

CITY OF RAPID CITY
TRAVEL REQUEST

Person requesting travel Curt Bechtel Department Growth Management/Fire Dept

I hereby request permission to travel for the following purpose: (Give specific nature of business and interest of the City to justify cost involved.)

Colorado Chapter Educational Institute

List all other City employees, if any, making the trip for the same purpose: _____

Bernie Hall, Jeff Larus, 3 Fire Dept To Be Determined

Place of meeting or destination: Denver, Co Technological Center

Date of meeting March 2-6, 2009

Date trip to begin March 1, 2009 Date trip will end March 7, 2009

Method of transportation requested 2-City Vehicles

Estimated transportation cost 407 x 37¢ x 2 x 2 \$ 602.36

Meals 6 days 6 meals x \$160 1,032.00

Lodging 6 days 6 meals x \$160 5,760.00

Other costs - description Registration \$325 X 6 1,950.00

Parking \$10 x 6 x 2 120.00

Total estimated cost of trip \$ 9,464.36

Signed [Signature] Date 11/7/08
(person requesting travel) (Department Head)

When the cost of the trip will exceed \$500, per employee, this section must be signed.

In accordance with the provisions of Rapid City ordinances and travel regulations, consent is hereby given for travel as requested in the foregoing application. Maximum cost of trip authorized is \$ _____

Approved: _____ Date _____
Mayor

When the cost of the trip will exceed \$1,500, per event, Council approval is required.

Approved by Common Council on _____ (Date)

White copy - Mayor

Yellow copy - Finance

Gold copy - Department copy



CITY OF RAPID CITY

Growth Management Department
300 Sixth Street
Rapid City, South Dakota 57701-2724

MEMORANDUM

TO: Legal & Finance Committee

FROM: Marcia Elkins, ^{hve} Director
Growth Management Department

DATE: November 12, 2008

RE: ICC International Codes Training, Denver, CO

Staff requests City Council approval of the amended travel request for Curt Bechtel, Code Consultant, Bernie Hall, Chief Electrical Inspector, Jeff Larus, Building Inspector III, and three Fire Department staff to be determined to attend the ICC International Codes Training seminar. The purpose of the seminar is to provide continuing education to the Building Inspections and Fire Department staff and to help comply with educational requirement of Insurance Services Organization. Participants will earn 3.5 Continuing Education Units for the five-day seminar.

The cost of travel is estimated at \$9,464.36 and includes the following expenses:

\$602.36	transportation costs for two City vehicles
\$1,032.00	Meals (3/1/09-3/7/09)
\$5,760.00	Lodging (BI: 1-single occupancy, 1-double occupancy) (Fire: 3-single occupancy)
\$1,950.00	Registration
\$120.00	Parking fees (2 vehicles)
\$9,464.36	Total Travel Estimate

Staff Recommendation: Staff recommends approval of the travel request for Curt Bechtel, Code Consultant; Bernie Hall, Chief Electrical Inspector; Jeff Larus, Building Inspector III; and three Fire Department staff to attend the ICC International Codes Training seminar in Denver, Colorado, March 2-6, 2009 (travel dates March 1-7, 2009) in an estimated amount of \$9,464.36.



Continuing with our commitment to
education....

JOIN US FOR OUR TWENTY-FOURTH ANNUAL

COLORADO CHAPTER EDUCATIONAL INSTITUTE

MARCH SECOND THROUGH MARCH SIXTH
TWO THOUSAND AND NINE

MARRIOTT DENVER TECHNOLOGICAL CENTER
www.coloradochaptericc.org

*****AUTO**MIXED AADC 800 T#6 S#1027
SHARLENE MITCHELL OR CURRENT OCCUPANT
RAPID CITY GROWTH MANAGEMENT
300 6TH ST
RAPID CITY SD 57701-5034



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COLORADO CHAPTER
EDUCATION COMMITTEE
P.O. BOX 961
ARVADA, COLORADO 80001



