



Our Company

Rau and Associates, Inc. is a general engineering firm that provides surveying, environmental design, civil design, structural design, and geotechnical consulting services for site development and building construction projects. Our firm was originally incorporated in 1980 as Scherf and Rau, Inc. and was changed to Rau and Associates, Inc. in 1990 with the retirement of a senior principal.

Our firm's goal is to provide the full range of engineering services required by our clients, for these projects.

Rau and Associates has provided design and/or construction services to many architects, government agencies and private clients, either as the prime design professional or as a sub-consultant. Our emphasis on all projects is to contribute our expertise as required, to a cohesive multi-disciplinary team whose goal is the effective and efficient provision of comprehensive engineering services to the client.

Rau and Associates offers an organized and inclusive project development program that is adjusted to be cost effective for each project's identified goals. We rely strongly on client participation and feedback to set and accomplish these goals throughout the project's life.

Our Technology and Facilities

In today's fast-tracked project schedules, Rau and Associates recognizes the need for efficient preparation, modification, and distribution of project documents. To facilitate this, Rau and Associates is committed to using industry standard computer software and hardware. Staff members are linked to one another through an internal LAN and have access to e-mail and the Internet.

The firm uses Wild Total Station survey equipment for a fully integrated and computerized data collection system. Site mapping and boundary surveys are generally the first step in developing competent working drawings. Rau and Associates carefully plans this work with the project architect to insure that all of the design team (civil, electrical, mechanical, landscape architect and project architect) have an accurate common base map and coordinate system with which to integrate their work.

Our primary survey and engineering design software runs within AutoCAD. The fully integrated system utilizes data collected with Wild Total Station survey instruments to create three-dimensional terrain models of the existing site. Design software overlays the terrain model with proposed roadway, grading, or utility designs. This automates much of the plan drafting, section drafting, quantity take-off, and perspective rendering. It also significantly reduces the cost of analyzing alternate designs and making subsequent revisions.

To reinforce our firm's goal and commitment to full service for our clients, Rau and Associates have a soils laboratory for basic materials analysis and construction compliance testing. Our technicians do on-site compaction testing to provide timely confirmation of construction procedures and contract performance.



Our Quality Management

Our professionals maintain a high degree of involvement and management control over each project, thus, facilitating a close client-consultant relationship. In addition, Rau and Associates has established close working relationships with specialized engineering firms and independent consultants. These relationships ensure we can form design teams that can address the specific requirements of individual projects. The combination of long-term involvement in the local community, continual improvements to technology and education, practical experience, and personal commitment at Rau and Associates results in an effective response to client's engineering requests, on time and within budget.

Rau and Associates corporate procedures are continuously reviewed and modified as required through our formal TQM (Total Quality Management) program. Goals and priorities are confirmed during meetings of our three-person management team.

Our Personnel

Staffed by highly qualified civil and geotechnical engineers, land surveyors, and technical support staff, Rau and Associates has extensive depth of experience in general civil engineering. Each staff member is continually upgrading their education through seminars, classes, and in-house training to maintain their efficiency and knowledge of current science and methods. The majority of staff is highly trained in the use of computers and industry standard computer applications for design and project management. Rau and Associates is continuously upgrading hardware, software, and staff education to provide competent and efficient service. Our staff prides itself in being able to integrate into project teams of other competent consultants.

Rau and Associates has personnel who have worked on civil engineering projects in positions of responsibility within the Mendocino County Public Works Department, Millview County Water District, PG&E, City of Ukiah, and City of Willits. These positions were either as employees of the entities named or as consulting engineers contracted to act as City Engineer. Their experience provides insight into the expectations, internal process, and approval requirements that are invaluable to our clients.

Rau and Associates use the following computer models and software:

- WILDSOFT (Surveying System Software)
- HEC RAS (Storm Simulation & Flood Modeling)
- WATERCAD (Hardy-Cross Water Flow Analysis)
- PONDPACK (Detention Pond Design)
- CULVERT MASTER (Open channel hydraulic analysis)
- AUTOCAD 2003 (Computer Aided Drafting)
- AUTODESK LAND DESKTOP (Roadway and site design)
- STORMCAD (Storm drain system analysis and design)
- FLOWMASTER (Hydraulic analysis)
- AUTOTURN (Vehicle tracking for layout design)
- ENERCALC (Structural Design Analysis)
- MICROSOFT PROJECT (Project Management Modeling)
- MICROSOFT OFFICE (Word, Excel, E-Mail, Access, Power Point)
- AXIUM (Accounting)



