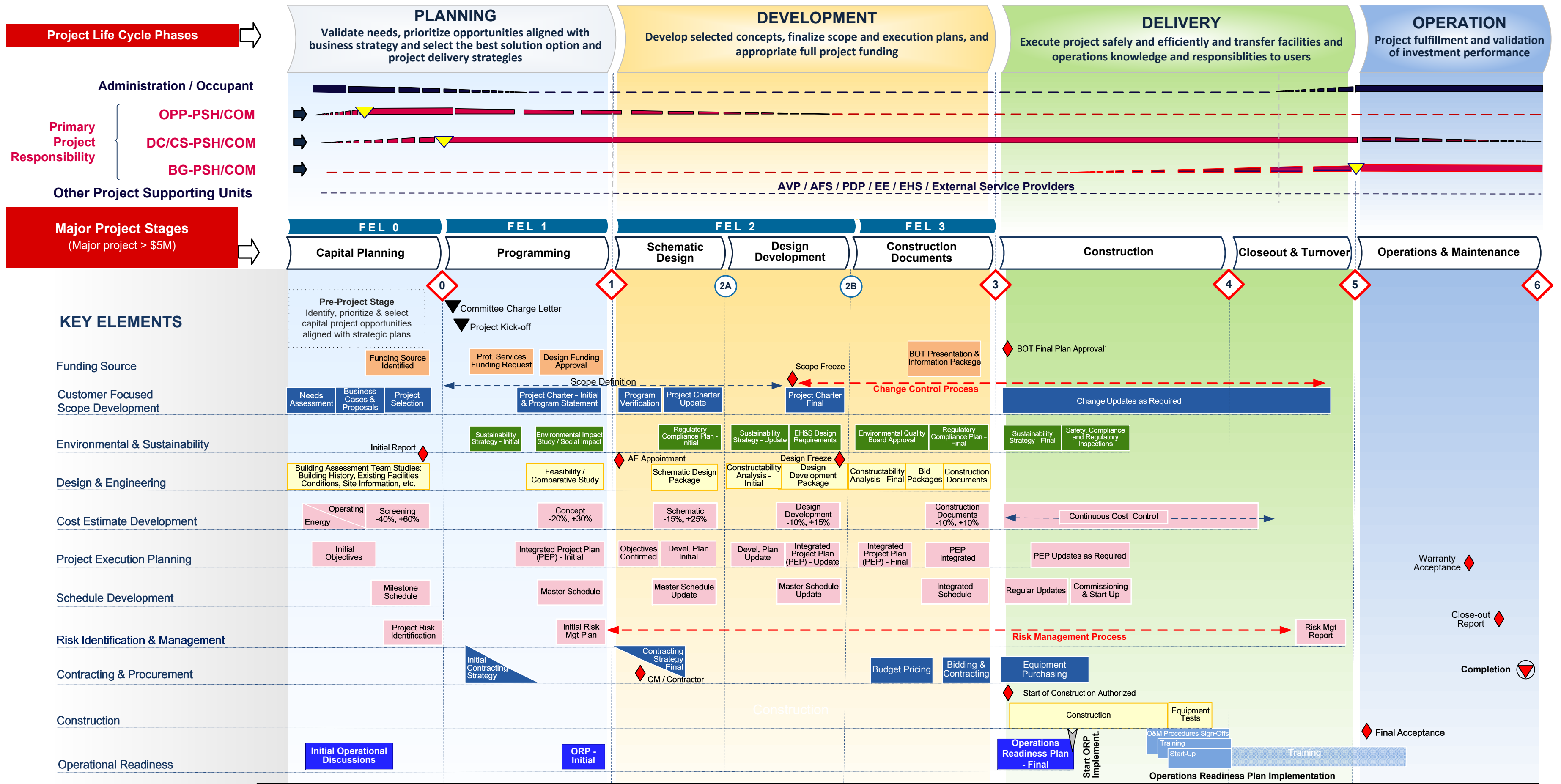


PROJECT DELIVERY SYSTEM



Legend :

- ◊ Major Gates
- ◻ Sub-Gates
- ▽ Leadership
- ◼ Committee Charge Letter / Project Kick-off
- ◈ Significant Milestones
- ⊙ Project Completion

AFS - - Administrative and Financial Services
 AVP - - Associate Vice President
 BG - - Building & Grounds
 BOT - - Board of Trustees
 1 BOT Final Plan Approval required for projects \$10M or greater

CM - - - Construction Management
 CS - - - Commonwealth Services
 DC - - - Design & Construction
 EE - - - Energy and Engineering

EHS - - - Environmental, Health and Safety
 FEL - - - Front End Loading - Planning
 PDP - - - Planning, Design & Properties
 PSH/COM - Penn State Health/College of Medicine

OPP - - - Office of Physical Plant
 ORP - - - Operational Readiness Plan
 PEP - - - Project Execution Plan

