

## **Stephen E. Cheney, P.E., LEED® AP** **Senior Program/Project Executive - International**

### **Education**

- University of Arkansas, 1967, B.S., Civil Engineering
- Webster University, 1986, Geneva, Switzerland, MBA (4.0 GPA)

### **Registrations**

- Professional Engineer: Iowa #6603; Hawaii #9615; Arkansas #3335; Tennessee #9571; New Jersey #24GE04984700; Pennsylvania #079649

### **Professional Affiliations**

- National Society of Professional Engineers
- American Society of Civil Engineers

### **General Experience**

Mr. Cheney, Senior Program/Project Executive - International, has more than 40 years of experience managing the staffing, marketing, planning, design, construction, and maintenance of multidisciplinary projects and programs. Mr. Cheney has a long history of managing resources and teams to complete projects and programs on time, within budget, and within approved scope. He has experience managing and staffing firms, architectural/engineering offices, and multidisciplinary and multinational staffs of up to 500 professionals in the United States, Middle East, the Pacific Arena, and Asia, for multi-billion dollar projects.

His work has included infrastructure, office, data and control centers, manufacturing, light industrial buildings and facilities, residential and resort communities, highways, marine facilities, and medical and pharmaceutical complexes.

### **Selected Project Experience**

#### **GOVERNMENT PROJECTS**

##### **Delaware River Joint Toll Bridge Commission (DRJTBC), I-78 Toll Plaza Maintenance Garage Expansion and Facility Upgrades CM - Project Manager**

Provided Construction Management (CM) and Owner's Representative (OR) services for the Delaware River Joint Toll Bridge Commission (DRJTBC) during the renovation and expansion of the Toll Plaza, Maintenance Garage, Welcome Center and upgrades to other structures at the facility on I-78 in Northampton County, PA. The \$11 million project encompassed upgrades to approximately 5,680-sf of existing space, including interior upgrades within existing garages,

and construction of an additional 13,260 sf to accommodate improved maintenance shop space, vehicle and equipment storage, several exterior facilities and site upgrades to the Toll Plaza, Welcome Center, and Salt Storage Dome. Mr. Cheney coordinated with the general contractor as DRJTBC's representative for all work activities, including the particularly challenging reroofing of the toll plaza, which involved the installation of raised catwalks over active interstate highway traffic. Oversaw daily pre-construction meetings to ensure the coordination of partial lane closures that were allowable only between 6 a.m. and 2 p.m. Coordinated with the electricity provider on the removal and replacement of the existing electric transformer that feeds the entire facility, including the maintenance garages and the toll collecting network. Temporary power via emergency generators was phased in and out at key points in the project to achieve uninterrupted operation of the toll collection "Easy Pass" system - - the source of revenue for the Owner. The facility remained operational 24/7 during the project duration with no interruptions to the facilities or staff. The project completed on schedule in October 2017. (3/16 – 10/17)

#### **DRJTBC Delaware Water Gap Maintenance Garage Addition – Project Manager**

Managed construction activities and construction inspection services to the Delaware River Joint Toll Bridge Commission (DRJTBC) for the construction of a 4-bay addition to the maintenance garage at the Delaware Water Gap Toll Bridge in Delaware Water Gap, PA. The approximately \$2.7 million, 6,880-sf addition allows DRJTBC maintenance personnel to respond more quickly to weather and traffic emergencies. Key challenges included a requirement that the project be completed within 10 months while keeping the existing facility completely operational 24 hours a day, 7 days a week. This requirement was met. Mr. Cheney served as the DRJTBC's representative. He worked closely with the client, A/E, and the contractor; oversaw all work activities; conducted progress meetings; and liaised with the local municipal authority. Along with the construction of the addition, the DRJTBC connected to the public sewer and natural gas services, enabling the abandonment of an aging septic waste disposal system. The existing oil-fired HVAC equipment was replaced with natural gas-fired equipment. The project scope included replacement of power distribution and controls for the adjacent highway lighting circuits, cancellation of the existing highway lighting dedicated metering account, and roadway paving replacement. Mr. Cheney coordinated the smooth transition of the sewer, electrical, and natural gas utilities, as well as the municipality, and emergency security system services. The project was completed on time, on budget, and received a high service satisfaction evaluation from the client. (5/13 – 3/14 )

