EEL Room 121 SVT Cleanroom Requirements

6/10/2010

- Class 10,000 with positive pressure design
- Hard-wall construction with ~ 30' X 29' Cleanroom area
- Test Station Monitoring area (outside of cleanroom area) ~11' X 30'
- Minimum 7' Ceiling height
- Entrance Air Shower / Gowning Area
- Work area for 6+ people
- Frequency of entry – up to 4 times per day (per person)
- Temperature (adjustable 66 - 74°) Relative humidity 45% +5%
- Digital temperature and humidity monitoring & computer interface
- High intensity lighting – same or better as R121 before conversion
- ~(24) 120V 20A quad outlets
- (3) 208V 3-phase - 30A outlets For HV supplies
- (1) Dry nitrogen supply & exhaust
- (4) Shop Air (same as R121 before conversion)
- Flooring – Sealed & protect against electrostatic discharge (conductive)
- External observation window
- (12) Jlab Computer Network Connections
- See drawing for layout and outlet locations
- (5) Phone lines total – (2) Digital phone lines inside cleanroom - (2) Digital outside + 1 Fax line

Hall B Instrumentation Lab Equipment (to be used in the SVT cleanroom)

6/10/2010

Qty	Equipment	Manufacturer	Model #	Voltage (V)	Phase	Max Power (W)	Total Power
4	Bench Power Supply	Tenma	72-6905	120	1	400	1600
1	Scope	Tektronix	TDS 644B	120	1	300	300
2	Scope	Tektronix	TDS3045	120	1	75	150
1	Digital Delay Generator	SRS	DG535	120	1	70	70
1	NIM Crate	Weiner	UEN03-04	120	1	600	600
2	VME Crate	Dawn VME	DEV-7713	120	1	500	1000
2	Arbitrary Waveform Generator	Agilent	33250A	120	1	140	280
1	Logic Analyzer	Agilent	16902A	120	1	1000	1000
1	Bench Meter	Keithley	2001	120	1	55	55
1	High resistance Electrometer	Keithley	6517B	120	1	100	100
1	Sub-Femto remote source meter	Keithley	6430	120	1	100	100
1	HV Source Meter	Keithley	237	120	1	100	100
1	LCR Meter	Agilent	E4980A	120	1	150	150
1	Electrometer	Keithley	6512	120	1	100	100
1	PicoAmpmeter	Keithley	6487	120	1	100	100
3	CAEN HV supply crate	CAEN	SY1527	208	3	800	2400
1	Mpod LV crate system	Weiner	Mpod	120	1	800	800
1	BNC pulse laser system	Berkeley Nucleonics	6430	120	1	80	80
1	Wire bonder System	K&S	4500	120	1	400	400
1	Probe station & accessories	Suss-MicroTec	PM-8	120	1	830	830
1	Environmental test Station	Assoc Environ Sys	LH-10	120	1	700	700
1	Dry Storage System	Terra Universal	Multiple	120	1	150	150
1	Parts Cleaner System	Terra Universal	Multiple	120	1	1000	1000
3	Solder station	Metcal	MX-500P	120	1	120	360
1	Surface mount station	Metcal	TBD	120	1	200	200
1	Multiplexer system	Keithley	707A	120	1	140	140
1	Coordinate Measurement Machine	Ram Optical	300	120	1	500	500
5	Misc Test equipment	TBD	TBD	120	1	100	500
5	Test Station Computer	Dell	490	120	1	500	2500
11	Monitors	Dell	2709W	120	1	140	1540
1	Network Router	Cisco Systems	Catalyst	120	1	96	96

