



**Denver Meeting Information**

**DATE:** Wednesday, May 1, 2013  
**TIME:** 5:30 PM – Registration  
 6:30 PM – Dinner  
 7:00 pm – Program Begins  
**LOCATION:** Dave & Busters  
 2000 South Colorado Blvd  
 Denver, CO 80222  
**RSVP:** [www.RockyMTNASHRAE.COM](http://www.RockyMTNASHRAE.COM)  
**COST:** \$25 Rocky Mtn Chapter Members  
 \*Reservation made by 5:00 PM on Monday  
**\$35 Non-members and late reservations**  
 \$20 Students

**Fort Collins Meeting Information**

**DATE:** Wednesday, May 1, 2013  
**TIME:** 12:00 Registration/Program Begins  
**LOCATION:** Cache Bank  
 100 S. College Avenue  
 Fort Collins, CO 80524  
**RSVP:** **Mike Fulton**  
[mfulton@westernmechanicalsolutions.com](mailto:mfulton@westernmechanicalsolutions.com)  
**COST:** \$10 Rocky Mtn Chapter Members

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**RM ASHRAE is a USGBC/GBCI education provider!**

The Rocky Mountain Chapter of ASHRAE is now a USGBC/GBCI education provider. If you would like to have a presentation submitted to the USGBC for LEED AP credentialing credits, please contact Jessie Jones [jjones@rmhgroup.com](mailto:jjones@rmhgroup.com) or Michelle Swanson [mswanson@rmhgroup.com](mailto:mswanson@rmhgroup.com) for more information.

**Denver Meeting**  
**“ASHRAE 2013: Saving Energy and Helping People in Need at the Denver Rescue Mission”**

Presented by Celeste Cizik, PE, CEM, LEED AP  
 and  
 Ken Urbanek, PE, HBDP, LEED AP

Each year, ASHRAE society contributes funding to the host city of the Annual Meeting for a sustainability project in the community. The Rocky Mountain Chapter has chosen the Denver Rescue Mission for the project this year. This presentation will cover the project detail including the technical aspects of the various systems. Upgrades include lighting, controls, HVAC replacement, energy recovery ventilation, and upgraded domestic hot water including solar thermal. Design details, project challenges, and results will be covered.

Celeste Cizik is the Energy Team Leader for Eaton Energy Solutions where she executes and oversees projects focused on lowering energy use in buildings. Celeste has a wide range of experience in building systems and energy related engineering including retro-commissioning, energy analysis, mechanical system design, energy planning, and sustainability consulting. Her experience spans both new and existing buildings and covers many different building types. She has a degree in Architectural Engineering from the University of Colorado-Boulder and an MBA from the University of Colorado Leeds School of Business.

Ken Urbanek is the Director of Engineering at MKK Consulting Engineers, Inc. Ken received a B.S. degree in Architectural Engineering from the University of Wyoming where he specialized in Building Mechanical Systems. Ken has extensive experience working in high performance building design including the design and construction of the Denver Department of Human Services Eastside Facility which is a LEED Gold building currently implementing Measurement & Verification. This building makes use of an under floor air

distribution system in addition to a variable refrigerant flow heat pump system. Ken is also a Rocky Mountain ASHRAE Chapter Past-President.

### **Fort Collins Meeting**

#### **"Simple, & Sustainable ERV Controls "**

Presented by Michael Fulton, P.E.

This presentation will discuss control strategies for Energy Recovery Ventilators (ERV's). Items covered will include maximizing heat recovery, minimizing energy use, how to control in frost conditions, economizer, control of different types of heat recovery, trouble shooting, and building pressure control problems. Michael Fulton, P.E. founded Western Mechanical Solutions to focus on minimizing the energy use of buildings through innovative application of engineering. WMS represents various energy recovery products. Mike has 24 years' experience in equipment sales, consulting and construction. He graduated from the University of Maine with a degree in Mechanical Engineering. He is actively involved with ASHRAE, past president of the Rocky Mountain Chapter (2002- 2003), has been involved with the local ASHRAE tech conference since 1996, and has been the north section (Fort Collins) chair since 2008.

