

# THE AGGREGATE

ACI Intermountain Chapter Newsletter

*"concrete news you can use"*

*September 2006*

## **PRESIDENT'S MESSAGE**

Welcome back. That summer went by fast. I did get to ride my dirt bike out in the Western Desert more often than I had to mow the lawn. (I have a riding lawn mower but it's not quite the same.)

I've started a new hobby—Recreational Prospecting. In other words, I've been looking for gold. Ask me and I'll show you my gold nuggets. My wife laughs at me because you have to have a magnifying glass to see them. It's been fun trying to discover where gold can be found. One time I filled a five-gallon bucket with dirt from one location and another from a quarter of a mile away, then I took them home to pan them out. In one bucket there was nothing, but the other had a gold flake in every pan.

You may wonder why I'm telling you this story. Well about a month ago I was asked to fly to another state to evaluate the process that the contractor had used to pour six columns. The columns were six foot by eight foot by 30 foot high. All the columns were poured on the same day. The problems were rock pockets, honey combing, and cold joints. Unfortunately, they ended up saw cutting them into six foot lifts and craning them all out.

Here's what they did. They determined that they needed to insert the vibrator every 12 inches on center. The vibrator head was two and a half inches. Because of the depth of the column they decided to attach the vibrator to a crane to assist in lowering and raising the vibrator up and down the column. The ambient temperature was 101°. The concrete was tested every 100 yards and three tests were taken. The slumps were 7, 5, and 4½ inches and the concrete temperatures were 87°, 87°, and 90° respectively. The truck spacing was ten minutes apart.

Just like me, they were close to getting it right. (I was within a quarter of a mile of the gold.) But close isn't good enough. A few rules of thumb for vibrating concrete are:

1. The area of influence is eight times the vibrator head size.
2. The vibrators field of action should overlap.
3. The vibrator should be raised three inches per second.
4. Insert the vibrator vertically.
5. Penetrate the previous lift at least six inches.
6. Pause the vibrator head in the previous lift for five to 15 seconds.

One of the other problems they had was the temperature of the concrete. Ninety degrees is the cut off temperature. Use it or lose it. It would have also helped them to start in the cooler ambient temperatures of night. Finally, the truck spacing of 10 minutes would have been good if the concrete vibrators could have kept up. They probably rushed the vibrators when they couldn't keep up with the truck spacing.

Finding the perfect concrete pour is as scarce as finding gold in the west desert. The more you learn about it the closer you'll get.

Ray Nelson  
Chapter President

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## **CHAPTER LUNCHEON**

Cabela's

Lehi, Utah

September 12, 2006 12:00 noon

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## SEPTEMBER CHAPTER LUNCHEON

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Topic:

### **Tie-backs and Concrete Platform Lids for Residential Multi-story Buildings**

Speaker:

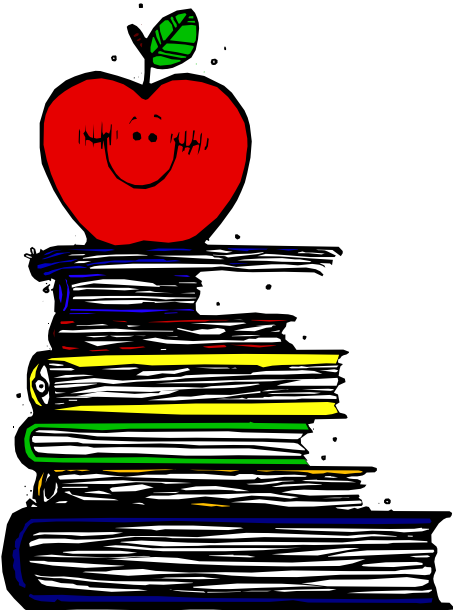
**Christopher Olson**  
Dunn Associates

Chris has been a practicing engineer for 10 years and became professional engineer in 2000. As project manager at Dunn Associates his responsibilities include structural analysis and design, specifications, inspections and project management. Chris has experience in the design of commercial, educational, correctional, industrial, mining and residential projects. Additionally, Chris has experience in the preparation of engineering reports outlining building deficiencies and required upgrades, based on site observations and calculations. Chris graduated from the University of Utah and is currently a

We are holding our Chapter luncheon this month at Cabela's in Lehi. We will be in the upstairs conference room. Lunch will be through the cafeteria line and then bring it into the conference room.

We're going to try this new location. We hope you will join us and let us know if you like holding the meetings there.

Monthly chapter luncheon meetings are held the second Tuesday of each month (except June, July, and August). If you have a topic you would like to hear, please contact Jim Cavey at 801-973-0500.



## CERTIFICATION

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The last Field Testing Technician certification program for 2006 will be October 5-6, 2006. The first certification of 2007 will be January 4-5, 2007.

Registration forms are available by calling Kristin at 801-250-3444 or by e-mail at kbeckstead@gmail.com.

The Flatwork Finisher certification program will be October 4 & 11, 2006.

Strength Testing Technician and Laboratory Testing Technician certification programs will be offered November 30 and December 1, 2006.

Classes are limited to the first 30 registrants so please register early.

### 2006 CALENDAR OF EVENTS

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#### SEPTEMBER

September 12 Chapter Luncheon Meeting  
September 20 Golf Tournament

#### OCTOBER

October 4 & 11 Flatwork Finisher Certification  
October 5-6 Field Testing Technician Certification  
October 10 Chapter Luncheon Meeting

#### NOVEMBER

November 14 Chapter Luncheon Meeting  
November 30 Strength Testing Tech. Certification  
Laboratory Testing Technician Certification

#### DECEMBER

December 1 Strength Testing Tech. Certification  
Laboratory Testing Technician Certification  
December 12 Chapter Luncheon Meeting

## **SEPTEMBER CHAPTER LUNCHEON**

When: TUESDAY, SEPTEMBER 12, 2006, 12:00 -1:00 p.m.

Speaker: Christopher Olson, Dunn Associates

Subject: **Tie-backs and Concrete Platform Lids for Residential Multi-story Buildings**

Where: Cabela's, Lehi, Utah

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**P.O. Box 473**  
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