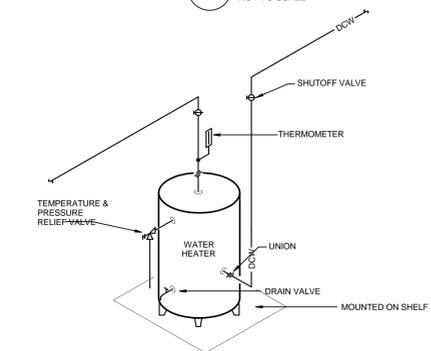
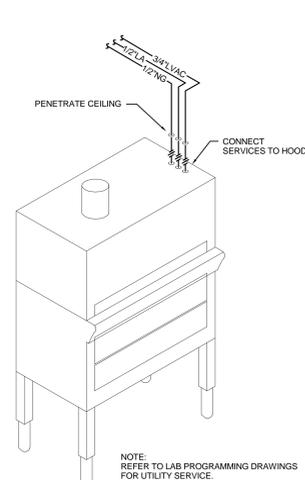


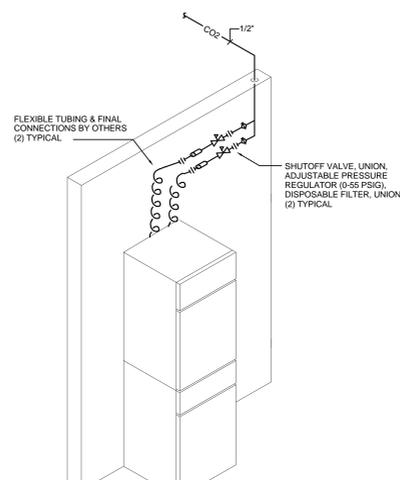
**13 GAS WATER HEATER**  
NOT TO SCALE



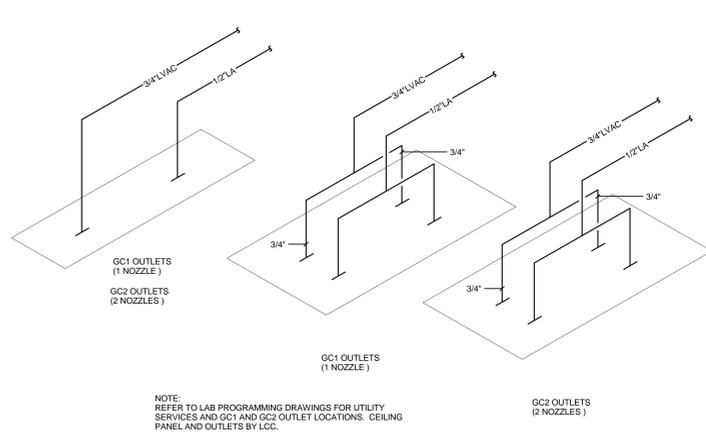
**14 ELECTRIC WATER HEATER**  
NOT TO SCALE



