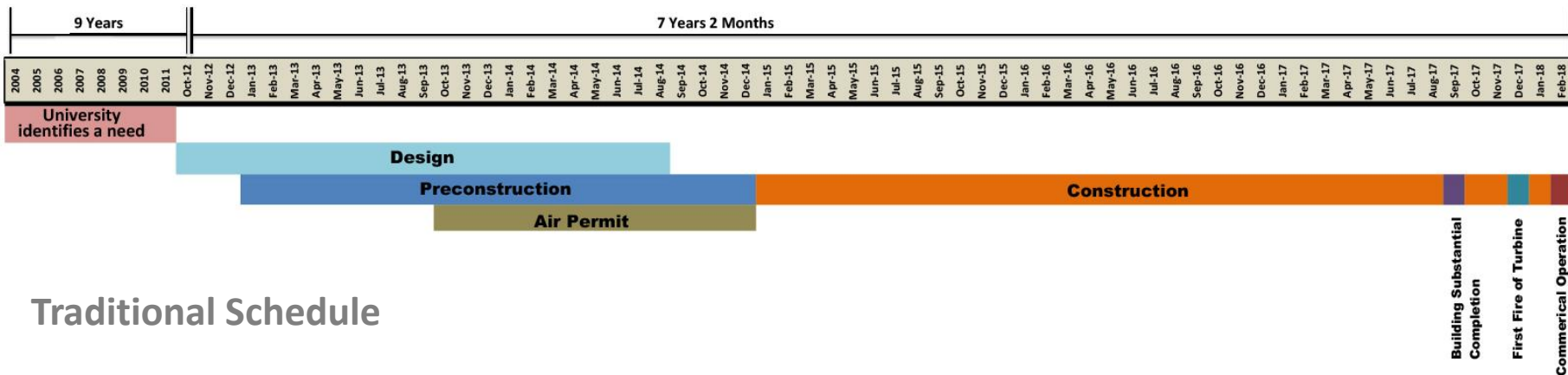
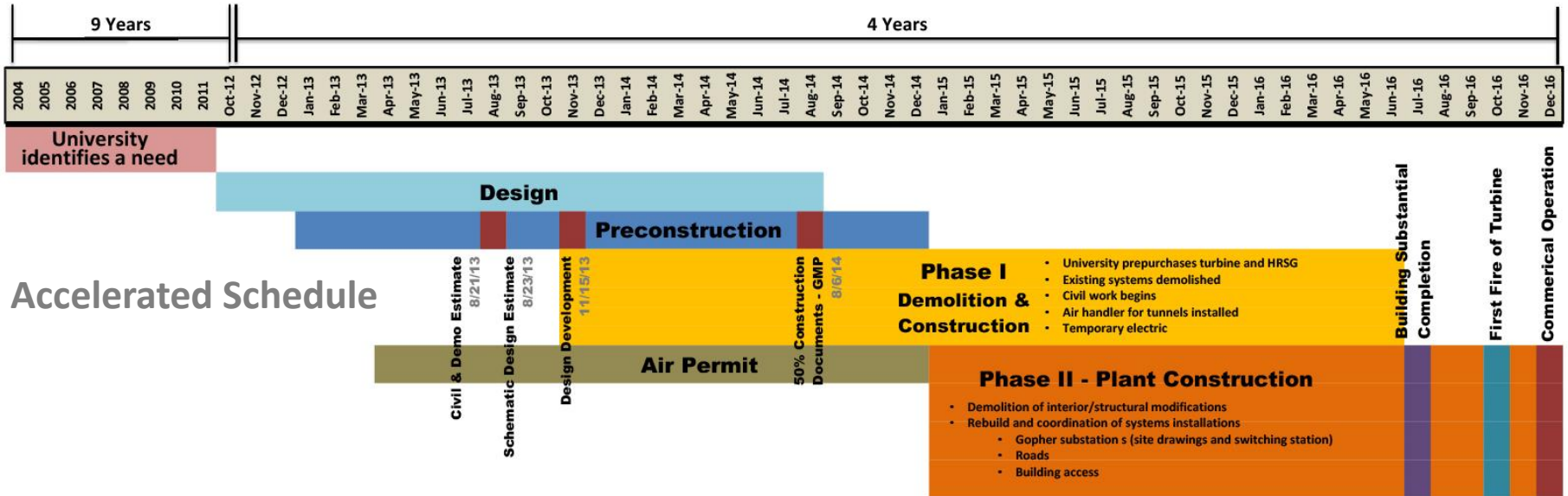