# PRESIDENT'S MESSAGE

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## PRESIDENT'S MESSAGE

Dear Rocky Mountain ASHRAE:

We made it to the end of another ASHRAE year. Thank you to all who have attended our meetings and I look forward to seeing a lot of you at our last meeting of the year and at the ASHRAE Annual meeting here in Denver on June 22-26.

The May meeting will be a lunch meeting in Fort Collins and a dinner meeting in Denver. Our speaker will be Celeste Cizik and Ken Urbanek for the Denver meeting and Mike Fulton for the Fort Collins Meeting.

Thank you to everyone who made the 21st Annual Technical Conference a great success. Thank you to all of our presenters and the tech conference committee for a great year. If you have topics you would like included for next year please let us know.

Thank you for a wonderful year and it has been an honor to serve as your president this year.

If you have any questions or concerns, please do not hesitate to contact me.

Best Regards,



Michelle Swanson

Chapter President  
Rocky Mountain Chapter of ASHRAE

# ROCKY MOUNTAIN ROSTER

## Rocky Mountain ASHRAE 2012 - 2013 Board of Governors

Title/Committee Chair	Name	Email	Phone
<b>President</b>	Michelle Swanson	<a href="mailto:President@RockyMtnASHRAE.com">President@RockyMtnASHRAE.com</a>	303.239.0909
<b>President-elect/Tech Conf.</b>	Jon Rundquist	<a href="mailto:TechConference@RockyMtnASHRAE.com">TechConference@RockyMtnASHRAE.com</a>	303.904.7923
<b>Vice President/CTTC Chair</b>	Jessie Jones	<a href="mailto:CTTC@RockyMtnASHRAE.com">CTTC@RockyMtnASHRAE.com</a>	303.239.0909
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<b>Director</b>	Mike Day	<a href="mailto:Director2@RockyMtnASHRAE.com">Director2@RockyMtnASHRAE.com</a>	303.421.6655
<b>Northern Section Chair</b>	Mike Fulton	<a href="mailto:NorthernSection@RockyMtnASHRAE.com">NorthernSection@RockyMtnASHRAE.com</a>	720.934.8273
<b>Membership</b>	Chris Garofoli	<a href="mailto:Membership@RockyMtnASHRAE.com">Membership@RockyMtnASHRAE.com</a>	303.396.9006
<b>Historian</b>	David Sietsema	<a href="mailto:History@RockyMtnASHRAE.com">History@RockyMtnASHRAE.com</a>	303.825.4328
<b>Website</b>	Scott Jones	<a href="mailto:Webmaster@RockyMtnASHRAE.com">Webmaster@RockyMtnASHRAE.com</a>	303.428.2800
<b>Student Activities</b>	Craig Wanklyn	<a href="mailto:Student@RockyMtnASHRAE.com">Student@RockyMtnASHRAE.com</a>	303.421.6655
<b>Sustainable Engineering</b>	Celeste Cizik	<a href="mailto:Sustainable@RockyMtnASHRAE.com">Sustainable@RockyMtnASHRAE.com</a>	303.974.1212
<b>Government Activities</b>	Celeste Cizik	<a href="mailto:Government@RockyMtnASHRAE.com">Government@RockyMtnASHRAE.com</a>	303.974.1212

# ASHRAE RESEARCH



*Don't Wait, Please Donate for the 2012-2013 ASHRAE Year*

Mail Check To:  
**ASHRAE RESEARCH**  
c/o Air Purification Company, Jon Rundquist  
1861 West 64<sup>th</sup> Lane  
Denver, CO 80221

**Your contribution puts us closer to achieving**  
our goal. Please send what you can today!

\* Individual contributions of \$100 or more and  
Corporate contributions of \$150 or more  
receive this year's Commemorative Coin  
And Honor Roll Contribution status.