17901 Watts

149 Amps

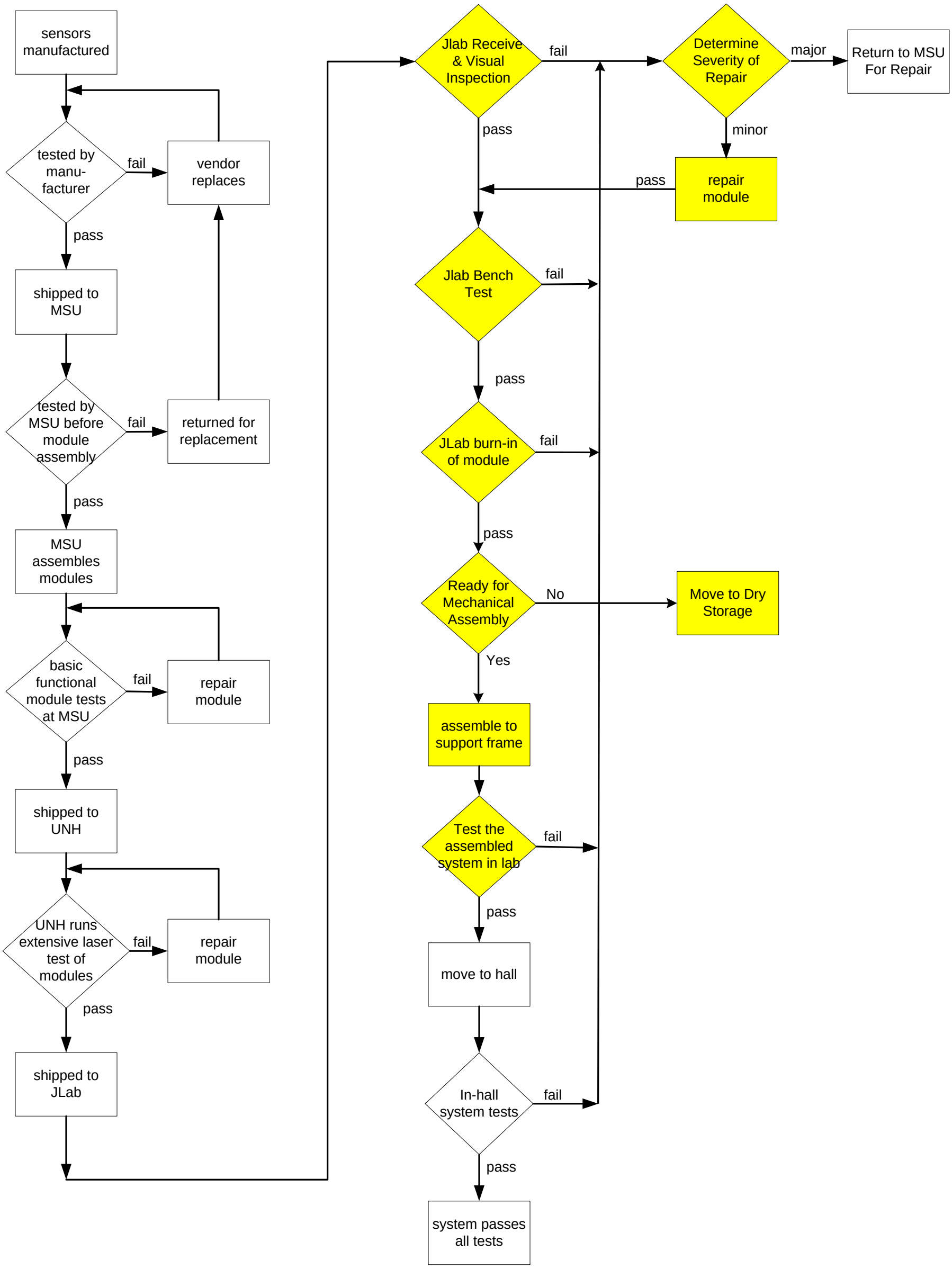
Regarding equipment demand:

