

# Design Charrette Presentation

---

# Health and Safety Engineer

- Develop procedures & design systems
- Inspect buildings & machines for hazards and safety violations
- Review equipment to make sure they meet safety requirements
- Review employee safety programs and recommend improvements



## City Manager

- Responsible for planning, directing, managing, and reviewing all activities & operations of the city
- Coordinates services, programs, and activities among city departments and outside agencies
- Represents the city's interests



# Environmental Engineer

- Develops ideas for a cleaner project
- Make sure bridge is up to environmental regulations
- Write environmental safety reports on bridge production
- Recommend improvement where it is needed if we want a clean and safe project



# Commissioning Agent

- Responsible for the overall supervision of the project.
- Overseeing the design, installation and testing.
- Maintenance of all components, materials, and systems.
- Ensure that the project work as intended by the original design.



## Cost Estimator

- Responsible for calculating the expenses of the project.
- Discuss the expenses with the city mayor, and gets consent from the city hall to utilize the money.
- Meets the responsibilities for planning the project and the ones responsible for building it, and shows the expenses and the budget.



# Building and Construction Inspector

- Buildings meet local and national building codes
- Approve building plans
- Monitor construction
- Use testing devices
- Inspect systems
- Issue violations
- Keep daily logs
- Document Findings



# Meeting Roles & Responsibilities

Facilitator: Kristi

Time-Keeper: Albert

Note-Taker: Jessica

Decision Maker: Edwin

Consumer Voice: Yan

Vibes Watcher: Albert

Promise Tracker: Kamili

- Budget (Yan, Albert)
- Develop procedures and design systems for protection (Edwin)
- Making sure that the problem doesn't get worse (Kamili)
- Inspect building and construction (Jessica)
- Health and safety issues (Edwin)



# Problem Statement

A casino is moving to an urban city with high population density. The city is only 2.4 square miles, but is adjacent to Boston. Coming from Boston, there are only two bridges to get to the city and then the casino. The city has seen an increase in traffic, especially to Boston.



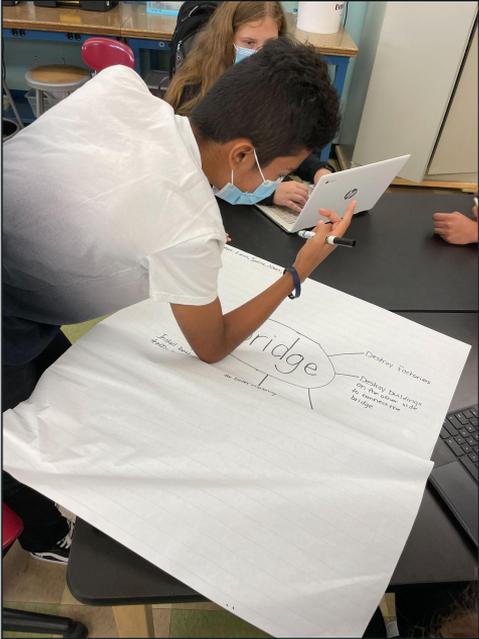
# Process Used to Breakdown the Problem

Our group inspected the details of the problem. We paid attention to the fact that the problem said that city is adjacent to Boston, that there are only two bridges to get to Everett and the casino, and that the city has seen an increase in traffic, especially to Boston. We then used these details to take into consideration when solving the problem to help us understand the scenario. Next, our group used Google Earth to inspect the Boston Harbor area to visualize the problem and visualize where significant objects were located, such as the bridges. Then, this led us to finding an area where a third bridge could be built. We chose to destroy the factories close the casino and build a road and bridge that would be connected.



# Sketches

Group Chart Paper



Factories that'd be destroyed

Third Bridge Location

Buildings that'd be destroyed



Encore Casino

## List of Benefits

- Less traffic to get to Boston and to the casino.
- Less risk of accidents and collisions.
- Lesser time spent driving to get into and out of the casino.
- Environmental beneficial due to air pollution reduction.



# List of Unanswered Questions & Potential Barriers

**Q.** What is the budget for destroying the factories and building a bridge?

-We might not get permission to destroy the factories.

**Q.** How much time will it take to build a third bridge?

-Traffic could be more spread out in the Boston Harbor area.

**Q.** Will building a third bridge majorly affect the environment and water?

-We could provide enough compensation for the destruction of the factories.

**A.** We could potentially ask the city/government for a specific budget.

-Building extra roads can even out the traffic.

**A.** We could calculate the amount of time it takes for the process to be completed.



The End

