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Eaton Aerospace

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Responsibilities at Eaton

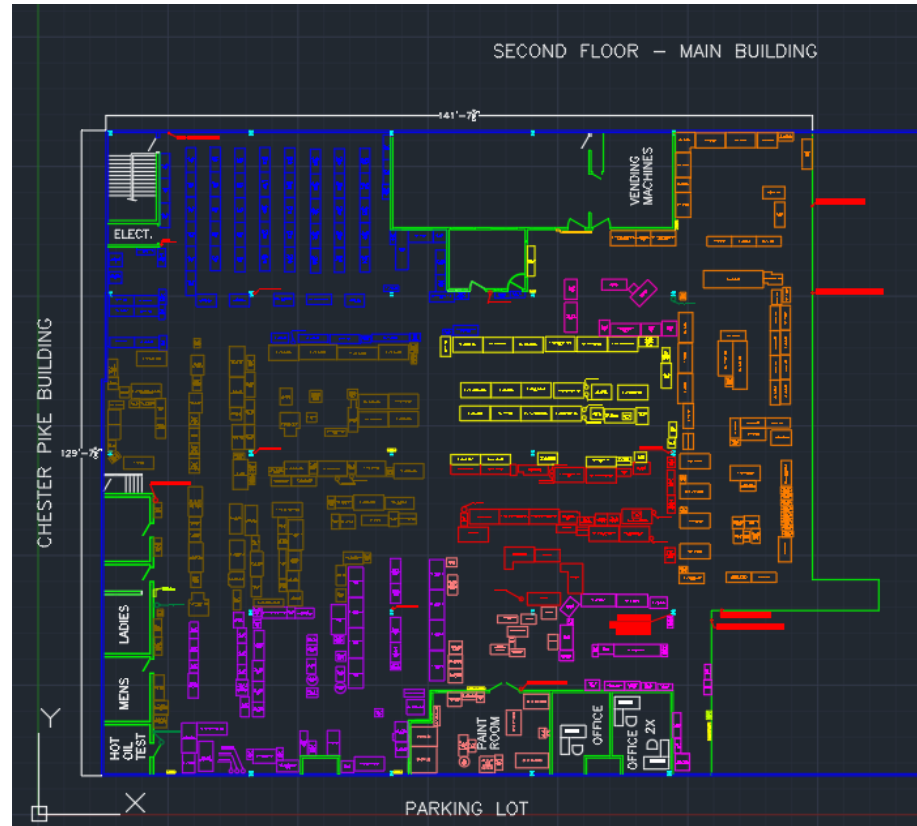
- Develop floor plans for the 2nd floor assembly, 1st floor shop and test labs
- Run time studies for cost-out justification for new assembly laser
- Design fixtures for use in the shop and assembly floors
- Use Vinyl Cutter for the creation of masking templates to be used in the Paint room

Responsibilities at Eaton

- Reverse engineer fixtures
- Participate in paint room, lubriclone packaging engineering and cell C RIEs
- Creation and revision of MIs
- 3D print designed fixtures for implantation and testing purposes
- Conduct 5S+ audit for manufacturing engineering

Project #1 – Floor Layouts

- **Problem:** More efficient way to conduct RIEs
- **Solution:** Develop floor plans for 1st and 2nd floor as well as the test labs

