7 of this Agreement and within the BIM Addendum, without exception.

The Professional shall lead the development of a project specific BIM Execution Plan (BIM Plan), documenting the collaborative process in which BIM will be implemented throughout the life cycle of the project, during the design phase. An initial BIM Plan shall include the Professional's requirements identified in the BIM Addendum and the Office of Physical Plant Plan Template. It shall be submitted for approval by The Pennsylvania State University prior to the contract execution. A collaborative BIM Plan shall be developed with the Contractor/CM prior to completion of the schematic design phase. In the event that a Contractor is not procured for preconstruction services, the Professional Team and Owner shall develop the collaborative BIM Plan. The BIM Plan shall be revisited with the entire project team prior to Construction and submitted to the Office of Physical Plant for final approval. Payment may be held at each development phase until the BIM Plan is approved.

All costs associated with BIM, including model updates during construction, shall be included in the base contract price (contract Article 9.1.1). A breakdown of any cost associated with the implementation of BIM must be disclosed in the BIM Addendum.

Any questions or variations from this language shall be submitted in writing and agreed upon with the Office of Physical Plant BIM Manager or Manager of Design Services.

1.1.11 Contractor Design-Assist. The Owner anticipates utilizing contractor/vendor design-assist on some aspects of the project. If utilized, the Professional will assume the responsibility for incorporation of the design assist information into the overall design.

1.1.12 (OPTIONAL, If there is a cost impact for not meeting the LEED certification level, it should be outlined as a penalty in this section.) LEED Responsibility for Project. The Professional shall ensure that the LEED target certification level for the project is achieved. The Professional shall be primarily responsible for identifying the listing of credits to be achieved during the project in an effort to meet the certification level. The Professional shall also be responsible for preparing all documentation required for

submission. The Professional shall use as a guide The Pennsylvania State University LEED Policy to be provided by the Owner.

1.2 Schematic Phase

The Professional shall review and comply with the Project program and The Pennsylvania State University Design and Construction Standards, both as furnished by the Owner, and shall conduct appropriate visits to the Project site. The Professional shall then provide to Owner a preliminary evaluation of the program and schedule and a preliminary construction cost estimate. The Professional shall review with the Owner alternative approaches to project design and construction, as may be required.

After the Owner has approved the Project scope, cost estimate and schedule as submitted by the Professional, the Professional shall prepare and submit to the Owner, for approval, Schematic Design Documents and any other documents required by the Owner. Refer to the Design Phase Submittal Requirements document available on the Office of Physical Plant web page for a listing of submission requirements for the Schematic Phase.

Following approval of Schematic Design Documents and any other documents required at such phase by the Owner, The Professional shall submit a Construction Cost Estimate. The estimate shall be determined by the Professional using the most accurate means available.

1.3 Design Development Phase

After approval by the Owner of the Schematic Design Documents, and any Owner-authorized changes in Project scope or construction budget, the Professional shall prepare and submit, for approval by Owner and any government authorities, Design Development drawings and any other documents required by the Owner for said approval. These drawings and other documents shall fix building size, delineate and describe the various construction materials to be used, and indicate the structural, mechanical, and electrical systems upon which the design is based. Refer to the Design Phase Submittal Requirements document available on the Office of Physical Plant web page for a listing of submission requirements for the Design Development Phase (noted as Preliminary and Design Phase in the document).

The Professional shall provide an update of the Construction Cost Estimate and schedule and advise the Owner immediately of any adjustments.

1.4 Construction Document Phase

After approval by the Owner of the Design Development Phase documents, and any further Owner-authorized changes in Project scope or construction budget, the Professional shall prepare and submit to the Owner, for approval, Construction Drawings and Specifications/Project Manual (hereinafter referred to as the "Construction Documents") required by the Owner for said approval. These Construction Documents shall delineate, detail, and completely specify all materials and equipment required to fully complete construction of the Project in every respect, consistent with current standards of the profession. The Construction Documents shall completely describe all work necessary to bid and construct the Project. Refer to the Design Phase Submittal Requirements document dated August 2006 (or any subsequent updates), available on the Office of Physical Plant web page, for a listing of submission requirements for the Construction Document Phase.

Any review and approval by the Owner of the Construction Documents shall not be deemed to diminish the Professional's obligations under this Agreement.

The Professional shall provide an update of the Construction Cost Estimate and schedule and shall advise the Owner immediately of any adjustments.

The Professional shall be responsible for completing all of the appropriate planning modules, soil and erosion control plans, and other documents which may be required.

The Professional shall be responsible for obtaining, on behalf of the Owner, whatever approvals are necessary to connect to non-Owner-owned utility lines.

The Professional shall coordinate the Construction Documents for all of the Separate Prime Contracts or trade packages, as required, and shall employ all reasonable and necessary efforts to prevent omissions, conflicts, overlaps, or duplications of any items of work or materials on the Project.

The Professional shall coordinate the services of all design consultants for the Project, including those retained by the Owner.

1.5 Bidding Phase

After approval by the Owner of the Construction Documents, the Professional shall prepare and distribute all necessary bidding correspondence and documents, evaluate bid proposals, attend pre-bid or pre-award meetings, clarify the scope or intent of the Construction Documents, evaluate proposed subcontractors, and assist in the preparation of construction contracts.

