



<b>LCLS Room Data Sheet #</b>	<b>1.9-1031</b>	<b>Near Experimental Hall (NEH) - Open Work Area (Sub- Basement)</b>	<b>Revision 2</b>
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### REVISION INFORMATION

Rev 2, Added layout figure, deleted floor drain. Changed room temperature stability requirements to +/- 2F

Updated Standards and Codes- Added diversity factor for power panels. Clarified lighting requirements

**ROOM DATA SHEETS**

FACILITY COMPONENT	OPEN WORK AREA (NEH SUB-BASEMENT) - ROOM DATA SHEET																																				
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 40%;"><b>Name of Building</b></td> <td colspan="3">Open Work Area (NEH SUB-BASEMENT)</td> </tr> <tr> <td><b>Organization or Department</b></td> <td colspan="3">SLAC, Stanford University</td> </tr> <tr> <td><b>Net area</b></td> <td>238.7</td> <td>sq. meters</td> <td>2,568 sf</td> </tr> <tr> <td rowspan="3"><b>Critical dimensions</b></td> <td><b>H:</b></td> <td>4.5 m</td> <td>15'-0"</td> </tr> <tr> <td><b>W:</b></td> <td>7.32m</td> <td>24'-0"</td> </tr> <tr> <td><b>L:</b></td> <td>32.6 m</td> <td>107'</td> </tr> <tr> <td><b>Hours of operation</b></td> <td colspan="3">Facility is open 24/7/365 for users</td> </tr> <tr> <td><b>Users/Occupancy</b></td> <td colspan="3">Laboratory workers and external users utilize this central area as a common work area. "B" occupancy group.</td> </tr> <tr> <td><b>Building orientation</b></td> <td colspan="3">The Open Work Area is located directly adjacent and between the Hutches and the Shops on the NEH sub-basement level.</td> </tr> </table>			<b>Name of Building</b>	Open Work Area (NEH SUB-BASEMENT)			<b>Organization or Department</b>	SLAC, Stanford University			<b>Net area</b>	238.7	sq. meters	2,568 sf	<b>Critical dimensions</b>	<b>H:</b>	4.5 m	15'-0"	<b>W:</b>	7.32m	24'-0"	<b>L:</b>	32.6 m	107'	<b>Hours of operation</b>	Facility is open 24/7/365 for users			<b>Users/Occupancy</b>	Laboratory workers and external users utilize this central area as a common work area. "B" occupancy group.			<b>Building orientation</b>	The Open Work Area is located directly adjacent and between the Hutches and the Shops on the NEH sub-basement level.		
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<b>FUNCTIONAL OBJECTIVE</b>	Provide a centrally located common work area for Laboratory workers and use for control area for the experiments in the hutches. Each control area (3) are ~12x18ft/per hutch and shall consist of racks, office furnitures for 4-5 persons, computers, printers, monitors, etc. (see Figure 1).																																				
<b>PLANNING CONSIDERATIONS &amp; CRITICAL</b>	Centrally located on the NEH sub-basement level. Each shall be independent and isolated from adjacent control areas. Noise level in this area shall be reduced similar to office environment NC: 35 Considerations shall be given for egress and access to adjacent shops and tunnel access.																																				
<b>FINISHES</b>	Wall	Painted reinforced concrete, framed gypsum board assembly																																			
	Ceiling	Reinforced concrete, painted surface. 15'-0"high. Remains 3 ft thick																																			
	Floor	Sealed concrete with epoxy coating																																			
	Base	Rubber base																																			
	Doors	Limited to perimeter, stair and tunnel access																																			
	Fenestrations	None																																			
	Acoustical	Typical laboratory decibel level required. NC=35																																			
<b>APPLICABLE STANDARDS</b>	29 CFR Part 1910 Occupational Safety and Health Standards Dept of Labor, 29 CFR Part 1926 Safety and Health Regulations for Construction Dept of Labor, Uniform Building Code (UBC) 1997 including appendixes, National Electric Code (NEC) 2002, Uniform Mechanical Code (UMC) 2003 including appendixes, Uniform Plumbing Code (UPC) 2003 including appendixes, Uniform Fire Code (UFC) 2003 including appendixes, California Code of Regulations Title 8 Industrial Safety, Title 19 Public Safety, NFPA 70 National Fire Codes, National electrical Safety Code ANSI C2, Occupational Safety and Health Act (OSHA), General Services Administration 41 CFR part 101-19, Environmental Protection Agency 40 CFR Parts 264 and 265, SLAC Environmental Safety & Health Manual, General Industrial Activities Storm Water Permit (SLAC Permit), NFPA 101 life Safety Code, Title 24-Energy Code, DOE standard 10 CFR Part 435, ASHRAE/IES Standards 90.1, NFPA Standard 13 and SLAC Fire Marshal requirements, LCLS Cabling Standard, SLAC LOTO																																				

