

Memo To: All LEPP Design Drafting Clients, Drafting Staff and CAD users
From: Tim O'Connell
Subject: LEPP Drawing and CAD Standard Policies
Date: December 14, 2004
Revised: April 11, 2005
Revised: February 27, 2009

The focus of this memo is to revisit LEPP drawing and CAD standards. It is critical that we are all on the same page, especially early in the ERL program. This memo is in fact overdue. Please contact me if you have any questions regarding these policies.

- The present CAD software versions in use at this time are Autodesk Inventor Professional 2009 (3D) and AutoCAD 2009 (2D). AutoSketch 8 is also available to use as a very basic CAD tool. Although Mechanical Desktop (v2009 current version) still exists, ALL 3-dimensional design work shall be done using Inventor Professional 2009. Earlier versions of AutoCAD and Mechanical Desktop are considered obsolete.
- All new LEPP drawings shall use the laboratory's original 7-digit number scheme of the form "aaaa-bbb". The modified drawing number scheme (aaaa-bbb-XXYYZZ) that had been tested throughout 2004 has proven cumbersome and confusing for many people and will no longer be used.

Example: 7102-002 "Injector Cryomodule Sub-Assembly"
As opposed to: 7102-002-020102 "Small Beam Tube"

- Drawing numbers assigned from the LEPP design drafting office shall completely document the primary assembly or sub-assembly they reference. If excessive sheets accumulate -- greater than 15 to 20 for each primary assembly title -- then the author shall contact the LEPP design drafting office to obtain additional drawing numbers in an effort to better organize the project. Regarding Inventor .idw drawing files, the preferred approach is to have a single .idw file that contains all sheets, not multiple .idw files canvassing the project.
- All CAD drawing projects submitted to the design drafting office shall have complete, detailed titles on every sheet. Written in each title block shall be the primary project title in line one. Lines two and three in the title block shall contain secondary titles that are specific to the contents of that sheet.
- All Autodesk Inventor CAD drawings shall begin with the LEPP template files found in the Vault data base:
...\\Templates
- Regarding CAD file name conventions, all Vaulted project folders shall contain the primary drawing number somewhere in the folder name. The Inventor .idw drawing file shall contain the drawing number as well. Naming conventions for AutoCAD (2D) .dwg files remain unchanged.

Example (Inventor 9): "7101-007 ERL Gun Insulator" (the folder name)
 "7101-007.idw" (the CAD drawing file name in that folder)

- All sheets of a given drawing number shall be the same physical size; B-size (11x17), C-size (17x22), D-size (22x34), E-size (34x44, rarely used).
- An example of drawing dimension & nomenclature standards can be viewed in DWF & PDF here:
http://www.lns.cornell.edu/~draft/private/lnsdwf/7000/7101/7101-027_Outgassing_Bakeout_Oven/