#### **PTC Central Administration Data Center - Program Manager**

Oversaw the construction management, inspection and project controls of the \$35 million renovation of the Pennsylvania Turnpike Commission (PTC) Turnpike Industrial Park (TIP) Building in Middletown, PA. The TIP Building now houses the agency's centralized Tier 3 data processing center, their centralized communications private branch exchange (PBX), the electrical and HVAC prime movers to support these major facilities plus the recently completed Traffic Operations Center, and a future planned centralized E-Z Pass operations center. The TIP Building also houses a significant contingent of the PTC's IT Department support and programming staff. The 101,235-sf, single-story building was gutted down to its structural steel

frame — including the removal of the roof, building envelope, interior walls, and some of the floor slab. It was refitted with new materials and systems to support the installation of the state-of-the-art Tier 3 data center. Mr. Cheney managed and monitored the work of the resident inspectors, project controls, and scheduling specialists during the 26-month assignment, as well as supervised the four prime contractors, including general construction, electrical, plumbing, and HVAC, plus an independent third-party commissioning agent. The project was tracked and monitored using the PTC's Constructware and Construction Document System (CDS) construction management systems to track, monitor, and document the work, client reporting, generating and processing requests for information, submittals, pay estimates, and change orders. In addition to the PTC's prescribed tracking and monitoring systems, the firm utilized Primavera P6 software to parallel schedule, track, monitor, and document the work. The project was completed on schedule. All work was documented per LEED requirements.

Project received STV's Project of the Year recognition in the Construction category. (2/09 - 4/11)

#### **PTC Traffic Operations Center – Program Manager**

Oversaw the construction management, inspection, and project controls for the \$1.6 million construction and fit-out of the centralized Traffic Operations Center for the Pennsylvania Turnpike Commission (PTC) in the Turnpike Industrial Park Building in Middletown, PA. The Traffic Operations Center occupies 13,174-sf of space previously renovated under the Central Administration Center project. The new center supports the relocated and expanded PTC Traffic Operations group in Harrisburg, PA. The function of the facility is to provide monitoring and security of the PTC roadway network and future interstate roadways. The project was tracked and monitored using the PTC's Constructware and Construction Document System (CDS) construction management systems to track, monitor, and document the work, client reporting, generating and processing requests for information, submittals, pay estimates, and change orders. In addition to the PTC's prescribed tracking and monitoring systems, the firm utilized Primavera P6 software to parallel schedule, track, monitor, and document the work. The project was completed on budget and on schedule, (4/11 - 2/12)

#### **PTC TIP Site Improvements - Program Manager**

Oversaw construction management, inspection, and project controls for the \$2.6 million full-depth reconstruction and installation of the parking area for the Pennsylvania Turnpike Commission Turnpike (PTC) Industrial Park (TIP) Building in Middletown, PA. The project also included the installation of an underground stormwater management facility to collect and use stormwater for the air conditioning system cooling tower, the installation of underground chilled water thermal storage tanks to provide HVAC redundancy, and area lighting. The project was tracked and monitored using the PTC's Constructware and Construction Document System (CDS) construction management systems to track, monitor, and document the work, client reporting, generating and processing requests for information, submittals, pay estimates, and change orders. In addition to the PTC's prescribed tracking and monitoring systems, the firm utilized Primavera P6 software to schedule, track, monitor, and document the work. (1/12 - 4/13)

**NAVFAC Advanced SEAL Delivery System Facility Ford Island Naval Station - Project Manager**

Managed the multidisciplinary design of a \$17 million facility to house maintenance shops and testing and training facilities for new Navy Sea, Air, and Land (SEAL) submarines in Pearl Harbor, HI. The Naval Facilities Engineering Command (NAVFAC) project encompassed 11 acres and 2,000 feet of waterfront facilities. Mr. Cheney also evaluated physical conditions and developed plans and specifications to restore the facilities to their originally designed capacity and configuration. (11/95 - 12/99)

**ENERGY PROJECTS****Aramco Various Projects - Program Manager/Project Manager/Facilities Planning Engineer/Division Head/Senior Project Engineer/Lead Planning Engineer**

Managed a variety of divisions for Arabian American Oil Company (Aramco) in Dhahran, Saudi Arabia. Developed \$1 billion to \$2 billion capital programs. Designed, contracted, and managed \$100 million to \$500 million in projects. Managed staffs of 100 to 300. During his tenure with Aramco Mr. Cheney received four promotions. (1/75 - 7/85)