MARCH 2009 CURRICULUM

COURSE PATH	MAR 2 MONDAY	MAR 3 TUESDAY	MAR 4 WEDNESDAY	MAR 5 THURSDAY	MAR 6 FRIDAY
SPECIAL INTEREST	181 Outside the Box Plan Review -	281 Egress Behavior and Analytical Techniques	381 Accessibility 202: Advanced	481 Three P's of Litigation (Perils, Pitfalls & Practice)	581 Prop Maintenance & Dangerous Bldgs
SPECIAL INTEREST	182 Commercial Provisions of the IECC	282 Energy Plan Review Using ASHRAE 90.1	382 Residential Energy Code Compliance	482 Photovoltaic Solar Systems	582 2006 I-Codes and Green Building
ENGINEERING PRINCIPLES	183 IBC Wood Framing	283 Advanced Design of Wood Frame Buildings Workshop	383 High Wind Wood Frame Design & Construction	483 Wood-Frame Roof, Shear Diaphragms & Wood Products	583 Basic Structural Concepts
BASIC PLANS EXAMINATION	184 Basic Means of Egress	284 Fire-Resistive Construction	384 Building Areas, Fire Areas and Mixed Occupancies	484 Residential Plan Review	584 Soils Identification and Foundation Design
ADVANCED PLANS EXAMINATION	185 IBC Advanced Occupancy Classification	285 IBC Advanced Schematic Design	385 IBC Advanced Types of Construction	485 IBC Advanced Means of Egress Components	585 IBC Advanced Means of Egress Design
FIELD INSPECTION	186 Accessibility 101: Basic	286 Exterior Wall Systems	386 & 486 Moisture Control, Indoor Air Pollution and Mold in Buildings		586 Roofing Inspection
FIELD INSPECTION	187 Combination Inspections of Commercial Structures	287 2006 IBC Overview Nonstructural Provisions	387 2006 IRC Overview	487 IBC Multi-Family Building Construction	587 Prestressed Concrete Special Inspection
TECHNICAL ASPECTS	188 Managing Emotions Under Pressure	288 & 388 The Complete Permit Technician		488 and 588 Over the Counter Plan Review	
INTERNATIONAL PLUMBING CODE	189 IPC Water Distribution and Backflow Prevention	289 Basic Plumbing: 2006 IPC	389 Commercial Plumbing: 2006 IPC	489 Plumbing for Combination Inspectors	589 Boilers, Water Heaters & Refrigeration
INTERNATIONAL MECHANICAL CODE	190 Grease Hoods	290 & 390 Mechanical Inspection Under the 2006 IMC, IFGC & IRC		490 ACCA Manuals J & D	590 Up with Fire and Smoke (Fire & Smoke Dampers)
NATIONAL ELECTRICAL CODE	191 & 291 Grounding Verses Bonding of Electrical Systems		391 2008 NEC Update	491 and 591 Electrical Fires: Causes and Prevention	
INTERNATIONAL FIRE CODE	192 Fire Code Legal Issues	292 & 392 Advanced Sprinklers		492 UL Fire Research on Lightweight Wood Construction	592 Fire and Life Safety Plan Review
INTERNATIONAL FIRE CODE	193 IFC Significant Changes/Oil & Gas Wells	293 Flammable Finishes	393 High Piled Combustible Storage	493 Data Rooms Code Review and Tactics	593 Vehicle Fire Investigation

OVERVIEW

The Colorado Chapter of the International Code Council, along with the Fire Marshal's Association of Colorado, the Colorado Association of Plumbing and Mechanical Officials and the Colorado Association of Permit Technicians, invite you to attend the Colorado Chapter's Twenty-Fourth Annual Educational Institute.

2009 HIGHLIGHTS:

- Once again **65** full-day classes in **13** different course paths, with the "best of the best" instructors from all over the United States. A number of all new classes and many revised and improved versions of our most popular offerings.
- **New!** You can now submit your registration online at the Colorado Chapter ICC's web site: www.coloradochaptericc.org.
- **New!** A second Special Interest course path focusing on energy conservation, sustainability and green building.
- **New!** Classes on plan review, combination inspections, accessibility and litigation.
- **Back!** A comprehensive course path on HVAC requirements for residential and commercial applications.
- **Back!** IPC class covering boilers, water heaters and refrigeration systems.
- **Back!** Classes on residential plan review and residential energy code compliance.
- **Revised and Improved!** The Engineering Principles course path is updated with new classes on advanced wood framing and wood framing in high wind areas using the Wood Frame Construction Manual (WFCM).
- **Back!** "Moisture Control & Indoor Air Pollution," with the latest information on mold thrown in, from the only person who can make these subjects thoroughly entertaining, Joe Lstiburek.
- **Back!** A graduate level weeklong marathon in Advanced Plan Review to explore the intricacies of the 2006 IBC from Greg Keith! This is a week that you won't forget!
- **Electrical!** Back by popular demand; Electrical Fires: Causes and Prevention!
- **More Electrical!** Two days on grounding and bonding, arguably one of the most important and least understood subjects in the electrical code; from Mike Holt, the best guy to tell it!

- **Hot!** Check out our International Fire Code (IFC) course paths! Ten full-day classes of top notch instruction on the most current fire prevention topics, including new courses on data rooms, oil and gas wells, and fire research on lightweight wood construction.
- **Fellowship Breakfast!** Back by popular demand on Tuesday morning with speaker Mike Holt and Christian musician Bruce Webb.

EXHIBITS: Monday, Tuesday & Wednesday in the Atrium

- This is your opportunity to learn about the latest building and construction products and services offered by manufacturers, trade associations and related companies exhibiting at the Institute.

REGISTRATION:

- Registration applications can now be submitted online. Credit cards will be accepted for payment of approved applications.
- One or more persons may attend any combination of classes for not more than 5 days total for only \$260. Individual classes are offered at \$65 per day.
- In return for the fees noted above, registrants receive instruction, handout materials plus lunch and break refreshments.
- Register early! The most popular classes fill quickly and often need to be closed.
- **REGISTRATION DEADLINE IS FEBRUARY 2, 2009. Registrations or fees made or received after February 2nd and faxed registrations cannot be accepted.**
- **CEUs.** Continuing education units will be offered, with individual certificates to be mailed within 90 days.
- **PUBLICATIONS.** The ICC will once again have an onsite bookstore offering code books and other reference materials for viewing and purchase.

LOCATION:

- Marriott Hotel, Denver Technological Center (DTC), 4900 S. Syracuse Dr., Denver, CO 80237, south of Denver at I-25 & Belleview (Exit 199).
- Room rates are \$139/night single or double until February 13th, 2009 or until our room block is filled.
- Reservations can be made by calling 1-800-228-9290 or local number 303-779-1100. Hotel reservations can also be made on-line by using the link on www.coloradochaptericc.org, the Colorado Chapter ICC's web site. Be sure to reference the **Colorado Chapter Educational Institute** when making your reservations, and be sure to obtain those reservations as soon as possible.