1.6 Construction Phase

The Professional shall issue a set of construction documents that incorporate all bidding documents and revisions per addenda prior to the start of construction.

The Professional's responsibility under this Agreement for Construction Phase services commences with the execution of the Contract(s) between the Contractor(s) and the Owner and terminates no earlier than the expiration of the Contractor's one-year guarantee period against defective materials, equipment, and/or workmanship. This paragraph is not intended to, and shall not be construed as, affecting in any way the calculation of any applicable legal statutes of limitation.

Administration, by the Professional, of the construction contract(s) shall be as outlined below and in accordance with the General Conditions of the Contract for Construction. The Professional agrees to perform all of its obligations under this Agreement consistent with said General Conditions. The extent of the Professional's duties and responsibilities and the limitations of its authority as specified thereunder shall not be modified without written agreement between the Owner and the Professional.

The Professional shall not be responsible for the Contractor's construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs in connection with the work. However, if the Professional has actual knowledge of safety violations, the Professional shall immediately alert the relevant Contractor or Subcontractor and shall give prompt written notice to the Owner.

The Professional shall not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents. The Professional shall not be deemed to have control over or charge of acts or omissions of the Contractor, Subcontractors, or their agents or employees, or any other persons performing portions of the Work. However, the Professional shall provide all required assistance to the Contractor, Subcontractors and/or agents and employees in order to facilitate the appropriate and timely performance of the Work. Furthermore, Professional is responsible for notifying the Owner and the Contractor of the Contractor's failure to carry out the Work in accordance with the Contract Documents upon observing such failure by the Contractor.

1.6.1 Schedule of Values. Upon receipt, the Professional shall carefully review and examine the Contractor's Schedule of Values, together with any supporting documentation or data which the Owner or the Professional may require from the Contractor. The purpose of such review and examination will be to protect the Owner from an unbalanced Schedule of Values which allocates greater value to certain elements of the Work than is indicated by such supporting documentation or data or than is reasonable under the circumstances. If the Schedule of Values is found to be inappropriate, or if the supporting documentation or data is deemed to be inadequate, and unless the Owner directs the Professional to the contrary in writing, the Schedule of Values shall be returned to the Contractor for revision or supporting documentation or data. After making such examination, if the Schedule of Values is found to be

appropriate as submitted or, if necessary, as revised, the Professional shall sign the Schedule of Values thereby indicating the Professional's informed belief that the Schedule of Values constitutes a reasonable, balanced basis for payment of the Contract Price to the Contractor. The Professional shall not sign such Schedule of Values in the absence of such belief unless directed to do so, in writing, by the Owner. The Professional shall provide the Owner with a signed copy of the Schedule of Values after approval.

1.6.2 Access to Work. The Professional and its authorized representatives shall have full and safe access to the work at all times.

1.6.3 Visits to the Site/Inspection. The Professional and any consultants retained by the Professional, or an authorized and qualified representative, shall visit the Project periodically as required by the Owner during periods of active construction in order to review the progress of the work, and take such actions as are necessary or appropriate to achieve the requirements of the Construction Documents in the work of the responsible Contractors, including advising the Owner's representatives as to particular matters of concern. It shall also be the duty of the Professional to have its Consultants visit the site periodically as required during their respective Phases of the work, at such intervals as may reasonably be deemed necessary by the Owner and the Professional, to review their respective Phases of the work in order to achieve the requirements of the Construction Documents.

The purpose of such site visits and reviews will be to determine the quality, quantity, and progress of the Work in comparison with the requirements of the Construction Documents. In making such reviews, the Professional shall exercise care to protect the Owner from defects or deficiencies in the Work, from unexcused delays in the schedule, and from overpayment to the Contractor. Following each such review, the Professional shall submit a written report within (5) calendar days of such review, together with any appropriate comments or recommendations, to the Owner.

Whenever, in the Professional's opinion, it is necessary or advisable, the Professional shall require special inspection or testing of the Work in accordance with the provisions of the Construction Documents whether or not such Work is fabricated, installed, or completed. The Professional shall advise the Owner of all such occurrences requiring special inspection or testing of the Work and shall obtain prior approval from Owner before any funds are committed for inspection, beyond what has already been budgeted.

1.6.4 Approval of Payment to Contractors. Based on the Professional's review of the Project, the Professional will recommend, within seven (7) calendar days after receipt, approval or rejection of payment on the Application-Certificate of Payment. Approval of the Certificate of Payment shall constitute a representation by the Professional to the Owner that the work has progressed to the point indicated on the Application, and that to the best of the Professional's knowledge, information, and belief, the quality of the work is in accordance with the Contract Documents.

The Professional shall make recommendations to the Owner for the withholding of any payment, or portion thereof, due to inadequate progress and/or performance of the Contract.

The Professional agrees that time is of the essence with respect to this provision.

1.6.5 Interpreter. The Professional will be, in the first instance, the interpreter of the requirements of the Contract Documents. The Professional will, within a reasonable time as determined by the Owner, render such interpretation as it may deem necessary for the proper execution or Progress of the Work. All interpretations by the Professional shall be defined in writing and/or by drawing and shall be consistent with the intent of the Contract Documents.

In addition to the above, the Professional shall be required to attend, at the determination of the Owner, any and all Project site conferences dealing with interpretation of the Contract Documents.