- **As Senior Project Engineer** - Managed a staff of 30 to 35 professional U.S., U.K., and Saudi employees to procure and manage international design contracts for the Aramco. Mr. Cheney managed a \$1 billion annual construction program and assisted construction managers in the solution of complex construction problems. He worked with various project management teams to design and construct residential, community, and light industrial facilities. (1/79)
- **As Lead Planning Engineer** - Supervised the preparation construction drawings and project proposals for civil and industrial facilities in support of major expansions for the Aramco's Gas Gathering Program. Mr. Cheney supervised and coordinated engineering activities in the United States, Europe, and Saudi Arabia. The value of the constructed facilities totaled more than \$41 billion. (2/76 - 6/77)
- **As Facilities Planning Engineer** - Prepared master plans, capital budgets, and performance specifications for Aramco residential, community, and industrial support facilities costing approximately \$15 billion in Dhahran, Saudi Arabia. As lead planning engineer, Mr. Cheney led a multidisciplinary task force in the preparation of master plans for all non-petroleum facilities needed in support of the Aramco Gas Gathering Program. He prepared implementation, phasing programs, and budget item requests, and developed project scopes, budgets, and schedules for facilities planned in support of the program. (1/75 - 2/76)

**Commercial Projects****American Express 3 World Financial Center Mechanical and Electrical Renovations - Director of Project Management**

Directed electrical and mechanical renovations to high-technology spaces at a 2.1-million-sf skyscraper in Lower Manhattan. Serious failures in the HVAC systems had caused total

shutdowns of the computer systems, resulting in massive financial losses for American Express until the system was back up and running. Time was of the essence. The entire cooling system was replaced and upgraded along with the associated electrical systems. All building and business functions remained operational during the rehabilitation activities. (7/91 - 12/92)

**Glaxo Wellcome Medicines Research Centre Computer Center Master Plan - Senior Project Manager**

Provided site evaluation, master planning, architectural/engineering concept design, programming, and schematic design and design development for Phase I of a master plan for a 1.8 million-sf administrative headquarters and research and development facility on a 73-acre site in Stevenage, Hertfordshire, UK. The main research and administrative buildings are arranged around a landscaped courtyard. The 4-story administrative building is approached over a pedestrian bridge from the visitor parking area and includes a conference center with a 200-seat lecture theater and seminar room facilities; a cafeteria; a restaurant; and occupational health, safety, and security functions. The project won the Supreme Award of the British Construction Industry Awards for planning, design, and construction, as well as the Building of the Year Award sponsored by The Architects' Journal with the New Civil Engineers and the London Daily Telegraph. (1/90 - 8/92)

**Miles Pharmaceuticals Corporate Office Headquarters Master Plan - Senior Project Manager**

Directed the master plan, architecture, and interior design for a total of 473,000 sf of corporate office headquarters space and 228,000 sf of underground parking on a 21-acre site in Marley-le-Roi, France. Comprehensive programming and pre-design documentation were completed prior to the design phase. Located near Versailles, the site history and physical context of the town of Marley-le-Roi were reflected in the design. (7/89 - 12/92)

**Bell Atlantic Bell Atlantic Tower - Senior Project Manager**

Coordinated design of the multiple-award-winning, 53-story, 1.37 million-sf Bell Atlantic Tower in Philadelphia. The skin of the building is granite and reflective glass. The faceted mass of the building provides more corner offices than any other in the City, while the stepped-back upper levels heighten the verticality and create terrace levels. Full height office windows enhance the accessibility of spectacular views in all directions. [The building is now known as Three Logan Square]. (3/88 - 2/90)

**Bristol-Meyers Commons Building - Senior Project Manager**

Programmed, designed, and documented an 85,000-sf building in West Haven, CT, including housing administrative offices as well as a cafeteria, library, and auditorium. Mr. Cheney managed a team of 30 team members for this approximately \$17 million project. (4/89 - 9/89)

**LABORATORY & HIGH-TECH PROJECTS**

**USDA Animal Health Facilities Modernization – Senior Program Manager**

Directed an on-site team of five professionals and two administrative staff to provide construction phase and design review services during the construction of a new \$460 million U.S. Department of Agriculture (USDA) laboratory complex in Ames, IA, with extensive BSL-2, BSL-3, and BSL-3 agricultural spaces. Mr. Cheney's responsibilities included leading the review and evaluation of bid package proposals and vendors, addressing technical questions from the construction managers and the bidders, administering bid package amendments, attending pre-bid conferences and preconstruction conferences, monitoring the construction manager submittal process, reviewing construction contract changes and clarifications, maintaining record drawings and specifications, providing QA services, and managing the commissioning process as the commissioning agent. The project included a 145,000-sf BSL-3 agricultural laboratory; a central utility plant expansion and infrastructure upgrades to support the expanded facilities; a 98,630-sf large-animal, low-containment facility; a 647,050-sf consolidated research laboratory; and various other new facilities. Included in the design reviews were solid and liquid waste pretreatment and disposal systems such as incinerators, rendering equipment, and biological waste cookers. The program management team for this program received STV's Project of the Year recognition in the Program Management category. (2003 - 1/09)

