

Engineering Standards Update

Topics this month: February 2005

- Standards POCs' Top 10 Design Errors and/or Issues Observed (Programmatic & Facility) -- NEW
- Documents Available for Labwide Review (Programmatic & Facility)
- Standards Issued during the Past Month (Programmatic & Facility)

The Standards Homepage: http://engstandards.lanl.gov/

<u>Standards POCs' Top 10 Design Errors and/or Issues Observed (Programmatic & Facility)</u> -- NEW

This is a new document on the EngStandards homepage. It was developed as an aid to the outside architect/engineers since they perform the majority of design work for LANL. It cites the design errors are seen most frequently in their design output submittals. Because LANL design personnel are likely to commit some of the same errors, they will also benefit from studying this document. Look for it under under the Resource and Reference Links heading.

Documents Available for Labwide Review (Programmatic & Facility)

Three Eng Standards Manual revision drafts have been webposted for Labwide review by March 21 following review by their respective Technical Committees. They are in the ESM area of the homepage under *Documents for Review*.

<u>Chapter 1 Section Z10 General Requirements for All Disciplines (Programmatic & Facility)</u>
Updated Definitions. Added Applicability section. Under Code of Record section, added new rules for projects underway superseding LIR. Under Design Output, clarified sealing of design. Under Repairs & Alterations, changed 50% rule to IEBC for building systems. Under Quality Requirements, added IESL reference. Changed FWO to successor orgs.

<u>Chapter 1 Section Z10 Appendix A Sustainable Design Requirements (Facility)</u>
Added waste min plan, slab grade insulation per IECC, IECC vice 90.1 option for GPPs, LEED Certified equivalency for line items, other minor changes.

D5020 Lighting & Branch Circuit Wiring (Facility)

Updated references to LANL Construction Specifications; updated references to NEC; clarified requirements for remote control wiring; added requirements for receptacles in copy rooms; modified requirements for isolated-ground receptacles; revised requirements for adjustable-frequency drives; clarified motor selection criteria; incorporated variance for replacement of self-luminous exit signs.

STANDARDS ISSUED DURING THE PAST MONTH (Programmatic & Facility)

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LANL CONSTRUCTION SPECIFICATIONS (Facility)

02585, R1 Underground Ductbank Systems - Clarification of backfill compaction requirement and requirement that ground cable in ductbanks be connected to pad-mounted equipment and riser poles.

13100.R1 Lightning Protection - Additional detailed requirements for attaching lightning protection system air terminals and cable fasteners to standing-seam metal roofs and membrane roofing materials.

13725, **R1** Administrative Access Control System Rough-In - Clarifications that at vestibules the access control is to be installed for the interior set of doors.

15080, R5 - Mechanical Insulation - Added definition for ductwork exposed to outdoor temperatures; changed refrigerant piping insulation to elastomeric; minor editorial comments to clarify contractor expectations; changed high pressure steam piping insulation thickness to conform to ASHRAE 90.1.

15211, R5 Compressed Air System - Revised section 1.2 to include welding submittals; Sections 2.7, 2.13-2.15 changes made to manufacturers and model numbers.

16075, R1 Electrical Identification - Revisions include: Added fault clearing time on arc-flash warning label. Added paint as a material for marking working clearance on floor. Added working space labels on equipment. Added cabinets for on-line diagrams and operating instructions. Added more specific installation requirements for identification products.

16720, R0 Paging Systems - NEW

STANDARD DETAIL DRAWINGS-CIVIL

Ch. 3 Civil

ST-G2040-1, R2 (all sheets), Chain Link Fencing and Gates - Formerly ST3831. Editorial, revised to comply with LANL Drafting Manual.

ST-G2040-2, R1 (all sheets), 3-Strand Fence - editorial, added text block

Previous issues of this monthly Update are available. Click the "What's NEW in Stds: Monthly Update" link near the upper right on the Standards homepage http://engstandards.lanl.gov/ for more recent ones.

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LANL ENGINEERING STANDARDS

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Documents in Review

Please send comments to the POC listed within the "comments due" column. Please use comment form (link provide below).

NOTE: Should you not want track change marks showing, you will need to "Turnoff" track changes found under "Tools".

Please use the following Comment Form for your comments.

Document [No., Rev/Draft, Title]	Send Comments
Ch. 1, Z10 General Req't. for All Disciplines/Chapters - Rev. 2b	Tobin Oruch, <u>oruch@lanl.gov</u> Ph. 665-8475
Attachment A, R2b	By March 21, 2005
Ch. 7, <u>D5020 Lighting & Branch Circuit Wiring</u> - R2b	David Powell, <u>dpowell@lanl.gov</u> Ph. 667-3217
	By March 21, 2005



Note: To be notified of any changes, contact <u>Tobin Oruch</u>, Standards Manager. Please feel free to send feedback/suggestions to the Discipline POC

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