

Manson Construction Project Student Guide

Table of Contents

Manson Construction Project Overview

Module 1	Overview of Manson Construction Project
Module 2	Site Tour
Module 3	Determining Transportation Options and Route Planning
Module 4	Writing Business Reports
Module 5	Making Business Presentations

Appendix A: Glossary

Student Guide for Manson Construction Project

About this Project

Welcome to the Manson Construction project. This project allows you to explore career opportunities in marine construction, transportation operations, logistics planning and management for shipping, surface transportation and air freight. It also lets you solve some typical problems people face in this career area.

Manson Construction is the sponsor of this project. You will work on a typical problem: supplying the construction crews in Alaska with necessary materials and equipment.

You will visit the Port of Seattle's shipping facilities and Manson Construction's home. You also will learn about the many career opportunities in shipping, air shipping, insurance, construction and other similar companies in the transportation, distribution and logistics sector career cluster.

The project also will allow you to practice your academic and workplace skills such as teamwork and learning how to solve problems in the business world.

Good luck!

Project Goals

The major goals of the project are to:

- Provide students with an orientation to career opportunities in logistics planning and management within the transportation, distribution and logistics career cluster.
- Provide students with the necessary career exploration experiences to decide whether they wish to explore these career opportunities further.
- Provide students with an orientation into how these careers relate to all aspects of the transportation, distribution and logistics industry.
- Demonstrate the application and integration of academic subjects as well as problem solving, teamwork, computer, and learning skills in real-world workplace applications.

More specific learning objectives are presented at the beginning of each learning module.

Project Outline

The Manson Construction Project has five major sections or modules. These modules are:

- Module 1 Overview of Manson Construction Project
- Module 2 Site Tour
- Module 3 Determining Transportation Options and Route Planning
- Module 4 Writing Business Reports
- Module 5 Making Business Presentations

Each module provides you with knowledge and skills you will need to solve the problem. Each module contains the following:

- **Objectives:** Each module begins with a set of student learning objectives. These objectives define what you should know and be able to do after completing the module. Your teacher will work with you to assess your knowledge and skills.
- **Readings:** Each module starts with short introductory readings that your teacher will review and discuss with you. These readings are designed to provide the basis for group discussion and problem-solving activities.
- **Activities:** Each module provides group activities that are designed to help you learn and apply concepts and skills in solving problems.

After your team completes the project, company representatives and your teacher will work with you and your fellow students to evaluate your proposed solution.

Module 1

Overview of

Manson Construction

Project

Module 1

Overview of Manson Construction Project

Objectives

After completing this activity, you will be able to:

- Determine customer needs and requirements
- Identify the cost/benefit of different shipping methods between Seattle and Alaska
- Develop a logistics plan including final routes, schedules and total cost
- Use geographic information technology tools to identify and analyze alternative transportation routes and methods
- Produce a written business plan
- Develop a business presentation to share your proposal
- Describe the types of career opportunities in marine construction

Analyzing Manson Construction Project Problem Statement

Problem Statement: You are the transportation manager for Manson Construction and Engineering, a Seattle-based construction company that specializes in marine construction. Your company has been contracted to do a pier reconstruction job at the port of Seward, Alaska. During construction, a machinery malfunction requires immediate shipment of a new generator from your home office on the Duwamish waterway. The Port of Seward has also decided to expand the pier, requiring Manson to ship in additional materials from their home office.

Your assignment is to:

1. Ship a generator from Seattle immediately. Without a new generator, the job would have to shut down, costing money in lost labor.
2. Truck or vessel ship six concrete pilings to expand the pier.

Required Materials and Resources

Dimensions of generator – the generator is a free-standing (not on a trailer), diesel-powered unit. It is five feet long, three feet wide and three feet high. It weighs seven thousand pounds.

Dimensions of pilings – The six (6) concrete pilings are each 75 feet long, 16 inches in diameter. They weigh 250 pounds per foot, or 18,750 pounds each.

Manifest list for construction materials/supplies:

- Container size TEU/FEU's
- Total weight and distribution

Site location and map

- Maps of Seattle, Tacoma, Anchorage, Seward, Sea Routes
- Distances by land/sea/air

Shipping cost sheet(s)

- Price: per total weight, number of containers, or total Shipment.
- Compare cost/time/services requirements
- Liner Trade/Tug & Barge/Air/Surface shipping
- Insurance for entire shipment

Analyze the problem and develop questions for your site tour. You should write you questions in your class notebook.

Tips for Analyzing Problem Statements

Here are some tips for analyzing the problem:

- Read the problem statement very carefully. Go through the statement sentence by sentence and ask for clarification of any part you don't understand.
- Don't assume anything. Make sure you can back up any assumption about the problem with what is stated in writing.
- Don't be concerned if you don't have all the information you need. You will get more information at the site tour and by asking our business partners and Mr. Foster for the information you need to solve the problem.