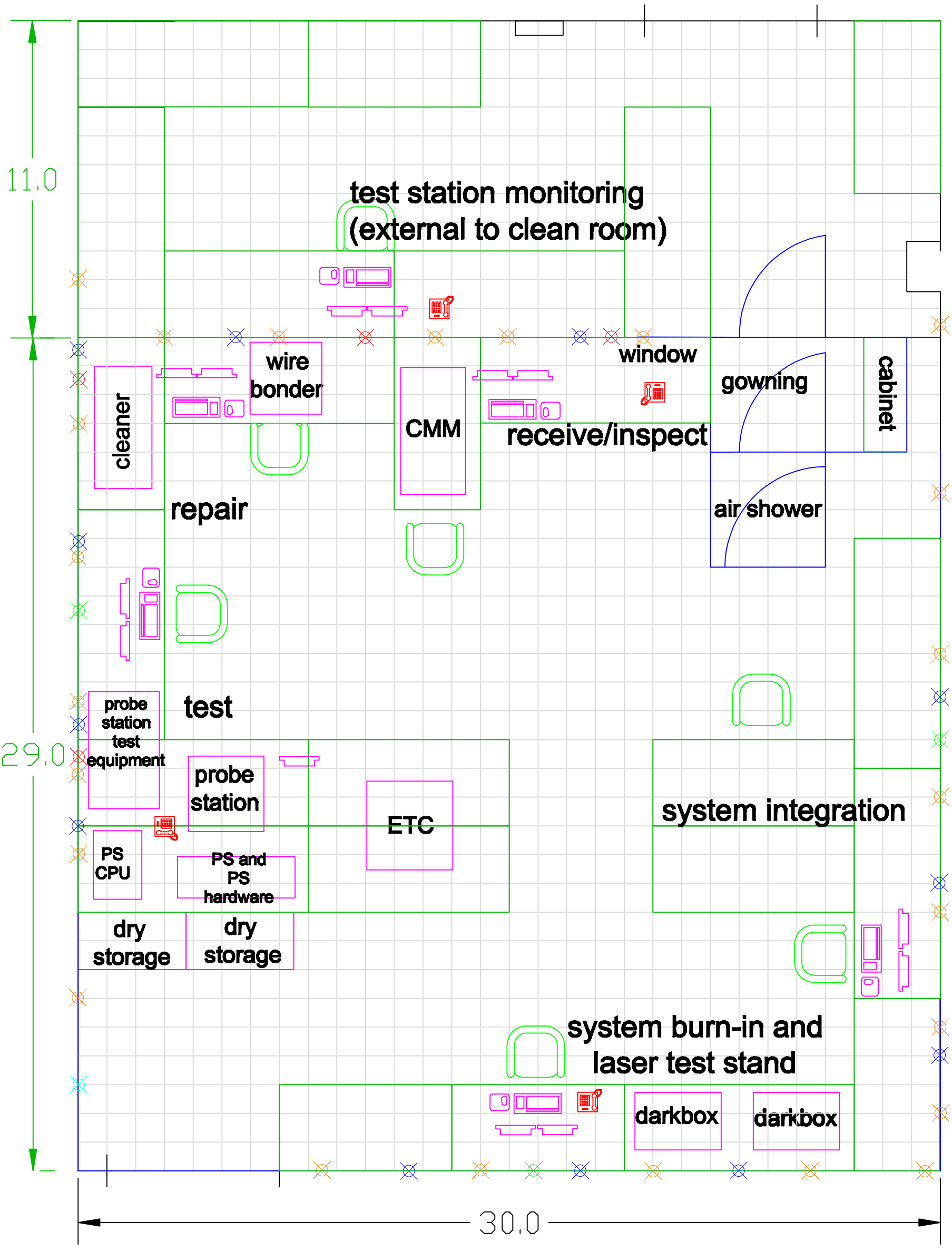
The majority of the equipment on this list is currently being used in EEL R121 and will be transferred to the cleanroom.
The breakers & configuration of the current room will be adaquite for the conversion to the cleanroom.

EEL Room 121 currently has ~ 24 quad (2 duplex) 120V outlets on ~ (15) 20A breakers - Power strips are used on the work benches & ~ (6) 208V 3-phase outlets on ~ (6) 30A breakers

SVT Workflow

Yellow Highlighted = work that will be done In Jlab Cleanroom




11.0
test station monitoring
(external to clean room)
wire
bonder
cleaner
CMM
window
receive/inspect
gowning
cabinet
air shower
repair
probe
station
test
equipment
test
29.0
probe
station
ETC
system integration
PS
CPU
PS and
PS
hardware
dry
storage
dry
storage
system burn-in and
laser test stand
darkbox
darkbox
30.0
208 V, 3 phase
120 V @ 20 A, 7 phase
dry nitrogen
network
shop air