Our Services

Rau and Associates, Inc. is an independent small business providing public agencies and private clients with civil engineering, geotechnical engineering, and surveying services. From our offices in Ukiah, California we offer our services throughout Mendocino County, and on a specific project basis in Sonoma, Santa Cruz, Lake, and Humboldt Counties. Some of the services we offer include:

- ✚ PROJECT MANAGEMENT
- ✚ CONCEPTUAL / SCHEMATIC DESIGN OF ALTERNATIVES
- ✚ ENGINEERING & FINANCIAL FEASIBILITY STUDIES OF ALTERNATES
- ✚ SCHEDULING & OPINIONS OF PROBABLE CONSTRUCTION COST
- ✚ LAND SURVEYING, RIGHT-OF-WAY, & EASEMENT MAPPING
- ✚ LEGAL DESCRIPTIONS & CONSTRUCTION RIGHT-OF-ENTRIES
- ✚ MASTER PLANNING
- ✚ PRELIMINARY GEOTECHNICAL ENGINEERING
- ✚ SITE DEVELOPMENT DESIGN COORDINATION
- ✚ ENVIRONMENTAL STUDIES & DESIGN OF MITIGATION MEASURES
- ✚ TOPOGRAPHIC MAPPING
- ✚ GRADING & DRAINAGE DESIGN
- ✚ IRRIGATION POND & DAM DESIGN
- ✚ LEACHFIELD EVALUATION
- ✚ SEWAGE COLLECTION & SYSTEM DESIGN
- ✚ WATER SYSTEM & DISTRIBUTION DESIGN
- ✚ ROAD & STREET DESIGN
- ✚ BRIDGE DESIGN
- ✚ COMMERCIAL & RESIDENTIAL STRUCTURAL DESIGN
- ✚ FOUNDATION ENGINEERING
- ✚ RETAINING WALL DESIGN
- ✚ REHABILITATION PROJECT DESIGN
- ✚ SPECIFICATION & CONTRACT DOCUMENT PREPARATION
- ✚ CONSTRUCTION LAYOUT STAKING
- ✚ QUALITY ASSURANCE OR QUALITY CONTROL
- ✚ CONSTRUCTION REVIEW & ENGINEERING SERVICES
- ✚ MATERIALS TESTING
- ✚ CONSTRUCTION CONTRACT ADMINISTRATION



Our Organization

Rau and Associates, Inc. is organized into seven informal service divisions.

Project Management & Planning Services include preliminary conceptual/schematic design, budgeting and scheduling, coordination of surveys & sub-consultant studies, feasibility analysis, alternative selection, environmental constraint analysis, traffic impact analysis, environmental assessment, right-of-way planning, design coordination, and permit application assistance. Typical assignments are large projects with extensive public involvement and a wide array of sub-consultants & interests to be coordinated.

Geotechnical, Geological & Soils Laboratory Services include preliminary soils investigation, geologic hazard identification and mapping, environmental assessment, excavation/embankment stability analysis, and construction compliance testing.

Land Surveying & Mapping Services include real property boundary surveys (GPS or standard), topographic mapping (aerial or ground), right-of-way surveys, and right-of-way & easement acquisition assistance. Also offered are construction staking and as-built record surveys.

Site Development Design Services include streets, parking, sidewalks, water wells & mains, sanitary & storm sewers, septic leach-fields, grading, and utility locations. This is accomplished through needs & capacity analysis, preliminary design, cost estimating, site layout design, coordination of utility & drainage designs, detailed design & technical specifications, contract preparation & administration, construction engineering, and quality control / assurance. Typical projects are commercial or industrial buildings, schools, health-related buildings, subdivisions, and rural residential lots.

Road & Drainage Design Services include needs analysis, preliminary design, cost estimating, structural section design, floodplain risk assessment, water quality analysis, coordination of utility and municipal systems designs, environmental impact mitigation design, detailed design & technical specifications, contract preparation & administration, construction engineering, and quality control / assurance. Typical projects are county roads, community airports, irrigation ponds, quarries, and dams.

Community Water & Sanitary System Design Services include preliminary design, source or disposal studies, capital improvement budgeting, rate structure analysis, funding justification, property acquisition assistance, environmental impact mitigation design, system & component design, piping network analysis, construction contract preparation & administration, shop drawing review, quality control / assurance, construction review, and startup assistance.

Structural Design Services include structural design, cost estimate preparation, specification writing, shop drawing review, quality control, and construction review. Typical projects are one and two story buildings, building rehabilitation, bridges, hydraulic structures, retaining structures and erosion prevention structures.