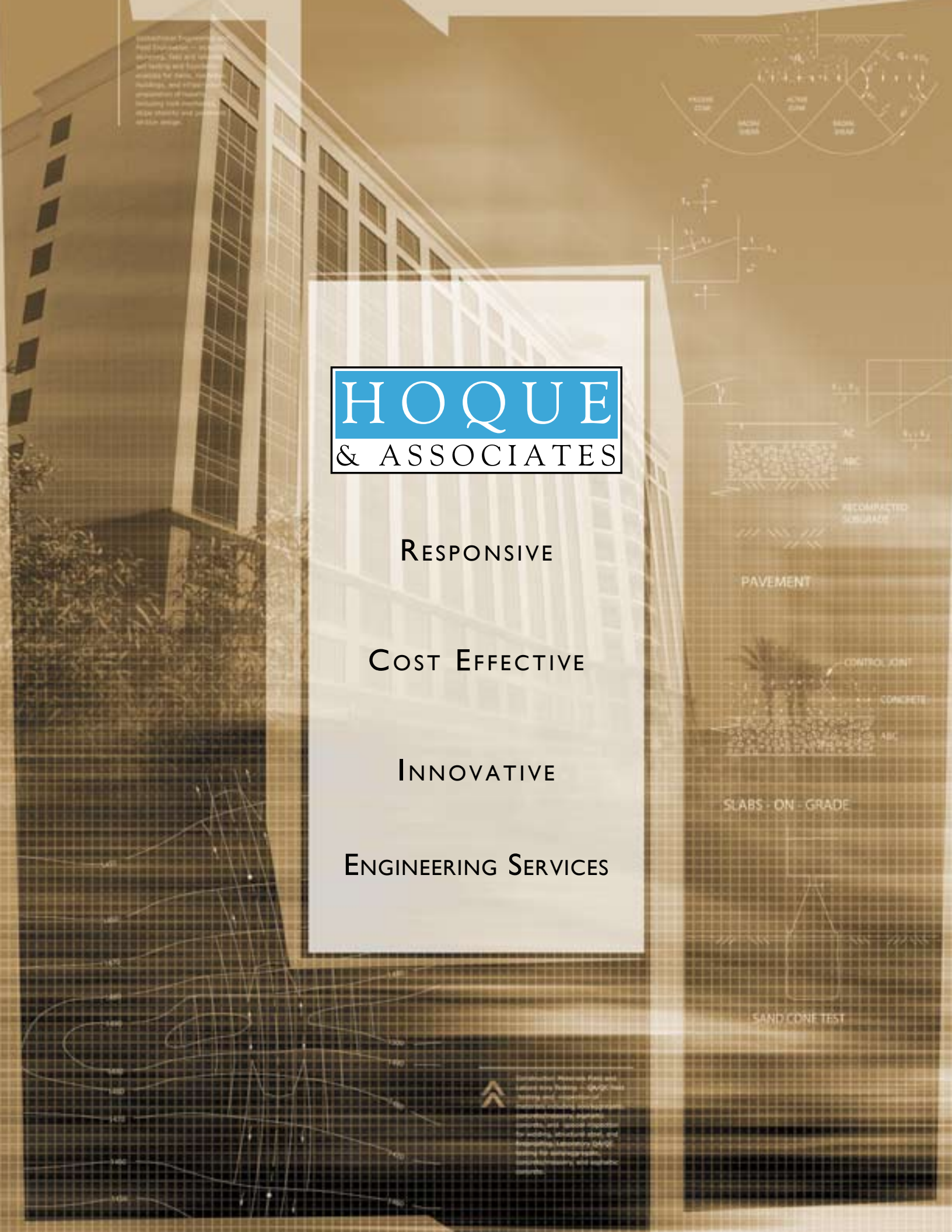
HOQUE
& ASSOCIATES
RESPONSIVE
COST EFFECTIVE
INNOVATIVE
ENGINEERING SERVICES
PAVEMENT
SLABS - ON - GRADE

Mission Statement:

Hoque & Associates strives to build lasting client relationships through commitment, communication, innovation, and quality responsive service to establish and maintain our standing as premier consultants in our field of expertise.

Hoque and Associates, Inc. (HA) is a consulting engineering firm specializing in geotechnical exploration, civil engineering, construction materials testing, environmental assessment and solid waste engineering. HA provides high quality, innovative, cost effective and responsive services to public sector clients including city, county, state and federal agencies and private sector clients including architectural and engineering firms, contractors, materials suppliers, real estate developers, builders and property owners.