PROJECT DELIVERABLES

PLANNING		DEVELOPMENT			DELIVERY		OPERATION
FEL 0	FEL 1	FEL 2		FEL 3			
Capital Planning	Programming	Schematic Design	Design Development	Construction Documents	Construction	Closeout & Turnover	Operations & Maintenance
0	1	2A	2B	3	4	5	6
0-01) Business Case	1-01) Committee Charge Letter	2A-01) Development Phase Kick-off	2B-01) Development Phase Workplan - Update	3-01) Integrated Project Plan - Final	4-01) Construction Contract(s)	5-01) Service Provider Evaluations	6-01) 11 Month Bond/Warranty Inspection
0-02) Project Risks Identification	1-02) Core Project Team Established	2A-02) Development Phase Workplan - Initial	2B-02) MBE / WBE Procurement Strategies	3-02) Environmental quality board Approvals	4-02) Initial Job Conference and "Job Kit"	5-02) Attic Stock Turnover	6-02) Final Cost Report
0-03) Proposed Solution Analysis	1-03) Project Kick-off	2A-03) Program Verification	2B-03) Project and Building Safety Plan	3-03) Utility Demand and Consumption Estimate - Update	4-03) Sustainability Strategy - Final	5-03) Facilities Care, Custody and Control Acceptance Notice	6-03) Project Closeout Report
0-04) Comprehensive Master Plan	1-04) Programming Work Plan	2A-04) Commissioning, Survey, and Geotechnical Services Agreements	2B-04) Sustainability Project-Strategy Update	3-04) New Emission Source Title V Compliance	4-04) Operational Readiness Plan - Final	5-04) User & Maintenance Turnover Letter(s)	6-04) Project Lessons Learned Review
0-05) Cost Estimate - Screening (-40%, +60 %)	1-05) Project Delivery, Procurement & Contracting Strategy	2A-05) Survey	2B-05) Integrated Project Plan - Update	3-05) Constructability Analysis - Final	4-05) Final Commissioning and Start-up Plan	5-05) Operations & Maintenance Manuals	6-05) Job Closing Checklist
0-06) Operating Cost Estimate	1-06) Risk Management Plan - Initial	2A-06) Geotechnical Analysis	2B-06) Constructability Analysis - Initial	3-06) Regulatory Compliance Plan - Final	4-06) Compliance and Regulatory Inspections	5-06) Record Set Drawings	6-55) Deliverables Check-list Verification
0-07) Energy Cost Estimate	1-07) Operational Readiness Plan - Initial	2A-07) Project Delivery Procurement & Contracting Method Selection	2B-07) Project Charter - Final	3-07) Building Permits	4-07) Certificate of Occupancy	5-07) Building Systems Training	
0-08) Capital Budget Funding Source Identification	1-08) Integrated Project Plan - Initial	2A-08) Construction Manager Pre-Construction Agreement	2B-08) Complete Set of Design Development Documents	3-08) Land Development and Zoning Submittal Package	4-08) Substantial Completion	5-08) Risk Management Report - Final	
0-09) Building Program Statement - Initial	1-09) Completed Project Program	2A-09) Initial Commissioning Plan	2B-09) Design Development Review Comments and Approval	3-09) Project and Building Safety Plan - Final	4-09) Punch Lists - Initial	5-09) Delivery Phase Lessons Learned Review	
0-55) Deliverables Check-list Verification	1-10) Sustainability Strategy - Initial	2A-10) Energy and Operating Cost Estimate - Updated	2B-10) Cost Estimate- Design Development (-10%, +15 %)	3-10) BIM Execution Plan - Final	4-55) Deliverables Check-list Verification	5-10) Punch Lists - Completed	
	1-11) BIM Execution Plan - Initial	2A-11) Cost Estimate - Schematic (-15%, +25%)	2B-11) Design Freeze Authorization	3-11) Complete set of Contract Documents		5-11) Documentation Archived	
	1-12) Programming Consultant(s) Agreement(s)	2A-12) Project Charter - Update	2B-55) Deliverables Check-list Verification	3-12) Bids Summary Report		5-55) Deliverables Check-list Verification	
	1-13) Environmental Impact Study/ Social Impact	2A-13) Complete Set of Schematic Design Documents		3-13) Cost Estimate-Construction Documents (-10%, +10 %)			
	1-14) Feasibility/Comparative Study	2A-14) Schematic Design Review, Comments and Approval		3-14) Development Phase Lessons Learned Review			
	1-15) Cost Estimate - Concept (-20%, +30 %)	2A-15) Regulatory Compliance Plan - Initial		3-15) Construction Documents Review, Comments and Approval			
	1-16) Planning Phase Lessons Learned Review	2A-55) Deliverables Check-list Verification		3-16) BOT Presentation/ Information Package			
	1-17) Project Charter - Initial			3-17) BOT Construction Funding Approval			
	1-18) PDRB Approves Program Statement			3-55) Deliverables Check-list Verification			
	1-19) Designer Selection Approval						
	1-20) Design Funding Request Approval						
	1-21) Architectural/Engineering Agreements						
	1-55) Deliverables Check-list Verification						