- Don't be concerned that you don't know how to develop a business report. You will have direct instruction on how to develop these types of plans.
- Don't be afraid to ask questions and tell people what you need to know. Good problem-solvers are people who are not afraid to learn new things and ask for assistance.

Determining What You Know and What You Don't Know

Expert problem-solvers start their analysis of a problem by writing down what they already know and what they need to know to solve the problem. Once they identify what they don't know, they then develop questions and seek out people who can answer their questions and help them solve the problem.

The best way to do this is to make two columns in your notebook with one column for what you know and one column for what you don't know.

Module 2

Site Tour

Module 2

Site Tour

Objective

After completing this activity, you will be able to:

- Describe how Manson Construction receives, stores, and distributes materials to selected job sites.
- Identify and describe major job opportunities at Manson Construction.
- Understand Manson Construction's geographic location and how this affects their transportation options
- Ask questions and take notes on answers for solving the problem.

Preparing for the Site Visit

You need to make sure that you get all or most of your questions answered at the site visit. You also need to make sure you use the site visit to understand how Manson Construction determines the most efficient sipping method. Here are some tips to get the most out of your site visit.

Understanding How Manson Construction uses its facility for storage of materials and equipment

As we tour Manson Construction's home offices and facilities along the Duwamish waterway, notice what sorts of storage facilities are available and the size and types of material handling equipment available (fork lifts, cranes, trucks).

Preparing to Ask Your Questions

- Practice asking your questions with other students. Be sure to state your question slowly and clearly and be prepared to restate your question if people do not understand what you are asking?
- Make sure you listen carefully to all questions and answers. If you don't understand the answer, ask people to say it again or repeat what you don't understand.
- Take notes on the answers. Don't try to write down everything that is said. Write down the major concept or idea that you can refer to later.

Activity

With your group, do the following:

1. Ask your questions to your teacher and other students and ask them to tell you whether they understand your question and how you could say it better when you get to the Manson Construction site.

After the Site Visit

After the site visit, you will have more information to solve your problem. But, you will quickly forget this new information if you don't review your notes and write down what you know. Here are some suggested steps to take.

As soon as possible after leaving the Manson Construction headquarters, write out your notes in more detail in your Student Log Book or on a separate sheet of paper. Make sure you write clearly so you can read your own notes later!

Step 1: Revise your work sheet or start a new work sheet. Identify what you know and don't know after the tour.

Step 2: Make a list of questions that you need to answer and write down what you need to do to get these questions answered.

Step 3: Meet with your group to compile a list of what you know and what you don't know and write out all of your questions and strategies for finding answers to your questions.

Remember, the longer you wait to write out your notes and revise your work sheet, the more you will forget.

Activity

With your group, do the following:

1. Revise your work sheet and write down your revised list of what you know and what you don't know.
2. Make a list of questions you need to answer and what you need to do to get your questions answered. Set some priorities and determine what you need to get answered first (See Figure 2.1).

Figure 2.1 Remaining Questions and Action Plan

Remaining Questions (What I Need to Know)	Action Plan (How Will I Get My Questions Answered?)

Module 3

Determining Transportation Options and Route Planning

Module 3

Determining Transportation Options & Route Planning

Objective

When you finish this activity, you will be able to:

- Compare the cost/benefit of different methods of shipping:
 - Tug and barge
 - “Liner” shipping
 - Surface
 - Rail
 - Air
- Read and interpret maps and estimate mileage between two locations
- Use computers to estimate mileage between two locations
- Identify and describe all possible routes between the location of origin and the location where the equipment and materials must travel and select the lowest cost route

Title

Using maps to estimate distance between locations

When developing a transportation plan, one important skill in determining the lowest cost is to select the shortest route between sites.

The first step in planning is to use maps to estimate the distance between locations. These locations are the Manson Construction home offices in South Seattle and the waterfront in Seward, Alaska.

Look at the accompanying map of the area. Look for the following information:

- Direction – north, south, east, west
- Scale – miles to a standard measurement
- Roads – types and location
- Rail lines – types and location
- Other information – possible blocks on the way, points of interest, reference points, nearby ports

Using computers to estimate distance between locations.

Most transportation managers no longer rely on maps and charts to estimate distance between locations. They use computer programs that are based on geographic information systems.

One way to show how these systems work is to use publicly available computer software systems on the internet.

One popular internet site – *mapquest.com* – can provide your group with an example of how these systems work.

Access and explore this site. Select “driving directions” to use it to estimate point to point distances between locations. Enter the location of the Manson Construction home offices and Seward, Alaska for an estimate of the mileage.

Activity

With your group, use mapquest.com to answer the following questions:

1. How far would a truck have to travel to go from Manson Construction’s home office to the waterfront in Seward, Alaska?
2. How far is it from Manson’s home site to Sea-Tac airport?