IDEA Conference

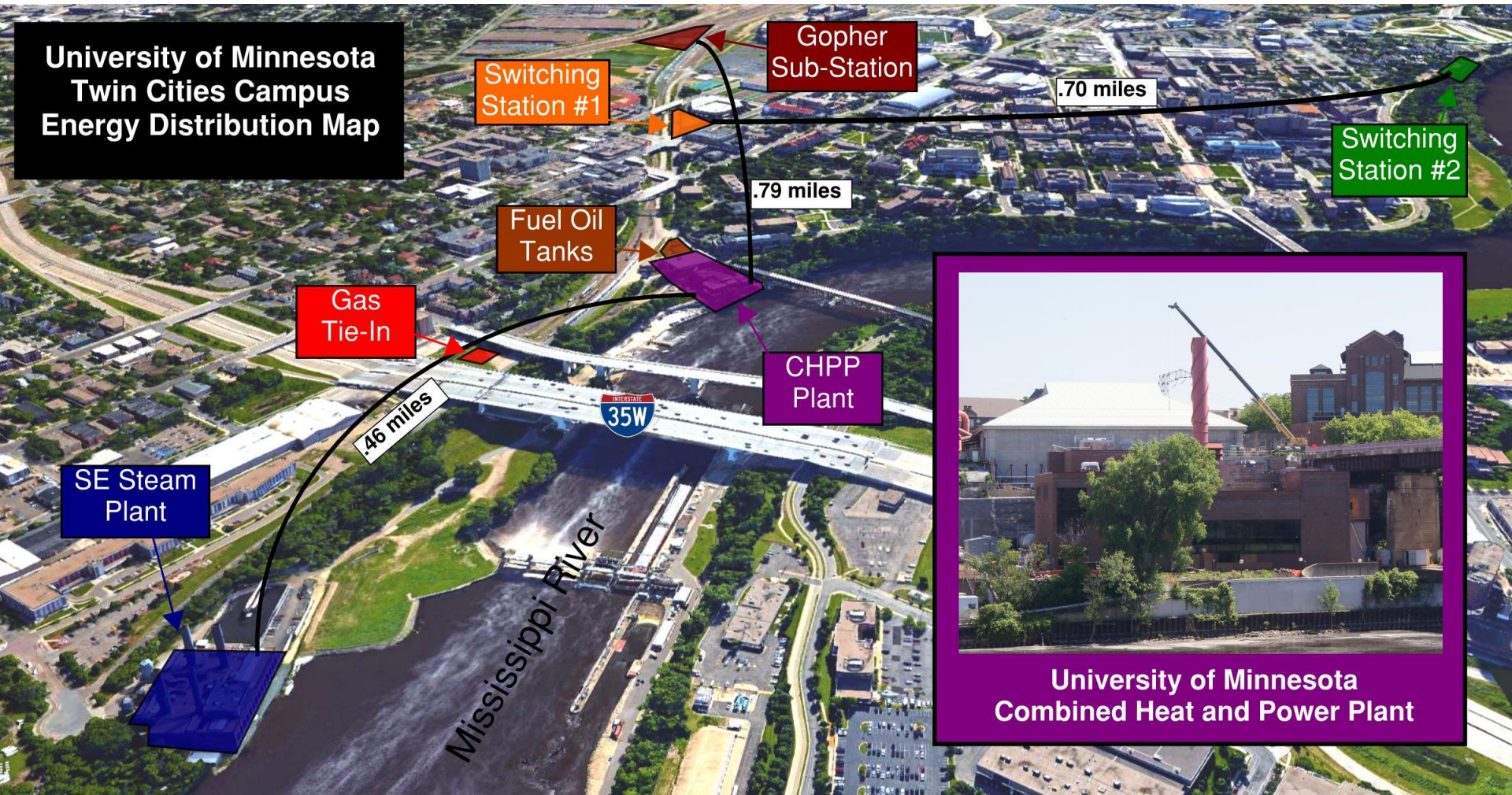
University of Minnesota
Combined Heat & Power Plant





