

NASA'S ADVANCED LIFE SUPPORT PROGRAM

ASEN 5519: Space Experiment Design and Technologies
Independent Study Project

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Fall, 1999



Lunar-Mars Life Support Test Project (LMLSTP)

Late 1997



Phase III

Early 1997



Phase IIA

1996



Phase II

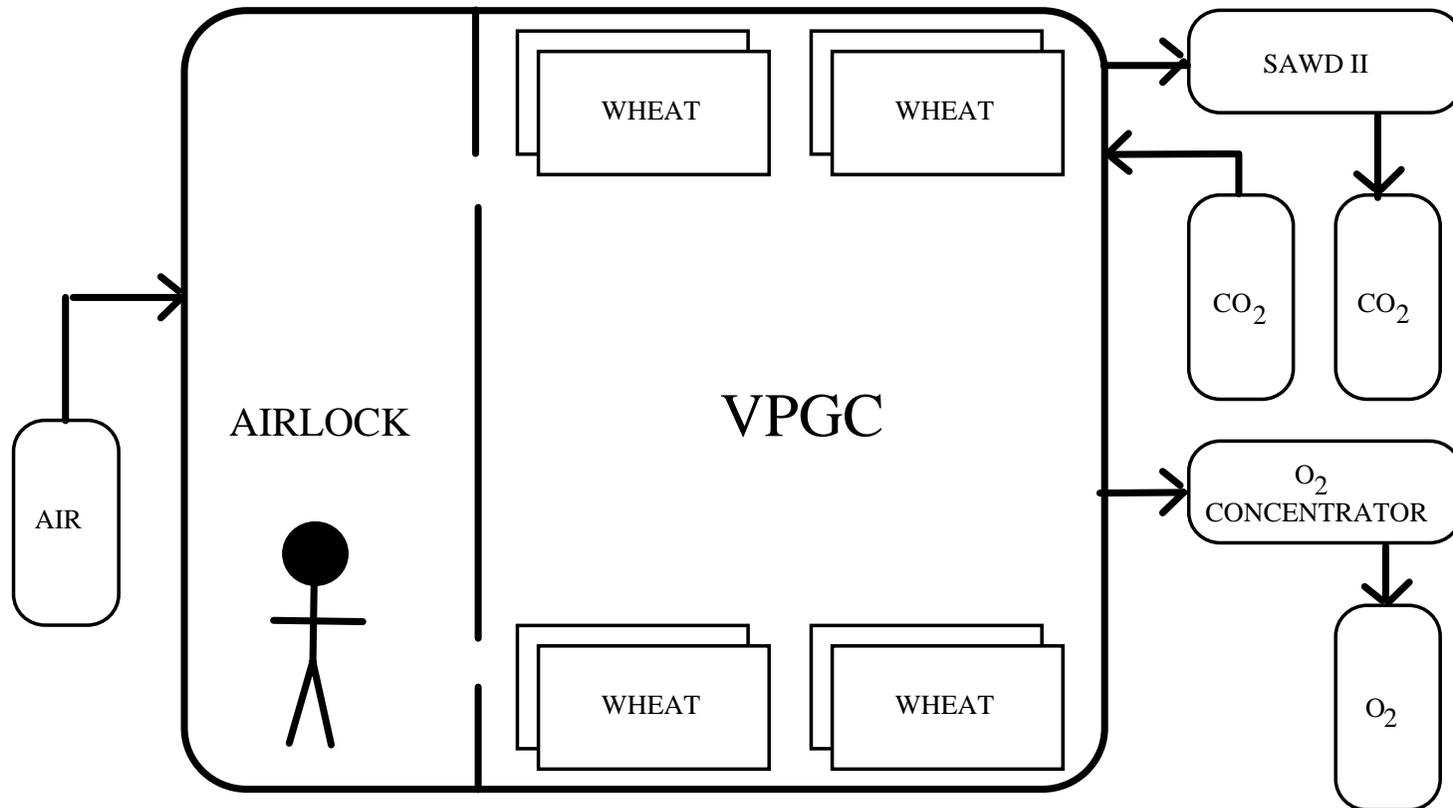
1995



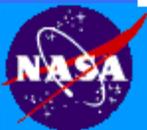
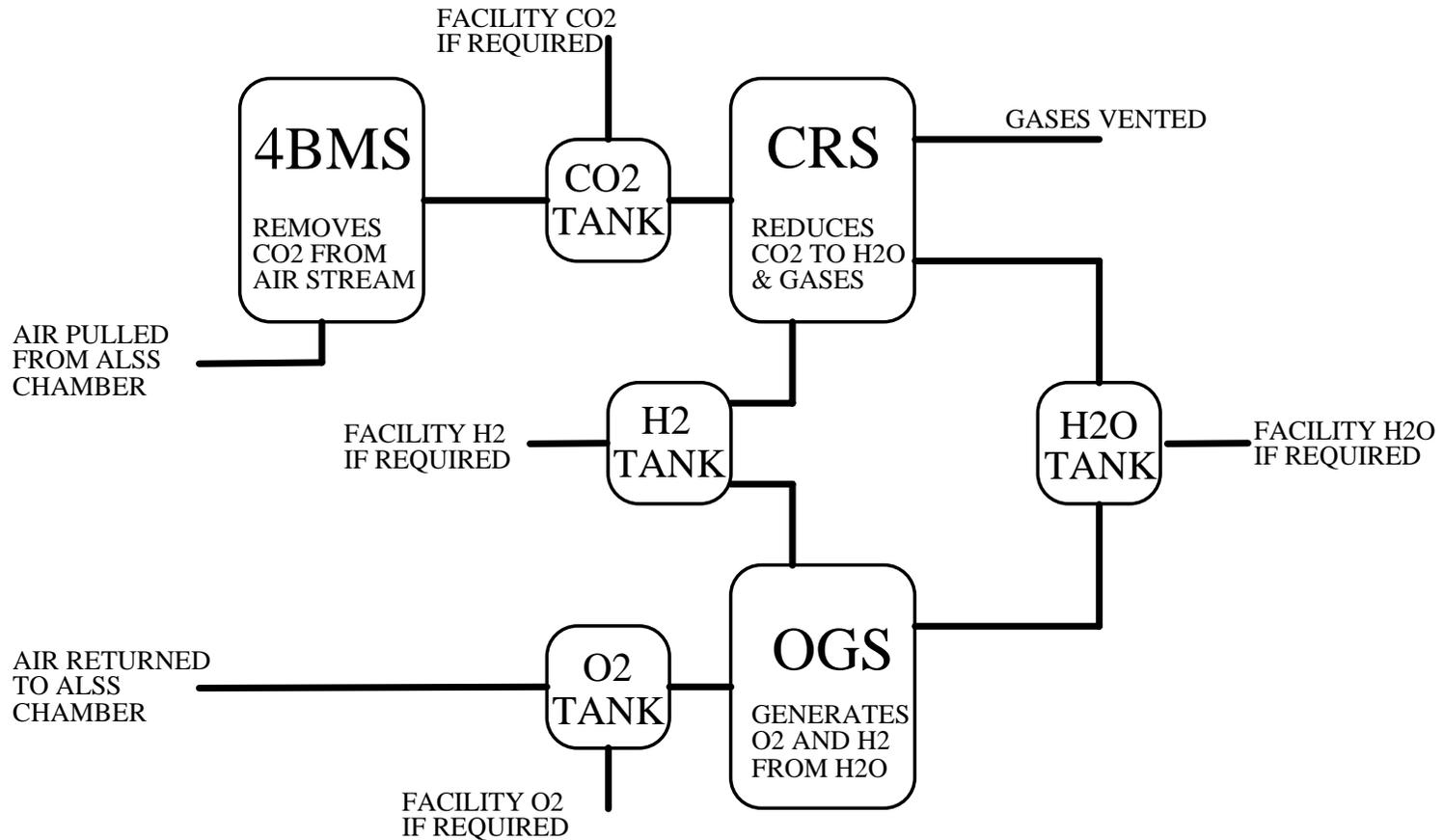
Phase I