#### **Pennsylvania State University Applied Research Laboratory - Senior Project Manager**

Managed architectural and engineering design, documentation, and construction administration for a 3-story, 71,000-sf facility in University Park, PA, to research and test underwater guidance systems for the U.S. Navy. This project included 12,950 sf of laser and electronics laboratories, a 30-foot deep anechoic tank, a computer room, an acoustical laboratory, a teleconferencing facility, and a 300-seat lecture theater. The lecture theater is located on-grade, with flexible electronic laboratory space throughout the rest of the building. The design approach relied on flexible space being available for a variety of non-lab uses such as open office areas, classrooms, conference rooms, and faculty and staff offices. (7/91 - 7/93)

#### **Glaxo Pharmaceuticals Scale-Up Plant Building - Senior Project Manager**

Developed the project program and prepared architectural and engineering design for a \$30 million, 50,000-sf scale-up facility containing process labs, scale-up labs, scale-up multipurpose space, and separated hydrogenation areas in Research Triangle Park, NC. The facility was designed for segregation between labs and the large scale-up space, and allowed for future expansion as well as expansion of neighboring facilities. Mr. Cheney managed a team of 50 architects, engineers, and planners in the production of the design and construction documents. (7/91 - 8/92)

#### **Miles Pharmaceuticals Headquarters Research and Development Complex - Project Director**

Directed the master plan and architectural, engineering, and interior design for a pharmaceutical headquarters and research and development facility on a 500-acre site in Research Triangle Park, NC. The multi-building complex is connected with covered walkways in a configuration that follows the varied terrain. The facilities include the following separate but interrelated components: a 200,000-sf pharmaceutical development facility for bench scale and pilot-plant prototype production of various types of pharmaceutical products; 275,000 sf of diversified

pharmaceutical, chemical, and biomedical research laboratories; 225,000 sf for toxicology and drug safety evaluation, including BSL-2 and BSL-3 containment suites; 350,000 sf of research administration office spaces; and a 440,000-sf parking garage. The project won the prestigious Triangle Award. (1/89 - 8/92)

**Miles Pharmaceuticals Research Center - Senior Project Manager**

Managed the design of six research buildings of five stories each, totaling 229,658 sf on a 1.1-acre site in Kyoto, Japan. The buildings were planned as increments of phased construction and were oriented around a central garden and water court. The complex positioned common spaces in pavilions placed within the park-like setting. The prominence of the setting was significant in the prioritization of an image reflective of both Japanese culture and technology. The design of the laboratory units utilized a simple cubic form with vertical exhaust risers and external emergency walkways. The proposed stainless steel cladding was intended to be expressive of the enclosed technology and the softened roof forms and gridded pavilions reflective of traditional Japanese forms. (12/88 - 10/90)

**Miles Pharmaceuticals Central Utility Plant Building - Senior Project Manager**

Programmed, designed, documented, and administered construction of a 45,000-sf central utility plant to initially support 300,000 sf, and ultimately 1.4 million sf, of pharmaceutical research and development facilities in West Haven, CT. Mr. Cheney managed a project team of 40 design professionals. The estimated construction cost was \$19 million. (3/89 - 9/90)

**Miles Pharmaceuticals Pharmaceutical Laboratory Building - Senior Project Manager**

Programmed, designed, documented, and administered construction of a 130,000-sf biology and chemistry laboratory building with animal facilities in West Haven, CT. The building was designed for complete separation between the biology, chemistry, and animal areas. Mr. Cheney managed a multidisciplinary team of 50 architects, engineers, and planners. The estimated construction cost was \$36 million. (5/88 - 2/90)

**Bristol-Meyers Pharmaceutical Research and Development Campus Master Plan - Senior Project Manager**

Supervised the master plan for an 11-acre research and development campus site in Hillside, NJ. Mr. Cheney developed a 10-year program of needs, including approximately 300,000 sf of existing and new facilities. He managed and prepared architectural/engineering schematic design and documentation for renovation of four existing structures and construction of a new 90,000-sf addition. Facilities and functions included an animal facility; wet chemistry and biology; scale-up and aerosol laboratories; and a central library, cafeteria, administrative offices, and maintenance support. Mr. Cheney managed team of 30 planning and design professionals. The construction budget estimate was \$60 million. (11/87 - 5/88)