The Professional's decisions, with Owner's prior approval, shall in matters relating to aesthetic effect be final if consistent with the intent of the Construction Documents.

1.6.6 Review of Contractor's Shop Drawings and Materials. The Professional shall review, approve, and process, subject to the right of review by the Owner, Shop Drawings to ensure compliance with the Contract Documents and all product data, samples, materials, and other submissions of the Contractor required by the Contract Documents for conformity to and in harmony with the design concept of the Project and for compliance with the requirements of the Contract Documents. The Professional shall not approve any substitution of specified materials and/or equipment without first obtaining the Owner's consent. Approval by the Professional of the Contractor's submittal shall constitute the Professional's representation in accordance with Article 5 of the General Conditions of the Contract for Construction to the Owner that such submittal is in conformance with the Contract Documents.

When the Contractor is required by the Contract Documents to provide professional certification of performance characteristics of materials, systems, or equipment, the Professional shall be entitled to rely upon such certification to establish that the materials, systems, or equipment will meet performance criteria required by the Contract Documents.

Based on the priorities of the construction schedule, the Prime Contractor(s) shall submit a shop drawing submittal schedule on or before the Second Regular Job Conference. The Professional shall review and check the shop drawing submittal schedule within fourteen (14) calendar days of receipt from the Contractor.

The Professional shall return the approved shop drawings, or detailed notation for resubmission, if required, within fourteen (14) calendar days after receipt from the Contractor unless mutually agreed otherwise by the Professional, Owner, and Contractor. The Professional shall act on any resubmissions within seven (7) calendar days of receipt thereof unless mutually agreed otherwise by the Professional, Owner, and Contractor. A detailed log shall be maintained by the Professional as to time of receipt of the shop drawings and time of return, with adequate notes as to their disposition.

Refer to 1.6.12 for electronic scanning and submission requirement of approved project shop drawings at the completion of the project.

The Professional is responsible to incorporate into the shop drawings comments by the Owner or Owner’s authorized representative prior to the shop drawings being returned to the Contractor.

The Professional agrees that time is of the essence of this provision.

1.6.7 Job Conference Reports. The Professional shall take and retain a verbatim record of the biweekly Job Conference meetings and shall prepare and distribute summary minutes in a format approved by the Owner of each meeting within five (5) calendar days to the Owner, the Contractors, and all other interested parties.

1.6.8 Change Orders. The Professional shall review all Change Order requests within seven (7) calendar days and shall advise Owner, in writing, with respect to the necessity or advisability of same. The Professional shall also determine whether the cost is fair and reasonable for the additional work associated with the Change Order. In so doing, Professional shall provide all pertinent documents and data to the Owner, who shall make all decisions regarding approval or rejection of Change Order requests. The Professional shall maintain an appropriate Change Order log. The Professional may, after consultation with the Owner, authorize minor changes in the Work which do not involve an adjustment in the Contract sum or an extension of the Contract time and which are consistent with the intent of the Contract Documents.

1.6.9 Rejection of Work. The Professional is authorized and obligated to reject work which does not conform to the Contract Documents and shall immediately notify the Owner to stop a Contractor's work whenever, in the Professional's reasonable opinion, such action is necessary for the proper performance of the Construction Contract Work. The Professional shall not be liable to the Owner for the consequences of any recommendation made by the Professional in good faith, and in the exercise of due care in recommending to stop or not to stop the work.

1.6.10 Substantial Completion, Final, and One-Year Guarantee Inspections. The Professional and its consultants shall participate in Substantial Completion and Final Inspections to affix the dates of Substantial and Final Completion and shall concur in the report of Final Completion to the Owner prior to approving the Contractor's application for Final Payment. The Professional shall produce the punch list document and provide follow-up to ensure all items are completed to the satisfaction of the Owner. The Professional shall also acquire for Owner the Certificate of Occupancy.

The Professional and its consultants shall participate in an inspection prior to the expiration of the one (1) year guarantee period against defective materials, equipment, and/or workmanship to determine any defects in materials, equipment, and/or workmanship since the date of Substantial Completion. The Professional shall produce the (1) year guarantee period punch list document for distribution to the Contractor(s) and provide follow-up to ensure all items are completed to the satisfaction of the Owner.

1.6.11 Operations and Maintenance Data. At the time of Substantial Completion of the Project, the Professional shall review and approve all required close-out documentation required per the Specifications including, but not limited to, manufacturers' operating instructions, maintenance instructions, certificates, warranties, guaranties, and other pertinent operating and maintenance data.

The Professional shall electronically scan all reviewed and approved Operation and Maintenance data being returned to the Contractor and provide a complete set of Operation and Maintenance data for the Project in electronic .pdf format (organized by building system) to the Owner within (1) month after receipt from the Contractor.

1.6.12 Record Drawings. At the time of Final Completion of the Project, the Professional shall collect from the Prime Contractor(s) their complete sets of as-built drawings and will, within 30 days after receipt from the Contractors, transpose all the changes recorded by the Contractors, onto a full set of reproducible drawings which shall become the record (as-built) drawings of the Project. The record drawings must also be put on electronic media compatible with the Owner's ACAD system. The Professional shall submit the as-built drawing set to the Owner in both ACAD dwg format and electronic pdf format (if project is utilizing Building Information Modeling an additional record drawing format shall be required and approved by the Owner).