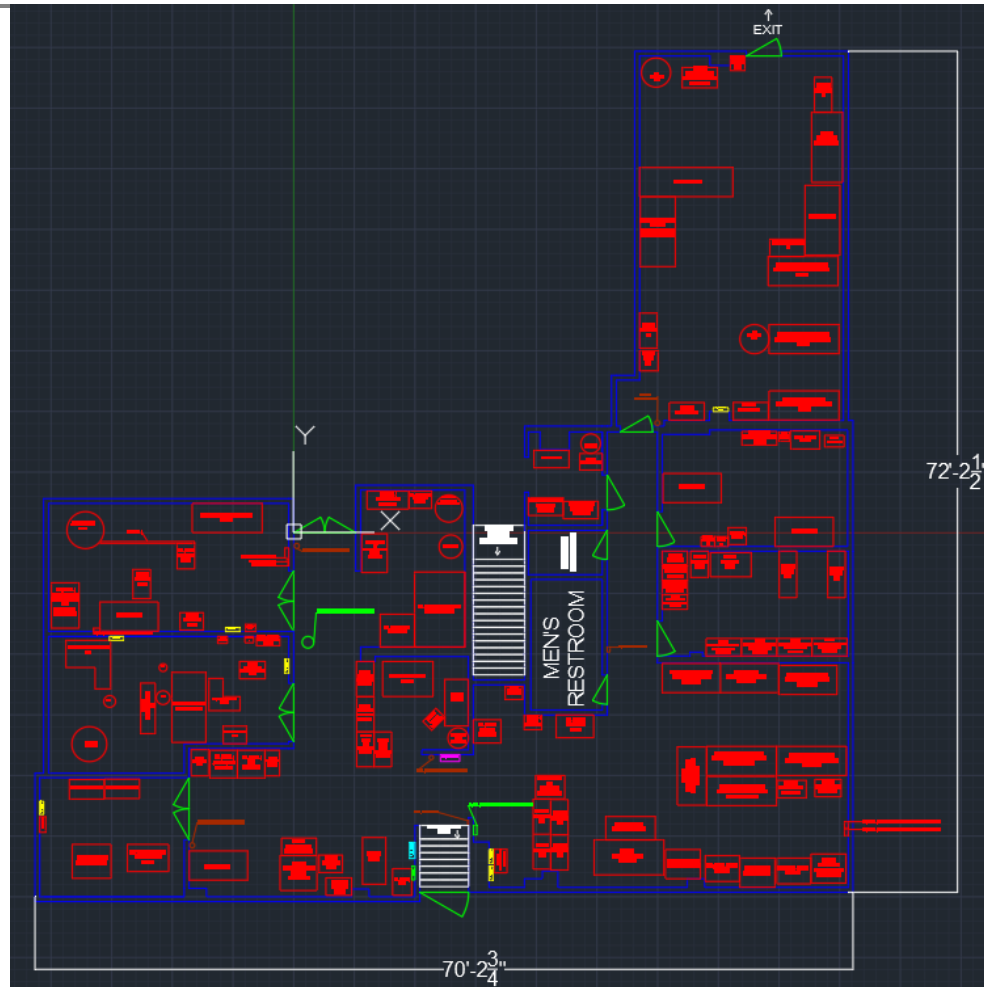


Project #1 – Floor Layouts



1st Floor Layout

Project #1 – Floor Layouts



Test Labs Floor Layout

Project #2 – Time Studies for Laser Assembly

- **Problem: Cost-outs needed for new laser justification**
- **Solution: Conduct time studies for current assembly laser**

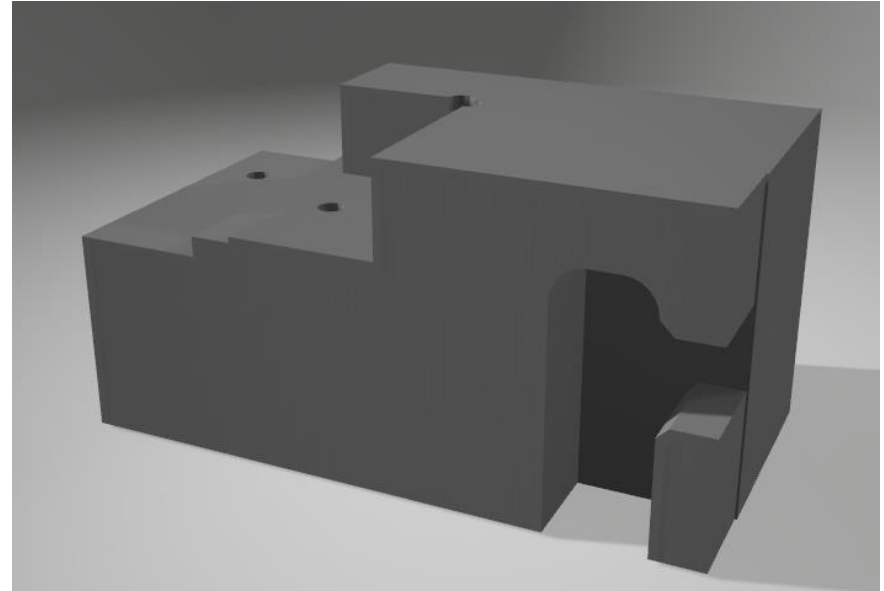
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Project #3 – Reverse Engineering Fixtures

- **Problem:** Rofin Laser fixture needed model and drawing
- **Solution:** Reverse engineer existing fixture (SK8361) in CATIA and develop drawing