Plan Overview

University of Minnesota Twin Cities Campus Energy Distribution Map



University of Minnesota
Combined Heat and Power Plant



Temporary Power & Ventilation



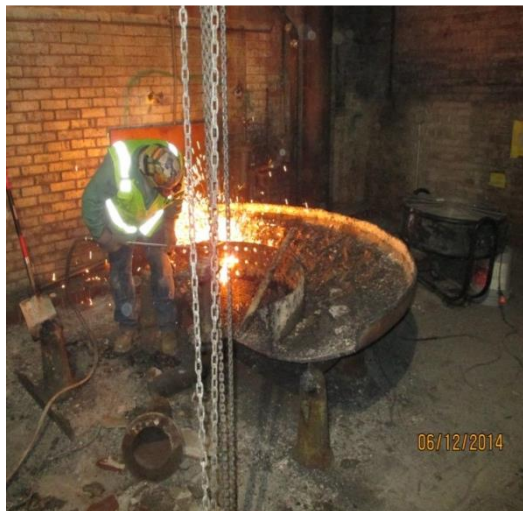


Safety





Demolition of Equipment





Site Modifications





Structural Demolition



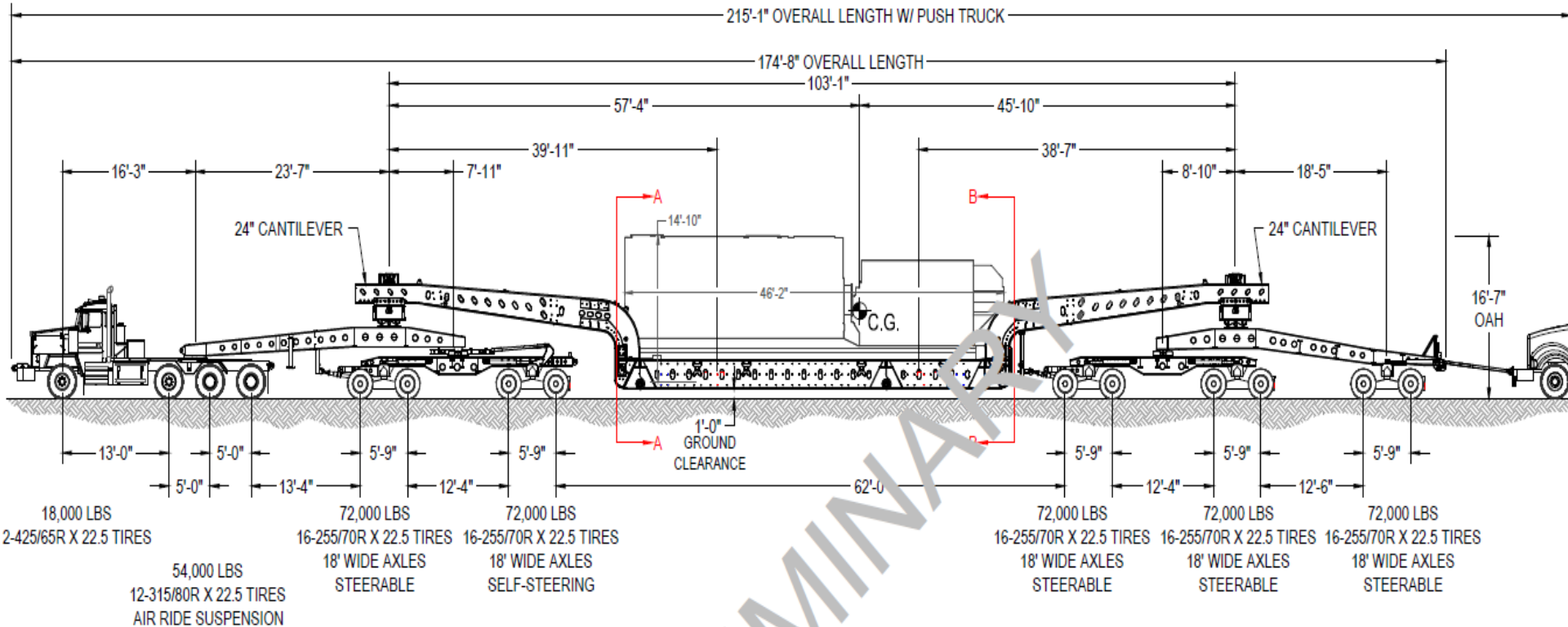


Structural Demolition





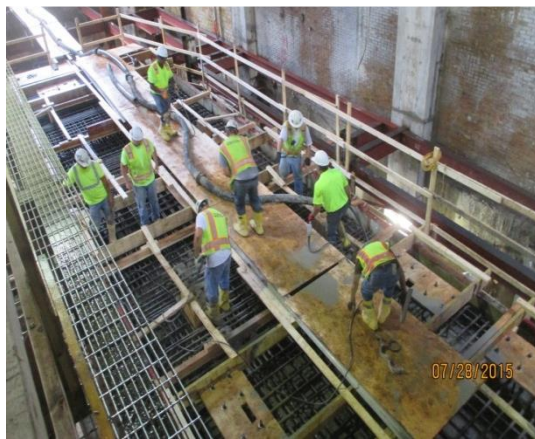
Equipment Install -Turbine



225,000 pounds of turbine and generator spread over 215 feet of truck!
20 days at night at <25 mph.