Figure 1 Hutches and Control area (open work area) lay out

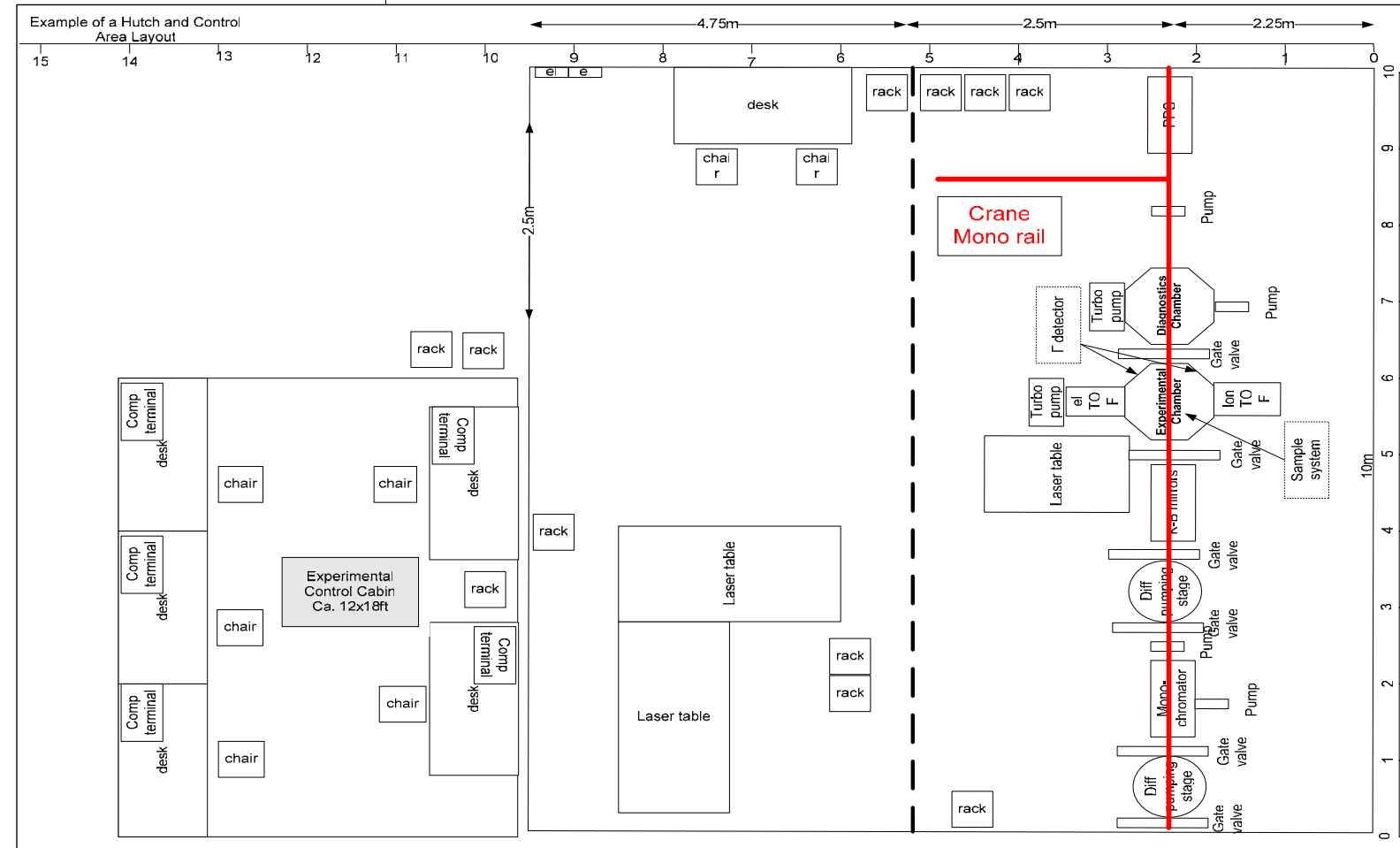
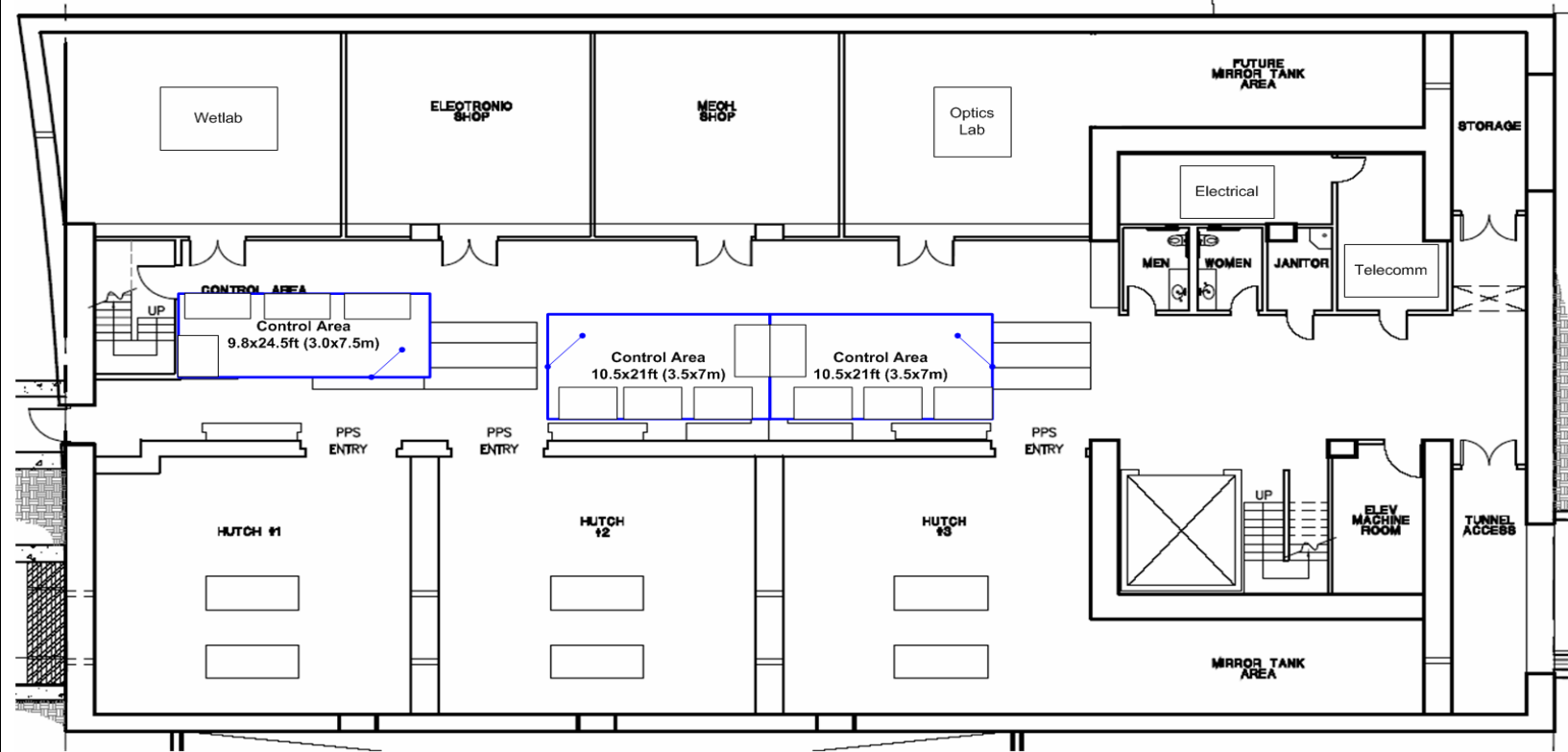


