

WARNER MIDDLE SCHOOL ESSAY

With thoughts of creating an elevated transportation system that would be nature friendly and easily accessible on our minds, we decided to build an elevated transportation system. Before we started building the system, we contacted a geotechnical engineer and a city planner. To discover the requirements and laws of building transportation in Alaska, we consulted with the geotechnical engineer. In Alaska, permafrost is a problem. To solve that problem, we dug below the permafrost, around one hundred feet below the surface. To insure stability, we added pilings; the transportation system was built on top of the pilings.

Our elevated transportation system, also known as CHELL, travels around the whole city. Our city planner helped us plan the direct routes of our modern transportation. Powered by electromagnets, CHELL is a very easy, affordable mode of transportation. In many ways, CHELL is like a modern subway. Transparent glass surrounds it, soundproofing any noise. The transparent glass allows people to enjoy the breath-taking scenery outside. We built walkways next to CHELL so that people would have the choice of traveling on their own feet or on mass transit.

The age and condition of our water mains, wells, and sewer lines is important to the water of our city. We tested the current water system to see if there are any problems with the structure or arrangement. We hired a water service company, and they checked the water utilities for any signs of decomposing or leakage. They found that the age of the water system did not affect its condition. Therefore, we feel that we can move ahead with the building process.

The arrangement of the water system also required examination. We had to make sure that the transportation and quantity of the sewer utilities was able to provide enough water for this region. Because this redevelopment project changes a commercial area to residential, we discovered that there was not enough water supply for the site. Thus, more sewage lines were added and another water tower was built, including another purification system for the tower. As a result, our water system now operates efficiently. When we purchased our land, it came with a gas station; therefore a soil analysis is necessary. The soil beneath the gas station may be polluted, which will require us to move it. To analyze the soil of an area--in this case our gas station--the first step should be to find a geotechnical engineer. Geotechnical engineers examine the existing soil and determine the cost and amount of redevelopment that is needed.

First we hired a team of highly educated geotechnical engineers. They took samples of the soil. Eventually, they came to the conclusion that our soil needed to be removed and replaced with new, unpolluted soil for an environmentally safe region.

The cost came to \$2,200; and then the engineers went to work. We had to factor in the cost of trucking, labor, and landfill fines. The landfills ensured that the soil wasn't dangerous. It couldn't be explosive or corrosive. It took the engineers a few days to have the soil removed. After that, they ordered new soil and placed it in the area of the removed soil. We are planning to demolish the gas station and use the land for further purposes.

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