The Professional shall electronically scan all approved shop drawings being returned to the Contractor and provide a complete set of the approved shop drawings for the Project in electronic pdf format (organized by CSI division) to the Owner within (1) month after Substantial Completion of the project.

1.6.13 Corrections. The Professional shall, without additional compensation, promptly correct any errors, omissions, deficiencies, or conflicts in its work product.

1.6.14 Errors and Omissions. If it becomes necessary during the course of construction to issue change orders which increase the cost of the Project because of the Professional's failure to produce proper and coordinated specifications and drawings, the Professional shall be assessed as follows:

1.6.14.1 Omission Change Order: A change order will be considered to be an omission change order when the additional work is necessitated by the Professional's omission of required elements or specifications in the Construction Documents, and where no work must be removed or replaced in order to carry out the change order. In such cases, the Professional shall be assessed in an amount equal to the difference between the amount of the change order and what the Owner would have paid had the omission not occurred, plus administrative costs incurred by the Owner.

1.6.14.2 Error Change Order. A change order will be considered to be an error change order when the additional work is necessitated by a failure of the Professional to conform to the applicable professional standard of care, resulting in an error which may be rectified only by removal and/or replacement of work which has been performed. In such cases, the Professional shall be assessed in an amount equal to the difference between the amount of the change order and what the Owner would have paid had the error not occurred.

At the completion of the project, the parties shall exercise good faith in seeking to amicably resolve any disputes that may exist regarding change orders. In the event that the parties are unable to reach an amicable resolution, the dispute resolution provision of Article 12.1 shall apply.

ARTICLE 2: ADDITIONAL RESPONSIBILITIES OF PROFESSIONAL

2.1 Compliance

The Professional is responsible for the compliance of the Construction Documents with all applicable permits, laws, regulations, and ordinances of all commissions, agencies and governments, federal, state and local, insofar as they are applicable to, and have jurisdiction over, the Project. The Professional shall make all required submittals with the advance knowledge of the Owner to, and shall obtain all required approvals from, the applicable agency in a timely manner so as not to cause delays to the Project. The Professional shall also attend all hearings/meetings required for securing necessary approvals and permits.

The Professional shall be responsible for producing a submission document set for approval by Labor and Industry as required by the Commonwealth of Pennsylvania to obtain the necessary building permit. The Professional shall also be responsible for additional submissions as required by the Labor and Industry Building permit processes and procedures throughout the project design and construction.

2.2 Cooperation With Local Bodies

During the design of the Project, the Professional shall keep informed and comply with the requirements of all local zoning, planning, and supervisory bodies. Should these requirements substantially increase the cost of the Project, or should any required approvals be withheld by the local bodies, the Professional shall immediately notify the Owner.

2.3 Proprietary Items, Copyrights, Patents

The Professional shall not include in the design of the Project unless directed by the Owner any equipment, material, or mode of construction which is proprietary or which contains a copyright or patent right relating to designs, plans, drawings, or specifications, unless the equipment, material, or mode of construction is different and fairly considered superior in quality and performance. If the Professional includes in the design of the Project any equipment, material, or mode of construction which is proprietary, it shall have prior approval by the Owner and it shall only be because the item is different and fairly considered superior in quality and performance, and not for the purpose of preventing or restricting competitive bidding. Professional may not knowingly list as acceptable any item which cannot comply with the Steel Products Procurement Act.

ARTICLE 3: OPTIONAL ADDITIONAL SERVICES

Unless required by the Project Scope, the services performed by the Professional, Professional's employees, and Professional's consultants as outlined in this Article are not included in Basic Services and shall be paid for by the Owner as provided in this Agreement in addition to the compensation for Basic Services.

None of these services shall be provided by the Professional, whether they are requested by the Owner or required due to circumstances unknown at the time of the execution of the Agreement, until approval in writing has been given by the Owner.

3.1 Project Representation

If more extensive representation at the site by the Professional is required by the Owner than is provided for under Basic Services, Paragraph 1.6, Construction Phase, the Professional shall provide one or more Project representatives to assist in carrying out such additional on-site representation.

Additional Project representative(s) shall be selected, employed, and directed by the Professional with the approval of the Owner, and the Professional shall be compensated therefore as mutually agreed, in advance, between the Owner and the Professional. Such supplemental agreement letter shall also delineate the duties and responsibilities of the additional Project representative(s).

3.2 Revisions to Approved Drawings and Specifications Prior to Construction Phase

3.2.1 Making revisions to the drawings and specifications requested by the Owner subsequent to the Owner's approval of the Construction Documents as outlined in Paragraph 1.4, Construction Document Phase, unless required to keep the estimated Construction Costs within the amount budgeted for same.

3.2.2 Making revisions to the drawings and specifications required by the enactment or revisions of codes, laws, or regulations subsequent to the completion of the Construction Documents as approved by the Owner.

3.3 Preplanning

Providing special analysis of the Owner's needs such as selection, planning, and development of the site; economic, demographic, and/or financial feasibility; preliminary design criteria and budget estimates; or other special studies except as herein provided as part of Basic Services.

3.4 Specialized Consultants

Providing unusual or specialized Consultant services other than those consistent with the inherent requirements of the Project scope and required to meet the functional needs of the Project.

3.5 Surveys

Providing a complete topographic survey and/or related aerial photography, ground control, photogrammetric plotting, property boundary survey, and the preparation of a metes and bounds legal description and a related plot.