Module 4

Writing Business Reports

Module 4

Writing Business Reports

Objective

When you complete this activity, you will be able to:

- Identify and describe the major types of information to be included in a transportation plan
- Identify and explain the content of a business report
- Write a business report

Information in Transportation Plan

A transportation plan must contain three types of information:

1. Materials or equipment to be shipped

The first type of information should be the description, quantity, size and weight of the materials and/or equipment to be shipped. This is normally contained in a Manifest List that clearly states the dimensions and weight of each item to be shipped. Also, the list must identify the quantity of the items to be sent and total dimensions and weight for the entire order. This list should also state any specific handling requirements. (generators must be boxed up before shipping, cranes must use four slings for 60-foot sections of pilings)

2. Transportation routes for delivery period.

- Origin of materials/equipment
- Ultimate destination of materials/equipment
- Mileage (one-way or round trip?)
- Shipping supplier(s) chosen
- Shipping rates
- Individual route costs

3. Total transportation costs

The transportation plan should include a summary of all transportation costs. The cost summary should be itemized for:

- In-company costs
 - Use of company equipment (cranes, trucks, forklifts)
 - Personnel costs (equipment operator, driver)
- Total shipping costs
 - Materials/equipment from Manson site to shipper
 - Materials/equipment from Seattle to Seward
- Insurance costs for order

Writing Business Reports

As the transportation manager, you will be required to submit a business report to your general manager. The report should have two major sections.

1. Introduction – The introduction should state the purpose of the report and should summarize what is described in the report, including the total cost of the plan.
2. Plan summary – The plan summary should provide a detailed summary of each major type of information including an explanation of the costs. You should support your written report with tables, charts and spreadsheets to more clearly summarize the information in your distribution plan.

The business report should be concise and clearly written. Here are some tips:

- Write your report using short sentences and paragraphs
- Use supporting charts and tables to better convey your information.
- Your report must be typed for easy reading
- Make sure you proofread your report, correcting all grammar and spelling mistakes
- Make sure your report only contains factual information which you can back-up with evidence.

Activity

With your group, do the following:

1. Identify and discuss the major types of information to be included in your transportation plan.
2. Discuss and decide on how to display our information visually, using tables and charts to enhance understanding.
3. Develop a first draft of your report and give it to your teacher to review.

Module 5

Making Business Presentations

Module 5

Making Business Presentations

Objectives

When you complete this activity, you will be able to:

- Identify and describe the components of a business presentation.
- Use Microsoft PowerPoint to create a visual presentation.
- Develop and present your business presentation to teachers, students and professionals from the industry.

Organizing your presentation

Business presentations should have three major components:

Introduction – In the introduction, you tell the audience:

- Your name and the name of your group or organization
- The purpose of your presentation
- The major topics or sections of your presentation and the order in which you will discuss each section

Body of presentation – In the body of the presentation, you will:

- Present the information using your PowerPoint presentation and hand-outs
- Explain how you developed the information
- Explain the importance of the information for the purpose of the presentation

Conclusion – In the conclusion, you will:

- Summarize the important information in the presentation
- Summarize how the information supports the purpose of the presentation
- Ask for questions, reactions, and comments

Tips:

Keep your presentation short and to the point. Your presentation should not be longer than 10 minutes.

Remember to use good visual aids to assist you in making your presentation, but don't rely too much on them.

Making your presentation

Here are some tips for making an effective business presentation:

Prepare and practice – Practice making your presentation out

loud in front of an audience. Practice using your visual aids. Prepare note cards to help you remember key information. I will collect your note cards after the presentation.

Split the presentation up among the group – Decide who will do which part of the presentation and how you will transition from one speaker to the next. Everybody in the group needs to take part in the presentation.

Start on time – Make sure you are ready to go and prepared to start when your presentation is scheduled. Many people are relying on you being ready.

Dress appropriately – You are judged on your appearance. Make sure you are dressed and groomed appropriately for a business presentation. Show good posture and stand up straight when you speak. No hats!

Show enthusiasm and confidence – Show you are excited about your report and that you are confident in presenting and explaining the information. Remember, you're selling your ideas to the audience.

Maintain eye contact – Show interest in your audience by maintaining eye contact during your presentation. Use your notes as back-up, but do not read from your note cards.

Use effective speaking techniques – Speak slowly and distinctly. Use standard grammar. Avoid saying “umm” or “you know”.

Answer questions completely – At the end of your presentation, welcome questions and reactions. Make sure you understand the question. Answer the question completely, don't defer to a partner. Don't be defensive if you don't know the answer. Offer speculative answers, and show interest in finding the answer.

For specific information on your Power Point presentation, see handout 5.1

Activity

With your group, do the following:

1. Determine who has experience using Microsoft PowerPoint and allow this person to help others create the presentation.
2. Prepare your presentation and develop your note cards and visual aids.
3. Practice your presentation with your class and make improvements based on their suggestions.