A great time was had by all the members who attended this year’s ABM at Bally’s Hotel and Casino in Las Vegas, NV. The weekend started off with a cocktail reception on Friday night where the members and their significant others were able to relax and catch up on old times. On Saturday morning we had our annual business meeting with a very interesting presentation from Richard Sallee with Intelli Rock. Richard’s company has developed a new technology to determine concrete strength by using thermo couplers inserted into freshly mixed concrete. The thermo couplers log the time and temperature of the concrete and are plotted onto a graph. The strength can then be determined based on similar temperatures from a previously performed trial batch where concrete compression tests are correlated with temperature and time. This technology would eliminate the need and expense of a portable compression machine while working on a highway or time critical project. The meeting finished with much discussion over the current status of the LEA program. On Saturday night the ABM concluded with our annual awards dinner. I would like to thank the outgoing board members for all their hard work and support; Bill Cale, Corey Dare, Jim Backman, Terry Egland, Gordon Woodard, and Greg Smith. I would also like to welcome the new 2005 board members as we prepare to lead CCTIA into the future; Bill Cale, Elizabeth Levi, Jim Backman, Greg Ruf, Corey Dare, and Gordon Woodard.

2004 was a very tough year for many companies in the Testing and Inspection industry. Business was down and many state and federally funded projects fell victim to budget cuts. However I believe that 2005 will be a much better year for our industry. With the presidential elections now behind us I believe our economy will begin to stabilize. This will allow businesses in the private and public sector as well as consumers to feel comfortable spending some of their disposable income once again. I see an increase in school and hospital projects, private sector work on the rise and a new housing market that continues to grow despite all expert opinions to the contrary.

2005 will also present some major issues for our industry with the disbandment of the Special Inspection Committee and the need to comply with the new LEA program. That is why CCTIA plays such an important role. With our membership base and expertise within the organization we should be able to help in finding solutions to solve these problems. However we are only as good as the participation that we receive from our members. That is why I am making my goal for the 2005 year to increase our membership and the level of participation that we receive on each sub-committee.

While I would like to offer my sincerest thank you to the members who routinely contribute on a regular basis. (Terry, Miki, Cliff, Jim, Issam, Dan, Elizabeth, Bill, Chip) I would ask that we have other members step up and lend a hand to these committee chairs. I recently sent out a survey to our members. I would ask that you take some time to think about what you would like CCTIA accomplish and return the form back to me. We are going to use these member opinions to restructure our current com-

### SPELLERBERG New Manager of CCRL

By Terry Egland

Peter Spellerberg will replace Jim Pielert as manager of Cement and Concrete Reference Laboratory (CCRL), a research associate program under the sponsorship of ASTM. Peter will be an employee of AASHTO and his responsibilities will include ASSHTO Materials Reference Laboratory (AMRL). This management arrangement is based on a memorandum of agreement between ASTM & AASHTO.

CCRL, which has been based at NIST since 1929, operates laboratory inspection and proficiency sample programs that are used by more than 1,500 laboratories worldwide.
Establishing Concrete Strengths with CORES Tests at 85%

By Terry Egland

Q: I’m investigating an older concrete building and would like to use ACI 318 Section 5.6.5 to confirm the existing concrete strength. Can you outline a procedure for specifying the work and explain the rule of 85%?

A: A nondestructive test method, such as probe penetration, impact hammer or ultrasonic pulse velocity may be useful in surveying structural members for areas of lower strength concrete. From this preliminary view point use ASTM C823-00 “Standard Practice for Examination and Sampling of Hardened Concrete on Construction” to formulate specific areas of investigation. The selected areas then can be specified for investigation for concrete strength according to ASTM C42-04 “Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete”. Section 3.2

States “Generally, test specimens are obtained when doubt exists about the in-place concrete quality” and “use of this method is to provide strength information on older structures.” According to International Building Code IBC Section 1905.6.5.2, three cores will be taken for each strength test. And Section 1905.6.5.4 states, “the average of three cores is equal to at least 85% of f’c”.

The rule of 85% can be best explained by ASTM C42-04 Section 3.5 “There is no universal relationship between the compressive strength of a core and the corresponding compressive strength of standard-cured molded cylinders. The relationship is affected by many factors such as the strength level of the concrete, the in-place temperature and moisture history, and the strength gain characteristics of the concrete. Historically, it has been assumed that core strengths are generally 85 % of the corresponding standard-cured cylinder strengths, but this is not applicable to all situations.”

One Era Ends and a New One Begins

By Michelle Craig, (DCI, President)

After more than 20 years of operation, the Tri-Chapter Special Inspection Committee (SIC) suspended operations in February 2005. This was prompted by a lawsuit filed against the East Bay, Peninsula and Monterey Bay Chapters of ICC by a firm that was unsuccessful in its application for SIC recognition. At the request of the Chapters, SIC and an ad hoc committee comprised of Chapter representatives began researching alternate programs to fill the void.

The International Accreditation Service (IAS), represented by Chuck Ramani, presented its new IBC Special Inspection Agency accreditation program, AC291, in January of this year. This program is just getting off the ground, with its first round of audits occurring in May in Las Vegas, Nevada. Feedback from participating agencies has been mixed, with many firms complaining of overly strict requirements and high fees.

The Division of the State Architect (DSA), represented by Eric France and Jeff Enzler, presented the LEA program in February. The jurisdictions present noted some concerns that the program did not deal sufficiently with special inspector experience, inspector certifications, and its use of a “different” code.