3.6 Special Studies

Providing services related to the preparation of Environmental Assessments and/or Environmental Impact Statements, Energy Impact Statements, Analysis, or Feasibility Studies as may be required by local, state or federal government agencies, provided such services are in addition to the Project scope requirements.

3.7 Other Services

Providing services mutually agreed to that are not otherwise included in this Agreement.

ARTICLE 4: INDEMNIFICATION

To the fullest extent permitted by law, The Professional shall indemnify and hold harmless the Owner and the Owner's respective officers, directors, agents, servants, and employees from and against any and all liability, claims, losses, costs, expenses or damages, including reasonable attorneys' fees, costs and expenses, for property damage, bodily injury or death, that may arise as a result of the failure of the Professional or Professional's agents, employees or consultants, to comply with the applicable professional standards of care in rendering services in connection with this Agreement. Nothing in this indemnity section shall be construed to limit the insurance obligations agreed to herein.

ARTICLE 5: OWNER'S RESPONSIBILITIES

5.1 Basic Information

The Owner shall provide the Professional all information available at the time regarding requirements for the Project. Such information shall include:

5.1.1 A Project Program setting forth the Owner's objectives, space requirements and relationships, special equipment, and systems and site requirements.

5.1.2 A Project Budget including the amount allocated for the Construction Cost and all other anticipated costs and expenses.

5.1.3 A Project Schedule setting forth the times allotted for the Design and Construction Phases of the Project.

If the information furnished is not sufficient for the process of initiation of design solutions, the Professional shall notify the Owner immediately.

5.2 Surveys

The Owner shall furnish to the Professional, as available, surveys describing (as applicable) grades and lines of streets, alleys and pavements; the location of all rights-of-way restrictions, easements, encroachments, zoning classification, boundaries and contours of the site; location, dimensions and other necessary data pertaining to any existing buildings, other improvements and trees; information concerning existing utilities throughout the site, including inverts and depth; and shall establish a Project benchmark.

5.3 Geotechnical Engineering Services

The Owner shall pay the costs of all geotechnical engineering services required for the Project and requested by the Professional and Owner. Such services shall include, but are not limited to, tests borings, samples, field and laboratory reports, final soil reports and logs, and foundation engineering evaluations and recommendations.

5.4 Miscellaneous Tests, Inspections, and Reports

The Owner shall furnish, at the Owner's expense, air and water pollution, hazardous material, environmental, and any other miscellaneous laboratory tests, inspections, and reports as may be required.

5.5 Approval or Disapproval of Design Work

Any approval or failure of the Owner to disapprove or reject design work submitted by the Professional shall not constitute an acceptance of the work such as to relieve the Professional of his full responsibility to the Owner for the proper and professional performance of all design work on the Project.

5.6 Owner Response

The Owner shall act with reasonable promptness on all submissions from the Professional, which require action by the Owner, in order to avoid unreasonable delay in the progression of the Project through the various Phases outlined in Article 1.

5.7 Notice of Nonconformance

The Owner shall notify the Professional immediately if the Owner becomes or is made aware of any fault or defect in the Project or nonconformance by any party with the Contract Documents.

5.8 Copies of Owner’s Documents

The Owner shall supply the Professional with copies of the Owner's Form of Agreement between Owner and Contractor and General Conditions of the Contract for Construction for inclusion, by the Professional,

in the Bidding Documents. It shall be the Professional's responsibility to access, review, and implement The Pennsylvania State University Design and Construction Standards information provided by the Owner on the Office of Physical Plant web page. Refer to web page content listing in Exhibit C.

5.9 (OPTIONAL) Preconstruction Services

The Owner intends to independently retain a Construction Management firm to provide preconstruction and construction services. The Professional will assist the Owner in reviewing proposals and allow for two full days of meetings to interview and rank prospective construction management firms.

ARTICLE 6: CONSTRUCTION COST

6.1 Project Cost Determination

The Construction Cost for all work described in the Construction Documents, as approved by the Owner shall be determined as outlined below, with precedence in the order listed:

6.1.1 For completed construction, the total cost to the Owner for such construction work less the amount of any change order work necessary because of errors or omissions on the part of the Professional as defined in Subparagraph 1.6.14 Errors and Omissions.

6.1.2 If the Project is not constructed, the sum of the lowest bona fide bids(s) received for all of the work, providing said bids do not exceed the fixed limitation of Construction as defined in Paragraph 9.1.4 or as amended by written agreement by the Owner and Professional as the basis for design. If such bids exceed the limitation previously agreed upon, said limitation shall become the basis of cost.

6.1.3 If bids are not received, the latest Construction Cost Estimate prepared by the Professional, provided such estimate does not exceed the fixed limitation of construction as defined in Paragraph 9.1.4 or as amended by written agreement by the Owner and Professional as the basis for design.

6.2 Notification

It shall be the Professional's responsibility to promptly notify the Owner if, in the Professional's opinion, the Project cannot be designed and constructed within the fixed limitation on the cost of construction as authorized by the Owner. It is the Professional's responsibility to so notify the Owner as soon as such a situation becomes, or should have become, apparent to the Professional.

