

ENGINEERING STANDARDS UPDATE

Standards are serious business, but this newsletter isn't.

Topics this month:

- **Z10 Revised**
- **Variance Form 2137 Going Gates**
- **IBC Permit Log Online**
- **So Long, Mell Smithour**
- **Allwyn (was Kleinfelder) now NV5**
- **IFC Training July 22 – Last Chance!**
- **IBC and IEBC Training Aug 3 and/or 4 – Last Chance!**
- **LANL Standards Issued in June**
- **DOE Technical Standards Actions**
- **When Good Conduct of Engineering Isn't Followed**

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

Z10 REVISED

Please be aware that ESM Chapter 1 General, [Section Z10](#) General Requirements for all Disciplines, was revised yesterday. Since it affects almost all users, please take a look. Changes were made to the variance process changes per NNSA authority delegation, including the need for NNSA and other collaboration in some cases. We added need for as-builts in all cases (3.0.H). Software requirements and fire/controls sealing requirements were revised. And we have a new project document list/upload site requirement.

VARIANCE FORM 2137 GOING GATES

Curtis Thomson is the man behind the electronic DCF curtain, document numbering tool, and generally all Microsoft SharePoint wizardry in Conduct of Engineering. He's almost finished development of a new method for creating and processing variances and alternate methods to CoE documents.

Once we launch, probably this month, clicking any existing link for Form 2137 will lead the requestor to a VAR number checkout process. This process automatically triggers Christina Salazar-Barnes (SI-DC indentured to CoE) to populate a 2137 Word template in a SharePoint folder and email the requestor a link to it (and a users guide).

The requestor drafts the rest of the 2137, uploads any attachments to the folder, and forwards the link email to stakeholders/approvers asking them to read/edit (collaborate). When that's done, requestor informs Christina and she finalizes form, pdfs it with any attachments, and gets approvers to sign with Entrust. When that's done, she issues the final 2137 to the requestor et al.

The advantages of this method include automated numbering, logging, and tracking of variances. It will also facilitate easy, periodic uploads to EDMS (Documentum). More on this next month – right now I’m off to see the wizard!

IBC PERMIT LOG ONLINE

The LANL Building Official’s permit [log](#) is now online. Now stakeholders can check the progress of projects that pass through David Smith, the LBO’s primary Design Package Reviewer, when permitting is required by ESM Chapter 16. The log is a SharePoint library that’s read-only to WIN account holders (access with IE is seamless; other browsers may require WIN password). Contact [David](#) with questions or comments.

SO LONG, MELL SMITHOUR

[Mell Smithour’s](#) last full day before retirement is next Tuesday, July 7, and he’s STILL working hard (asphalt spec meeting on Tuesday). Mell’s been driving improvements to the Civil Standards for years – he’s basically the last of the key standards team people I first worked with when I began back in 2000 and he will be greatly missed.

ALLWYN (WAS KLEINFELDER) NOW NV5

The IBC Program requires constructors to use LBO-approved testing agencies for soils, concrete, and the like. The LBO was made aware of the ownership change of Kleinfelder operations in New Mexico to Allwyn Environmental effective May 1. Now, as of late June, Allwyn’s NM operations have been acquired by the firm NV5. Once again, we’ve been assured that this is an “ownership” change only and that processes/procedures, personnel, and equipment currently approved by both the LANL LBO and AMRL are still current and in use by NV5. The change of name, from Allwyn to NV5, will be made on the official LBO-approved testing labs (etc.) listing at the bottom of ESM Ch 16 [page](#).

IFC TRAINING JULY 22 – LAST CHANCE!

Fire Marshal Jim Streit is sponsoring the course “2015 International Fire Code (IFC) Transition from the 2009 IFC” currently set for the MSL (may change).

If interested, please sign up for UTrain 29502 ASAP so we can get a good headcount, order workbooks, and reserve a room that supports small group exercises. Registration instructions similar to IBC and IEBC courses below. Free to participants.

“This interactive training will focus on the key changes presented in the participant material. Small group activities and knowledge review questions will provide many opportunities for participants to discuss and consider the changes. The information presented will allow for the application of these code requirements to the design, plan review, and/or inspection functions.”

IBC AND IEBC TRAINING AUG 3 AND/OR 4 – LAST CHANCE!

You can still enroll for either or both courses. The third is a Monday, so this will test some attendees' ability to take a reminder note home the week before about where to go Monday morning (late arrivers may be berated).