HA's diversified staff is one of the most qualified and experienced professional and technical teams in Arizona, comprising engineers, geologists, scientists and laboratory and field testing technicians. Team members combine technical skill, professional reputation and project management expertise with common sense to solve complex engineering problems. Each team member is recognized in his or her field and has a thorough knowledge of a variety of specialties ranging from foundation analysis to pavement design; from record search to regulatory review; and from building inspection to site assessment. HA represents one of the most innovative and experienced team of geotechnical, material testing and environmental engineering professionals available. Diverse backgrounds allow HA to address a wide range of project issues that can go beyond the initial scope of work.

Asphalt testing at a City of Phoenix roadway construction project. HA assists the Contractor to develop their rolling pattern then provides the owner with QA testing to verify and document that the end product meets project specifications.

Company principals as well as senior level engineers and scientists are involved hands-on with every project. Company President, Enamul Hoque, P.E., is an ASCE Fellow with 26 years of experience who has worked in the southwestern United States for the last 19 years. He has experience on hundreds of civil engineering projects, is highly knowledgeable with regard to soil conditions in Arizona and is highly respected for his innovations in geotechnical engineering.

When unexpected environmental conditions on a project site are encountered, the company has 40-Hour Hazardous Waste Health and Safety Training certified personnel who can assess the situation and modify field activities to keep jobs moving forward in a safe and appropriate manner.

Highly Responsive, Professional Treatment

As a small company, HA is highly responsive to clients' needs. Every client—large or small—receives the same high-level, professional treatment. That is because we consider every job vitally important. HA makes sure clients' needs are understood up front and does whatever it takes to satisfy those needs.

HA has completed several hundred geotechnical and materials testing projects in the Phoenix area and across Arizona. Our diverse client base includes public sector municipalities and private sector clients ranging from small single-family custom homebuilders to multinational engineering firms.

HA has the technical expertise, direct experience, range of staff and corporate commitment to successfully complete project work on time and within budget. We are dedicated to pursuing innovative ideas and technology that can save our clients time and money while adhering to project objectives. Many of our projects are completed ahead of schedule and under budget.

HA has performed QA and QC testing on numerous projects at Sky Harbor International Airport. Here HA collects concrete cylinders to verify compressive strength of concrete used to construct a new blast wall following relocation of the Air National Guard.

HA is highly experienced and capable of performing the following services:

- **Geotechnical Engineering and Field Exploration**
  Including sampling and field and laboratory soil testing; foundation analysis for dams, roadways, buildings and infrastructure; preparation of reports, including rock mechanics, slope stability and pavement section design.
- **Construction Materials Field and Laboratory Testing**
  QA/QC field testing and inspection of materials including soil/aggregate, concrete/masonry, asphaltic concrete and special inspection for welding, structural steel and fireproofing. Laboratory QA/QC testing for soils/aggregate, concrete/masonry and asphaltic concrete.
- **Environmental Assessment**
  Phase I and Phase II environmental site assessment (ESA) associated with commercial real estate transactions and underground storage tank facilities.
- **Solid Waste Engineering**
  Design and construction administration of pollution control systems including solid waste disposal facilities and liner systems for waste and liquid impoundments.
- **Grading and Drainage Services**
  Site grading and drainage planning to comply with county and municipal requirements for land development including hydrologic analysis and preparation of site plans and drainage reports.

Geotechnical Services / Civil Engineering Services

HA's geotechnical services are critical for project owners and architectural and engineering firms that are designing structures, roadways and infrastructure. Our full-service program includes expertise in subsurface exploration and foundation analysis, pavement thickness design, slope stability analysis, seismic analysis and evaluation, rock and soil evaluation, special foundation problems in moisture-sensitive soil and geotechnical analysis and engineering design for waste management facilities.

HA's geotechnical field exploration and testing services include: test borings for evaluation of subsurface soil for foundations and structures; rock coring and sampling; field testing such as standard penetration tests, percolation tests, rock classification and rock quality designation; and collection of samples for laboratory testing.

The cost associated with geotechnical evaluation and exploration for a typical construction project constitutes a very small percentage of the total budget. However, the geotechnical evaluation is one of the most important factors that affect the performance of any structure built on soil. Therefore, accurate, precise, reliable and timely geotechnical data are critical for innovative, cost-effective and proper design of foundations and structures.

Many soils in Arizona are known to expand and contract in response to changes in moisture or pressure. This expansion and contraction of soils can damage structures. HA's evaluation for expanding/contracting soils and analysis for foundations and subgrade is a critical investment to identify and address these issues. When buildings do experience damaging foundation cracks and settling, HA experts can be called in to provide forensic assessment and recommend a remedy.

