terminal operations. We are looking at terminal design and mechanical features that can be built to increase cargo handling within the same acreage and without a huge capital investment. The port is also expanding its Electronic Data Interchange (E.D.I.) to eventually link U.S. Customs, cargo terminals, vessels and inland transportation carriers.

## COMPETING IN THE PACIFIC NORTHWEST BY BONNIE McDADE Port of Bellingham

The Port of Bellingham is located 90 miles north of Seattle on Interstate 5, in Whatcom County, the most northwestern county in the U.S. excluding Alaska. Bellingham is 23 miles south of the Canadian border.

The port facilities include the Bellingham International Airport, which increased flights from 9 daily to 76 daily in a year and one-half. There are two marinas and a new convention and trade complex. The port has four foreign trade zones, which will grow in relation to trade with Canada. There are two industrial parks, and a shipping facility called Whatcom International Terminal which has 50 acres of cargo terminal and 70 acres of foreign trade zone. The ports cargos include aluminum, wood pulp, chemicals and dried milk.

The port is located closer to the Pacific Rim than the Port of Seattle. The port is competing with the Port of Seattle to locate the southern terminal of the Alaska Ferry. It has the advantage of cutting six hours off the sailing time, and it is only a 1-1/2 hour drive by car from Bellingham to Seattle.

Ports in the State of Washington are mandated by the state legislature to do four things: maintain safe harbors, maintain safe terminals, take a leadership role in economic development, and promote tourism.

## THE EMERGING ROLE OF AN INLAND INTERMODAL TRANSPORTATION FACILITY BY LARRY BONDERUD Northern Express Transportation Authority

The Northern Express Transportation Authority (NETA) is located in Shelby, Montana, a town of 3,500 population in a county of 6,000 persons. The concept of the inland intermodal facility is about 10 months old. The authority is a regional port authority under state statutes, the second such authority created in the state.

NETA came into existence to take advantage of its geographic location. It is located about 30 miles from the Canadian border on the Burlington Northern Railroads east-west main line, and on the BN's north-south line which runs from the Canadian border south to Houston, Mobile and Pensacola. About 44 trains per day run through Shelby, of which 12 are intermodal with eight double-stack trains and four single-stack trains.

Another key factor in Shelby's geographic location is that one of the largest Ports of Entry is at Sweetgrass, Montana, at the Canadian border, handling about 750 semi-loads per day through Customs.

The State of Montana provided a big carrot to help bring the project for an intermodal facility together. This was in the form of Exxon overcharge funds that were returned to the state. The state allocated \$2.1 million of these funds for development of an intermodal facility. This gave us the incentive to pull our resources together and to hire the expertise and consultants. Although the state funds went to another port authority, in Butte, we were sure of our concept, and we agreed to proceed.

Shelby, Montana is served by 50 transportation companies that have worldwide networks. The key was to access those companies and to make the proper linkages with Pacific Northwest ports, which would lessen our dependence on the BN railroad.

The population of the Province of Alberta now exceeds the State of Colorado, making it a major transportation market. A new transportation authority could act as a gateway between Canada and the U.S. With the large volume of trains, trucks and container movements in this region, the new authority could gain access to some of this traffic.

One concept which could enable the authority to serve as a resource for the BN involves the ongoing study in development of uniform length and load limits for trucks. British Columbia, Alberta and Saskatchewan are going to adopt uniform limits. The maximum gross vehicle weights are going to be 137,500 pounds with 8-axle rigs. The authority is moving those vehicles right now. Between Shelby and the Canadian border, the BN mainline has located "tramp" loading sites. These loading sites allow for transfers between trucks and trains of bulk commodities and containers. Some bulk cargoes are loaded there into containers for export.

At present, NETA is handling 300 forty-foot equivalent container units per month. Many of the containers are U.S. consumer goods coming out of the Midwest via the BN. Canadian export shipments move through NETA to U.S. markets.

We provide warehousing and bulk transloading. NETA provides export cargoes for empty boxcars moving to the West Coast as well as alternative routing and intermodal competition that provides savings for shippers.

One means the authority is working on to extend the range of containers served by NETA involves obtaining permission to exceed the 105-foot length limit on trucks. We could then handle two 40-foot containers in tandem which, along with the cab, would exceed the limit. We will work with the state to determine the placement of trailer axles. The state will be providing scales to weigh trucks at our facility. Sea-Land has agreed to position equipment at the facility.

The NETA is also considering agricultural exports on double-stack trains. At

present, we are loading containers with grain products without taking them off the flatcars.

## AUTOMATIC INVENTORY SYSTEM AT THE SP INTERMODAL CONTAINER TRANSFER FACILITY BY

ROGER D. STILES
In-Terminal Services

In August, 1986, In-Terminal Services was chosen as the contractor by the Southern Pacific to operate the newly created Intermodal Container Transfer Facility (ICTF) in Long Beach, California. This modern, fully automated, state of the art facility was built by the SP in conjunction with the Ports of Long Beach and Los Angeles in response to the growing needs of their many international customers. The ICTF is the largest rail container facility in the world.

As this was a totally new and untested facility in almost all operational aspects, many challenges arose in the first two years of operations, not the least of which was inventory control. To illustrate the magnitude of this challenge, consider the following factors. The ICTF currently operates on approximately 230 acres, has 5 working tracks each about 1 mile in length, has 2,300 numbered parking slots, handles 36 double stack trains per week (varying from 6 to 28 cars) and 42 conventional trains per week also of varying sizes, does in excess of 360,000 lifts annually and will have an average of 2,500 containers on chassis and 4,000 bare chassis in the yard at any given time. Ownership of these containers belong to many varied customers utilizing the ICTF.

The dynamic parking scheme of the ICTF was designed to be operated with a real time computerized inventory system, conceived by the SP to utilize their existing TOPS/TCC systems integrated with slot monitors and a mobile inventory system.

There are several key elements that combine to make this a highly effective and efficient operation. First, the drivers delivering the containers or picking them up, must ensure that the container and chassis numbers they give the pre-checker are correct and that they park their container in the assigned parking slot.

The second, is our pre-check clerk working with the slot monitor, communicates directly with the driver and must ensure proper data input as this drives the slot assignment by the slot monitor. The slot monitor maintains a real time inventory of available parking slots. A daily plan is laid out based on the day's projection as to what destinations and/or blocks will be loaded on which tracks. The slot monitor is then programmed with this information, so that when a container comes in for a particular destination, it will provide the pre-check clerk with the next available slot in the area designated for that destination.