Right now we have the TA-53-1 Rosen Auditorium (might go smaller and cut off registration). Registrants will get an email in late July with the handout they'll need to print and bring.

International Building Code (IBC) 2009 to 2015 Transition - Course 29203 --

Mon, Aug 3, 8 a.m. to 5 p.m. (7 CEUs)

Reviews the changes from the 2009 edition to the 2015 International Building Code. The background behind many of the changes will be discussed to provide the participant with an understanding of the intent of the changes and how to apply it to their everyday work. Subjects covered will include the code change process, mixed occupancies, atriums, accessible means of egress and many more. Free to participants.

International Existing Building Code (IEBC) 2015 - Course 29204 --

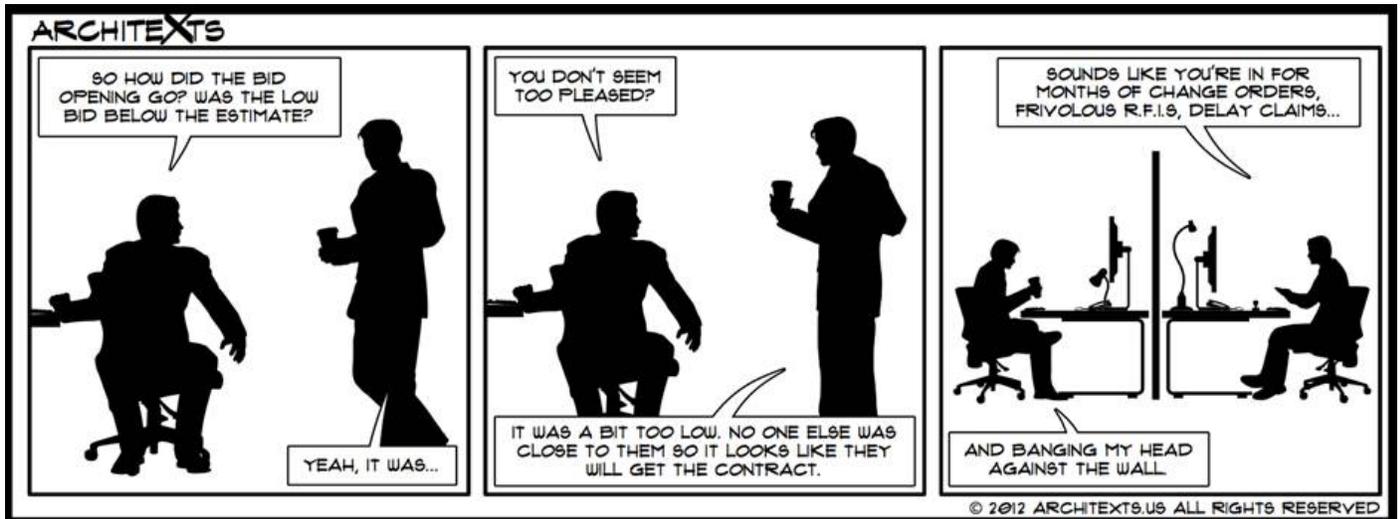
Tues, Aug 4, 8 a.m. to 5 p.m. (7 CEUs)

Focuses on the fundamental requirements of 2015 IEBC for existing structures that undergo repair work, alterations, renovation activity or construction of an addition, and the effect of a change in the building's occupancy classification. The class discusses the prescriptive requirements, work area requirements and compliance alternatives method of evaluating work in an existing building. Free to participants.

To register: Sign up via [UTrain](#) (AEs without cryocard via Yolanda Trujillo at 665-5696 or ytrujillo@lanl.gov.)

- On [UTrain](#) click on the "catalog" tab and select "advanced catalog search"
- Enter Item Number (29203 and/or 29204) as the "ID", then "search"
- Add-to-do-list
- Go to your to-do-list and click on 'register'

[Low Bidder](#) by [Architexts](#) on May 21st, 2012



LANL STANDARDS ISSUED IN JUNE
Eng Standards Manual [STD-342-100](#)

Chapter 1 General, Section Z10 General Requirements for all Disciplines, Rev.12	Variance process changes per NNSA authority delegation. Added need for as-builts in all cases (3.0.H). Software requirements and fire/controls sealing revised. New project document list/upload site requirement. Other minor changes.
Chapter 17, NASME-1 B31.3 Equivalent Safety Evaluations, NASME-1-a,-b,-c,-d, Rev. 1	A342 changed to use B31.3 paragraph as written. A345 added requirement based on ASME interpretation. Updates for B31.3-2014