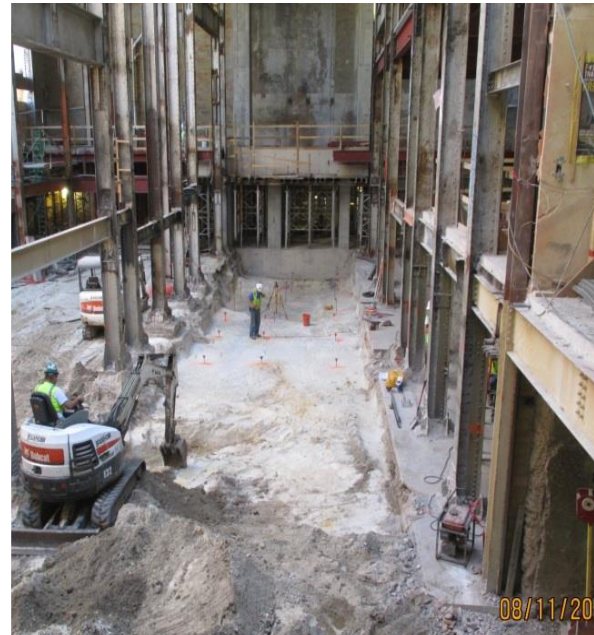


Turbine Pad





Structural Rebuild





Equipment Install -Turbine





Equipment Install – Steam Drum



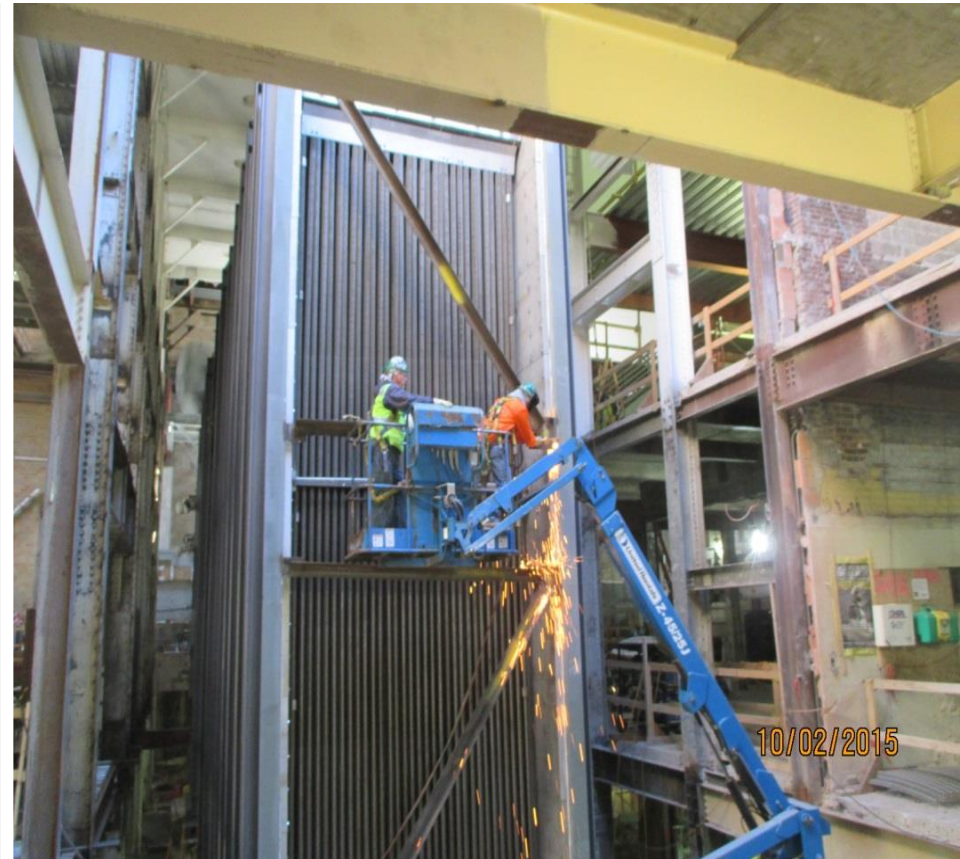


Equipment Install - HRSG





Equipment Install - HRSG





Equipment Install - Stack





Gas Supply





Cooling Towers





