

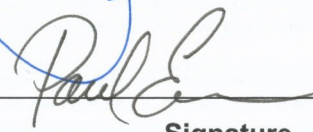
LCLS Room Data Sheet #	1.9-1005	Research Yard (RSY)	Revision 2
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Javier A. Sevilla
Owner / Editor

 **Signature**


8/12/05 **Date**

Jim Welch
System Physicist Conventional
Facilities

 **Signature**

8/12/05 **Date**

David Saenz
Conventional Facilities System
Manager

 **Signature**

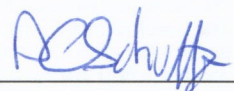
8/12/05 **Date**

Eric Bong
Injector-Linac Manager

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8/12/05 **Date**

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8/12/05 **Date**

Darren Marsh
Quality Assurance Manager

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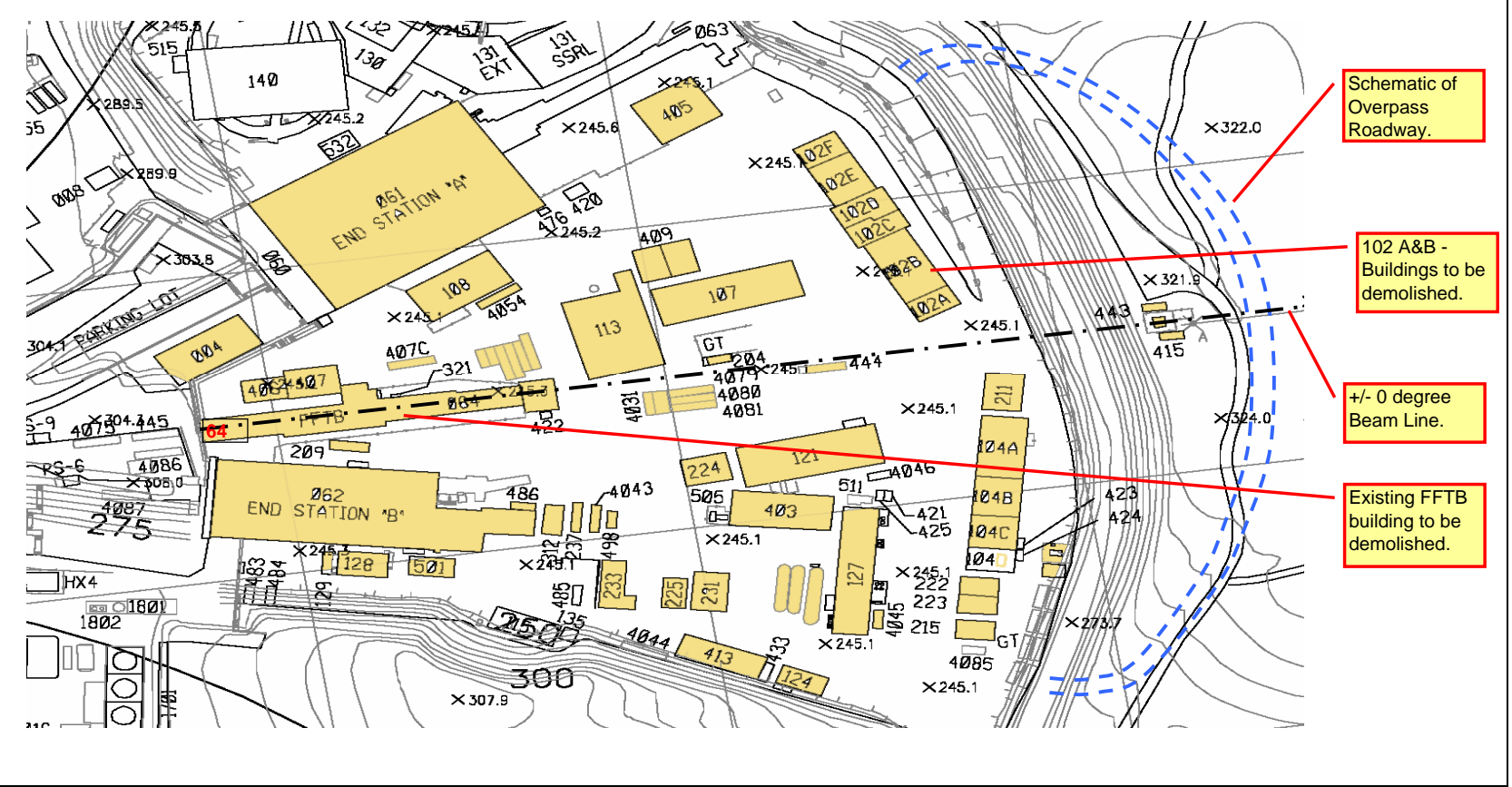
8/12/05 **Date**