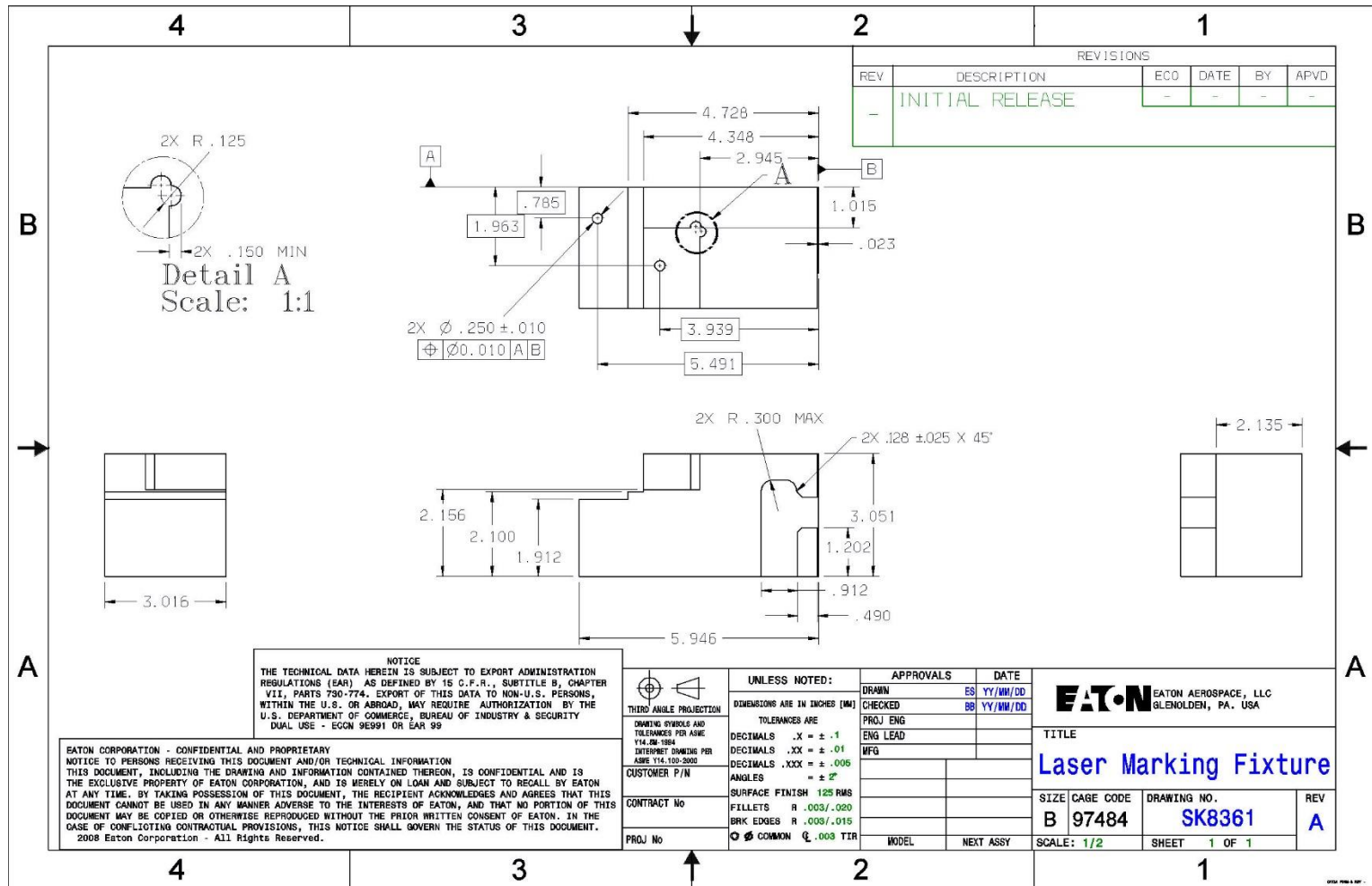


Existing Fixture



Reverse Engineered CATIA 3D Model

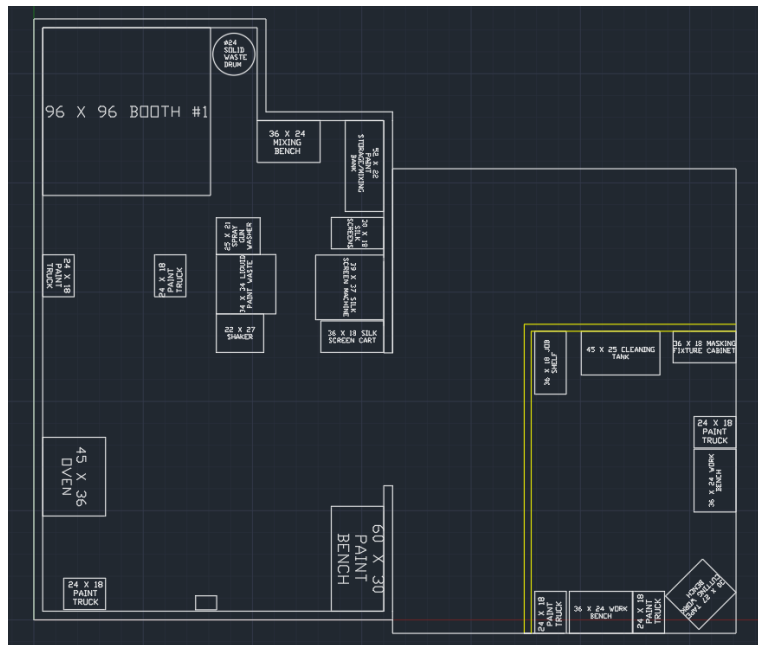
Project #3 – Reverse Engineering Fixtures