**INDUSTRIAL PROJECTS**

**Cabot, Cabot & Forbes Boston Internet City - Project Manager**

Managed the \$200 million renovation and expansion of a 2-story, 450,000-sf industrial building in Brighton, MA. The purpose of this fast-track project was to retrofit the existing facility with the necessary telecommunications infrastructure to house and support file servers and other hardware to allow the building to serve as an "Internet hotel." As the term suggests, Internet hotels are data centers that "lease" electronic storage space to companies involved in Internet-related activities. In addition to scheduling services, general project management and claims prevention services were provided to the client. (6/00 - 12/00)

**Glaxo Pharmaceuticals Production Facility Expansion - Senior Project Manager**

Managed the addition of 145,000 sf and the renovation of 40,000 sf of existing facilities in order to move production of the over-the-counter product line from a plant being closed in Morrisville, NC. This project included the construction of five process centers and five packaging lines; renovation and expansion of a 4,000-sf quality assurance laboratory; and central pharmacy, tank farm, warehouse, office, and administration functions. (10/90 - 12/92)

**Glaxo Pharmaceuticals Central Utility Plant Building - Senior Project Manager**

Programmed, designed, and administered construction of a \$47.5 million, 30,000-sf expansion to an existing central utility plant in Research Triangle Park, NC. The project included 1550-ton chillers, water tube steam generators rated at 40,000 pounds per hour, six cooling towers, and space for future prime movers. Mr. Cheney managed a team of 30 planning and design professionals. (7/91 - 8/92)

**Miles Pharmaceuticals Plant Building Renovation - Senior Project Manager**

Programmed and designed the \$13.5 million, fast-track renovation of a solid dosage production facility in Morrisville, NC. Renovations included the addition of granulation rooms with Collette Mixers; Glatt fluid bed dryers and kettles; Sweco sifters with mixers; ribbon blenders; tableting rooms with tablet presses; powder drop rooms; coating rooms; materials storage; and work-in-progress storage spaces, coating solution storage rooms, and mechanical rooms. Mr. Cheney managed a project team of 35 planning and design professionals. (9/90 - 7/91)

**Bristol-Meyers Pharmaceutical Research and Development Campus Master Plan - Senior Project Manager**

Oversaw the master plan for a 1.4 million-sf international research and development campus on an existing 70-acre site in West Haven, CT. The project included administration areas; a commons building; corporate headquarters; a central utility plant; and central support buildings with associated utilities, traffic studies, and wetlands issues. Mr. Cheney managed a multidisciplinary team of 30 planning and design professionals. The estimated construction cost was \$500 million. (11/88 - 3/89)

**Glaxo Pharmaceuticals Computer-Automated Warehouse Building - Senior Project Manager**

Programmed, designed, and administered construction of a 95,000-sf computer-automated storage warehouse in Zebulon, NC. The building stores pharmaceutical, raw ingredients, work-



in-progress, finished product, and packaging materials. The fast-track project was completed within budget and was occupied on schedule while allowing the existing production facilities to operate uninterrupted at full capacity. Mr. Cheney managed a multidisciplinary team of 35 planning and design professionals. The estimated construction cost was \$19 million and the project received the Lighting Excellence Award from the International Association of Lighting Designers. (9/86 - 2/88)

## **HIGHWAY/ROADWAYS/BRIDGES/TRANSPORTATION FACILITIES PROJECTS**

### **Aramco Various Roadway Projects - Former Division Head**

Organized and managed three Arabian American Oil Company (Aramco) divisions equal in scope and size to a small U.S. highway department in support of a major vehicular transportation program. Mr. Cheney directed the planning, design, construction, and maintenance of 62,500

miles of paved and unpaved roadways and storage areas throughout Saudi Arabia. He oversaw approximately 150 staff. (2/82 - 9/84)

### **Powers-Willis and Associates, Iowa City, IA – Senior Design Engineer and Associate**

Supervised and prepared highway and bridge designs. Developed computer applications to perform highway calculations, including alignments, profiles, cross section plots, and volumes of cuts and fills. (1970 - 1971)

### **Kansas State Highway Commission, Topeka, KS - Civil Engineer**

Prepared highway designs and developed a new position as liaison between design and data processing. Mr. Cheney automated the design functions of this major state highway department by introducing computer applications and conducting seminars to train design engineers in the use of CAD applications. (1967 - 1970)

