**Introduction**

- visual scene

- stem importance - influence and power in society

**Background Research/Influence on Project**

- crash statistics

- pre-existing designs

- light on brain

- caln township

- recent winters - power outages

**First Model (brief)**

- goals of build

- what we achieved

- benefits

- negatives

- practicality and purpose

- goals for improvement - the vision

**Business Partnership (first time around)**

- DEC

- conceptual - knowledge based

**Realizing the Vision - Version 2.0**

- schematics/planning

- step up STEM skills

- goals: motorization (electrical system) - remote control capabilities, more precise (more apt for mass production), more secure (casing), visual upgrades

- predicted benefits

- utilizing expanded budget

**Producing the Sign**

- stem skills used

- the build - much larger projects - more intensive

- electrical build - motorization - problems - solutions - end product

- physical build - Haas machine - putting it together - secure unit

- testing

- how it works as a unit - demonstration

**Goals Achieved - Great Benefits**

- new sign is vastly improved

- still affordable yet effective

- practical application

- using stem skills to address a tangible problem

**Future Improvement/Enhancement**

- tap into city power grid - sense power outages

- expand uses - busy events, school zones, etc.

**Lessons Learned**

- team contributions

- real world application

- build a stronger PA

- conclusion

- thank you