Fuel Gas Compressor





Flying Duct Bank





NE Corner



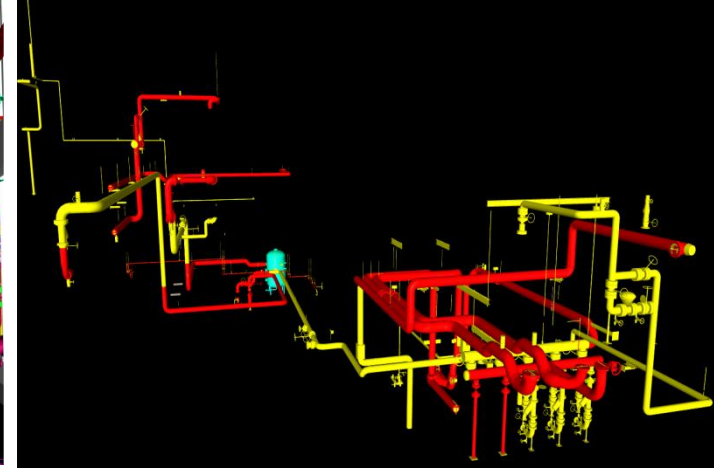
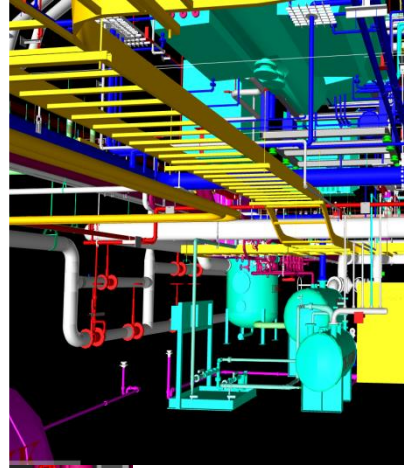
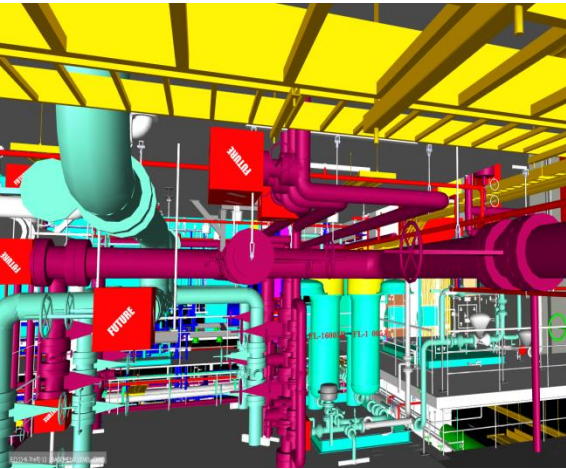


Gopher Substation





BIM Models





Summary

- **Plan Ahead**
- **Importance of Team**
- **Integration**





Questions