

# FHWA Freight Transportation Industry Internship

## Mining, Forestry, Fishing & Agriculture



These internships are designed to enable public sector participants to better understand: 1) how the various industries' supply chains work; 2) how transportation decisions are made and who makes them; 3) what drives decisions; 4) how the industry manages or contends with transportation problems and issues; 5) what critical situations require immediate changes to modes, routes, or schedules; 6) the availability of transportation infrastructure and the impact of the infrastructure conditions; 7) the importance of the on-time performance of the industry's supply chains and distribution networks; and 8) the economic and policy environments that shape the supply chains. This may be accomplished through focused questions and discussions with responsible industry staff and firsthand observation.

*Please note that the array of cargos included in this section is very diverse with respect to supply chains and the modes that could be utilized, making the transportation considerations complex at times.*

**Industry Description – Mining:** the extraction of minerals such as coal and ores; liquids, such as crude petroleum; and gases such as natural gas. Mining is also used to include quarrying, well operations, milling, and other preparation customarily done at the mine site, or as a part of mining activity.

**Industry Description – Forestry and Agriculture:** farms, ranches, dairies, greenhouses, hatcheries, nurseries, and orchards, primarily engaged in the production of crops, plants, vines, or trees and the keeping, grazing, sale, or feeding of livestock. Livestock includes cattle, sheep, goats, hogs, and poultry, as well as animal specialties. Forestry covers establishments primarily engaged in the operation of timber tracts, tree farms, or forest nurseries; in the gathering of forest products; or in performing forestry services.

**Industry Description – Fishing:** primarily engaged in commercial fishing and operating fish hatcheries and preserves.

**Prior to the Internship:** Gather general information on the host industry and facility

### **Research the type of operations, employees and facility**

- Internships with some of these industries may be difficult to arrange. Initial off site discussions at, for example, a farmer's co-op or executive offices of a mining company may be a first step prior to requesting field observations.

- Working in the field in mining, agriculture, farming, ranching, or fisheries may require special clothing, safety training, and equipment; be sure to understand the rules and dress and act accordingly.

### **Coordinate and clear your proposed activities with the host company**

- Schedule and clear your internship activities with a host company official (including participation in meetings, observations, and interviews) prior to the internship.

**During Internship:** Internship opportunities for this broad group of industries vary based on US region. Establishments that produce agricultural commodities and sell them directly to the general public for personal or household consumption are not included in the suggested questions below.

### **Interview Manager of the Host Facility**

- What types of supplies and materials are required to support the facility and how are they shipped
  - Upon arrival, do they go to a central location or directly to the field or site where they are used (e.g., how are feeds delivered daily to stalls or pens)
  - How are materials transported within the facility
- How are products shipped to customers
  - What mode(s) of transportation are used
  - What types of material handling or facilities are required (rail sidings, cranes, special equipment)
- Are truckloads taken to a rail or barge terminal; if so, in what type vehicle and quantities, how is the transportation arranged, what is the schedule for train loadings, or what volume or carload requirements are set by the railroads to warrant a stop
- How important is Just-in-Time delivery
- What is the impact of truck weight limitations; how does this impact the routes they take, the modes they use
- Do they obtain permits for overweight loads; if yes, what type of permit (routine, single or multiple trip, commodity restricted, etc.); what is permit fee schedule
- Discuss transportation issues impacting their business and its operations:
  - Fuel prices
  - Increase or decrease in demand for products (economy)
  - Seasonal impacts

- What types of changes could the business experience in the short term; long term
- How do the current transportation (highways, rail, waterways, air, pipeline) network connectivity and infrastructure condition hinder or optimize productivity
- What are obstacles to 1) driving, e.g., low bridge, sharp turn, slow traffic light, one-way streets, construction, congestion; 2) railroad transport of goods and the connectivity (short lines to Class I's, rail access to grain elevators, etc.); 3) airport access 4), pipeline terminal access (see 1 above)
- How easy are intermodal connections; are loads transferred between multiple modes; how is their access to intermodal facilities; how can intermodal access be improved—including international and national gateways (air and water ports, border crossings, rail, truck, etc.)
- How are railcars transferred from short line railroads to Class I railroads; is this a problem; do bulk commodities such as grain have to be partially transported by truck as a result of any disconnects; what are the economic and other impacts (to roadways, cost of grain shipments, etc.)

#### **Discuss the intern's public sector job function**

- What types of decisions are made by the FTII participant; how may these decisions impact this company's performance
- How can participant or agency better communicate with this company and vice versa
- What can be done to improve transportation efficiency for the industry

#### **If appropriate, talk with the operations manager, supervisors, drivers**

- Does the driver work in the same or similar area daily; how many turns or miles does the driver cover daily; what are the average daily number of deliveries and pick-ups for the driver
- What types of roads does the driver take (highways, or secondary roads); does the driver choose the route; are there toll ways in the area; does the driver use them; does the company approve the use of toll ways; who pays the tolls
- How does weather or other events impact schedule and/or route for each mode utilized
- What happens if deliveries cannot be made
- What causes delays, e.g., infrastructure issues, accommodating recurring congestion in urban area; facility design; loading space issues; modernization of infrastructure such as short line railroad capacity, etc.
- Who determines the amount of time a truck can idle

- What transportation improvements, investments, technology changes or tools are needed to facilitate efficiency improvements; by mode; how much of an issue is the overall system condition (pot holes, rail capacity, etc.) to the routes they take; to long-term condition and maintenance needs of their vehicles; to the condition of the products they ship or receive

#### **Observe inbound, internal, and outbound supply chain operations**

- Physical handling of shipments during loading and unloading
- Type of equipment being used based on the routes
- When are changes of operations required; how are changes communicated and how quickly are they implemented

#### **Ride-along<sup>1</sup>**

- How does the driver negotiate infrastructure (turning radii, bridge weight restrictions, clearances, signage, or signalization delivery times and parking restrictions, etc.)
- What technology is available, e.g., in the cab, GPS in current farm equipment
- If the host is a private carrier operating its own vehicles, you should seek to understand motor carrier operations during the internship. Refer to Motor Carrier sheet for additional information.

#### **Conclusion of Internship:**

- Lessons learned from the internship experience should be shared by both the host and participant with the public agency and host company
- Identify opportunities for collaboration in the future

#### **Contact:**

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<sup>1</sup> With permission of the host company and authorization from participant's insurance provider