

Client is a leading manufacturer and service parts supplier of Agricultural Equipment

The Challenge

The design of a new headquarters and main distribution center that will be located in a new city. The project involves a thorough review of the current operation and processes in order to develop the design criteria, material handling concepts / solutions, space needs, and process requirements for the new facility warehouse and distribution operations. The distribution center will contain finished goods and service repair parts. The client's General Contractor recommend us to the client.

The Solution

The solution approach included the following steps:

- On-Site Review of existing Operations
- Analysis of data, summarize and provide feedback for agreement of 'as-is' state of the DC operations.
- Confirm assumptions with respect to growth factors and new facility for the future design year
- Apply growth factors and critical assumptions to develop future state estimated volumes; build models to accommodate performing sensitivity analysis for critical assumptions
- Based on agreed solution concepts develop facility block layout for purpose of demonstrating the overall process flow; establishing the footprint / square feet requirements by operational area; and establish the overall facility size for the new location, including dock door counts and door sizing, maintenance, crane type and requirements, battery charging, returns area, product staging, product storage, outbound processing, etc.

The Value

A separate analysis and separate agreed upon growth rates were completed for finished goods equipment and attachments, and service parts. The crane was strategically placed to allow for expansion of both operations but the crane would not need to be moved. A separate design was completed for service parts operation vs. the finished goods operation. The finished goods operation had a flow through operation with inbound doors on opposite side of the warehouse as the outbound doors which was slotted for FIFO of the large equipment. Additionally, a bridge crane was designed to allow for lifting equipment out of containers, light assembly and for loading on outbound trailers. The spare parts operation was designed in a "U" s with the inbound and outbound dock doors on the same side with a fast pick area slotted for the 5,000 fastest SKUs giving the putaway and picker associates the shortest, most efficient walk. A block layout was completed with the recommended placement of the doors and warehouse office. The General Contractor used our drawing for the initial design. We also left the manufacturer with the spreadsheet model we did the sensitivity analysis with growth. The client was able to resize the building if their growth projections changed.

Client is a well recognized manufacturer and service parts supplier of Agricultural Equipment.