6.3 Owner Options

If, without written acknowledgment by the Owner, the Professional permits the Construction Contracts to be bid, and if the fixed limitation on the cost of Construction is exceeded by the lowest bona fide bid(s) or negotiated proposal, the Owner may: (1) give written approval of an increase in such fixed limit; (2) authorize rebidding or renegotiating of the Project; (3) terminate the Project and this Agreement in accordance herewith; or (4) cooperate in revising the Project scope or quality, or both, as required to reduce the construction cost. In the case of (4), the Professional, without additional charge to the Owner, shall consult with the Owner and shall revise and modify the Construction Documents as necessary to achieve compliance with the fixed limitation on construction cost. Absent negligence on the part of the Professional in making its estimates of probable construction cost, such modifications and revisions shall be the limit of the Professional's responsibility arising from the establishment of such fixed limitation of construction costs, and having done so, the Professional shall be entitled to compensation for all other services performed, in accordance with this Agreement.

If, after notification to the Owner by the Professional that the Project cannot be designed and constructed within the fixed limitation on the cost of construction, the Professional is by written authorization by the Owner instructed to proceed without a change in the Project program, design, or in the fixed limitation on the cost of construction, the Professional shall not be responsible for the cost of any subsequent redesign.

ARTICLE 7: OWNERSHIP AND USE OF DOCUMENTS

All preliminary studies, Construction Documents, as-built documents, record drawings, special requirements, cost estimates, building information models and all other data compiled by the Professional under this Agreement shall become the property of the Owner and may be used for any purpose desired by the Owner except to use for the construction of an identical facility not covered by this Agreement. The Professional shall not be liable for any reuse of these documents by the Owner.

ARTICLE 8: PROFESSIONAL'S EXPENSES

8.1 Billable Hourly Rates

8.1.1 Direct personnel expense is defined as the direct salaries of the principals, associates, and employees of the firm who are assigned to and are productively engaged on the Project, including clerical employees.

8.1.2 Billable hourly rates for this project are included in the personnel listing in Exhibit B. Billable hourly rates shall be the direct personnel expense rate for any principal's time and a multiple of a maximum of (2.5) the direct personnel expense per hour for the Professional's employees which shall include mandatory and customary benefits such as employment taxes, statutory employee benefits, insurance, sick leave, holidays, vacations, pensions, and similar contributions and benefits.

8.1.3 The billable hourly rates set forth in Exhibit B may be adjusted annually, subject to the Owner's approval, in accordance with generally accepted salary review practices of the profession. Payroll certification shall be provided by the Professional to the Owner upon demand.

8.2 Reimbursable Expenses

Reimbursable expenses are in addition to compensation for Basic and Additional Services and include those expenses as follows for which the Professional shall be reimbursed a not-to-exceed amount for his direct "out-of-pocket" costs (no mark-up allowed on reimbursable expenses). Reimbursable expenses shall be submitted with supporting documentation, which shall include detailed, itemized receipts. Where requested or authorized by the Owner, the following shall be reimbursable:

8.2.1 Out-of-town and out-of-state travel expenses and any necessary fee or permit payment required and paid to any governing body or authority having jurisdiction over the Project. Air travel expenses shall be approved in advance by the Owner. Maximum individual per diem expenses for travel to the job site shall be based on the Owner’s allowable per diem for lodging and meals for that location.

8.2.2 Expense of reproductions including reproductions of record drawings, postage and handling of Drawings, Specifications, and other documents including the preparation and distribution of all necessary bidding correspondence and documents, receipt of bid proposals, and construction contract preparation. Reproductions made for the Professional’s own use or review shall not be included.

8.2.3 Expense of renderings, models, mock-ups requested by the Owner, and/or discs for electronic format submissions of record drawings.

8.2.4 Expenses of specialized consultants identified as optional additional services in Article 3 of this Agreement.

8.2.5 Reimbursable expenses for individual travel, meals, and lodging expenses are limited to individuals under the direct employ of the Professional or their approved consultants.

8.3 Cost for Consultants (consultants not included in the Basic Services proposal/procured after award)

The Professional shall be reimbursed on a multiple of one and one-tenth (1.1) times the amounts billed to the Professional for such services.

ARTICLE 9: COMPENSATION AND PAYMENT

9.1 Compensation and Payment

9.1.1 The Owner agrees to pay the Professional as compensation for those Basic Services described in Article 1, Article 2, and any other agreed upon services described in Article 3: (Insert information in appropriate option below.)

(Option #1) __% of the authorized and approved Construction Cost as defined in Article 6.

(Option #2) an amount not to exceed _____ Dollars ($_____) for the Professional's Personnel Expense as defined in Paragraph 8.1 and cost for Consultants.

(Option #3) a fixed sum of _____ Dollars ($_____).

9.1.2 Payment for Basic Services will be made monthly by the Owner in proportion to the service actually performed, but not to exceed the following percentages at the completion of each Phase.

Schematic Phase	15%
Design Development Phase	20%
Construction Document Phase	35%
Bidding Phase	5%
Construction Phase/Close-Out	25%

The close-out portion of the project refers to the development of the punch list and required follow-up, the submission of the as-built documents and other close-out document requirements, ongoing commissioning support, ongoing support of design-related project issues, and the performance of the (1) year bond inspection and punch-list development.

9.1.3 Reimbursable Expenses

The Owner agrees to pay the Professional as compensation for the Professional's Reimbursable Expenses, as defined in Paragraph 8.2, an amount not to exceed _____ Dollars ($_____).