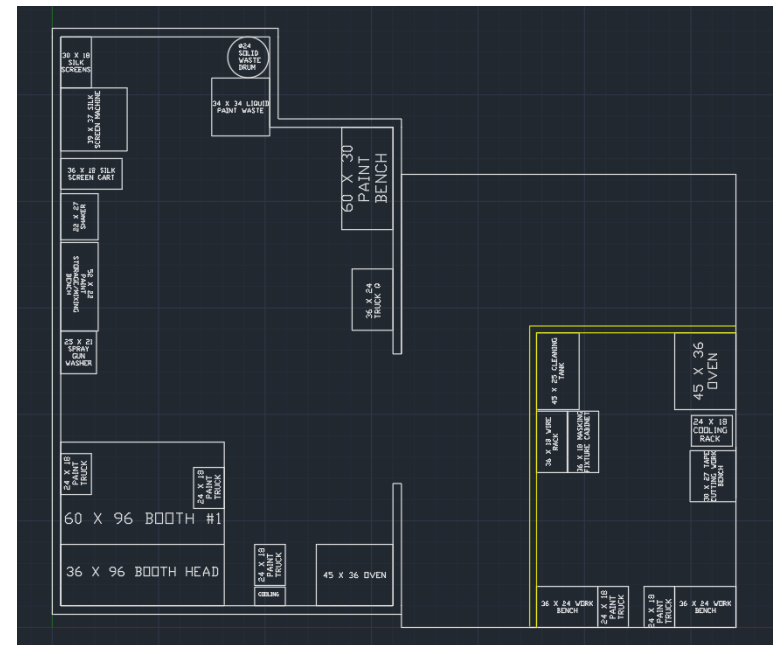
Engineering Drawing of SK8361

Project #4 – Paint Room RIE

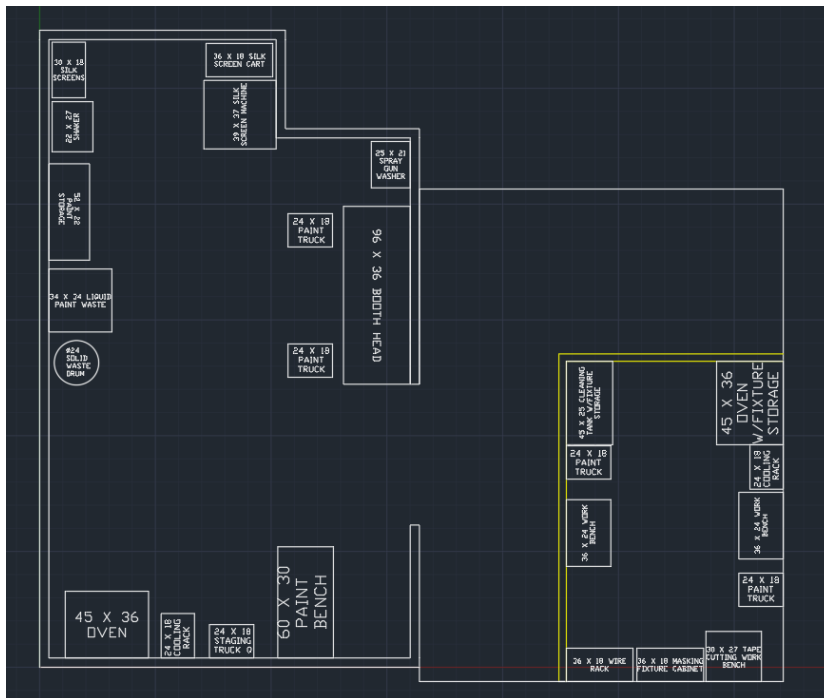
- **Problem: Paint room workflow is inefficient**
- **Solution: Develop 7+ different potential layouts in AutoCAD to improve productivity**