Fig.: NEH Sub basement: Control areas in the open work area



MECHANICAL REQUIREMENTS	HVAC	<input checked="" type="checkbox"/>	Heating system	Temp:	<input type="checkbox"/>	Mechanical humidification
		<input checked="" type="checkbox"/>	Air conditioning	Temp: 72 degrees F +/- 2 degree F	<input type="checkbox"/>	Direct exhaust system
		<input type="checkbox"/>	Direct supply		<input type="checkbox"/>	Positive pressure system
		<input type="checkbox"/>	Indirect supply		<input type="checkbox"/>	Negative pressure system
		<input type="checkbox"/>	Smoke control system		<input type="checkbox"/>	Standard registers
		<input checked="" type="checkbox"/>	Temperature Control connected to DDC system		<input type="checkbox"/>	Requirement for gases
		<b>Comments:</b> Control area has no cleanliness requirements				
	Communications	<input checked="" type="checkbox"/>	Telephone- 2 phone lines/location-see figures in NEH Overall.		<input type="checkbox"/>	PA speakers
		<input checked="" type="checkbox"/>	Data port- 2 jacks/location-see figures in NEH Overall		<input type="checkbox"/>	PA station
		<input type="checkbox"/>	Payphone			CCTV camera
		<input checked="" type="checkbox"/>	Fire alarm station		<input type="checkbox"/>	CCTV monitor
		<input type="checkbox"/>	Intercom			
		<b>Comments:</b> 1) Cable trays should be made from galvanized steel. Provide each cable tray with 1-4#0 bare copper wire for grounding.				
	Plumbing/Fire Protection	<input type="checkbox"/>	Hot water system		<input type="checkbox"/>	Electric water cooler
		<input checked="" type="checkbox"/>	Cold water system		<input type="checkbox"/>	Drinking fountain
		<input type="checkbox"/>	Tempered water		<input type="checkbox"/>	Smoke detection system
		<input type="checkbox"/>	Waste drain		<input checked="" type="checkbox"/>	Wet Sprinkler System
		<input type="checkbox"/>	Floor drain		<input checked="" type="checkbox"/>	Eye wash / Safety shower
		<input type="checkbox"/>	Trench drain			See NEH overall requirements
		<b>Comments:</b>				

<b>ELECTRICAL REQUIREMENTS</b>	<b>Power supply</b>	<input type="checkbox"/>	208V outlets-1 phase- 30 amps	<input type="checkbox"/>	Uninterrupted power supply		
		<input checked="" type="checkbox"/>	110V, 1ph Double duplex outlets, 20 amps locate at 10ft apart on all walls.	<input type="checkbox"/>	Special electric <small>Type:</small>		
		<input type="checkbox"/>	Emergency power				
		<b>Comments:</b> 1- Number of circuits per panel: 42 each panel for clean and dirty power. Panel location: see fig 3 "NEH Overall RDS". 2 - Provide three panels, 208 volts, 3 ph-120 volts, (two "clean" and one "dirty" power) for the total work area. Each panel shall have a main breaker. 3) Capacity of each panel: 100 amps Diversity factor: 60% Panel location: On walls between hutches next to door.					
	<b>Lighting</b>	<input checked="" type="checkbox"/>	Light fixtures -	<input type="checkbox"/>	Remote lighting control		
		<input type="checkbox"/>	Fixture type I: Down light	<input checked="" type="checkbox"/>	Light switches		
		<input type="checkbox"/>	Fixture type II: Bollard (exterior)		Lighting level <small>FC: 75</small>		
		<input type="checkbox"/>	Emergency lighting				
		<b>Comments:</b> 1- All conduits are surface mounted. 2.- Provide night lighting. 3.- Provide independent lighting controls for three areas (in front of each hutch)					
<b>RADIATION/SEISMIC/VIBRATIONS ISSUES</b>	<b>Comments:</b> 1- All equipment (HVAC, cable trays, panels, etc) and systems are to be seismically braced and restrained per SLAC's Seismic Standards and Code.						
<b>SPECIAL REQUIREMENTS FOR EQUIPMENT</b>	<b>Comments:</b> Each control area, will have two to three I&C racks (University Furnished)						
<b>CHEMICALS / GASES</b>		<b>CHEMICALS</b>		<b>SPECIALTY GASES</b>			
		<b>#</b>	<b>Chemical Type</b>	<b>Quantity</b>	<b>#</b>	<b>Gas Type</b>	<b>Quantity</b>
<b>ENVIRONMENTAL NEEDS</b>							