COURSES AND INSTRUCTORS

All courses will be based upon the 2006 editions of the IBC, IECC, IFGC, IFC, IMC, IPC and the IRC, and the 2008 edition of the NEC. Code books will also be available for purchase. **PLEASE BRING THE APPLICABLE CODE BOOK(S) AND/OR REFERENCE MATERIALS.** The instructors listed below are scheduled to teach, however substitutions may be made. All classes begin at 8:00 a.m. and end at 4:30 p.m. A 1-hour lunch break is provided at noon. Course descriptions are listed by day, Monday - Friday.

181: OUTSIDE THE BOX PLAN REVIEW

Steve Thomas, CCC, LLC. This class addresses very large and unusual buildings and how building departments address such developments. The class will focus on high-rise construction, atriums, unlimited area buildings, large assembly uses, and unusual designs. Several case studies will be discussed using both the prescriptive and alternative design principles of the International Building Code.

182: COMMERCIAL PROVISIONS OF THE IECC

Eric Makela, Britt/Makela Group Inc. This full-day class covers the provisions of the 2006 IECC that affect commercial buildings and is geared toward engineering, design and enforcement personnel. Topics will include scoping, climate zones, thermal envelope, mechanical systems, lighting controls and loads as well as determining lighting budgets.

183: IBC WOOD FRAMING

David P. Tyree, P.E., Dennis Pitts, American Forest and Paper Assn. This class is a comprehensive course composed of numerous subjects for building officials, plans examiners and contractors on the basics of wood frame construction. Detailed discussions will be included on conventional construction, wood characteristics, grade marking, termites and decay protection, conventional wall, floor and roof / ceiling framing, lateral load bracing, shear walls, fireblocking / draftstopping and much more!

184: BASIC MEANS OF EGRESS

Gary Pringey, CCC, LLC. This class is a basic overview of the means of egress requirements included in Chapter 10 of the 2006 IBC. Subjects included in the class are the three parts of the means of egress plus occupant loads, egress width, number of exits, travel distance, common path of egress travel and exit enclosures. Practical examples will be used to illustrate the code requirements.

185: IBC ADVANCED OCCUPANCY CLASSIFICATION

Greg Keith, P.h.D. This graduate level workshop will discuss the occupancies contained in Chapter 3 of the 2006 IBC. Methods relating to the proper classification of occupancies will be discussed. Differences between UBC and IBC occupancy categories will be emphasized.

- 186: ACCESSIBILITY 101: BASIC** Tom Meyers, CCC, LLC. This is a new class intended to provide basic concepts of accessible design and construction using the International Building Code and ICC/ANSI A117.1. The first portion of the class will discuss WHEN accessible features are required by the IBC. The remainder of the class will be devoted to HOW a building and its site is made accessible by the A117.1 Standard. This class is intended for the code user who is either new to accessible design or is in need of a refresher on the ever-changing requirements.
- 187: COMBINATION INSPECTIONS OF COMMERCIAL STRUCTURES** Dan Weed, CCC, LLC. This class provides new commercial inspectors with basic techniques and an understanding of conducting inspections of small commercial buildings. The discussion will include preparation, presentation and inspections of the building, plumbing, mechanical and electrical portions of a building.
- 188: MANAGING EMOTIONS UNDER PRESSURE** Lynn Pollard, Pollard Consulting. Turning RED? Learn how to stay calm and productive in any situation. Too many difficult citizens, developers and co-workers? The key to success – both personally and professionally – is to stay calm, cool and collected no matter what and to manage yourself in ways that “keep you from heating up”. In this program you can learn specific, practical techniques to staying “cool” no matter how “hot” it gets.
- 189: IPC WATER DISTRIBUTION AND BACKFLOW PREVENTION** John LaTorra, Redwood City, CA. This class will discuss the water distribution provisions of the 2006 IPC as well as backflow, cross-connection and back siphonage hazard prevention using the IPC and the Colorado Cross-Connection Control Manual plus other related topics and requirements.
- 190: GREASE HOODS** Guy McMann, Jefferson County. This class is an in depth review of Type I hood systems and grease ducts with an emphasis on correct hood installation and understanding what type of hood is required over what type of appliances. The proper installation and inspection of grease ducts, make-up air and exhaust systems as well as a brief explanation of required fire suppression systems will be included.
- 191 AND 291: GROUNDING VERSUS BONDING OF ELECTRICAL SYSTEMS** Mike Holt, Mike Holt Enterprises, Inc. This two-day course will cover basic as well as advanced topics necessary to understand the practical grounding and bonding rules in the NEC for systems not over 600V. As the most important and least understood activity in the electrical, data process and communications industry, this class will explain the concepts necessary to design, install, inspect, measure and trouble shoot electrical systems including sensitive electronic and communications equipment.
- 192: FIRE CODE LEGAL ISSUES** Kristen Cook and Kathleen Spicer, Colorado Springs City Attorney’s Office. This class addresses the aspects of fire code enforcement from both a municipal law and fire district perspective. The Colorado Revised Statutes and the 2006 International Fire Code will serve as references in discussing the various aspects of fire code enforcement during inspections of new construction and existing occupancies. This class will also address issues related to the plan review process and the application of the IFC in granting modifications and in the approval of alternative materials and methods.
- 193: IFC SIGNIFICANT CHANGES/OIL & GAS WELLS** Tom DeMint, Poudre Fire Authority and David Tomecek, PE, Hughes Associates, Inc. The first part of the day will focus on changes between the 2006 IFC and the recently finished 2009 IFC. The second half of the day will deal with the resurgence of oil and gas exploration and drilling, along with the growth of the alternative fuel industry which is affecting community planners, building and fire officials and emergency planners. This course is intended to discuss those issues, along with regulations, rules and codes pertinent to the myriad of energy production facilities that are becoming commonplace. Focus will be provided on current facilities and issues, along with common State rules and requirements from the International Fire Code.
- 281: EGRESS BEHAVIOR AND ANALYTICAL TECHNIQUES** Steve Gwynne, Hughes Associates, Inc. Human behavior is a vital component of the evacuation process. Even if not explicitly stated, the codes employed during the design process make broad assumptions regarding evacuee behavior that directly influence the results produced. This course will provide an overview of human behavior in a fire. It will discuss the factors that affect this behavior, the responses that can be expected and the impact that it has on the assessment of egress performance.
- 282: ENERGY PLAN REVIEW USING ASHRAE 90.1** Eric Makela, Britt/Makela Group Inc. This full-day session will provide an overview of the ASHRAE requirements for commercial buildings contained in the ASHRAE/IESNA Standard 90.1-2004 (90.1). Standard 90.1 is referenced in the 2006 International Energy Conservation Code. The session will cover scoping, mandatory and trade-off requirements for the building envelope, simple and complex mechanical systems, determining interior and exterior lighting budgets as well as lighting controls.
- 283: ADVANCED DESIGN OF WOOD FRAME BUILDINGS WORKSHOP** Dr. Robert Taylor and David P. Tyree, P.E., American Forest and Paper Assn. This advanced course for design professionals and building regulators will give a quick-review of some of the main features of the 2001 Wood Frame Construction Manual (WFCM), a referenced standard in the IBC/IRC, which provides an alternative for structural design of residential structures in areas of high wind, snow, or seismic loads. The class will include a detailed structural design of a 2-story house subjected to gravity (dead, live, and snow) and lateral (wind and seismic) loads, including the design of all components and connections as well as the design of shear walls and diaphragms using AF&PA’s 2008 Wind & Seismic Standard. **Required texts include:** the 2001 WFCM + Commentary (purchase only), the WFCM Workbook (purchase or free download) and the 2008 Wind & Seismic Standard (free download only). Go to www.iccsafe.org; www.forestprod.org/awc/index.html; or www.awc.org/publications/download.html.
- 284: FIRE-RESISTIVE CONSTRUCTION** Richard Walke, UL, Tom Thompson, Wally Prebis, P.E. An in-depth discussion of the general fire-resistive requirements of Chapters 7 and 8, 2006 IBC, ASTM E-119 and other ASTM Standards, including a detailed discussion of specific fire-resistive construction requirements.
- 285: IBC ADVANCED SCHEMATIC DESIGN** Greg Keith, P.h.D. This advanced workshop, geared towards plans examiners and Architects, will discuss the provisions contained in Chapters 3-5 of the 2006 IBC. Technical requirements relating to allowable area and height determination and mixed occupancies will be stressed.