REVISION INFORMATION

Rev 2. Updated Code and Standards, general changes, deleted from scope removal of shielding blocks

ROOM DATA SHEETS

SLAC RESEARCH YARD MODIFICATIONS - ROOM DATA SHEET																					
FACILITY COMPONENT	<table border="1"> <tr> <td>Name of Building</td> <td>Research Yard Modifications-Variou Buildings</td> </tr> <tr> <td>Organization or Department</td> <td>SLAC, Stanford University</td> </tr> <tr> <td>Net area</td> <td>Usable Square Feet</td> </tr> <tr> <td>Critical dimensions</td> <td> <table border="1"> <tr> <td>H:</td> <td>N/A</td> </tr> <tr> <td>W:</td> <td>N/A</td> </tr> <tr> <td>L:</td> <td>N/A</td> </tr> </table> </td> </tr> <tr> <td>Hours of operation</td> <td>N/A - Yard has a number of buildings in it.</td> </tr> <tr> <td>Users/Occupancy</td> <td>N/A - Yard has a number of buildings in it.</td> </tr> <tr> <td>Building orientation</td> <td>Yard is located at the west end of the existing 2-mile long accelerator.</td> </tr> </table>	Name of Building	Research Yard Modifications-Variou Buildings	Organization or Department	SLAC, Stanford University	Net area	Usable Square Feet	Critical dimensions	<table border="1"> <tr> <td>H:</td> <td>N/A</td> </tr> <tr> <td>W:</td> <td>N/A</td> </tr> <tr> <td>L:</td> <td>N/A</td> </tr> </table>	H:	N/A	W:	N/A	L:	N/A	Hours of operation	N/A - Yard has a number of buildings in it.	Users/Occupancy	N/A - Yard has a number of buildings in it.	Building orientation	Yard is located at the west end of the existing 2-mile long accelerator.
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Building orientation	Yard is located at the west end of the existing 2-mile long accelerator.																				
FUNCTIONAL OBJECTIVE	The research yard houses a number of core and support facilities for SLAC. Some of these buildings will be affected by the construction of the new LCLS facilities. It is expected that the BTH location will make it necessary to modify or remove a few buildings from the yard. Future +/- 2 & 4-degree beam tunnels will also impact other buildings in this yard.																				
PLANNING CONSIDERATIONS & CRITICAL FACTORS	All modifications to match existing construction. Refer to SLAC Seismic standards and LCLS vibration criteria for the BTH. The south entrance to the yard has to remain open during construction. Additionally, there needs to be fire-truck access to both sides of the yard, and the overpass road needs to have adequate turning radii for the same. Equally important is the issue of turning radius within the existing yard, after the overpass roadway is constructed.																				
BUILDINGS	<table border="1"> <tr> <td># 64 - FFTB</td> <td>To be completely removed (vertical shielding block at end BSY to be removed by SLAC)</td> </tr> <tr> <td># 113 Hi-Bay</td> <td>Modifications limited to demolition of Hi-Bay only</td> </tr> <tr> <td># 204, 209, 4031, 4079, 4080 & 4081</td> <td>To be relocated</td> </tr> <tr> <td># 406 & 407</td> <td>Remains in current location. Will provide power to BTH.</td> </tr> <tr> <td># 102</td> <td>Demolition to be limited to modifications of building #102.</td> </tr> <tr> <td>Overpass Roadway</td> <td>Roadway preferred on top of hill, adjacent to existing road. The roadway may need to cut into part of the hill in order to create adequate turning radius for the trucks/fire-engines.</td> </tr> </table>	# 64 - FFTB	To be completely removed (vertical shielding block at end BSY to be removed by SLAC)	# 113 Hi-Bay	Modifications limited to demolition of Hi-Bay only	# 204, 209, 4031, 4079, 4080 & 4081	To be relocated	# 406 & 407	Remains in current location. Will provide power to BTH.	# 102	Demolition to be limited to modifications of building #102.	Overpass Roadway	Roadway preferred on top of hill, adjacent to existing road. The roadway may need to cut into part of the hill in order to create adequate turning radius for the trucks/fire-engines.								
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Overpass Roadway	Roadway preferred on top of hill, adjacent to existing road. The roadway may need to cut into part of the hill in order to create adequate turning radius for the trucks/fire-engines.																				
APPLICABLE STANDARDS	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																				