9.1.4 The fixed limitation on the cost of construction as defined by this Agreement shall be _____ Dollars ($_____).

9.2 Optional Additional Services Compensation

If approved, the Owner agrees to compensate the Professional for Optional Additional Services beyond Basic Services, as defined in Article 3 in accordance with the rates defined in Exhibit B and as approved by the Owner.

9.3 Payment Procedures

9.3.1 Payments are due and payable forty-five (45) days from the date that the Professional's invoice is approved by the Owner.

9.3.2 Submission of the Professional's invoice for final payment and reimbursement shall further constitute the Professional's representation to the Owner that, upon receipt from the Owner of the amount invoiced, all obligations of the Professional to others, including its consultants, incurred in connection with the Project will be paid in full.

9.3.3 Documentation accurately reflecting the time expended by the Professional and its personnel and records of Reimbursable Expenses shall be maintained by the Professional and shall be available to the Owner for review and copying upon request.

9.4 Owner's Right to Withhold Payment

In the event that the Owner becomes credibly informed that any representation of the Professional provided pursuant to Articles 8 or 9 is wholly or partially inaccurate, the Owner may withhold payment of sums then or in the future otherwise due to the Professional until the inaccuracy, and the cause thereof, is corrected to the Owner's reasonable satisfaction.

ARTICLE 10: INSURANCE

10.1 Professional Liability Insurance

The Professional shall secure and maintain, at its sole cost and expense, Professional Liability Insurance to protect against loss resulting from design errors and omissions, failure to coordinate the Construction Documents of the Project, and failure to execute the construction administration duties for the Project.

10.1.1 Unless otherwise specifically provided in this Agreement, the Professional shall secure and maintain Professional Liability Insurance with limits not less than $1,000,000, or the total of the Professional's fee, whichever is greater.

10.1.2 The Professional shall secure and maintain Professional Liability Insurance, as required above, up to and including one year after the date of the (1) year guarantee inspection of the contracts under the Project.

10.2 General Liability Insurance

The Professional shall secure and maintain, at its sole cost and expense, adequate General Liability Insurance to protect the Owner and the Owner's respective officers, agents, servants, and employees against claims arising out of the Professional's services during the design and construction of the Project for damages in law or equity for property damage and bodily injury, including wrongful death. The Owner shall be named as an additional insured in the policy, and the Professional shall submit a Certificate of Insurance to the Owner prior to execution of the Agreement. The limits of coverage shall be not less than $1,000,000. The Professional is required to secure and maintain General Liability Insurance, up to and including one year after the date of the (1) year guarantee inspection of the contracts under the Project.

10.3 Certificate of Insurance

The Professional shall furnish to the Owner annually, unless otherwise requested, during the active terms of this Agreement, a Certificate from an Insurance Carrier authorized to do business in Pennsylvania indicating: (1) the existence of the insurance required under this Article; (2) the amount of the deductible; and (3) the amount of coverage of such insurance. The Professional shall submit a Certificate of Insurance covering the Professional Liability Insurance requirement up to and including one year after the date of the (1) year guarantee inspection of the contracts under the Project.

10.4 Failure to Comply with Insurance Requirements

During any period in which the Professional is not in compliance with the terms of this Article, no compensation shall be paid by the Owner to the Professional.

ARTICLE 11: TERMINATION, ABANDONMENT, SUSPENSION, REACTIVATION

11.1 Termination by Owner

The Owner shall have the right at any time, for any reason, to terminate this Agreement upon not less than seven (7) calendar days' written notice to the Professional. The Professional shall comply with all reasonable instructions of the Owner then or subsequently given relating to such termination, including but not limited to: instructions concerning delivery of drawings, sketches, and other architectural/engineering data to the Owner; discontinuance of the work on outstanding contracts; and furnishing to the Owner information concerning all action to be taken respecting outstanding agreements with consultants, contracts, awards, orders, or other matters.

Copies of Construction Documents and any other materials in existence as of the date of termination will be furnished to the Owner as requested.

11.2 Compensation in the Event of Termination

In the event of termination, the Professional shall be compensated for its services to the termination date based upon services performed on any Phase to the termination date in accordance with the Compensation and Payment schedule contained herein at Article 9.1.2.

Such compensation shall be the Professional's sole and exclusive remedy for termination.

11.3 Suspension of Work

The Owner may, at any time, direct the Professional to suspend all work on the Project, or on any part thereof, pending receipt of further notice from the Owner. In all such cases the Owner and the Professional shall agree upon an appropriate phasing-out of the work in such a manner that the work may be resumed with a minimum of added cost to the Owner, but in no event shall the work be continued beyond the completion of the Phase in which it then is. The Professional shall be compensated as if the Agreement had been terminated at the completion of the agreed Phase. If work is suspended during the Construction Phase, compensation shall be paid for all Professional services provided to the date of suspension, but no additional compensation shall be paid during the period of suspension.

11.4 Reactivation Compensation

When a Project has been suspended or terminated for a longer time than six (6) months and is subsequently reactivated using the same Professional, the Owner and the Professional shall agree, prior to the beginning of the reactivation work, upon a lump sum, or other basis, of reimbursement to the Professional for its extra start-up costs occasioned as a result of the work having been suspended or terminated.