Name: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_

INDIVIDUAL	\$25.00	\$50.00	\$75.00	\$100.00
CORPORATE	\$75.00	\$100.00	\$175.00	\$250.00

Other: \_\_\_\_\_

Other: \_\_\_\_\_

*Or Contact Jon Rundquist at: 303-428-2800*


































## **THANK YOU Donors:**

Michael Haughey, Pieter van der Mersch, Sheila Hayter, Michael Brandemuehl, E Cube Inc., Ken Urbanek, Scott Martin, Aaron Zimmerman, Kevin Ainsworth, Mary Reilly, Thomas Segelhorst, Mike Harrington, Scott Jones, Michelle Swanson, Jessie Jones, Trane, Megen Van Wieren, Tony Anderson, Water Technology Group, Jon Rundquist, David Olson, Joel Neymark, Robert Plamondon, Richard Scott, Kyle Manske, Donald Davenport, B2CE, Mark Golnar, C&D Insulation, Jock Griffith, Lyman Parkhurst, Caroline Traube, Roger Abrahamson, Gershon Gendler, Leonard Micek, MAI Mechanical, Veronica Brunk, Spec-Tech Sales, Rocky Mountain ASHRAE, Slattery & Company, Rocky Mtn Baldor, Western Mechanical Solutions, Mckinstry Company, Karl Selby, David Willetts, Cliff Littlejohn, Cay Strother, Peter Sabeff, Joel Neymark, CAD-1, Engineered Products Company, BCER Engineering, Shaffer Baucom Engineering, Coolerado, Trane, ME Engineers, RMH Group, Wetsern Mechanical Solutions, McKinstry, Eugene Mitchell, MDP Engineering Group



So far we have raised **\$22,235.75** for ASHRAE Research!!!

# ASHRAE RESEARCH DONOR LEVELS AND RECOGNITION

Receives 1 day Meeting Registration*							-----		
Receives 2 tickets to Members Night Out and Welcome Party*									
Presented Commemorative Sculpture									
Individually recognized at President's Luncheon*									
Invited to President's Luncheon*									
Invited to Board of Directors Luncheon*									
Listed on special Display at President's Luncheon*									
Group photo published in spring issue of ASHRAE Insights									
Receives personalized shadowbox plaque							-----	-----	
Listed on RP Display in Registration							-----		
Receives Gold ASHRAE Commemorative Coin & Plaque							-----		
Receives Silver ASHRAE Commemorative Coin & Plaque							-----	-----	-----
Receives Bronze ASHRAE Commemorative Coin & Plaque							-----	-----	-----
Receives Antique ASHRAE Commemorative Coin & Plaque							-----	-----	-----
Receives blue desktop coin holder							-----	-----	-----
Listed in annual <i>Investor Honor Roll</i>									
	Honor Roll Donor** \$150-\$249	Major Donor – Antique \$250-\$499	Major Donor – Bronze \$500-\$999	Major Donor – Silver \$1000-\$2499	ASHRAE Associate \$2500-\$4999	ASHRAE Partner \$5000-\$9999	Golden Circle Donor \$10,000 - \$19,999	Platinum Circle Donor \$20,000+	

\* ASHRAE Winter Meeting

\*\* Individual Honor Roll Donor begins at \$100

# SUSTAINABLE ENGINEERING COMMITTEE

## May Meeting

**DATE:** TBD

**TIME:** 12PM – 1PM

**LOCATION:** TBD

**RSVP:** Celeste Cizik  
[CelesteLcizik@eaton.com](mailto:CelesteLcizik@eaton.com)

The Sustainable Engineering Committee is committed to advocate sustainable design, construction and operation to our members, the industry and our community through advocacy group meetings and educational seminars. We strive to promote sustainable practices at all ASHRAE events and sponsored activities.

This committee meets once a month for planning and coordination. If you have questions about the committee, please contact Celeste Cizik or Megan Van Wieren at [sustainable@rockymtnashrae.com](mailto:sustainable@rockymtnashrae.com).

## PROJECT UPDATE - 2013 SUSTAINABILITY PROJECT

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### Denver Rescue Mission | Lawrence Street

**Project Description:** In preparation for the 2013 Annual ASHRAE Society Meeting, the Rocky Mountain chapter has selected the Denver Rescue Mission Lawrence Street facility as the Annual Meeting Sustainability Project in an effort to reduce the environmental impact of the meeting.