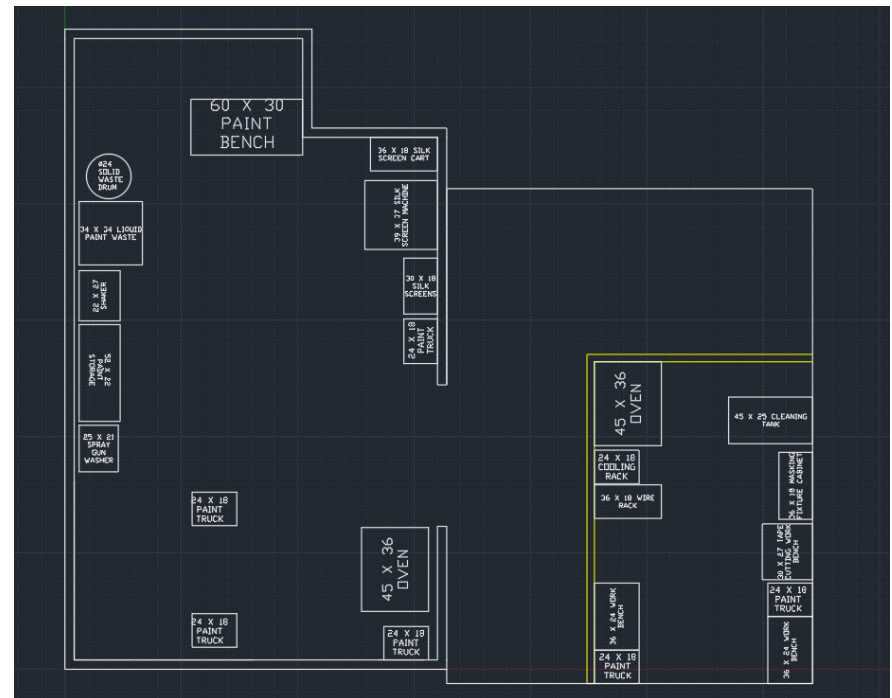
Layout A



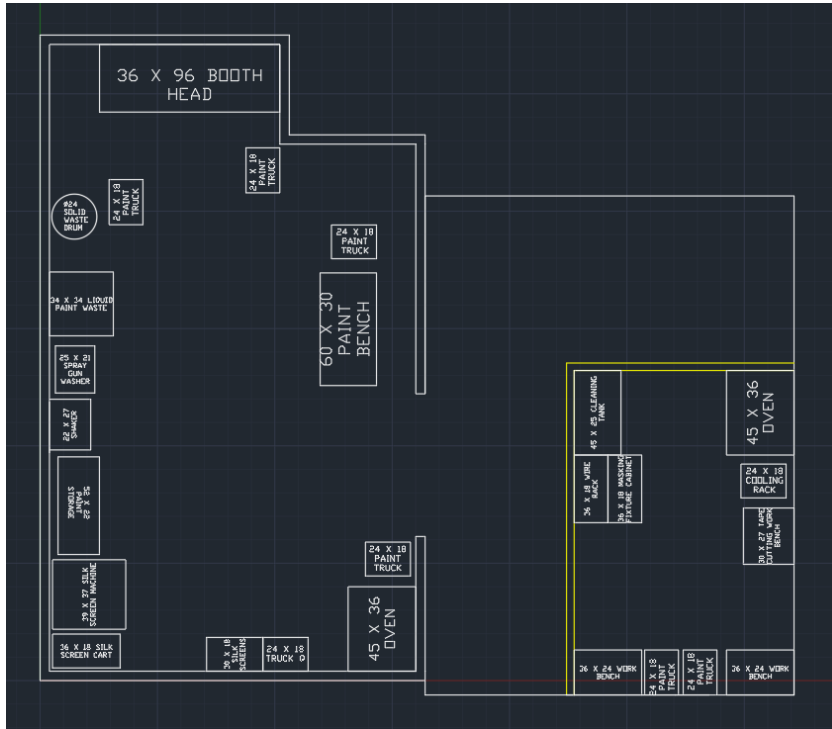
Layout B



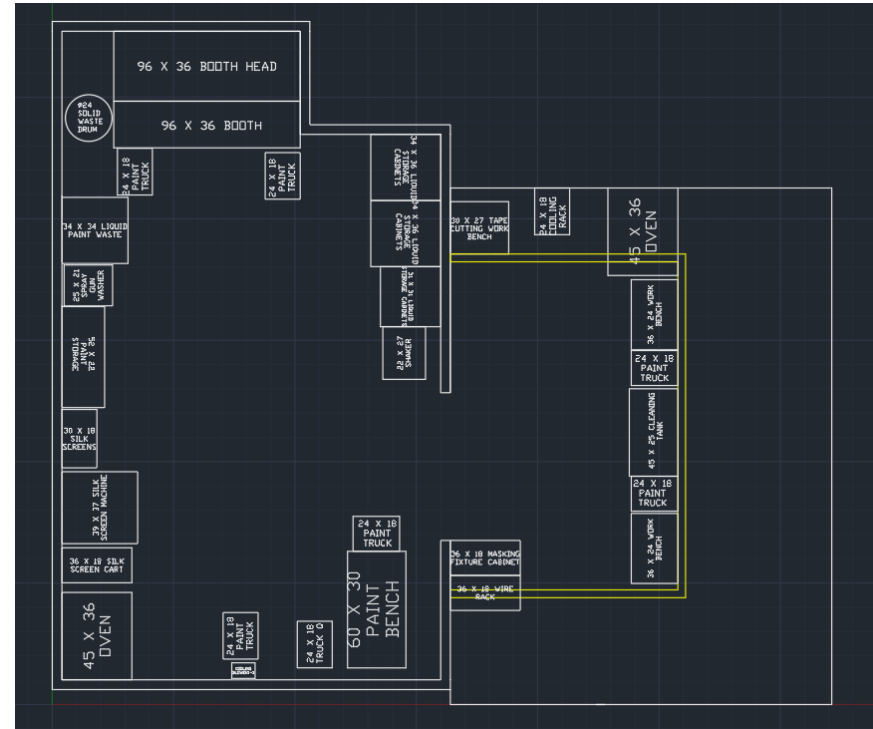
Layout C



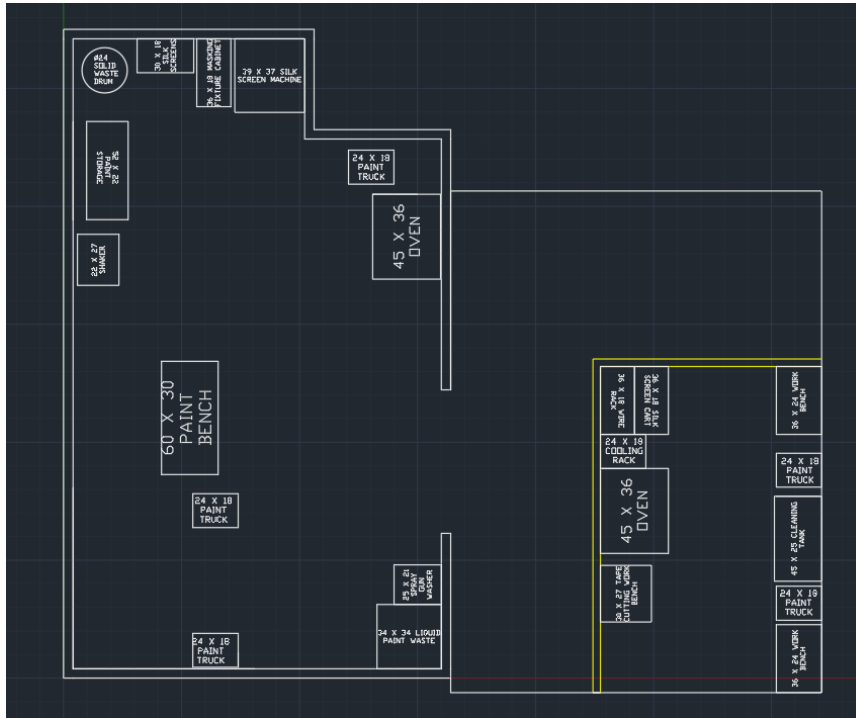