Several examples of notable geotechnical projects completed by HA include:

- Sky Harbor International Airport (SHIA) Automated People Mover for the City of Phoenix
- Sprint Switch Building for Sprint
- Alexan Belleview Luxury Condominiums for Trammel Crow Residential Southwest
- 12-story Marriott Hotel at 44th Street and McDowell for Columbia Sussex Corporation
- 10-story and 6-story multi-use structures for the Arizona Board of Regents/Smith Group
- I-17 Bridges and Barrier Walls from Thomas Road to Peoria Avenue for Parsons Brinckerhoff
- McKellips Road Bridge over the Salt River for Parsons Brinckerhoff
- Bridge over the Arizona Canal at the Biltmore Golf Course
- 51st Avenue Bridge over the Salt River for Parsons Brinckerhoff

HA's engineers & geologists provide hands-on expertise in the field and log subsurface soil conditions encountered during drilling. Soil samples are collected for laboratory testing and field tests are performed to evaluate in-situ conditions. Field and laboratory results are utilized to develop engineering recommendations and prepare an engineering report for the client.

Construction Materials Testing

During construction, HA provides quality assurance (QA) testing for project owners or quality control (QC) testing for contractors. HA routinely performs QA/QC testing for a wide variety of construction projects including small single-story to large multi-story buildings, roadways and bridges, civil infrastructure, landfills, waste impoundment lining systems and other projects. HA provides field and laboratory testing services for soil/aggregates, concrete/masonry and asphalt and can also provide specialty testing including structural steel, welding, fireproofing and other materials.

Engineering technicians that are ATI, NICET, ACI and/or Nuclear Gauge Use/Radiation Safety certified are on-site during construction, providing required field tests and collecting materials during various stages for laboratory testing and engineering analysis. Field personnel document all test results on standardized test report forms and summarize site activities in the field on daily field reports.

HA's soils and materials laboratory is fully accredited by the American Association of State Highway and Traffic Officials (AASHTO) and certified by the Arizona Department of Transportation (ADOT). Its laboratory is equipped with up-to-date, properly calibrated equipment and is staffed with highly qualified engineers and technicians.

Several examples of notable construction materials testing projects completed by HA include:

- SHIA North Runway, Terminal 4 Parking Structure, Runway 3 and Taxiway C3E for the City of Phoenix
- Sprint Switch Building for Sprint
- SR 85 Gila River Bridge for CS Construction
- Arrowhead Water Treatment Plant for PCL Civil Contractors
- Beaver Dam Section of I-15 for Cox Rocks
- San Tan Regional Park Roadways for Pinal County Public Works

Experienced engineers, geologists, and engineering technicians utilize HA's AASHTO accredited ADOT certified laboratory facilities to provide a full range of testing including concrete mix design.

Environmental Site Assessment

HA has completed numerous industry-standard Phase I and Phase II environmental assessments and our personnel have performed preliminary assessments associated with EPA evaluation for site listing under CERCLA. Our environmental professionals have performed hundreds of ESAs for vacant undeveloped land, commercial/retail properties, UST/gasoline stations and industrial properties.

During a Phase I ESA, HA characterizes the subject site and adjacent property conditions to identify potential environmental concerns and determine if the site warrants further study. The ESA tasks may include site review including visual and physical site reconnaissance, historical land use research, personal interviews of the current property owners and title search. The purpose of the Phase II ESA is to characterize the extent of suspected or known environmental contamination identified during the Phase I ESA and to estimate remediation costs.

HA is also qualified to provide support services for Phase III remediation activities, including providing site data required for remedial design, construction administration and remediation system operation and maintenance.

Several examples of notable environmental assessment projects completed by HA include:

- Landfill Assesments for the Rio Salado Environmental Restoration for CH2M Hill
- Numerous Phase I ESAs for vacant/undeveloped, residential, industrial, mining and landfill properties owned or planned for purchase and development by the City of Phoenix under HA's annual services contract with the city for environmental assessment
- Phase I and Phase II ESAs of a 7-Acre Industrial Property for AAA Transportation
- Several Phase I and Phase II ESAs for a National Auto Parts Retailer

Skunk Creek Landfill Cell 5 during construction. HA provided design, construction administration and QA testing and inspection services to the City of Phoenix. Following completion, HA prepared the construction report including all testing and inspection results for submittal to state regulators to obtain operating permits for the new waste cell.

HA's environmental assessment approach focuses on issues that have potential to impact the environmental integrity of a property and conforms to ASTM standards. HA works closely with the client to identify problems and recommend remedial options.

Solid Waste Engineering

HA has become one of Arizona's leading experts in solid waste engineering. Services include landfill siting and design, permitting, construction administration, QA/QC testing and inspection during construction, quarterly landfill gas and groundwater monitoring and reporting during operation, closure plan development and monitoring and post-closure care plan development and monitoring. Our expertise in design and construction administration of waste facility features includes soil and geosynthetic liner systems for landfill cells and liquid waste impoundments, leachate collection and removal systems, landfill gas monitoring and collection/removal systems, groundwater monitoring systems and closure caps.