Schematic of Overpass Roadway.

102 A&B - Buildings to be demolished.

+/- 0 degree Beam Line.

Existing FFTB building to be demolished.

MECHANICAL REQUIREMENTS	HVAC	<input checked="" type="checkbox"/> Heating system	Temp: <input type="checkbox"/>	Mechanical humidification
		<input checked="" type="checkbox"/> Air conditioning	Temp: <input type="checkbox"/>	Direct exhaust system
		<input type="checkbox"/> Direct supply		Positive pressure system
		<input type="checkbox"/> Indirect supply		Negative pressure system
		<input type="checkbox"/> Smoke control system		Standard registers
		<input type="checkbox"/> Temperature sensors connected to SLAC's DDC system		Requirement for gases
List of Gases -		Existing cooling tower may have potential for expandability and meet higher demands.		
	Communications	<input checked="" type="checkbox"/> Telephone		PA speakers
		<input checked="" type="checkbox"/> Data port		PA station
		<input type="checkbox"/> Payphone		CCTV camera
		<input checked="" type="checkbox"/> Fire alarm station		CCTV monitor
		<input type="checkbox"/> Intercom		
		Comments:		
	Plumbing/Fire Protection	<input checked="" type="checkbox"/> Hot water system		Electric water cooler
		<input checked="" type="checkbox"/> Cold water system		Drinking fountain
		<input type="checkbox"/> Tempered water		Smoke detection system
		<input checked="" type="checkbox"/> Waste drain	<input checked="" type="checkbox"/>	Wet Sprinkler System
		<input checked="" type="checkbox"/> Floor drain	<input type="checkbox"/>	Eye wash
		<input type="checkbox"/> Trench drain		
Comments: Existing fire-water available.				
ELECTRICAL REQUIREMENTS	Power supply	<input checked="" type="checkbox"/> 208V, 1 phase or 3 phase outlets		Uninterrupted power supply
		<input checked="" type="checkbox"/> 110V outlets		Special electric
		<input type="checkbox"/> Emergency power		Type:
		Comments:		
	Lighting	<input checked="" type="checkbox"/> Light fixtures		Remote lighting control
		<input type="checkbox"/> Fixture type I: Down light	<input checked="" type="checkbox"/>	Light switches
		<input checked="" type="checkbox"/> Fixture type II: Bollard (exterior)		Lighting level
		<input type="checkbox"/> Emergency lighting		FC:
Comments:				
RADIATION/SEISMIC/ VIBRATIONS ISSUES	Comments:			
SPECIAL REQUIREMENTS FOR EQUIPMENT	Comments:			
	a) See Research Yard Demolition Plans for utility lines. Also see Research Yard Proposed Plan for proposed layout of BTH, head wall and proposed utilities.			
ENVIRONMENTAL NEEDS	1.0	Radiation protection is a must for surrounding facilities.		
	2.0	SLAC to provide Environmental Protection Sampling Plan and analysis.		
		Demolition of bldg #102 will require a licensed asbestos removal subcontractor to remove construction materials		