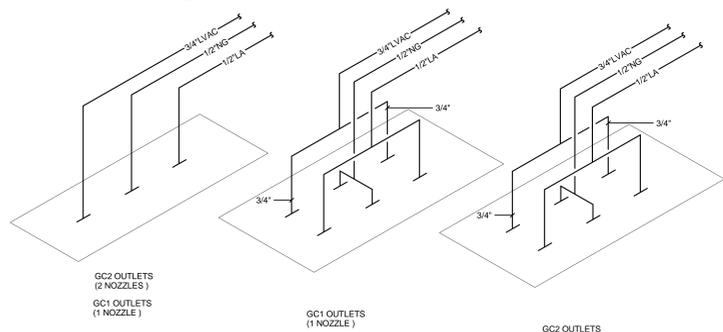
**16 BIOSAFETY CABINET**  
NOT TO SCALE



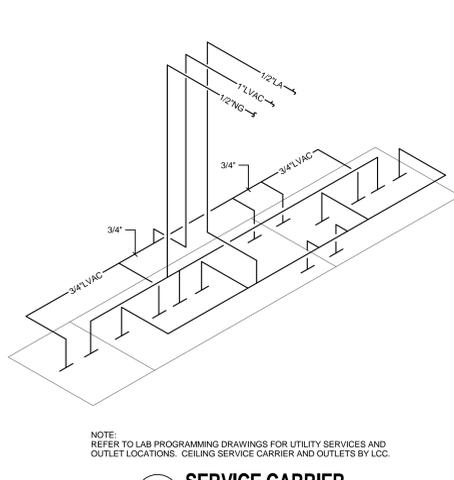
**15 INCUBATOR**  
NOT TO SCALE



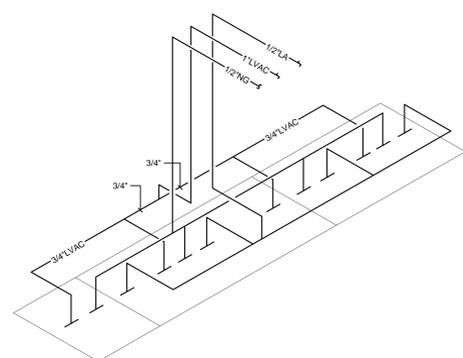
**9 CEILING SERVICE PANEL**  
NOT TO SCALE



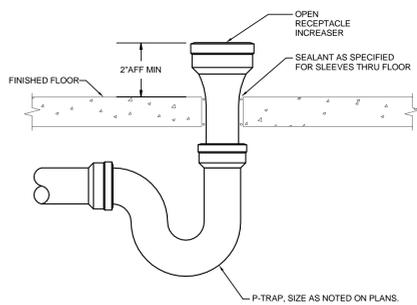
**10 CEILING SERVICE PANEL**  
NOT TO SCALE



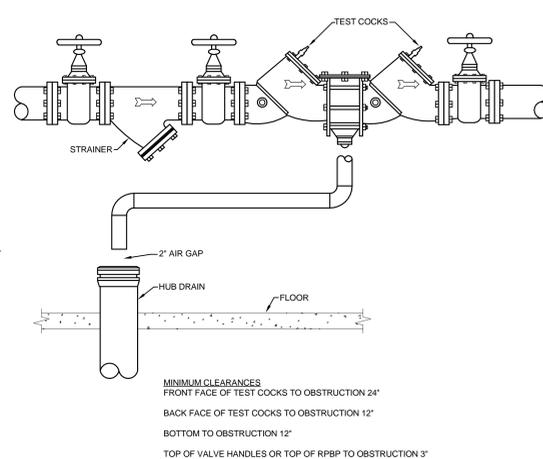
**11 SERVICE CARRIER**  
NOT TO SCALE



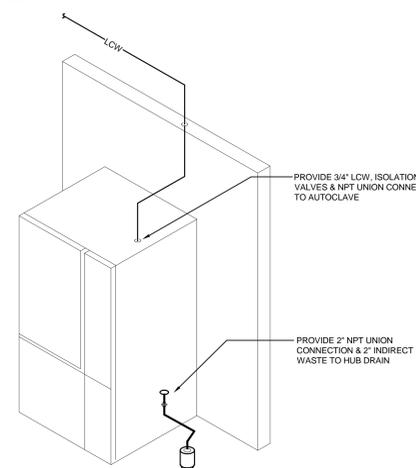
**17 SERVICE CARRIER**  
NOT TO SCALE



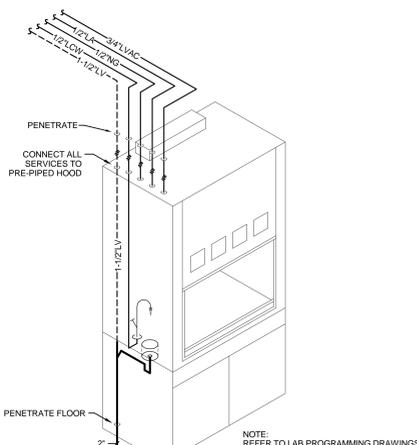
**12 HUB DRAIN**  
NOT TO SCALE



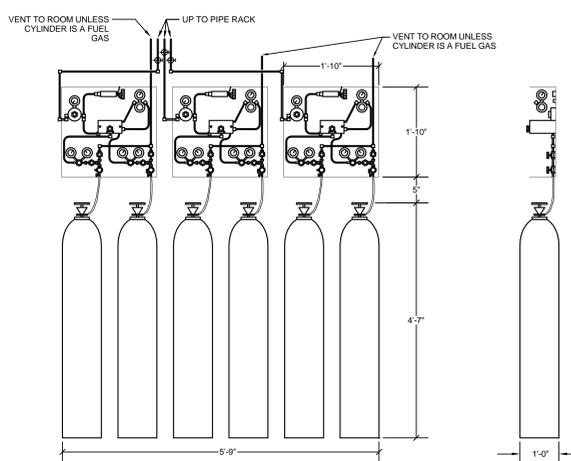
**5 REDUCED PRESSURE BACKFLOW PREVENTER**  
NOT TO SCALE