Several examples of notable solid waste engineering projects completed by HA include:

- 27th Avenue Landfill Closure and Skunk Creek Landfill Cell 5 Design for the City of Phoenix
- Landfill siting and geotechnical exploration for City of Phoenix's new Regional landfill (an approximately 3,000-acre site)
- Waste Projection and characterization in the Phoenix Area, Construction Administration and QA Testing for the City of Phoenix
- Cave Creek Landfill Closure design and QA testing for Maricopa County
- Construction Administration and QA testing for closure of three Rural landfills for Maricopa County
- Salt River Landfill Phase IIIB and IVA QA Testing for the Salt River Pima Maricopa Indian Community
- New solid waste landfill siting, design, permitting, and QA testing for Abitibi Consolidated
- Closure design and QA testing for existing monofil for Abitibi Consolidated
- Design and construction administration for Liquid Containment Dam (Mill Pond Dam) for Abitibi Consolidated
- Design and permitting of a new landfill in Humboldt/Dewey , Arizona , for Kuhles Services

Grading and Drainage

HA is involved in the early stages of site development and can assist in all aspects of site grading and drainage engineering, from conceptual plans to subdivision development permits. We provide site grading and drainage planning to comply with county and municipal requirements for land development. This work involves hydrologic analysis, preparation of site plans and drainage reports, storm water management planning, on-site retention, US Army Corps of Engineers 404 Permitting requirements and preservation of desirable native plant species when appropriate. HA's grading and drainage services help to prevent water seepage under foundations and other moisture related problems for developers and property owners.

Several examples of notable grading and drainage projects completed by HA include:

- Salt River Landfill for the Salt River Pima Maricopa Indian Community
- 320-acre parcel at 243rd Avenue and Deer Valley for a private developer
- 11-acre mountain side residence in Cave Creek, Arizona for Woolsey Studios Architects
- Housing subdivision for ACORN Housing
- Two housing subdivisions for the John C. Lincoln Foundation
- Fuel farm and bath house at Yuma for the Marine Corps Air Station

Firm principals, senior engineering personnel, and staff level personnel meet to discuss project work and review deliverables to ensure that the client receives a technically sound high quality product.

Strict Quality Control Process

To become a premier consulting engineering firm specializing in geotechnical exploration, civil engineering, construction materials testing, environmental assessment and solid waste engineering, HA has adopted a strict quality control process. As part of this process, HA assigns the most qualified personnel to each project to assure that the project work is completed on time and project deliverables meet the client's requirements. Firm principals and senior level personnel serve as project directors and oversee each project. Daily communication is essential between senior management and key project personnel. We conduct periodic project meetings to discuss the project status, accomplishments, budget and any foreseeable problems.

HA is committed to the principles and practices of Total Quality Management. As a part of this program, firm principals review all deliverables for errors and omissions, review project specifications and reports and oversee the work of field personnel.

In-House Resources

HA's in-house resources include a fully equipped construction materials testing laboratory and offices for professional and support personnel. Software proven effective in project management is utilized to assist our project managers. Computer software includes specialized geotechnical programs including slope stability, hydrologic modeling and AutoCAD R2000 with AutoDesk Land Development Desktop for all computer aided engineering design.

Small Disadvantaged Business Enterprise

Hoque and Associates is a Disadvantaged Business Enterprise certified with the Arizona Department of Transportation (DBE No. 1876) and the City of Phoenix/Maricopa County. HA is also certified as an 8(a) firm and Small Disadvantaged Business by the U.S. Small Business Administration. As such, we can assist our clients in meeting DBE goals placed on their projects by local, state or federal agencies.

Loyal Clientele

We have developed and maintained a dedicated client base that includes both public and private sector clients by performing on schedule and within budgetary constraints. Our primary belief is that our goals and financial rewards are met only when our clients reach their goals. Clients' goals and expectations have consistently been met since the company's founding resulting in a group of loyal clients. Clients continually come back to Hoque & Associates and the vast majority of our work is obtained through direct referrals and word-of-mouth.

Public sector clients include:

- Maricopa County
- Pinal County
- City of Phoenix
- Salt River Pima-Maricopa Indian Community
- Cochise County
- Maricopa County Community College District

Notable private sector clients include:

- URS Corporation
- CH2M Hill
- Black & Veatch Engineers
- Sprint
- Trammel Crow Residential Southwest
- Kiewit-Western
- Abitibi Consolidated
- West Consultants
- Kimley-Horn
- Kuhles Services

HA provides services for a wide range of projects. Whether it be a small single-story building or a large complex multi-story facility (such as the 12-story Marriot Hotel at 44th Street and McDowell pictured above), roadway/bridge project or other infrastructure, HA is capable and ready to serve the engineering and architecture and construction industry.

HOQUE & ASSOCIATES

Contact us for your next engineering project —no matter how small or large.

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