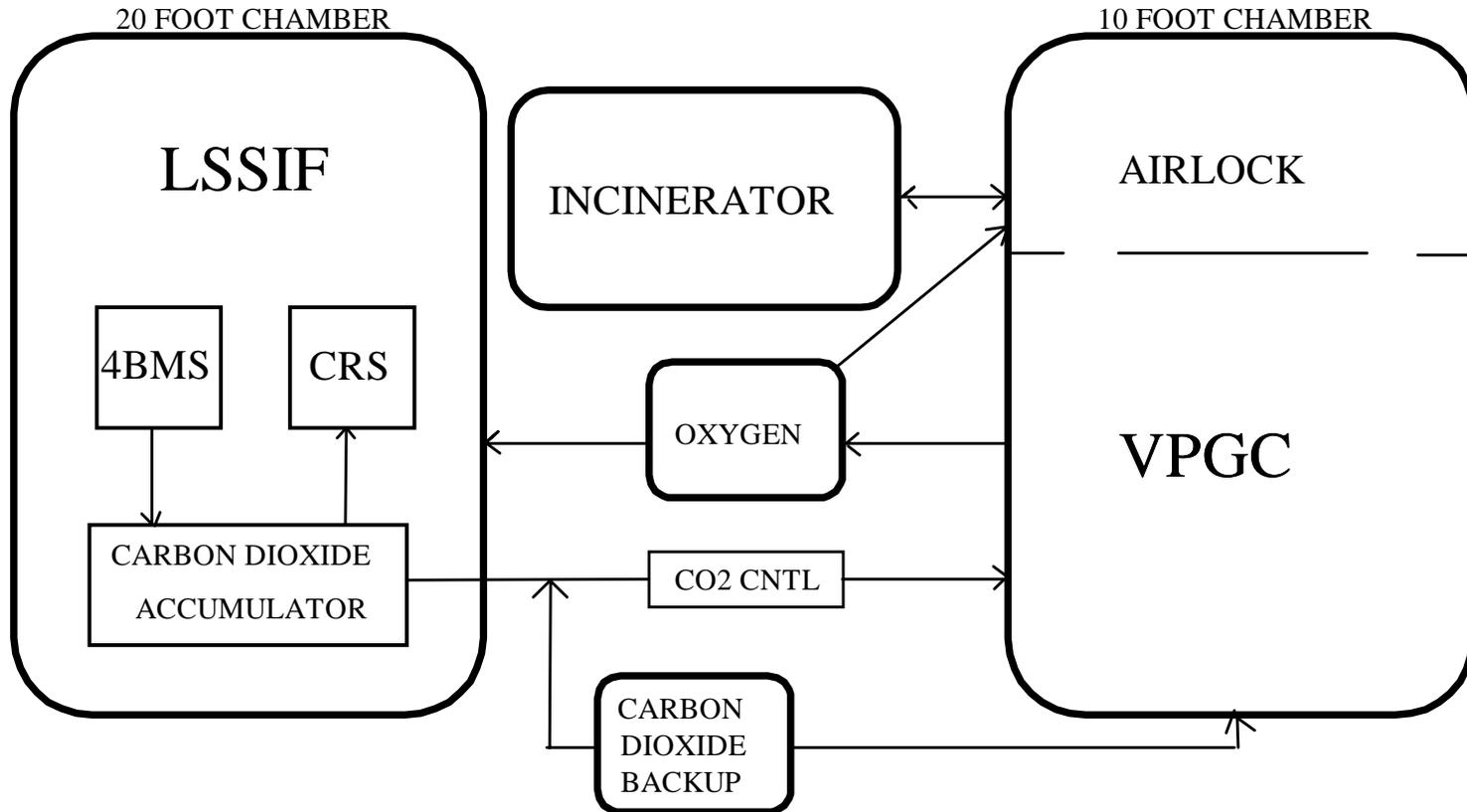
LMLSTP (EHTI) PHASE I TEST



LMLSTP (EHTI) PHASE II TEST