### **Arkansas State Highway Department Office Engineer and Survey Party Chief**

Collected field data and prepared calculations for daily, weekly, bi-monthly, and monthly documents and contractor progress payments. Mr. Cheney inspected construction; approved field deviations; ran survey parties; and maintained the resident engineer office, files, and correspondence. Projects included Interstate 40 from Little Rock to Hazen, for which Mr. Cheney managed the resident engineer's office for construction of 36 miles of a new 4-lane, median-divided, controlled access highway; four interchanges; eight bridges over streams; and 28 grade separation bridges. (1963 - 1965)

### **Iowa City Cedar Street Bridge - Engineering Designer**

Performed structural design and prepared construction documents for a bridge spanning the Iowa River, Iowa City, IA. The bridge consisted of four spans and the estimated cost was \$2.4 million. In addition, Mr. Cheney developed computer applications to perform highway calculations such as alignments, profiles, cross-section plots, and volumes of cuts and fills. (4/70 - 6/71)

## MARINE PROJECTS

### **AT&T Sand Island Marine Terminal - Project Manager**

Oversaw design and construction management for a new terminal for cable ships that install, maintain, and repair underwater communications systems in Honolulu. The 1.5-acre terminal has an 80-foot-long breasting pier/mooring platform with access catwalk and dolphins. Damage was assessed, designs developed, construction contractor selected, and turnkey repairs were completed on an expedited basis. Mr. Cheney oversaw field investigations as well as design and specifications for the \$2.2 million project. (11/95 - 12/97)

## SITE DEVELOPMENT PROJECTS

### **Puerto Velero Resort Community, Chile - Program Manager**

Provided a land use plan and infrastructure concepts for a 267-acre community in Tongoy, Chile. The development consisted of 5,000 condominiums, 400 single-family lots, and a 1,100-room hotel. (9/97 - 12/98)

### **Santa Margarita Resort Community, Chile - Program Manager**

Provided a land use plan, infrastructure concepts, and a feasibility study for 111 acres for 1,500 condominiums, 400 single-family lots, and a 250-room hotel in El Tabo, Chile. (1/97 - 12/98)

### **Aramco, Division Head and Program Manager of Local Community Development**

Assembled and managed an Arabian American Oil Company (Aramco) division of about 350 multinational, multidisciplinary professionals and specialists grouped in teams for numerous tasks in Dhahran, Saudi Arabia. planning, design, and construction of 5.4 miles of a 6- and 4-lane, median-divided, controlled access highway. (9/84 - 7/85)

### **Aramco, Division Head, Community and Industrial Facilities Projects Division Various Projects**

Responsible for planning, design, and construction to develop Arabian American Oil Company (Aramco) complexes in the cities of Dhahran Hills, Abqaiq, Ras Tanura, Udhailiyah, and Safaniyah in Saudi Arabia. Facilities included 5,000 expatriate family housing units, 10 mid-rise buildings, 10 primary and secondary schools, 3 dining halls, 4 commissaries, and 5 office blocks. Construction value was estimated at \$5 billion. (2/76 - 9/84)

### **Peoples Protective Corporation, Planned Unit Developments - Vice President, Engineering**

Planned, designed, and administered construction of three new retirement communities occupying 8,000 acres. The scope of work included approximately 250 miles of internal and connecting roads and streets at an estimated cost of \$11 million. Mr. Cheney assembled and managed a 40-person team of architects, engineers, and construction technicians to implement the work. The scope of responsibilities included planning, architecture, and design for the Round

Mountain Development in Arkansas, the English Mountain Development in Tennessee, the Sugar Tree Development in Tennessee, and the Fairfield Glade Retirement Community in Tennessee. (6/73 - 12/74)

**Bell-Burrough-Uerling Consulting Engineers, Community and Ancillary Facilities Planning - Senior Project Engineer**

Planned and designed roads and streets totaling approximately 150 miles for six communities. Supervised and prepared civil engineering designs for water systems, sewerage systems, and earth-fill dams. Prepared feasibility studies and land use plans for new communities and managed a data processing service subsidiary. Projects included the Fort Smith Airport expansion in Arkansas; the Taum Sauk Community feasibility study and master plan in Poplar Bluff, MO; the Round Mountain Community feasibility study and master plan in Conway, AR; the Cedar Village Community feasibility study and master plan in Blytheville, AR; and the Hot Springs Village, AR, feasibility study and master plan. (6/71 - 6/73)