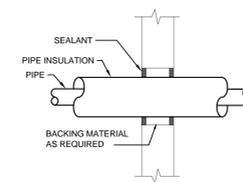
**6 AUTOCLAVE**  
NOT TO SCALE



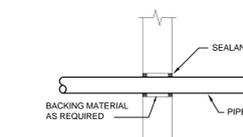
**7 FUME HOOD**  
NOT TO SCALE



**8 SPECIAL GAS CYLINDER MANIFOLD**  
NOT TO SCALE



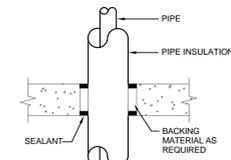
**A WITH PIPE INSULATION**



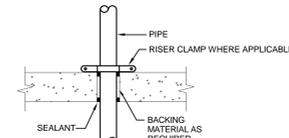
**B WITHOUT PIPE INSULATION**

NOTE: WHERE WALL IS FIRE RATED, COMBINATION OF SEALANT, BACKING MATERIAL AND INSULATION SHALL MEET THIS RATING. REFER TO SPECIFICATION SECTION 20 0573 FOR FIRE STOPPING SYSTEM MANUFACTURERS.

**1 PIPE THROUGH INTERIOR WALL**  
NOT TO SCALE



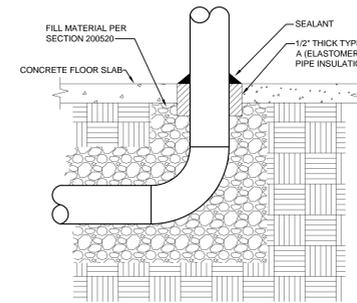
**A WITH PIPE INSULATION**



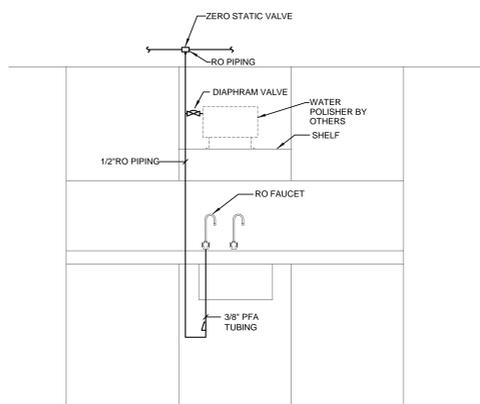
**B WITHOUT PIPE INSULATION**

NOTE: WHERE FLOOR IS FIRE RATED, COMBINATION OF SEALANT, BACKING MATERIAL AND INSULATION SHALL MEET THIS RATING. REFER TO SPECIFICATION SECTION 20 0573 FOR FIRE STOPPING SYSTEM MANUFACTURERS.

**2 PIPE THROUGH FLOOR**  
NOT TO SCALE



**3 PIPE THROUGH SLAB ON GRADE**  
NOT TO SCALE



**4 RO DROP TO SINKS**  
NOT TO SCALE

**ALTERNATE GENERAL NOTES**

**ALTERNATE A-7**  
1. PROVIDE PURE WATER (DI) SYSTEM EQUIPMENT AND PIPING.

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225 West Ohio Street, 4th Floor  
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SEALS AND SIGNATURES



ISSUED FOR CONSTRUCTION 07/03/12

REV. NO. DESCRIPTION BY APVD DATE



FMS  
Facilities Management Services

PROJECT TITLE ADVANCED PROTEIN CRYSTALLIZATION FACILITY, ARGONNE NATIONAL LABORATORY  
PROJECT NO. 08541-00  
DRAWING TITLE

**PLUMBING DETAILS**

DESIGNED SAB	AE CAD FILE PE 1.0	FACILITY (NOI)
DRAWN JAG	AE DWG. NO. PE 1.0	
CHECKED SAB	CAD NO.	
PROJECT MANAGER ANL - JESSE ADAMS	DWG STATE BND ORDER	
DATE: 10/11/11		
FACILITY DOCUMENT NUMBER <b>J446-101-W-</b>		REV. NO.
	<b>P6.1.0</b>	