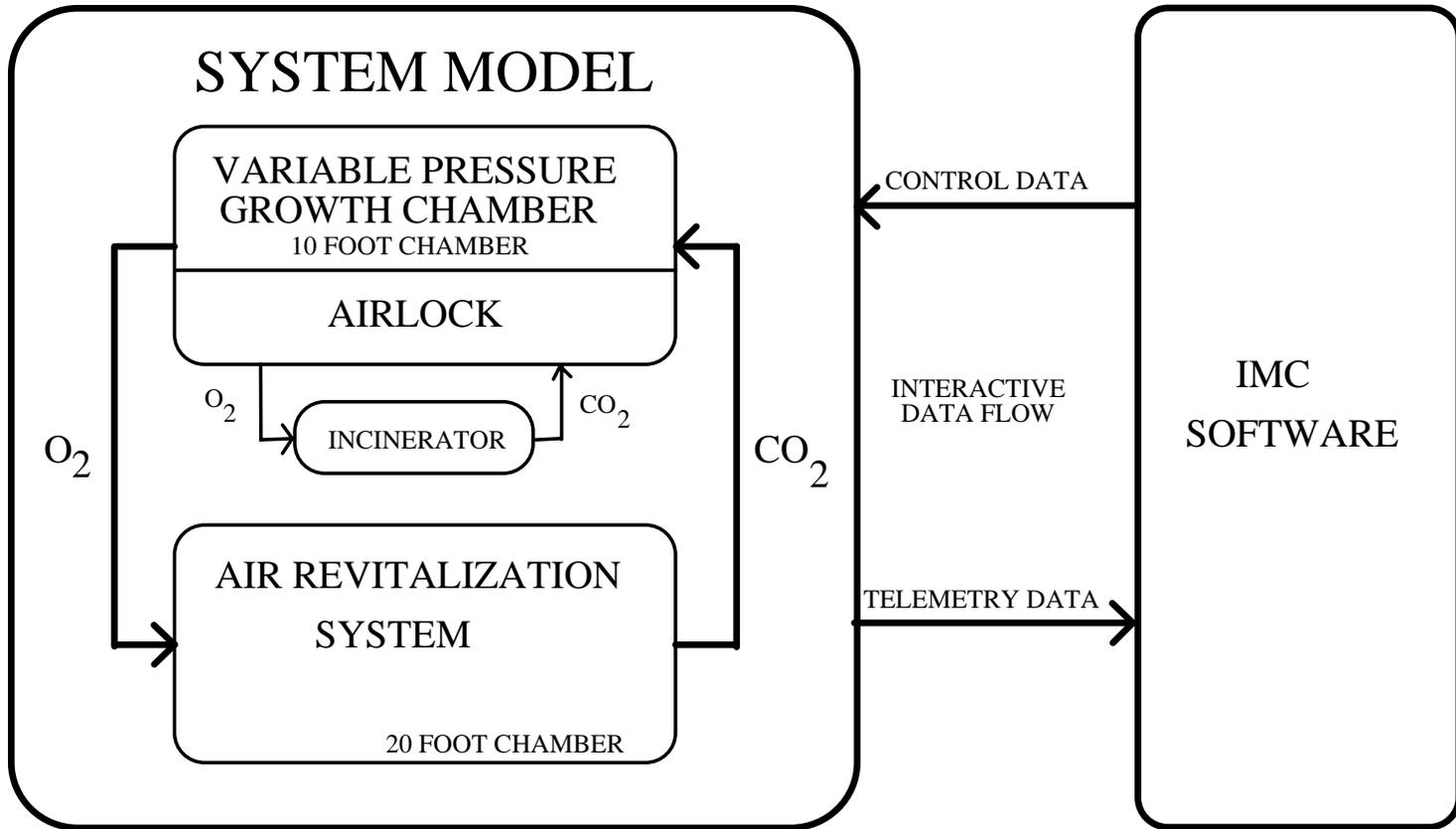
LMLSTP (EHTI) PHASE III TEST



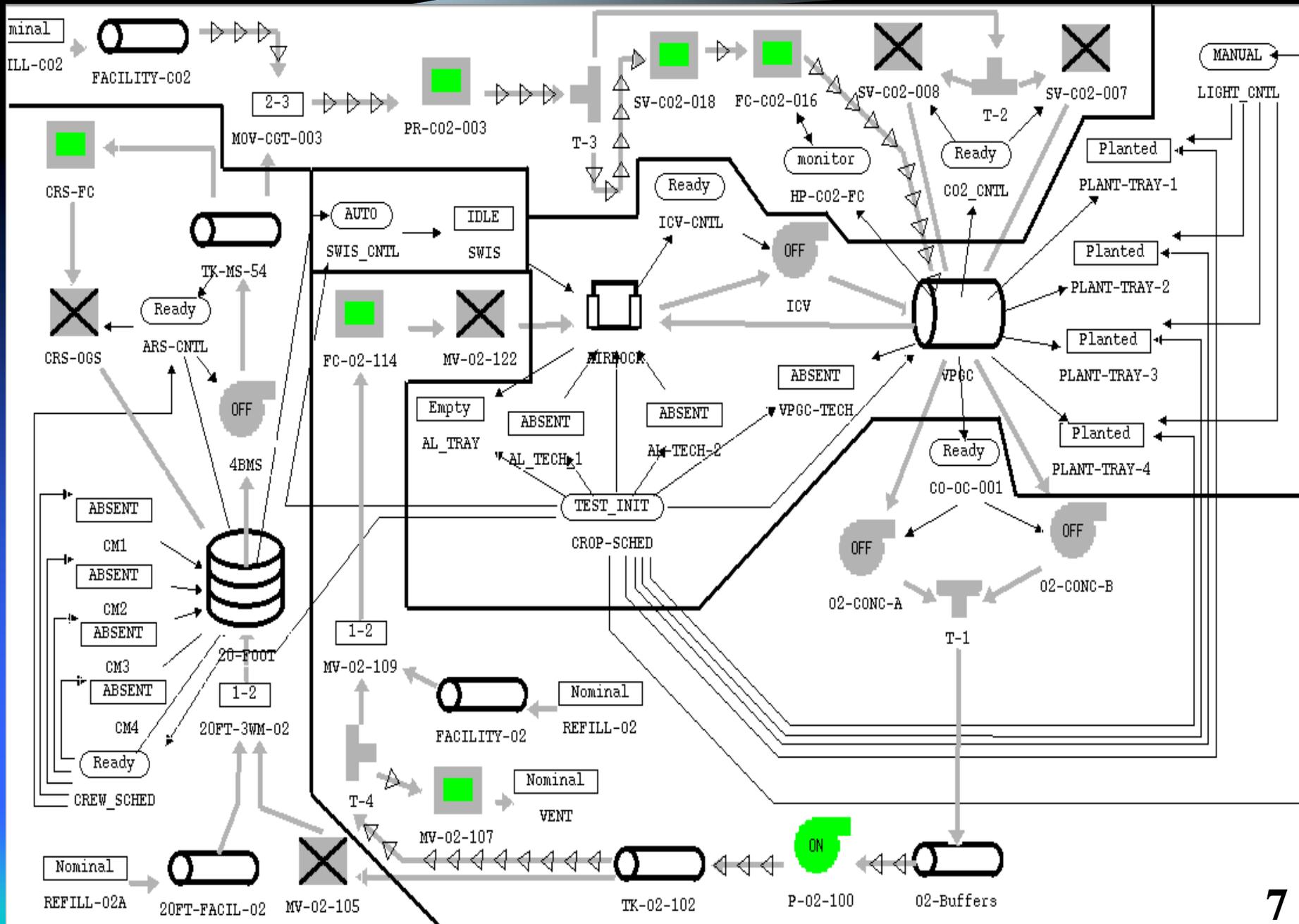
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INTERCHAMBER MONITORING & CONTROL



