SAL M. HAMDI-PACHA, P.E. LEED AP

Head of Fire Protection and Plumbing Engineering Group 630-369-2275 shpacha@aol.com

EDUCATION:

B.S., Fire Protection Engineering, Illinois Institute of Technology (IIT), Chicago, Illinois, 1980

Graduate Courses, Mechanical Engineering, IIT, Chicago, Illinois, 1981

REGISTRATION/AFFILIATION:

Registered Professional Engineer: Illinois No. 62043994 (1988)

Member: National Fire Protection Association (NFPA)

Society of Fire Protection Engineers (SFPE)
American Society of Plumbing Engineers (ASPE)
American Society of Sanitary Engineers (ASSE)

Illinois Institute of Technology, Chicago, Illinois - Guest Instructor for senior level architectural students on fire alarm systems, 1989, 1990

EXPERIENCE SUMMARY:

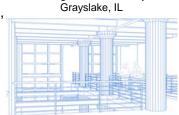
over 29 years of experience in the field of Fire Protection, Loss Prevention Engineering and Code Consultant. His specialty fields include fire protection systems design, fire protection engineering, building code analysis, life safety analysis, property loss prevention, chemical process safety, project management, fire protection systems review, hazard analysis and highly protected risk (HPR).

EXPERIENCE:

<u>1996 - Present</u>: Head of Plumbing and Fire Protection Engineering, Globetrotters Engineering Corporation/GEC, Chicago, Illinois. Responsibilities include establish design criteria and preparation of design bid package for plumbing, fire protection, and fire alarm systems to meet local code and Factory Mutual engineering requirements. Preparation of demolition and construction phasing drawings. Projects include:

- College of Lake County Technology Building, Grayslake, Illinois. 140,000 square feet of high tech. facilities.
- College of Lake County Technology Building, Grayslake, Illinois. PHASE 2 renovations of 22,000 square feet of science laboratory, dental laboratory and computer classrooms.
- University Center at College of Lake County, Grayslake, Illinois. 100,000 square feet of distant learning high tech university building.
- College of Lake County Task Order Contract: Horticulture Building, New Warehouse, Technical Center, University Center.

• University of Chicago, Chicago, IL MEP Renovation of three building facilities



College of Lake County

- Governors State University, Chicago, IL. Fire Protection study of existing systems, design of new pre-action, deluge and wet sprinklers systems and relocation of campus underground fire mains. Construction supervision
- Harper College, MEP Renovation of Wellness and Sports Center.
- University of Illinois at Chicago Alumni Hall Renovation.
- UIC Blanket Contract MEP/FP Multiple Projects.
- Chicago Public Schools MEP/FP Rehabilitation.
- Chicago McCormick New Convention Center. Provided fire protection and plumbing conceptual design, bid packages, site construction coordination and inspection of this new 2.5 millions square feet, \$900 million project.



UIC Alumni Hall Renovation

• GSA Blanket Contract MEP/FP Multiple Projects.

College of Lake County

- Designed fire alarm, fire protection systems and plumbing for schools in the City of Chicago, including classrooms, laboratories, computer rooms and infrastructures.
- New Midway Airport Terminal Managed and designed plumbing, water pumping system, fire protection and fire alarm systems for the entire new \$778 million Midway Airport Terminal, including 6-story parking building, concourse and terminal buildings, heat and refrigeration plant, and office parking.
- Hotels, office buildings and parking facilities.

<u>1990 - 1996</u>: Corporate Loss Prevention/Fire Protection Engineer, Abbott Laboratories, Abbott Park, IL.

New Midway Airport Terminal

Responsibilities: established design criteria to meet International Building Code, NFPA 101 Life Safety Standard, implemented corporate insurance carrier's engineering requirements and the Company's standards, such as process safety review, ventilation and chemical drainage design criteria, fire protection systems, damage-limiting construction, safety-eyewash stations and emergency showers; interacted and negotiated with corporate insurance carrier to determine maximum feasibility loss exposure for major projects. Experience encompassed conceptual design through acceptance testing. Projects included:

Managed and implemented building code, life safety, fire protection systems and Factory Mutual Engineering requirements for chemical plants, labs and offices ranging from less than \$1mm projects to grass-roots \$240 mm projects, including pharmaceutical process buildings, laboratories, solvent recovery plants and control buildings, utilities, warehouses, and office buildings, cafeterias, flammable liquid tank farms, incinerators, waste treatment plants, indoor and outdoor flammable liquid drum storage warehouses, cooling towers and chillers.

<u>1983 - 1990</u>: Senior Fire Protection Consulting Engineer, Gage Babcock & Associates, Inc., Mt. Kisco, N.Y. and Elmhurst, Illinois.

Responsibilities: planned, scheduled and managed design and code consulting projects.

- Prepared bid plans, specifications and cost estimates for fire suppression systems, fire alarm systems and smoke control systems.
- Conducted hazard evaluation of facilities, operations and processes for life safety, property and business continuity.
- Conducted and managed life safety surveys of health care facilities, including the use of the Fire Safety Evaluation System (FSES).
- Determined deviations from Building and Fire Protection codes and standards; outlined possible alternatives with detailed cost estimates and established plans of action.
- Conducted Life Safety and Fire Protection surveys of U.S. Government properties throughout the United States.
- Conducted site fire protection review and fire walls evaluation for Nine Mile nuclear power plant in New York (NRC compliance).

<u>1981 - 1983</u>: Design Engineer, Cosco Fire Protection Company, Division of Zurn Industries, Hayward, CA.

Worked in Special Hazard Systems and automatic Sprinkler Systems. Responsible for Electrical diagrams, CO₂ and Halon 1301 Fire Suppression and Detection Systems. Prepared Hydraulic Calculations and selection of components. Developed Detection and Sprinkler Systems Manual for customers.

1980 - 1981: Systems Engineer, Chemetron Corporation, Monee, Illinois. Designed layout of CO_2 and Halon 1301 Fire Suppression and Detection Systems. Prepared calculations and selected components. Developed detection and sprinkler systems manuals for customers.

Highlights of Specialized Professional Competence:

Systems Design	Automatic sprinklers, fire detection, fire alarm and communications, special hazard protection, smoke control, gaseous fire suppression, fire water pumping distribution. plumbing design
Building & Fire Code Analysis	Project assessment, building code analysis, development of alternate methods of compliance, code negotiation, working knowledge of International Building Code, City of Chicago and Puerto Rican Codes, NFPA and Factory Mutual Engineering standards
Loss Investigation	Systems failure, fire investigation
Computer Literacy	Microstation 2000, Microsoft Word for Windows, Excel

PUBLICATIONS:

- Editor of Gab's Newsletter, "GBA UPDATE", 1985 1990
- "Fire Detection Systems User Manual" for Chemetron Company Clients, 1981
- "Designing Fire Protection Motor Circuits" Consulting Specifying Engineer Magazine, 1990