

# PROJECT PROFILE

## LIVINGSTON STEEL



Livingston Steel expressed interest in starting a modular construction company and sought expertise in optimizing their factory floor layout. The primary objective was to ensure efficiency and streamlined operations within their new manufacturing facility. The Off-site Construction Research Centre (OCRC) developed a preliminary factory floor layout, incorporating essential elements such as workstations, workflow, material flow, and sub-assembly areas. The focus was on creating a layout that supported efficient manufacturing processes and integrated all necessary functions seamlessly.

### PROJECT BACKGROUND

The objectives of the project were to:

- Assess existing facility layout and production flow.
- Identify inefficiencies and bottlenecks in the manufacturing process.
- Develop an optimized facility layout to improve productivity and workflow.
- Ensure alignment with industry best practices for steel fabrication operations.

### RESULTS

The project took an exploratory approach in the development of the preliminary draft layout of the facility. This included:

1. **Data Collection & Analysis** – Conducted an assessment of the existing facility, analyzing potential equipment placement, material flow, and worker movement
2. **Workflow Optimization** – Identified key areas for improvement, including material handling, storage, and equipment arrangement
3. **Layout Design Interactions** – Created layout configurations through collaboration with the organization

4. **Preliminary Layout Recommendation** – Delivered a layout design based on industry best practices and Livingston Steel's specific operational requirements

This resulted in a foundation for a streamlined facility to optimize future production and reduce unnecessary material movement and handling, as well as ensure a steady workflow between the manufacturing stations. This not only ensures increased worker productivity and safety, but also allows for operational growth and future scalability.

### RECOMMENDATIONS

The recommended layout provides a foundation for increased efficiency in Livingston Steel's manufacturing processes. To maximize the benefits, Livingston Steel is advised to:

- Implement the new layout
- Continuously monitor workflow and adjust as needed to accommodate operational changes
- Consider future expansions and technological advancements to maintain a competitive edge in the industry
- Product design and analysis