**Construction Update:** Construction is almost complete! Most projects have already been completed and only the DHW solar panels remain to be installed. They are expected to be complete by the first week of May. The construction update is below and several photos are on the following page. Please visit the project website today for more information! <http://www.ashraedenver2013.org/>

- **ECM1 Lighting Upgrade:** The lighting fixture upgrade and installation of occupancy sensors is complete. Several Rescue Mission staff members have already noted the improved light quality and levels. During site visits, the project team also noticed the improved light quality.
- **ECM 2 Replace Split System Air Conditioning Units:** The split systems have been replaced and are currently providing both ventilation and heating to the spaces. As part of this upgrade, an existing electrical panel was also successfully replaced to accommodate the addition of the electric heat.
- **ECM 3 Upgrade HVAC Controls – Central DDC Control:** Design, programming and installation of the new control system is complete. Most of the equipment has been connected to the system and is working properly.
- **ECM 4 Reduce Steam Leakage and Replace Steam Control Valves:** The steam radiator traps and control valves have been replaced throughout the building. During construction a significant amount of debris was found between the radiator fins, reducing the radiator effectiveness. All debris was removed and the radiators and staff at the Mission have commented on the increased heat in the building.
- **ECM 5 Replace 3rd Floor MAU with Heat Recovery Ventilator:** Installation of the HRV serving the 3rd Floor dormitory is complete. Construction went smoothly, even with the very cold winter temperatures during installation of the HRV on the roof and start-up of the unit. Mission maintenance staff noted that the unit is operating well.
- **ECM6 Replace Domestic Hot Water Heaters, Low Flow Shower Heads:** Installation of the low flow shower heads is complete. The two new high efficiency DHW heaters have been installed and after replacing a broken component on one water heater, they are both operational. The water heaters are providing the hot water needs at the Mission for showers and cooking that were not previously met.

- **ECM 7 Install Solar Domestic Hot Water:** The solar DHW system installation is underway and is scheduled to be complete in just a few weeks. Only the installation of (8) evacuated tube solar collectors on the roof remains to be completed.

**Message from the Mission:** From Brad Meuli, President/CEO of the Denver Rescue Mission: “We are excited about the project ASHRAE has undertaken for Denver Rescue Mission. The Lawrence Street Shelter serves homeless and poor men, women and children on a daily basis through meals, shelter, food boxes, clothing, hygiene products, and medical care. It’s a 24 hour a day operation with commercial laundry and kitchen operations. The targeted annual savings to Denver Rescue Mission is estimated at \$19,000. Those savings will provide an additional 10,000 meals to those in need. It’s truly amazing to see this organization come together with expertise in each of their fields to make these greatly needed updates to our building. We simply cannot help as many people as we do without the generosity of our community.”



**Lighting Upgrades in Progress**



**Dorm ERV Ductwork on the Roof**



**Dorm ERV Arrives at the Mission**



**Domestic Hot Water Heaters are Delivered**



**Dorm ERV is Hoisted to the Roof**

Platinum (\$25,000 +)



Gold (\$10,000 to \$24,999)



Silver (\$5,000 to \$9,999)



Bronze (\$2,500 to \$4,999)



Patron (\$1,000 to \$2,499)



Partner (\$500 to \$999)

ASHRAE – Utah Chapter	MKK Consulting Engineers, Inc.
Denver Water	Water Technology Group
M-E Engineers, Inc.	Western Mechanical Solutions

Associate (\$200 to \$499)

ASHRAE - Black Hills Chapter	P.V.C. Specialties Company
James Waechter	Shaffer Baucom Engineering & Consulting
Purdy-McGuire, Inc.	TM Sales

Supporter (\$100 to \$199)