Layout D



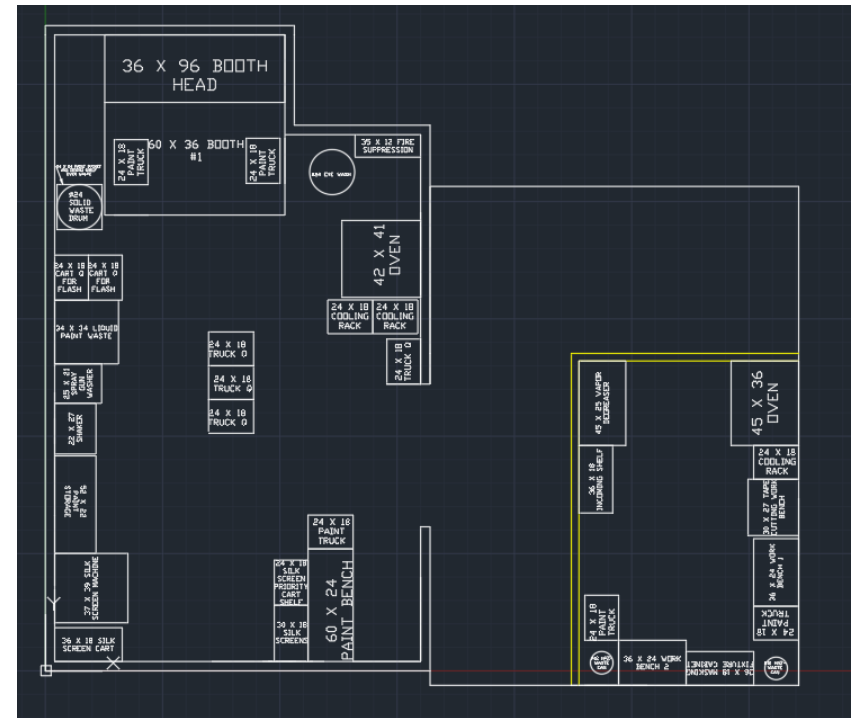
Layout E



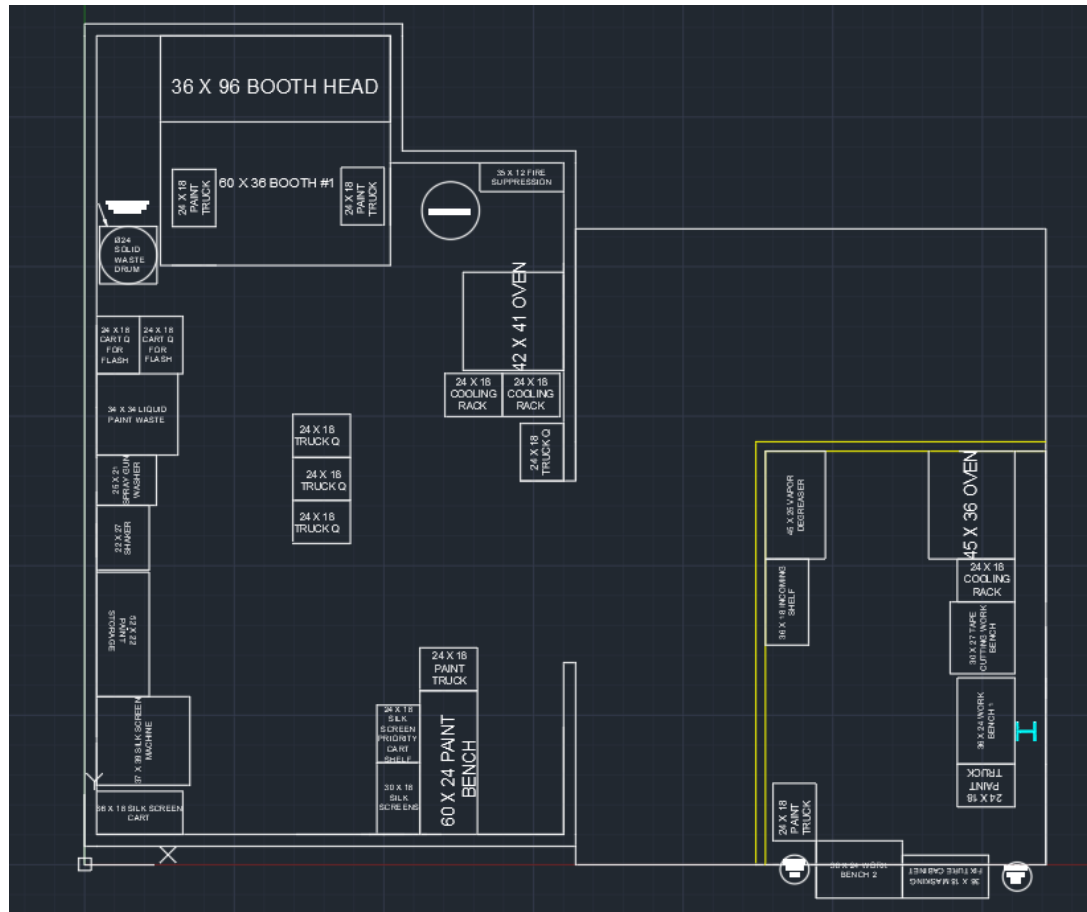
Layout F



Layout G



Layout H



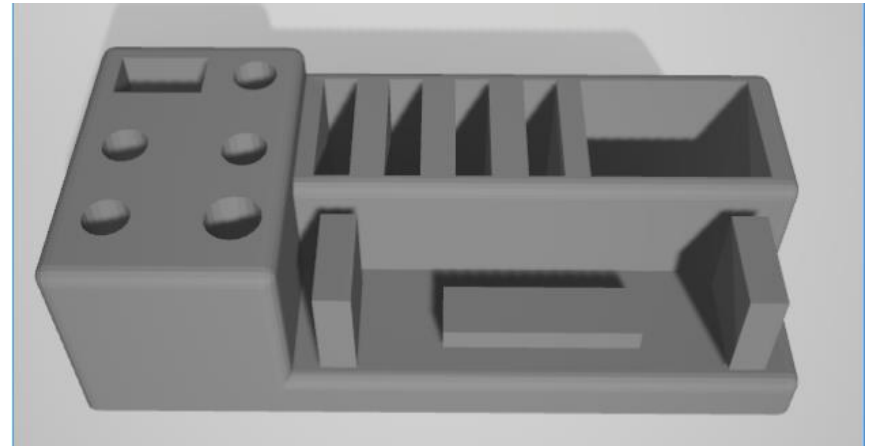
Final Layout

Project #5 – Tool Caddies

- **Problem: Lack of organization of tools for SCU and Cable Lines**
- **Solution: Develop Tool Caddies to free up workbench space**