At a joint meeting held in March, local jurisdictions and CCTIA members met for additional dialogue. The concerns and needs of local building officials were discussed at length, in addition to the pros and cons of the IAS and DSA accreditations. From these comments, CCTIA developed an outline for a hybrid program, tentatively named “Local Jurisdiction/CCTIA Competency Advisory Program” (CAP), that was comprised of three parts. The first would require agency accreditation by IAS, DSA or other nationally recognized program acceptable to local jurisdictions. The second would require a signed and stamped statement from the agency’s responsible engineer, similar to the one included in the old SIC program. The third and final part would require identification and certification of special inspection personnel in compliance with the CCTIA guidelines.

The commentary of ACI 318 Section R5.6.5 also states “Core tests having an average of 85% of the specified strengths are realistic. To expect core tests to be equal to f’c is not realistic, since differences in the size of specimens, conditions of obtaining samples, and procedures for curing, do not permit equal values to be obtained.”

NOTE: According to ACI 214.4R-03 “Guide for Obtaining Cores & Interpreting Compressive Strength Results” the preceding method is NOT an option when evaluating for structural capacity.


CCTIA will continue to work with the SIC and the local ICC Chapters to find an acceptable alternative. It is clear that some form of accreditation will be a part of the new program. Also, the continuation of the CCTIA experience and certification guidelines will carry a predominant role. What remains to be seen is how much impact we can continue to have on the restrictions and regulations being imposed on our industry. This new era will greatly impact the way each and every one of us conducts business in the Greater Bay Area!
The development cost of the additional exam should be minimal as it will be accomplished by the same committee. The EDC met in Las Vegas in April and began the task of developing the new exam. The EDC is concerned that the current exam does not adequately assess a candidate’s ability to evaluate welds. These recommendations were reviewed and approved by the Board of International Professional Standards (BIPS) and return to SSD&WSI EDC for implementation. The EDC is a technical advisory committee and may only make recommendations which must then be reviewed and approved by BIPS.

The benefits noted include:

- Allowing building officials to better evaluate the scope of structural certifications.
- Encourage agencies, firms and entities which, currently only recognize AWS certification to accept ICC certifications for welding inspection (i.e., Caltrans, FEMA 353, DSA)
- Provides a potential format for interaction with AWS, which is currently finalizing development of a Certified Structural Steel Inspector Exam.

The development cost of the additional exam should be minimal as it is well within the scope of the existing EDC. The maintenance of the exam would be accomplished by the same committee.
"International Accreditation Service (IAS) recently launched a program to accredit agencies involved in conducting Special Inspections under Chapter 17 of the International Building Code (IBC). The IAS program is the first of its type in the United States to provide services to building jurisdictions that involve actual site visits to determine the competency of special inspectors and to determine if proper inspection protocol is being followed. The program is a cooperative effort between IAS and building departments who desire to have a formal approval process for special inspection agencies that work in their jurisdictions.

The first meeting of the newly established IAS Technical Advisory Council (TAC) for Inspection Agencies took place in Las Vegas on April 7, 2005. The ten-member council appointed by the IAS board of directors, includes building officials Earl Russell of Las Vegas and Keyvan Irannejad of Milpitas, John Chrysler from Masonry Inst., Terry Egland (Testing Engineers, Inc.), Tom Ginsbach (Northwest Testing), Randy Webb (PSI), Bill Taylor (GeoTek), Willy Fitzjohn (Constr. Inspection Training) and Chuck Ramani of IAS. Items discussed included the new IAS special inspection agency program, technical checklists for on-site assessments, issues related to hiring, training and monitoring of inspectors, steps to maintain an adequate assessor pool for IAS to effectively manage the program, and sampling techniques for initial and reassessments of special inspection agencies.

During the week of April 4, 2005, IAS staff, together with a team of technical experts in concrete, masonry, fireproofing, soils and foundations, structural steel welding, non-destructive testing and high-strength bolting, conducted the first round of assessments of agencies that perform special inspections for the City of Las Vegas. Starting in July 2005 all agencies working in the city of Las Vegas is mandated to be IAS accredited.

The assessments consisted of visits to the offices of each applicant organization to conduct interviews with management and key personnel, to review inspection records and to verify the training and qualifications of inspection staff. Following the office visit, IAS technical assessors accompanied inspectors from each agency to actual construction sites to observe their inspection practices and to report on their findings.

IAS intends on working with the building departments and the special inspection agencies to raise the level of inspection knowledge and expertise and to ensure that special inspections are being carried out in accordance with the requirements of the IBC.

Notes and Footnotes in ASTM Standards, Mandatory or Not?

By Terry Egland

Q: We’ve just had a laboratory evaluation and one of the test methods examined was ASTM C39. As a footnote to our evaluation they noted that the compression-testing machine had bearing blocks that were slightly softer than the 55 HRC mentioned in NOTE 4 of C39. How do we handle this in the future without the cost of hardness testing?

A: Rather than addressing the subject of hardness and what might be a reasonable tolerance lets discuss the point of authority that the evaluator is quoting. According to an ASTM document “Form and Style for ASTM Standards” Section A27.1 “Notes in the text shall NOT include mandatory requirements. Notes are intended to set explanatory material apart from the text itself, either for emphasis or for offering informative suggestions not properly part of the standard.” Therefore I would suggest that the Subcommittee C09.61 on “Testing Concrete for Strength” feels that a comment on hardness is appropriate but cuts short of mandatory language. The subcommittee has recommended a hardness number of 55HRC. A slight difference from the recommended would not be a violation of the intent of C39 but a reasonable tolerance is not given.

The same document mentioned above also discusses Footnotes in Section A26.1. “Footnotes referenced in the text are intended ONLY for reference and shall never include any information or instructions necessary for the proper application of the method. Table footnotes are a part of the table.” Therefore again we see that no mandatory language should be outside of the main text of the document.