C&D Insulation Inc.	Aaron Zimmerman
Brian Lynch	

# GREENING OUR MEETINGS

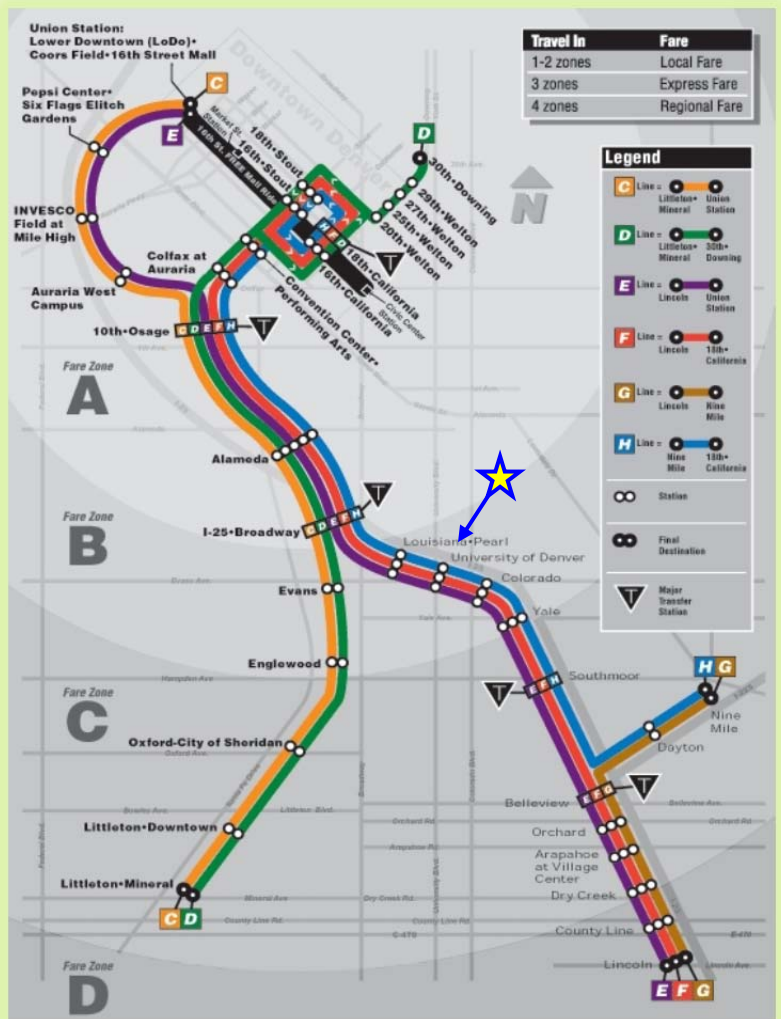
The Rocky Mountain Chapter of ASHRAE will present a free raffle ticket to anyone taking public transportation to the monthly ASHRAE meeting.

One raffle ticket will be given to each participant for each meeting. Visit [www.rtd-denver.com](http://www.rtd-denver.com) for system maps and times or contact [ridegreen@rockymtnashrae.com](mailto:ridegreen@rockymtnashrae.com) for further assistance.

Acceptable modes of alternative transportation:

- ✓ Walking
- ✓ Bicycling
- ✓ Bus
- ✓ Light Rail
- ✓ Alternative Fuel Vehicle
- ✓ High Efficiency Vehicle (35+ mpg)
- ✓ Carpooling (2 or more persons)

The ASHRAE meeting (Denver) at Dave & Buster's is located at the **Colorado Light Rail Station** for lines **E, F** and **H**. Any bus lines that pass through the **Evans and Colorado** intersection will also get you to Dave & Buster's.