286: EXTERIOR WALL SYSTEMS	Steve Thomas, CCC, LLC. Water intrusion through exterior walls may be the largest problem in residential construction today. This class discusses the International Residential Code's requirements for exterior walls. General installation requirements of products will be discussed, including weather barriers, flashing, wood/hardboard siding, masonry veneer, stucco and exterior insulated finish systems (EIFS).
287: 2006 IBC OVERVIEW NONSTRUCTURAL PROVISIONS	Gary Pringey, CCC, LLC. This fast-paced one-day seminar explores the major provisions of the 2006 International Building Code. The presentation will include discussions of the provisions addressing the following issues: occupancy classification, types of construction, means of egress, fire sprinklers and fire-resistive-rated construction, administrative provisions and accessibility. This class is designed to provide an introduction to the new provisions of the code.
288 AND 388: THE COMPLETE PERMIT TECHNICIAN	Steve Burger, Bureau Veritas. This 2-day course is intended to provide essential information in the areas of code history and administration, legal aspects, customer service, basic construction, inspection process, zoning terms, permit fee calculations, basic occupancy, construction types, basic means of egress and dealing with difficult customers. Please bring a calculator, 2006 IBC, 2006 International Zoning Code, Legal Aspects of Code Administration and Basic Code Enforcement books.
289: BASIC PLUMBING: 2006 IPC	Daryl Kuiper, Colorado Chief Plumbing Inspector. This class is very basic in nature and geared for the entry-level plumbing inspector or someone wishing to become a plumbing inspector.
290 AND 390: MECHANICAL INSPECTION UNDER THE 2006 IMC, IFGC & IRC	Sam Dardano, City of Boulder. This two day class will be a broad overview of doing inspections under the IMC, IFGC and IRC. The overview will include many residential and commercial provisions commonly encountered by inspectors and contractors, such as: equipment, warm air heating, vented decorative appliances, ducts, combustion air, venting and other miscellaneous subjects. The class will also include significant changes to the 2006 IMC, IFGC and IRC mechanical provisions.
292 AND 392: ADVANCED SPRINKLERS	Dave Lowrey, City of Boulder, and James Golinveaux, TYCO. This advanced sprinkler design class will be "co-taught" by Dave and James and cover the common requirements of hydraulics calculations, hangers, design area, storage arrangement, impact to industry and product design.
293: FLAMMABLE FINISHES	Scott Stookey, ICC Senior Technical Staff. This one-day class introduces participants to the requirements of Chapter 15 of the 2006 International Fire Code for the application of Flammable Finishes. This seminar will explain the requirements for the protection of operations, flammable finishes, powder coating and manufacturing of rigid thermoplastics. The seminar includes a detailed review of the 2006 International Mechanical Code requirements for hazardous exhaust systems.
381: ACCESSIBILITY 202: ADVANCED	Tom Meyers, CCC, LLC. This is a new class devoted to advanced accessibility requirements using the International Building Code and ICC/ANSI A117.1. Topics will include scoping for accessible design, compliance paths for existing buildings, and Accessible Type A and Type B residential requirements. New design methods, not fully addressed by the IBC, will also be discussed. The class will provide a Federal accessibility background to help better negotiate the maze of regulations and their base intent in the IBC.
382: RESIDENTIAL ENERGY CODE COMPLIANCE	Robby Swartz, Energy Logic and Gil Rossmiller, Town of Parker. This seminar is designed to provide an in-depth look at the Residential Energy requirements in Chapter 4 of the 2006 IECC and Chapter 11 of the 2006 IRC. This class will cover topics such as the Building Thermal Envelope, Climate Zones, Air Barriers, Vapor Barriers, Total UA Prescriptive Path and Performance Path. We will also provide a demonstration of the REScheck program. Please bring your concerns and questions about energy code enforcement.
383: HIGH WIND WOOD FRAME DESIGN & CONSTRUCTION	Dr. Robert Taylor and David P. Tyree, P.E., American Forest and Paper Assn. This class will provide specific design details for wood frame buildings for High Wind, Snow, and Seismic Loadings. This workshop combines lectures, slide presentations and interactive participation of the participants with the instructor in the use of <i>ANSI/AF&PA Wood Frame Construction Manual (WFCM) for One- and Two-Family Dwellings</i> . Required texts include: 2001 WFCM + Commentary, and WFCM Workbook, WFCM High Wind Guide-110 mph (purchase or free download) and DCA6 Prescriptive Residential Deck Construction Guide (purchase or free download) Purchase at www.iccsafe.org or www.forestprod.org/awc/index.html ; download at www.awc.org/publications/download.html .
384: BUILDING AREAS, FIRE AREAS AND MIXED OCCUPANCIES	Dan Weed, CCC, LLC. This seminar provides a comprehensive discussion of the major compartmentation concepts of the IBC, focusing on those requirements that deal with building size, sprinkler options and mixed-use buildings. Fire-resistance-rated construction is also addressed. This class will include topics on allowable areas, area increases, unlimited area buildings, fire area concept and construction, incidental/accessory use areas and separated/nonseparated uses.
385: IBC ADVANCED TYPES OF CONSTRUCTION	Greg Keith, P.h.D. This graduate level workshop will explain the types of construction requirements contained in Chapters 4, 6 and 7 of the 2006 IBC. Fire-resistive and materials requirements will be emphasized. Techniques on how to select the proper type of construction and identify the type of construction on existing buildings will be stressed.
386 AND 486: MOISTURE CONTROL, INDOOR AIR POLLUTION AND MOLD IN BUILDINGS	Joseph Lstiburek, Building Science Corporation. An entertaining, stimulating and thought-provoking two days that will change the way you think about how we build today's buildings. Topics include changes in building technology, why we don't build the way we used to, vapor diffusion and air flow retarders, vented & unvented roof and crawl spaces, keeping the rain & ground water out, biologicals, indoor air quality, HVAC, issues on mold and alternative materials & techniques
387: 2006 IRC OVERVIEW	Gary Pringey, CCC, LLC. This fast-paced one-day seminar explores the major provisions of the 2006 International Residential Code. The presentation includes detailed discussions of the provisions addressing the following issues: building planning; foundation, floor, wall and roof construction; exterior wall finishes; and roofing systems. The class is designed to provide an introduction to the code provisions.
389: COMMERCIAL PLUMBING 2006 IPC	Daryl Kuiper, Chief Plumbing Inspector, State of Colorado. This more advanced class will cover such topics as indirect waste piping, interceptors, sizing and types of DWV systems, determining appropriate fixture levels, roof drainage and more. Ample time for questions and discussion will be provided.