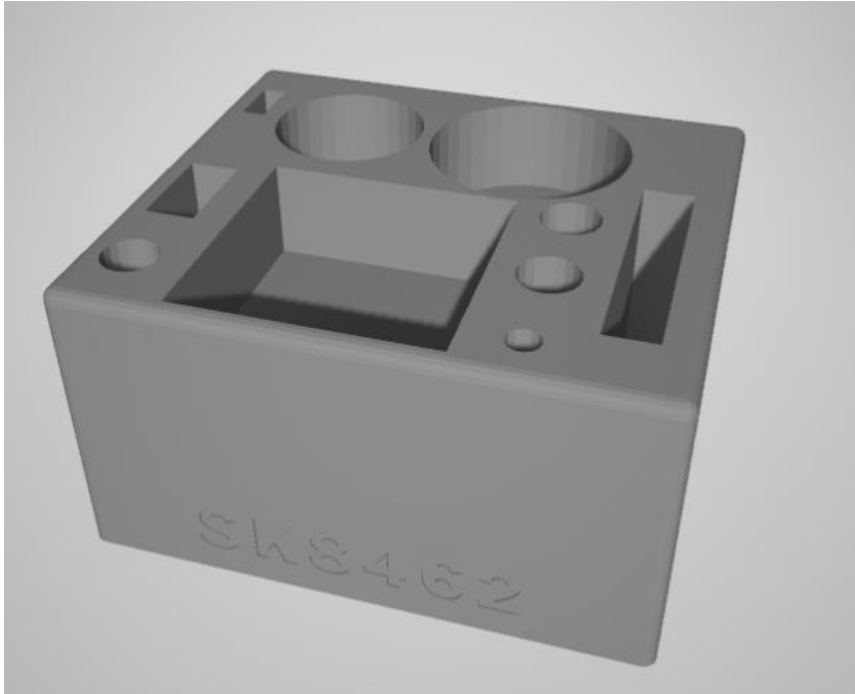


SCU Caddy 3D Print

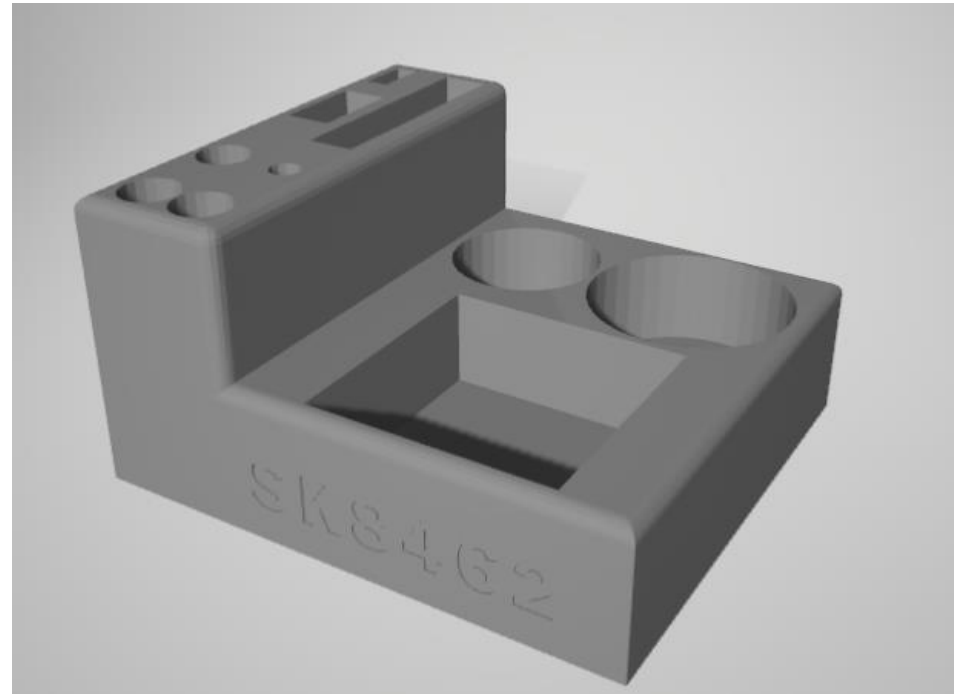


SCU Caddy 3D Model

Project #5 – Tool Caddies



Cable Caddy 3D Model



Cable Caddy Economic Design 3D Model

Lean Tools used during my Co-op

- Standard Work
 - MI
- Time Studies
- 3P
- 5S+ Audit

What I learned

- Fixture design
- CATIA
- MI creation and revision
- How to conduct a time study
- 3D Printing
- Vinyl Cutter program usage
- How a RIE is done and its purpose

What would make this Co-op Better?

- More direct mentoring of the co-op



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