

Everything about a Design Review

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What is a design review?

A design review in FRC evaluates the robot's design before moving on to fabrication. During a design review, a team assesses the design's functionality, fabrication feasibility, clashes between subsystems, and how they interact with each other.

The goal of a design review is to identify issues and provide feedback to designers to ensure it meets criteria. Design reviews allow for the prevention of expensive mistakes and a final visualized design.

Design Review Checklist

Checklist for Design Review:

Game Rules:

- Make sure everything is within frame perimeter
- Robot dimensions and bumper requirements have been checked
- Starting configuration of extending mechanisms don't exceed frame perimeter
- Robot is within the weight limit

Robot Subsystems:

- **Check individual subsystem assemblies separately**
 - Check for any clipping (parts intersecting)
 - Make sure all hardware is installed
 - All part materials are confirmed
 - Make sure all pulleys, gears, and belts are in and connect properly (CHECK BELT DISTANCES)
 - Verify that parts have full range of motion
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- **Top level assembly:**
 - All subsystems fit within frame perimeter
 - Every subsystem mounts and has proper support
 - Assemblies don't clip when stationary
 - Movement isn't limited or interfered for any subsystem
 - Subsystems and components are easy to access
 - Bumpers have area to mount and clearance with subsystems.
- **Electrical:**
 - Electrical components all have space to be installed
 - Cameras, cancoders, etc. are all in required places
 - Wiring routes (e-chain) are correctly mounted for easy access.
 - Battery installation and removal is quick and easy
- **Manufacturing:**
 - DXF's, STL's and all files have been uploaded to BOM and are ready to cut/print.

- Parts are not too expensive and should be bought in bulk (PLEASE DO NOT SPAM PROCURE BEARINGS IN SEPARATE ORDERS)
- All hardware is in CAD and the BOM to be ready for procurement