

Laboratory Facility Guidelines for Planning and Design
Document Scope Matrix

		Education Purposes					
		Functionality	Wet	Dry	Chemical Based	Electrical Based	Bench Top
Lab Types Chemistry	Organic						
	Inorganic						
	Analytical						
	P-Chem						
Biology	Biomedical						
	Biochemical						
	Biology						
	Molecular						
	Cellular						
	Plan Sciences						
	Pharmacology						
	InVivo						
	Marine						
	Bio-Physics						
High Containment							
Physics	Optical						
	Acoustical						
	Macro Materials						
	Micro/Nano						
	Weapons						
Radiological							
Electronics	Components						
	Systems						
	Data Centers						
Testing	Transportation						
	Physical						
	Materials						
	Assemblies						
Electrical							
Other Lab Types:							
1.							
2.							
3.							
4.							
5.							

**Laboratory Facility Guidelines for Plan
Document Scope Matrix**

		Research Objectives					
Functionality		Wet	Dry	Chemical Based	Electrical Based	Bench Top	Floor Equipment
Lab Types							
Chemistry	Organic						
	Inorganic						
	Analytical						
	P-Chem						
Biology	Biomedical						
	Biochemical						
	Biology						
	Molecular						
	Cellular						
	Plan Sciences						
	Pharmacology						
	InVivo						
	Marine						
	Bio-Physics						
High Containment							
Physics	Optical						
	Acoustical						
	Macro Materials						
	Micro/Nano						
	Weapons						
Radiological							
Electronics	Components						
	Systems						
	Data Centers						
Testing	Transportation						
	Physical						
	Materials						
	Assemblies						
Electrical							
Other Lab Types:							
1.							
2.							
3.							
4.							
5.							

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		Industrial, Institutional, Commercial					
Functionality		Wet	Dry	Chemical Based	Electrical Based	Bench Top	Floor Equipment
Lab Types							
Chemistry	Organic						
	Inorganic						
	Analytical						
	P-Chem						
Biology	Biomedical						
	Biochemical						
	Biology						
	Molecular						
	Cellular						
	Plan Sciences						
	Pharmacology						
	InVivo						
	Marine						
	Bio-Physics						
High Containment							
Physics	Optical						
	Acoustical						
	Macro Materials						
	Micro/Nano						
	Weapons						
Radiological							
Electronics	Components						
	Systems						
	Data Centers						
Testing	Transportation						
	Physical						
	Materials						
	Assemblies						
Electrical							
Other Lab Types:							
1.							
2.							
3.							
4.							
5.							

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Definitions for Human Factors

Habitability/Safety: a facility which addresses thermal, visual, spatial, and audio comfort, ensures personal safety, and is a healthy workplace connected to the outdoor environment accommodating the user's needs in flexibility, productivity and collaboration.

Community Interface: a facility which is built, enhanced and operates with respect to its consumption, displacement, obstruction and disruption of the "host" community through the use of energy, consumption of water, generation of waste water and solid waste, generation of hazardous waste, impact on transportation, medical and emergency services, appearance, employment, financial stability, and desirability.

Sustainability: a facility which in and of itself meets LEED silver, either certified or not but clearly recorded, and incorporates the Labs21 EPC criteria and Labs21 goals in its design and continuous operation. Is aggressively sub-metered, monitored and managed to maintain the standard to which it was designed.

Infrastructural: a facility which strives to lessen its demand on non-renewable energy resources, implements its own on-site energy renewable and co/tri gen production systems, pursues water and waste water recovery for higher value end-uses, minimize its dependence on community services for solid and hazardous waste disposal.

Maintainability: a facility designed and engineered to accommodate engineering and maintenance staff functions to be safe, efficient, functional, rational and easily performed, ensuring effective and life-cycle facility management.

Operability: a facility having an aggressive BAS system with monitoring and sub-metering capacities ensuring constant commissioning and real-time data generation integrated with prescribed HVAC and other building/research systems operation ensuing a high degree of management and decision-making by FM and PI/users for safe, efficient and sustained high performance of the laboratory.

Humane: a facility with designs, engineered systems and management services providing clean, safe and comfortable environments for laboratory animals and encouraging a reduction in the numbers of laboratory animals maintained on-site.