

Clearbend Logistics Hub - Piece Flow Process Map

This process map illustrates the standardized end-to-end workflow for parcel processing at Clearbend Logistics Hub. The system separates automation-compatible pieces from those requiring manual processing at the intake stage, with clear routing paths and failure handling mechanisms to prevent bottlenecks and equipment breakdowns.

| Process Symbols Legend: | |
|--------------------------------|----------------------------|
| ■ Start/End Point | ■ Decision Point |
| ■ Process Task | ■ Manual Handling |
| ■ Automation Process | ■ Failure/Exception |

END-TO-END PIECE FLOW PROCESS:

1. INBOUND RECEIPT (START)

- All parcels arrive at the facility
- Initial scanning and data capture

2. CLASSIFICATION DECISION POINT

- System evaluates each piece against automation compatibility criteria:
 - Dimensions within acceptable range (L: 6-48", W: 4-36", H: 1-24")
 - Weight within limits (0.5-50 lbs)
 - Regular shape (no protrusions, flexible items, or irregular geometry)
 - Non-fragile and non-hazardous
 - Proper labeling and barcodes

3A. AUTOMATION-COMPATIBLE PATH

- Pieces meeting all criteria enter automated conveyor system
- Automated sorting by destination
- Quality control scanning
- Direct routing to outbound staging
- *Success: Proceed to outbound shipping*

3B. MANUAL PROCESSING PATH

- Pieces failing any compatibility criterion are flagged for manual handling
- Routed to dedicated manual processing stations
- Human operators assess and process items individually
- Special handling for fragile, oversized, or irregular items
- Manual sorting and labeling as needed
- Routing to appropriate outbound streams

4. FAILURE HANDLING & EXCEPTIONS

- Automated system failures detected in real-time
- Failed pieces automatically diverted to manual overflow stations
- Machine jams trigger immediate alerts to maintenance team
- Backup manual processing capacity activated during system downtime
- Root cause analysis logged for continuous improvement

5. OUTBOUND PROCESSING (END)

- All pieces (automated and manual) converge at outbound staging
- Final verification and loading
- Dispatch to delivery vehicles
- Process completion confirmed