391: 2008 NEC UPDATE	John Travers, Hialeah, FL. This course will cover the changes adopted in the 2008 National Electrical Code. Be sure to bring your 2008 NEC. Copies of the code will be available for purchase in the ICC bookstore at the Institute.
393: HIGH PILED COMBUSTIBLE STORAGE	Scott Stookey, ICC Senior Technical Staff. This one day class is intended to familiarize code officials and design professionals with the 2006 International Fire Code Chapter 23, High-Piled Combustible Storage and 2006 International Building Code requirements for combustible storage. It will also introduce attendees to the requirements for Storage occupancies in the 2002 edition of NFPA 13, Installation of Sprinkler Systems. The seminar includes a review of commodity classification, including plastics, the requirements for fire department access, fire detection systems, smoke and heat vents and aisles. It also addresses the various methods of storage.
481: THREE P'S OF LITIGATION (PERILS, PITFALLS & PRACTICE)	Todd S. Welch, Pikes Peak Regional Building Counsel. Come learn while you practice the legal aspects of code application and/or enforcement. An interactive, hands-on experience with code application and/or enforcement. Each member of the class will be given an assignment to play the role of a juror, witness, lawyer or expert. After study and preparation, the class will try the case.
482: PHOTOVOLTAIC SOLAR SYSTEMS	Bill Brooks, Brooks Engineering. This workshop will present standardized guidelines for applying code provisions to photovoltaic (PV) solar system installations. The guidelines have been developed to assist local code officials and provide a common set of installation requirements needed to demonstrate compliance with code requirements and clarify installation requirements for system installers.
483: WOOD-FRAME ROOF, SHEAR DIAPHRAGMS & WOOD PRODUCTS	Tom Buist, WILLDAN. This class will provide an understanding of the wood-framed structure as well as an understanding of material; product knowledge; marking and identification; sizing; spans and tables. This seminar will cover common engineering terminology and provisions regulating lateral force-resisting systems (shear and diaphragm) in accordance with the 2006 <i>International Building Code (IBC)</i> . There will be a productive question-and-answer period
484: RESIDENTIAL PLAN REVIEW	Tom Meyers, CCC, LLC. This class is designed to provide a broad overview of the process for residential plan review. This course will provide the basic steps to complete a comprehensive review of a residence. The class will discuss the tools and process for conducting a residential plan review. It will also increase your awareness of the necessary items required to insure code compliance of the homes built in your jurisdiction.
485: IBC ADVANCED MEANS OF EGRESS COMPONENTS	Greg Keith, P.h.D. This graduate level workshop will focus on the means of egress component requirements contained in Chapter 10 of the 2006 IBC. Prescriptive means of egress component provisions will be reviewed. The differences in corridor construction requirements contained in the UBC and IBC will be pursued.
487: IBC MULTI-FAMILY BUILDING CONSTRUCTION	Dan Weed, CCC, LLC. This class provides an overview of the requirements for multi-family dwellings in the International Building Code. Type V-A structures may be the most difficult type of construction to build. This seminar discusses the design, construction and inspection of Group R-2 occupancies including, building planning, fire-resistive rated construction, fire protection requirements and means of egress requirements.
488 AND 588: OVER THE COUNTER PLAN REVIEW	Steve Thomas, CCC, LLC. This fast paced, 2-day class is designed primarily for the building department employee who has an interest in learning more about the plan review aspects of working at the front counter. The course is intended to provide essential information that will assist in doing plan review as it relates to such items as patio covers, room additions, decks, garages, hot tubs and other items.
489: PLUMBING FOR COMBINATION INSPECTORS	Robert Ream, City of Thornton. This class will cover the duties necessary for both IPC and IRC Combination Inspectors. Recently certified combination inspectors or those seeking such certifications will be able to attain knowledge of field requirements from experienced combination inspectors.
490: ACCA MANUALS J & D	Don Leonardi, Leonardi Heating and Design. This class presents a brief overview of MANUAL 'J' and MANUAL 'D' for inspectors and building department personnel. The review process for permits or contractor's proposal using Manual "J" for load calculations and Manual "D" for duct sizing will be covered.
491 AND 591: ELECTRICAL FIRES: CAUSES AND PREVENTION	John Travers, Hialeah, FL. This very popular two day course will include even more hands-on information that is guaranteed to generate a great deal of discussion. A must attend for Code Officials and Electricians alike.
492: UL FIRE RESEARCH ON LIGHTWEIGHT WOOD CONSTRUCTION	Robert Backstrom and Robert James, Underwriters Laboratories. This class will present the findings of the Firefighter Safety Research Project recently completed through a joint effort between IAFC and UL. This project was aimed at enhancing firefighter safety in modern fire scenarios by examining the structural stability of engineered lightweight wood floor and roof assemblies after exposure to full-scale fire testing.
493: DATA ROOMS CODE REVIEW AND TACTICS	Reinhard Hanselka, IES. This class will deal with the code requirements in constructing data centers, with battery rooms, generators, large server farms, and multiple redundancies to keep electricity flowing to the building. It will also cover fire suppression dealing with fires in such facilities and the tactics to be used.
581: PROPERTY MAINTENANCE AND DANGEROUS BUILDINGS	Tom Meyers, CCC, LLC. This one-day seminar provides an overview of housing and property maintenance inspections as outlined in the International Property Maintenance Code. Defining and identifying specific ways to handle dangerous buildings will be discussed. The seminar will assist code personnel who are seeking a better understanding of how to approach a property maintenance inspection, how to conduct a thorough inspection and how to follow through with appropriate enforcement actions.
582: 2006 I-CODES AND GREEN BUILDINGS	ICC Staff. This seminar provides an overview of current green building practice and its relationship to the I-Codes. The goals of green building initiatives, the need for green building and the six strategic areas of green design – sustainable sites, material resources, water conservation, indoor environmental quality, energy efficiency and innovation are examined. The long-standing role of building codes in sustainable buildings is explained and the specific "green" features of the International Codes is explored in detail.

