

Bicycle Production Factory Planning and Layout Document

1. Project Overview

1.1. Purpose

Design an efficient, environmentally friendly bicycle production factory to meet growing market demand while minimizing environmental impact.

1.2. Background

With the promotion of healthy lifestyles and increasing urban traffic congestion, bicycles, as an eco-friendly and healthy mode of transportation, are in continuous demand and growth.

1.3. Scope

This document covers factory site selection, production process design, equipment requirements, spatial layout, safety, and environmental measures.

2. Design Principles

Efficient Production: Optimize production processes to reduce production cycles.

Environmental Friendliness: Implement measures to reduce environmental impact and achieve sustainable development.

Employee Welfare: Provide a safe and healthy work environment to promote employee well-being.

3. Factory Site Selection

Choose a location with convenient transportation, close to major markets and suppliers. Ensure the site selection complies with local environmental protection requirements to minimize the impact on the natural environment.

Location: 30 kilometers from the nearest city center, near major highways.

Area: Total area of 50,000 square meters for the production area, warehouse, office area, and staff rest area.

Environmental Impact: Consider retaining natural vegetation on-site, planning to preserve at least 100 trees, and afforesting around the factory.

4. Production Process

4.1 Process Description

Bicycle production includes the following main processes: raw material preparation, parts machining, painting, assembly, quality inspection, and packaging.

4.2 Equipment Requirements

Machining Equipment: 20 units (including lathes, milling machines, and drilling machines)

Painting Equipment: 2 automatic painting lines

Assembly Lines: 4 conveyor lines

Inspection Equipment: A set of measuring and testing tools

Packaging Equipment: 2 automatic packaging machines

4.3 Production Capacity

The projected annual production capacity is 50,000 bicycles.

5. Layout Planning

5.1 Production Area

Machining Area: 5,000 square meters

Painting Area: 3,000 square meters, equipped with a dedicated exhaust system

Assembly Area: 6,000 square meters

Inspection and Packaging Area: 2,000 square meters

5.2 Storage Area

Raw Material Warehouse: 3,000 square meters

Finished Goods Warehouse: 4,000 square meters

5.3 Office and Staff Area

Office Area: 1,000 square meters

Staff Rest Area: