

TONGASS NATIONAL FOREST FACILITIES ENGINEERING

The Facilities Engineering Group works for the Forest Engineer in the Supervisor's Office, which has offices in Ketchikan, Petersburg, and Sitka. Engineers in the Facilities Engineering Group are currently located in Sitka, Juneau, Ketchikan and Petersburg. The group currently consists of four civil engineers, an electrician, and one AutoCAD support technician.

Facilities engineers are involved with project work all across the 17 million acres of Forest, from Hyder to Yakutat. We do planning, design, construction and maintenance for new and existing buildings. We do condition inspections of existing buildings to identify maintenance items and make sure the building meet the model building codes.

Work on a project may consist of:

- Planning – do an overall master plan for all 200 buildings on the forest to decide whether to maintain, renovate, or dispose the existing building, or acquire a new building. The next step is to do an analysis for the best option for a particular building – renovate the building, or build, lease or purchase a new building.
- Site survey – the Forest Service has professional land surveyors to help us with this task, or we contract the work to private surveyors. For very small sites, the design engineers may do their own survey with a compass, cloth tape, and clinometer.
- Use the survey data to create a topographic map in a terrain modeling software - we currently use Land Development Desktop or Terramodel.
- Site development plan – for a particular site, we consider where to locate the building, which direction it should be oriented, where the utility connections are, how the rain will drain off, and how to provide access to it.
- Do a design – a lot of our designs are from standard designs, but we need to adapt all or portions of the design to each individual site. We also work with Architect Engineer firms who do designs for us.
- Prepare contract documents – this includes drawings in AutoCAD, specifications in Microsoft Word, and a cost estimate in Microsoft Excel.
- Contract administration of the construction project – this involves watching the contractors work and making sure the work is being done in accordance with the plans and specifications.
- Maintenance – each of our Districts have maintenance people to fix their building problems. Engineers help the Districts identify and fix any code violations, and also assist in contract preparation for major work items like roof replacements.
- Building database – the Oracle database named Infrastructure helps us keep track of all our buildings, their size, the seismic requirements, and their maintenance problems.

OFFICES. The Tongass National Forest is spread out over many islands and the mainland of Southeast Alaska. The Forest has administrative offices in most of the towns in Southeast Alaska. We own seven offices, and also lease office space in six buildings. We are currently preparing a design/build contract for a new Ranger District and National Monument office in Juneau, and are in the planning process for an addition to the District office in Ketchikan.



HOUSING. We have two types of housing. In employees who work during the summer field round houses for employees who work in small towns like Yakutat, Hoonah, Craig and Thorne Bay. We are currently advertising for the construction of two new flexible housing buildings in Juneau, which has apartments for both seasonal employees and permanent employees. We are also working with an Architect Engineering firm for the design for permanent employee housing in Yakutat.

bunkhouses, we house volunteers and permanent year



Petersburg Flexible Housing



Sitka Warehouse

WAREHOUSES. Each Ranger District on the Tongass owns a warehouse. They vary in size from about 3,000 square feet to over 14,000 square feet. The Districts use the warehouses to store their field gear, to do carpentry work for the recreation, engineering, timber, and fisheries programs, to maintain vehicles and boats, and to store records and archived documents. We are currently doing a conceptual design for the replacement of the Ketchikan warehouse and are currently preparing a

design/build contract for a new Ranger District and National Monument warehouse and dry storage building in Juneau.



Kennel Creek Remote Camp

REMOTE FIELD CAMPS. We operate remote field camps throughout the forest. These camps are typically located about 20 to 50 miles from the town where the District office is located. These camps provide a dry shelter where field crews can live for 10 days at a time while doing their timber layout, road maintenance, fish counting, and trail construction work. These camps usually have sleeping and cooking facilities, and use generator or solar energy for power.

HOUSING BARGES. The Forest has four housing barges that are used as movable field camps. Each year the barge can move to a new location where the work is occurring. Three of the barges can sleep up to 14 people, and one can sleep 8. The barges are self-contained with sleeping rooms, bathrooms and kitchen. The generators, fuel tanks, water chlorination system, and sewage waste disposal system are located in the hull. We are currently renovating one barge at the Shipworks in Everett, WA and another at the Shipworks in Ketchikan, AK. We are replacing the roof, siding, windows, and doors, as well as sandblasting and painting the hull.



Chickamin Housing Barge

If you would like more information about the Facilities Engineering Group, please contact Molly Murphy in Sitka at 907-747-4319, or e-mail me at mmurphy@fs.fed.us.