# MEMBERSHIP PROMOTION

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Welcome to the “The Membership Promotion Page.” We would like to welcome the following new ASHRAE members for the month of April:

- Mr Eric Webber
- Mr Shannon Donohue
- Mr Jared Heath
- Mr Dan LeBlanc
- Mr Joey Davidson
- Mr Justin Spencer
- Ms Elizabeth Gehring
- Mr Eric Lowe

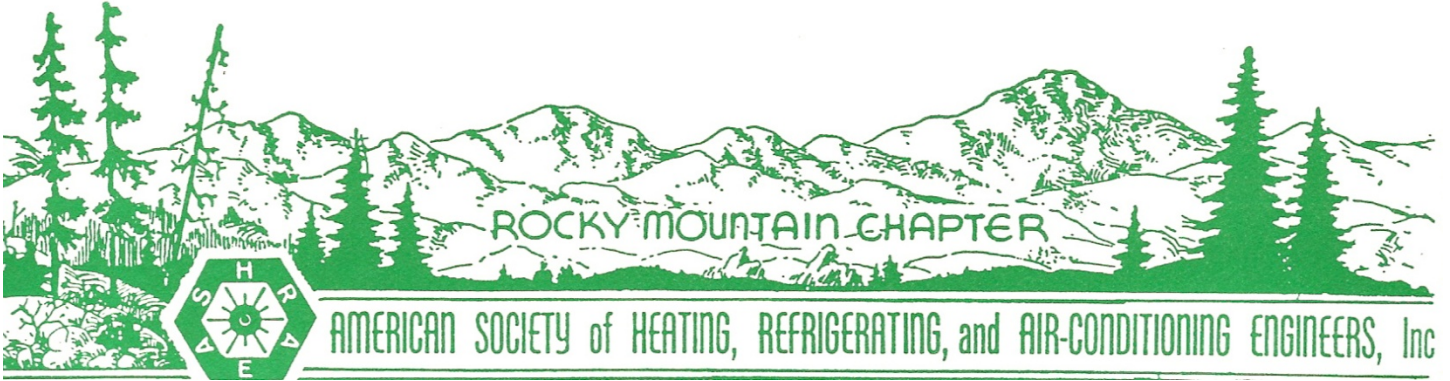
We would also like to welcome the following new student members:

- Mr Jeremy Johnson

If you have questions or need membership assistance please send an email to [cgarofoli@victaulic.com](mailto:cgarofoli@victaulic.com) or call Chris Garofoli at 303-396-9006.

Also, please look around your company and through your contacts to let people know about the benefits of joining ASHRAE. We continue to bring in new young members of the industry to keep them involved with technology and standard advancements.

# ROCKY MOUNTAIN MEMBERSHIP APPLICATION



Name: \_\_\_\_\_ (Last) \_\_\_\_\_ (First) \_\_\_\_\_ (MI)

Status: Renewal \_\_\_\_ New Member \_\_\_\_ Address Change \_\_\_\_

Please circle preferred mailing address: HOME BUSINESS

Home Address and Phone

Business Name, Address and Phone

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

p: \_\_\_\_\_

p: \_\_\_\_\_

Preferred email address: \_\_\_\_\_

Society Membership Number / Grade: \_\_\_\_\_

Name Tag (\$10.00) Paid? Y N

Name to appear on name tag as: \_\_\_\_\_

I would like to be contacted about serving on one of the following committees or functions (Please circle):

- |                       |                             |  |
|-----------------------|-----------------------------|--|
| A. Newsletter         | F. Chapter Historian        | K. Spouse's Night / Social Committee             |
| B. Membership         | G. Technical Seminars       | L. Colorado Engineering Council (Committee Help) |
| C. Meeting Attendance | H. Research Fund Promotions | M. General                                       |
| D. Education          | I. Monthly Meeting Programs | N. Energy Committee                              |
| E. Golf               | J. Publicity                | O. Sustainable Engineering Committee             |

Please mail this invoice and your check for \$50.00 (2010 / 2011 year) + \$10.00 (Name Tag if requested) payable to **Rocky Mountain Chapter ASHRAE** to the address listed below. ASHRAE will invoice you for both society and local dues every year following the first year.

Chris Garofoli  
Rocky Mountain Chapter ASHRAE Membership Promotion Chair  
c/o Victaulic  
3416 Alcott Street Denver, CO 80211 [cgarofoli@victaulic.com](mailto:cgarofoli@victaulic.com)

# ROCKY MOUNTAIN ASHRAE HISTORY

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The ASHRAE monthly meeting on December 6th, 1978 was held at the Ramada Inn North at I70 and Kipling. Donald E Bishop, Regional Sales Manager for Weber Technical Products, gave a presentation on Clean Room Design Practices. It was also announced at this meeting that Ladies' Night would be held on February 16th at the Heritage Square Opera House. The evening would consist of a cocktail hour at 5:30 followed by dinner and silent films, a melo-drama (with talking actors) and a still-in-the-planning-stage surprise ending.