583: BASIC STRUCTURAL CONCEPTS	Tom Buist, WILLDAN. This class provides information, examples and a general discussion of various engineering principles and fundamentals required to better understand how structures are designed and function.
584: SOILS IDENTIFICATION AND FOUNDATION DESIGN	Bill Koechlein, P.E., Koechlein Consulting Engineers. This class provides a detailed discussion and examples of soils and foundation investigations and how they're implemented into current foundation designs.
585: IBC ADVANCED MEANS OF EGRESS DESIGN	Greg Keith, P.h.D. This graduate level workshop will cover the means of egress design requirements contained in Chapter 10 of the 2006 IBC. The differences in the approach to the "three part" means of egress between the UBC and IBC will be discussed in detail.
586: ROOFING INSPECTION	Rich Boon. An overview of the provisions of Chapter 15, 2006 IBC. Instruction will focus on proper application techniques and review of all types of roof coverings as well as evaluation reports applicable to roof covering products.
587: PRESTRESSED CONCRETE SPECIAL INSPECTION	Walter J. "Wally" Prebis, P.E., Doug Schlegel, P.E. An in-depth discussion of prestressed concrete theory, pretension and post-tension methods, inspections, and practical applications. The latest version of the <i>Prestressed Concrete Institute Design Handbook</i> will be provided.
589: BOILERS, WATER HEATERS & REFRIGERATION	Don Leonardi, Leonardi Heating and Design. This class will review the fundamentals for the installation and inspection of boilers, water heaters and refrigeration systems as specified in Chapter 10 of the IMC, Chapter 5 of the IPC and Chapter 11 of the IMC as well as the related sections of the IFGC.
590: UP WITH FIRE AND SMOKE (FIRE & SMOKE DAMPERS)	Sam Dardano, City of Boulder. Everything you ever wanted to know about fire/smoke dampers using Section 716 of the IBC and Section 607 of the IMC. The class will include instruction on damper types and required locations as well as a review of through-penetration firestop systems.
592: FIRE AND LIFE SAFETY PLAN REVIEW	Mark S. Wassom, Colorado Division of Fire Safety. This class will provide an overview of plan review techniques used to verify that construction documents comply with applicable building and fire codes for fire protection and life-safety requirements. Subjects addressed in the course include site plan reviews for emergency apparatus access and water supply, means of egress, fire-resistive compartmentalization, assessment of the need for active fire protection systems and smoke control/management systems as well as basic fire protection system review.
593: VEHICLE FIRE INVESTIGATION	Peter Klaput, Peter Klaput Investigations. This class is designed for all personnel who need to understand the common causes and behavior of fires in modern automobiles. Numerous established and recent case histories will be presented citing various causes and providing procedures to clearly understand how to make final investigative determinations.

