

Urban Planning - Class Period 06

Class Goal: Understanding efficient road design, Part 1

Engineering: **Traffic engineering** is a branch of civil engineering that uses engineering techniques to achieve the safe and efficient movement of people and goods on roadways. It focuses mainly on traffic flow components, such as road geometry, sidewalks and crosswalks, segregated bicycle lanes, traffic signs, road surface markings and traffic lights.

1. There are many different types of roads - each has its own purpose
2. Learning which roads should be used for what purpose is important to effective city design.
Take, for example, one-way streets. I have never understood them. Yet, they are good for calming traffic, especially in historic city centers, when used in conjunction with sidewalk pop-outs and islands. They also serve to eliminate turns that involve crossing in front of oncoming traffic. And, they are often effective in increasing traffic flow and reducing traffic congestion. In SimCity 5, students will learn the purpose for each kind of road if you have them do the tutorial.

3. Learning how to lay out a **city road grid** is an important first step in SimCity play. (Next lesson)

4. In the real world, leaving enough room to expand roads is important to reduce the amount of bulldozing that will have to happen later when traffic necessitates making the road wider.

This is a good opportunity to talk about eminent domain - the legal process that allows governments to take privately owned land. An excellent example of this is La Canada Flintridge when the 210 freeway was built. An on-going example is the 710 freeway in Pasadena. but there are likely examples closer to your neighborhood.

<http://www.urbanplanet.org/forums/index.php/topic/25432-best-city-layout-grid-hexagonal-circular-or-natural>

Try this wikipedia article on [“Highway Revolts”](#).

5. Interestingly, students often come up with the “**concentric circle**” road design to keep citizens “close” to everything. (These are also called “ring roads” and are completely doable in the new SimCity.)

6. In [this blog](#), experts debate the best type of road design.

7. Here’s a lesson on what types of roads are available in SimCity.

http://www.ign.com/wikis/simcity/Road_Types

Sorry about the advertisements on this website.

Activity: Using what your students know about their local roads and what they recently learned about different zoning, ask them to design the best city transportation plan.