



# Grainger Consulting, Inc.

*Fire Protection / Forensic Engineering \* Code Consulting*

## RESUME: SCOTT GRAINGER, PE - PRESIDENT – CHIEF ENGINEER

### Education

BS Civil Engineering Colorado State University; Ft Collins, Colorado; 1971

Hazardous Materials 40 hour training, OSHA 1910.120, Hazardous waste operations and emergency response, 2000

### Professional Registration

First Licensed 1977

	AZ	NV	NM	CO	NY	WA	VA	CA	UT	WY
<b>FIRE PROTECTION ENGINEERING</b>	*	*	*		*		*	*	*	*
<b>CIVIL ENGINEERING ( + state had no FPE category)</b>	*		*	* +		* +				

### Professional Experience

- US Army, Military, 1971-1973. Fort Huachuca, AZ.
- Resident Engineer US Army Corps of Engineers, Tucson Resident Office, military and civil works.
- Owner and chief fire protection engineer of consulting engineering firm specializing in fire protection engineering design, evaluation, code analysis and forensics since 1985.
  - Forensic Engineering, Expert witness and failure analysis
    - Fire suppression systems
    - Fire alarm systems
    - Fire separations – walls, floors, doors, roofs
    - Firestopping / proofing
    - Pipe
    - Sprinkler Heads
  - Alternate means and methods preparation for alternatives to code compliance
  - Structural fireproofing system design
  - Design fire sprinkler and fire alarm systems
  - Review & application of various codes & standards & Preparation of variances (Equivalencies Performance Design)
  - Special Systems – design review, code analysis and field verification of special systems:
    - High Speed deluge, Halon Replacement Gas Systems
    - Hazardous Material storage/use/dispense
      - Flammable Liquids
      - Explosives
      - Toxics
    - Foam systems, AFFF & high expansion foams
      - Aircraft Hangers
      - Chemical Storage
      - Perfume Manufacturing
      - Fuel Storage and Dispense

### Professional Activities

ASTM International - member 2005 to present

E30 Forensic Sciences Committee – member 2005 to present

E30.05 Engineering subcommittee – member 2005 to present

E05 Fire Standards Committee – member 2005 to present

E05.11 Fire Resistance subcommittee – member 2005 to present

AZ State Fire Code Committee Member 1988-1998

Chairman, 1994; Vice Chairman, 1992, 1993; UBC 38-1and Article 25 subcommittee's member

Article 79 rewrite subcommittee, 1991, 92, 93 Member

National Fire Protection Association – member 1985 to present

Member Warehouse Fire Problem subcommittee, 1988

Society of Fire Protection Engineers, Professional member 1988-present

AZ Chapter President, 1996 & 1997

International Membership Committee, Member '98 – present

International Publications Committee, Member, 2002 – 2006

Southern Nevada Chapter, Member 2004

Point of Contact for Order of the Engineer for SFPE

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American Society of Sanitary Engineers 1996 – present  
Backflow Working Group 1997; 2002 - present  
Cross Connection Protection Devices re-write committee chairman '99  
Research Committee member, '00 to 2002  
International Conference of Building Officials, Southern Arizona Chapter and Arizona Chapter, Member '88 - 2001  
Adhoc Committee on smoke control, successful in rewriting Chapter 56 on covered Malls.  
International Code Council (ICC) member 2001 – present  
National Academy of Forensic Engineers, Senior Member, 2003 – present  
Continuing Professional Development Committee, 2004 - present  
International Association of Arson Investigators, Arizona Chapter  
Member, 1999 -2004  
Arizona State Board of Technical Registration, Enforcement Advisory Committee 1989-present  
Phoenix Backflow Prevention Ordinance Study Committee member, 1993/94  
City of Mesa AZ Building Board of Appeals member, '96 - '02.  
City of Mesa Rehabilitation Code Development Committee, Member, 2001  
AZ. Consulting Engineers Association , member '88 - 2003  
Judge for the 1998 Technical Excellence Awards Competition  
American Arbitration Association, Arbitrator, 1985 -'94  
National Society Professional Engineers, Member '73 - present  
AZ. Society Professional Engineers. 1973-Present  
Cochise Chapter Secretary, President '73,'74  
American Society Civil Engineers, member '71 - present  
Order of the Engineer, Member '88 to present

**Speaker**

American Backflow Preventer Association. 1993 International Conference, Backflow on Fire Sprinkler systems  
Society of Fire Protection Engineers. Backflow prevention program '91-'95  
American Fire Sprinkler Association '96 Fall Convention – Backflow Prevention  
American Society Plumbing Engineers '96 Fall Convention – Backflow Prevention  
Arizona Society Professional Engineers '96 Convention - Ethics  
International Assoc. Arson Investigators, '99 convention fire modeling  
Grainger Consulting sponsored Training Programs (all certified by AIA for CEU's):

- Fire Sprinklers and the UBC
- Fire Suppression
- Hydraulic Calculations
- Smoke Control
- System Testing and Commissioning
- Fire Hydrant Flow Tests

**Published**

Drinking Water and Backflow Prevention; March 1993  
Sprinkler Age; June '96  
American Society of Plumbing Engineers, Technical Proceedings '96 ASPE Convention; Backflow Preventers on Class 1 & 2 Fire Protection Systems

**Awards**

Society of Fire Protection Engineers, Hats Off Award, 2005  
National Society Professional Engineers, Engineers Week 2007 Outstanding Participation

**Community Service**

AZ Dept. of Education, Industrial Technological Education Advisory Committee, NAU 1997-1999, member, Special project – Review and comment Fire Science curriculum for high schools  
Design of automatic fire sprinkler system for the **EVAC Center**, a nonprofit halfway house, Mesa, AZ  
Sponsored annual awards for Fire Protection Engineering at the **SOUTHERN ARIZONA SCIENCE AND ENGINEERING FAIR** at the University of Arizona 1987 - 1996.  
Judge for the **1998 FUTURE CITIES** competition, sponsored by AZ. Society Professional Engineers  
Judge for the **ACEA 18<sup>th</sup> ANNUAL ENGINEERING EXCELLENCE AWARDS**  
Judge International Science and Engineering Fair, 2005  
Engineers Week speaker at Phoenix area schools, 2005, 2006, 2007