ARTICLE 12: MISCELLANEOUS PROVISIONS

12.1 Dispute Resolution / Applicable Law

After Final Completion of the Project, any and all claims, disputes or controversies arising under, out of, or in connection with this Agreement, which the parties shall be unable to resolve within sixty (60) days of the time when the issue is first raised with the other party, shall be mediated in good faith. The party raising such dispute shall promptly advise the other party of such claim, dispute or controversy, in writing, describing in reasonable detail the nature of such dispute. By not later than five (5) business days after the recipient has received such notice of dispute, each party shall have selected for itself a representative who shall have the authority to bind such party, and shall additionally have advised the other party in writing of the name and title of such representative. By not later than ten (10) business days after the date of such notice of dispute, the parties shall mutually select a Pennsylvania-based mediator, and such representatives shall schedule a date for mediation, not to exceed one (1) day in length, and less where applicable. The mediation session shall take place on the University Park Campus of The Pennsylvania State University, or upon the campus where the Work was performed, at the option of the Owner. The parties shall enter into good faith mediation and shall share the costs equally.

If the representatives of the parties have not been able to resolve the dispute within fifteen (15) business days after such mediation hearing, the parties shall have the right to pursue any other remedies legally available to resolve such dispute in the Court of Common Pleas of Centre County, Pennsylvania, jurisdiction to which the parties to this Agreement hereby irrevocably consent and submit.

Notwithstanding the foregoing, nothing in this clause shall be construed to waive any rights or timely performance of any obligations existing under this Agreement.

In all respects, this Agreement shall be interpreted and construed in accordance with the internal laws (and not the law of conflicts) of the Commonwealth of Pennsylvania.

12.2 Successors and Assigns

This Agreement shall be binding on the successors and assigns of the parties hereto.

12.3 Assignment

Neither the Owner nor the Professional shall assign, sublet, or in any manner transfer any right, duty, or obligation under this Agreement without prior written consent of the other party.

12.4 Extent of Agreement

This Agreement, including any and all schedules, proposals and/or terms and conditions attached hereto, represent the entire and integrated agreement between the Owner and the Professional and supersedes all prior negotiations, representations, or agreements, either written or oral. This Agreement may be amended only by written instrument signed by both the Owner and the Professional. In the event of a conflict between the provisions of this Agreement and those of any other document, including any that are attached hereto, the provisions of this Agreement shall prevail.

12.5 Third Party

Nothing contained in this Agreement shall create a contractual relationship with or a cause of action in favor of a third party against either the Owner or the Professional.

12.6 Hazardous Material

Unless otherwise provided in this Agreement, the Professional and its consultants shall have no responsibility for the discovery, presence, handling, removal, or disposal of, or exposure of persons to hazardous materials in any form at the Project site, including but not limited to asbestos, asbestos products, polychlorinated biphenyl (PCB), or other toxic material.

If the Professional encounters or suspects hazardous or toxic material, the Professional shall advise the Owner immediately.

12.7 Promotional Material

The Professional shall not issue or disclose to third parties any information relating to the Project without prior consent of the Owner, except to the extent necessary to coordinate the Work with the Owner’s agent, Contractors, Subcontractors, etc. The Professional may, with written consent of the Owner, include design representation of the Project, including interior and exterior photographs, among the Professional's promotional and professional materials.

12.8 Terms/General Conditions

Terms contained in this Agreement and which are not defined herein shall have the same meaning as those in the Owner's Form of Agreement between Owner and Contractor and the Owner's General Conditions of the Contract for Construction, current as of the date of this Agreement.

12.9 Background Check Policy

The Professional confirms that all employees (including the employees of any subconsultants/subcontractors) assigned to this project, and who conducted their work on Penn State premises, have had background checks that meet or exceed the University's standards for the type of work being performed. All background checks should be in accordance with the background check process for third-party employees outlined in Penn State Policy HR99 Background Check Process (http://guru.psu.edu/policies/OHR/hr99.html).

12.10 Amendments

If any amendment to this Agreement includes additional Design Services, such additional Design Services shall be in accordance with The Pennsylvania State University Design and Construction Standards that are current as of the date of execution of the Amendment, unless otherwise agreed to by the Owner in writing. The Pennsylvania State University Design and Construction Standards can be found within the Office of Physical Plant web page (www.opp.psu.edu).

ARTICLE 13: SCHEDULE OF EXHIBITS

The attached Exhibits are part of this agreement:

Exhibit A: Professional's proposal dated _____ (Professional's proposal, or some portion thereof, is attached hereto for the sole purpose of describing the scope of work that is to be completed pursuant to this Agreement. The parties agree that any additional terms or conditions that may appear within the attached proposal, or portion thereof, shall not bind the parties, shall not become a part of this Agreement, and shall not be incorporated within this Agreement).

Exhibit B: Professional's Billable Hourly Rates.

Exhibit C: The Pennsylvania State University Design and Construction Standards listing (screen print from the Office of Physical Plant web page).

(OPTIONAL) Exhibit D: Project Schedule (including design submission dates).

THE PENNSYLVANIA STATE UNIVERSITY
OWNER

_____ _____
Title ATTEST, Secretary

(PROFESSIONAL COMPANY NAME)
PROFESSIONAL

_____ _____
Signature ATTEST, Secretary

Name:_____
(print name of person signing above)

Title:_____
(print title of person signing above)

Federal ID Number:_____

Attachments