CAD Standards Manual [STD-342-300](#)

Title Sheet Template, Title Block Template, Template Instructions, Sketch Title Block, Font File, ReadMe File	Bug fixes mostly, added sketch file to enhance user ease. Font file for LANL (logo use).
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Master Specifications [STD-342-200](#)

03 3001 R9 Reinforced Concrete	Updated for compliance with latest revision to ESM Ch. 5 Sect. II (which was revised to comply with DOE O 420.1C, DOE-STD-1020, IBC 2015, etc.). Also, made several changes to main body and submittals checklist in order to more closely align the entire document w/ ACI 301. Other minor changes. Thanks to POC Glen Pappas.
03 3053 R8 Miscellaneous Cast-In-Place Concrete	Added additional mix options. Thanks to Mell Smithour.

04 2220 R2 Reinforced Unit Masonry	Updated for compliance with latest revision to ESM Ch. 5 Sect. II (which was revised to comply with DOE O 420.1C, DOE-STD-1020, IBC 2015, etc.). Much greater reliance on Master Spec template and much less reliance on SpecText 04 2016. Thanks to POC Glen Pappas.
05 0521 R1 Post-Installed Concrete Anchors - High Confidence	Updated template such that it is in accordance with latest revision to ESM Ch. 5 Sect. III (which was revised to comply with DOE O 420.1C, DOE-STD-1020, etc.). Added prohibition against driving/tapping post-installed expansion anchors when demolishing such anchors above habitable areas. Ref. 01/29/15 notification from LANL QPA Lessons Learned Team. Other minor changes. Thanks to POC Glen Pappas, also Jeremy Nowell.
26 0519 R5 Low Voltage Electrical Power Conductors and Cables	Changed submittals, color coding for new/existing facilities, MC cable, connectors, installation, quality control. Thanks to POC Eric Stromberg.
26 0533 R6 Raceways and Boxes for Electrical Systems	Deleted plastic-coated RMT and changed sealing requirements to address issues with conduit draining (concrete encased feeders, fittings on top of switchboard/switchgear, and in rooms with fire suppression systems). Thanks to POC Eric Stromberg.
33 1000 R7 Water Utilities	Minor updates, revised manufacturers valve numbers, clarified using valves without accessories. Thanks to Mell Smithour.
33 3000 R7 Sanitary Sewerage Utilities	Added pipe coupling material for connecting to an existing pipe. In response to input from the RLWTF LLW. Thanks to Mell Smithour.
33 7119 R5 Electrical Underground Ducts and Manholes	Split communications out to 33 8126, leaving only PVC option. Thanks to POC Eric Stromberg.
33 8126 R0 Communication Underground Ducts, Manholes, and Handholes	Initial issue. Comm material removed from 33 7119 R4 and revised to create this. Thanks to POCs Pete Lowe and Eric Stromberg. NEW!!!!!!!!!!

DOE TECHNICAL STANDARDS ACTIONS

DOE Tech [Stds](#) activity last month:

DOE-STD-[3020-2015](#), Specification for HEPA Filters Used by DOE Contractors. Supersedes DOE-STD-3020-2005 (December 2005). The purpose of this standard is to establish specifications and quality assurance (QA) requirements for the procurement, packaging, shipping and storage of high efficiency particulate air (HEPA) filters.

WHEN GOOD CONDUCT OF ENGINEERING ISN'T FOLLOWED

This month, a couple of interesting articles thanks to Glen Pappas:

1. The California Department of Transportation says cracks discovered in two of the rods that secure the tower of \$6.5 billion San Francisco-Oakland Bay Bridge are likely present in more of the rods. The cracks may be caused by saltwater seeping into the foundation cap, which will make repairs challenging because the rod bottoms are not accessible. Engineering professor emeritus Robert Bea said the design of the foundation goes against the "engineer explicitly for repairability" maxim. [The Sacramento Bee \(Calif.\) \(tiered subscription model\)](#)
2. Berkeley balcony collapse: A failure at the intersection of building science and microbiology. We don't use much wood at LANL, but water exclusion is still important. [Link](#)

LAST MONTH'S UPDATE TOPICS

Miss an issue? The archive is at "Monthly Update" on the Standards homepage. Last month's topics:

- **2012 UPC/UMC/USEC Adoption**
- **Fire Code Training**
- **IBC and IEBC Training**
- **LANL Standards Issued in May**
- **DOE Technical Standards Actions**
- **When Good Conduct of Engineering Isn't Followed**

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