PLEASE READ - IMPORTANT STUFF

PLEASE COMPLETE the Registration Form. You must check the classes you wish to attend in order to register. Please fill out a **SEPARATE FORM FOR EACH PERSON** attending and be sure to **PRINT CLEARLY** all requested information.

PLEASE NOTE: Registrations can now be submitted online at www.coloradochapericc.org. When submitting registrations online, credit card information must be provided. Credit card payment will not be processed until the registration has been approved.

PLEASE NOTE: Tuition fees include instruction, noon meals, break refreshments, and handout materials unless noted otherwise. Please register as soon as possible as certain classes will be limited in size. Individual classes will be filled on a first come, first served basis. If a selected class is filled, you will be notified by the education committee and asked for your alternative choice(s).

REFUND POLICY: If the request for a registration fee refund is received by February 13, 2009, 100 percent of the fee will be refunded. Fees will not be refunded if the request is received after February 13, 2009.

NOTE: WE CANNOT ACCEPT REGISTRATIONS BY FAX. FULL PAYMENT MUST ACCOMPANY REGISTRATION FORM.
OUR FEDERAL TAX IDENTIFICATION NUMBER IS: 23-7421122

FELLOWSHIP BREAKFAST-Tuesday, March 3rd, 6:30 AM

The Colorado Chapter of ICC would like to invite you to our second Educational Institute Fellowship breakfast with Christian musician Bruce Webb and speaker Mike Holt.

Once again we are excited to have our long time electrical instructor, Mike Holt, speak during this breakfast. We all know Mike as America's most knowledgeable electrical trainer and author. Mike Holt is a former high school dropout and former gang member that turned his life around with God's help.

Besides being considered one of the nation's top NEC experts Mike is the father of seven children and a world class rated Barefoot Water-skier, winning his 5th barefoot championship in 2007. Videos of Mike's water-skiing will be shown during breakfast. What sets Mike apart from some is his commitment to living a balanced lifestyle; he places God first, then family, career, and self.

COST: \$20.00

REGISTRATION: Reservation and payment must accompany registration. Please check the box for the fellowship breakfast on the registration and course selection form.

PARKING

As we have experienced in the past, there are far more attendees than available on-site parking spaces. The Marriott will be making some additional spaces available to attendees, but parking on-site will again cost \$7.00 a day. Attendees, especially local attendees, are encouraged to carpool or take RTD's light rail.

COLORADO CHAPTER EDUCATIONAL INSTITUTE

www.coloradochaptericc.org

REGISTRATION AND COURSE SELECTION FORM

REGISTRATION DEADLINE IS **MONDAY, FEBRUARY 2, 2009.**

Complete a SEPARATE REGISTRATION FORM FOR EACH PARTICIPANT. Please PRINT OR TYPE the following, as you wish it to appear on your badge:

NAME: (PRINT CLEARLY PLEASE!) _____

REPRESENTING: _____

PHONE: () _____ EMAIL: _____

MAILING ADDRESS: _____

Telephone: (303) 658-2077 or Email: dhorras@cityofwestminster.us for program information. Submit your registration online at www.coloradochaptericc.org.

FEE CALCULATION AND COURSE SELECTION – MARK THE APPLICABLE BOXES

Attendance	Payment Received by 1/12/09	Payment Received after 1/12/09	Amount Enclosed for This <u>Individual</u>
Full Week	<input type="checkbox"/> \$ 260	<input type="checkbox"/> \$ 325	\$
Per Day	<input type="checkbox"/> \$ 65	<input type="checkbox"/> \$ 75	
Fellowship Breakfast	Tuesday, 3/3/09, 6:30AM	<input type="checkbox"/> \$ 20	

MAIL TO: COLORADO CHAPTER ICC, EDUCATION COMMITTEE, P.O. BOX 961, ARVADA, COLORADO 80001

Full payment MUST accompany registration form(s). Registration deadline is Monday, February 2, 2009.

Our Federal Tax ID Number is: 23-7421122.