EHTI PHASE III TESTBED MODEL



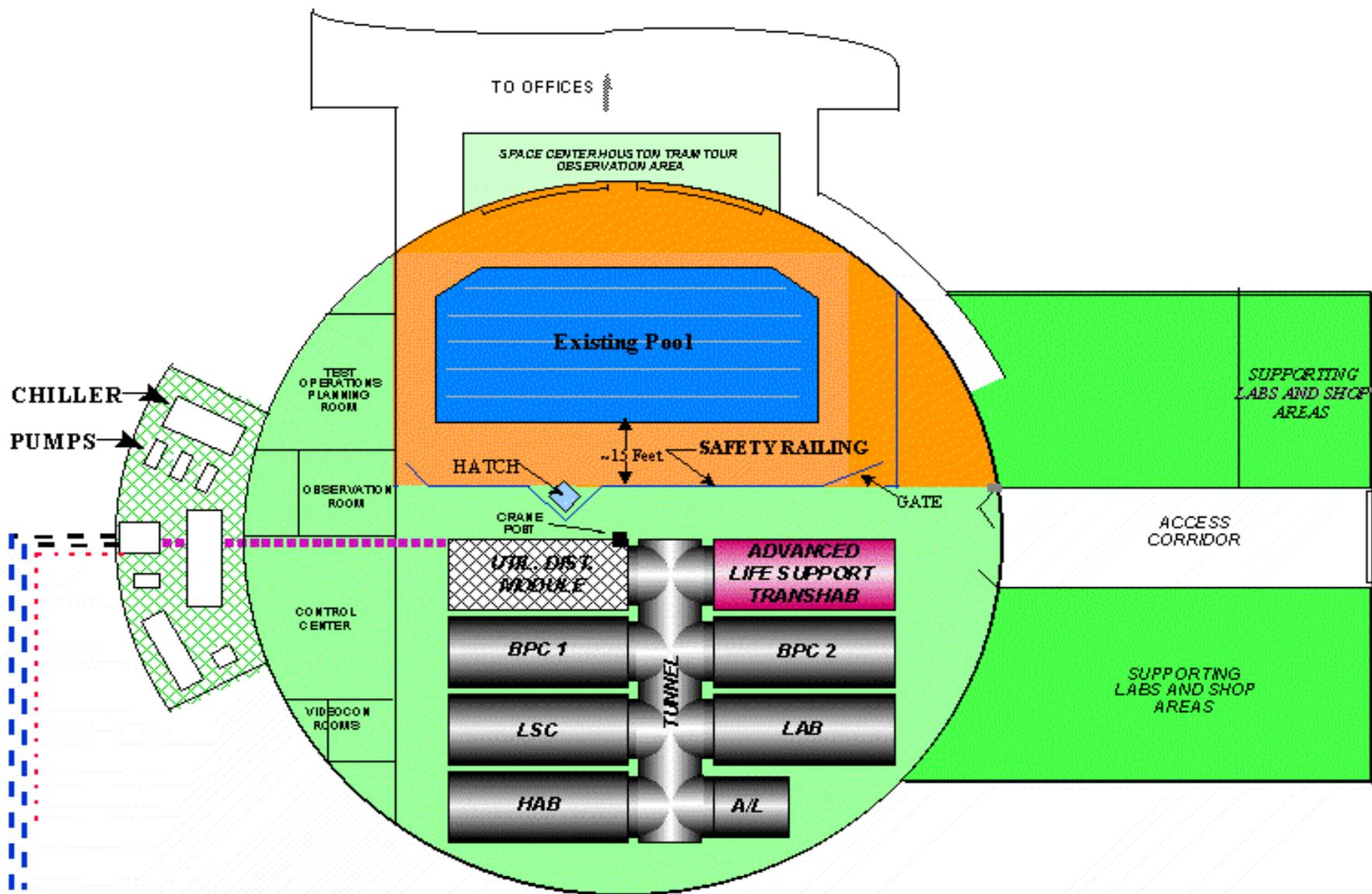
ADVANCED LIFE SUPPORT FUTURE WORK

- JOHNSON SPACE CENTER
 - Advanced Life Support Systems Integrated Test Bed (ALS SITB, formerly Bioplex, formerly HRTF)
 - Stage I Construction Complete FY99
 - Complete Operational Readiness Inspection FY00
 - Bioreactor Development and Test FY00
 - 30 Day Habitat, Food Processing, & Thermal Evaluation FY01
 - Initiate 120 Day Human Test FY02



BIO-PLEX FACILITY

BLDG. 29 ROTUNDA



ADVANCED LIFE SUPPORT FUTURE WORK

- AMES RESEARCH CENTER
 - Solid Waste Processing
 - Water Recovery
 - Atmosphere Revitalization
 - Support JSC with Models for Analysis
- KENNEDY SPACE CENTER
 - Characterize Biomass Production
 - Evaluate Nutrient Solution Recovery/Recycling
 - System Engineering for Closed Systems
 - Robotics in Plant Operations (Planting/Harvesting)