# VOLUNTEERS WANTED

2013 ASHRAE Summer Meeting = June 23,24,25,26  
Sheraton Hotel = 16<sup>th</sup> St. Mall – downtown Denver

## What We Need:

ASHRAE needs volunteers to be ‘Monitors’ for technical presentation sessions at the upcoming summer meeting in Denver.

## What You Get:

**FREE REGISTRATION** to all the technical sessions (\$500 Value)  
{ Good for Continuing Education Credits / PDH's }

## What You Do:

Work for 4 hours. You must monitor a couple technical sessions and attend a short training session. Monitoring consists of making sure all attendees are registered, working the lights, taking attendance, helping the speaker. Easy stuff!



## How To Volunteer:

Email your name and contact info to David Rodenberg at:

[drodenberg@long.com](mailto:drodenberg@long.com)

Or, call David at 303-975-2162.

Feel free to email or call with any questions or if you want some more information before deciding.

# EMPLOYMENT OPPORTUNITIES

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Go to our website to open these links <http://rockymtnashrae.com/classifieds.php>

<b>Job Title</b>	<b>Company</b>	<b>Date Posted</b>
<a href="#">Applications Engineer/Estimator</a>	Setpoint Systems	August 08, 2012
<a href="#">Project Controls Technician</a>	Setpoint Systems	August 08, 2012
<a href="#">Inside Sales Engineer</a>	Lohmiller & Co	January 28, 2013
<a href="#">Sales Engineer</a>	Ace Mechanical Equipment, Inc.	February 01, 2013

## **ASHRAE Jobs Website Tool:**

We thought you and your fellow members would like to know about this valuable tool for ASHRAE Members and HVAC&R hiring authorities. We have prepared a page detailing the story of [ASHRAEjobs.com and its success here](#).

The Career Center offers several benefits for hiring authorities and job seekers:

- ASHRAE Jobs is user friendly. Its products and services equal the offerings from traditional big box boards such as Monster.com, yet its information and postings are specific to the ASHRAE Community.
- Due to its focus on HVAC&R engineering, Job seekers have a more effective search experience. Employers also have immediate access to a pre-filtered pool of talent for skills and experience.
- A unique feature is ASHRAE members are highlighted in search results. The online job application and resume forms require applicants to identify themselves by membership status. Employers can sort applications and resumes by membership status.

I would invite your Chapter to participate in this program by creating a link on your website to the ASHRAE Jobs Career Center. You will find attached a copy of the logo to use on your homepage. We would also appreciate your help to spread the news about ASHRAE Jobs' success through an announcement through your eNewsletter, blogs, etc.

If you have questions, I or John von Harz (Services Manager at [jvonharz@ashraejobs.com](mailto:jvonharz@ashraejobs.com)) will be pleased to answer them.



The Rocky Mountain ASHRAE YEA committee has organized a site tour as an opportunity for all young engineers to get exposure to a unique mechanical system installed in a professional sports stadium. Following the site tour, there will be a sponsored happy hour nearby as a chance for young engineers to network and to talk with ASHRAE members about their current involvement with the Rocky Mountain Chapter. The details for the site tour are below.

### **Site tour of Sports Authority Field at Mile High**



When: Thursday, May 9<sup>th</sup> with tour beginning at 3:00 p.m. and happy hour to follow around 5:00 p.m.

Where: Sports Authority Field at Mile High

Please RSVP by May 2<sup>nd</sup> to [james.newman@me-engineers.com](mailto:james.newman@me-engineers.com) to reserve a spot on the tour. Please email with any questions in regards to the event. Additional details for the tour will be sent out prior to the event for all those planning on attending.

*Young Engineers in ASHRAE*