DAY ONE - MONDAY, MARCH 2, 2009 - 8:00 AM (All Classes Are Full Day - Choose Only One Class Per Day)	
<input type="checkbox"/> 181 Outside the Box Plan Review <input type="checkbox"/> 182 Commercial Provisions of the IECC <input type="checkbox"/> 183 IBC Wood Framing <input type="checkbox"/> 184 Basic Means of Egress <input type="checkbox"/> 185 IBC Advanced Occupancy Classification <input type="checkbox"/> 186 Accessibility 101: Basic	<input type="checkbox"/> 187 Combination Inspections of Commercial Structures <input type="checkbox"/> 188 Managing Emotions Under Pressure <input type="checkbox"/> 189 IPC Water Distribution and Backflow Prevention <input type="checkbox"/> 190 Grease Hoods <input type="checkbox"/> 191 Grounding / Bonding of Electrical Systems (also check Day 2) <input type="checkbox"/> 192 Fire Code Legal Issues <input type="checkbox"/> 193 IFC Significant Changes/Oil & Gas Wells
DAY TWO - TUESDAY, MARCH 3, 2009 - 8:00 AM (All Classes Are Full Day - Choose Only One Class Per Day)	
<input type="checkbox"/> 281 Egress Behavior and Analytical Techniques <input type="checkbox"/> 282 Energy Plan Review Using ASHRAE 90.1 <input type="checkbox"/> 283 Adv. Design of Wood Frame Buildings Workshop <input type="checkbox"/> 284 Fire-Resistive Construction <input type="checkbox"/> 285 IBC Advanced Schematic Design <input type="checkbox"/> 286 Exterior Wall Systems	<input type="checkbox"/> 287 2006 IBC Overview: Nonstructural Provisions <input type="checkbox"/> 288 The Complete Permit Technician (also check Day 3) <input type="checkbox"/> 289 Basic Plumbing: 2006 IPC <input type="checkbox"/> 290 Mech. Insp. Under 2006 IMC, IFGC & IRC (also check Day 3) <input type="checkbox"/> 291 Grounding / Bonding of Electrical Systems (also check Day 1) <input type="checkbox"/> 292 Advanced Sprinklers (also check Day 3) <input type="checkbox"/> 293 Flammable Finishes
DAY THREE - WEDNESDAY, MARCH 4, 2009 - 8:00 AM (All Classes Are Full Day - Choose Only One Class Per Day)	
<input type="checkbox"/> 381 Accessibility 202: Advanced <input type="checkbox"/> 382 Residential Energy Code Compliance <input type="checkbox"/> 383 High Wind Wood Frame Design & Construction <input type="checkbox"/> 384 Building Areas, Fire Areas and Mixed Occupancies <input type="checkbox"/> 385 IBC Advanced Types of Construction <input type="checkbox"/> 386 Moisture Control, Indoor Air Pollution & Mold (also check Day 4)	<input type="checkbox"/> 387 2006: IRC Overview <input type="checkbox"/> 388 The Complete Permit Technician (also check Day 2) <input type="checkbox"/> 389 Commercial Plumbing: 2006 IPC <input type="checkbox"/> 390 Mech. Insp. Under 2006 IMC, IFGC & IRC (also check Day 2) <input type="checkbox"/> 391 2008 NEC Update <input type="checkbox"/> 392 Advanced Sprinklers (also check Day 2) <input type="checkbox"/> 393 High Piled Combustible Storage
DAY FOUR - THURSDAY, MARCH 5, 2009 - 8:00 AM (All Classes Are Full Day - Choose Only One Class Per Day)	
<input type="checkbox"/> 481 Three P's of Litigation (Perils, Pitfalls & Practice) <input type="checkbox"/> 482 Photovoltaic Solar Systems <input type="checkbox"/> 483 Wood-Frame Roof, Shear Diaphragms & Wood Products <input type="checkbox"/> 484 Residential Plan Review <input type="checkbox"/> 485 IBC Advanced Means of Egress Components <input type="checkbox"/> 486 Moisture Control, Indoor Air Pollution & Mold (also check Day 3)	<input type="checkbox"/> 487 IBC Multi-Family Construction <input type="checkbox"/> 488 Over the Counter Plan Review (also check Day 5) <input type="checkbox"/> 489 Plumbing for Combination Inspectors <input type="checkbox"/> 490 ACCA Manuals J & D <input type="checkbox"/> 491 Electrical Fires: Causes & Prevention (also check Day 5) <input type="checkbox"/> 492 UL Fire-Research on Lightweight Wood Construction <input type="checkbox"/> 493 Data Rooms Code Review and Tactics
DAY FIVE - FRIDAY, MARCH 6, 2009 - 8:00 AM (All Classes Are Full Day - Choose Only One Class Per Day)	
<input type="checkbox"/> 581 Property Maintenance & Dangerous Buildings <input type="checkbox"/> 582 2006 I-Codes and Green Building <input type="checkbox"/> 583 Basic Structural Concepts <input type="checkbox"/> 584 Soils Identification and Foundation Design <input type="checkbox"/> 585 IBC Advanced Means of Egress Design <input type="checkbox"/> 586 Roofing Inspection	<input type="checkbox"/> 587 Prestressed Concrete Special Inspection <input type="checkbox"/> 588 Over the Counter Plan Review (also check Day 4) <input type="checkbox"/> 589 Boilers, Water Heaters and Refrigeration <input type="checkbox"/> 590 Up with Fire and Smoke (Fire & Smoke Dampers) <input type="checkbox"/> 591 Electrical Fires: Causes & Prevention (also check Day 4) <input type="checkbox"/> 592 Fire and Life Safety Plan Review <input type="checkbox"/> 593 Vehicle Fire Investigation

*** Call the Marriott DTC at 800-228-9290 or 303-779-1100 for Hotel Accommodations. ***
 When calling, be sure to reference the 'Colorado Chapter Educational Institute' for available room rates of \$ 139 per night.