

Recycling Plant Machine List

1. Primary Sorting Line
Use: Remove trash and non-recyclable contaminants and isolate aluminum containing materials
In: Mixed recycling stream containing aluminum cans plastics paper steel glass and waste
Out: Mostly aluminum-containing recyclable stream

2. Industrial Shredder
Use: Break aluminum cans and scrap into smaller fragments to improve downstream separation and melting efficiency
In: Loose aluminum cans and aluminum scrap
Out: Shredded aluminum fragments mixed with light contaminants

3. Air Density Separator
Use: Separate heavy metal fragments from lighter materials using controlled airflow
In: Shredded mixed material including aluminum plastic labels paper and dust
Out: Heavy aluminum fraction and light waste fraction

4. Eddy Current Separator
Use: Separate non-ferrous metals like aluminum from other materials using magnetic induction
In: Shredded heavy fraction stream
Out: Aluminum metal stream and remaining non-metal waste

5. Hydraulic Baler
Use: Compress loose aluminum scrap into dense bales for efficient storage handling and furnace charging
In: Loose shredded aluminum scrap
Out: Compressed aluminum bales

6. Rotary Kiln
Use: Remove coatings inks points and organic contaminants from aluminum scrap through high temperature heating
In: Aluminum scrap or bales containing coatings labels and paint
Out: Clean decoated aluminum scrap

7. Rotary Furnace
Use: Melt aluminum scrap into molten aluminum through high temperature combustion and rotation of the furnace drum
In: Decoated aluminum scrap
Out: Molten aluminum and slag or dross

8. Degasser
Use: Remove dissolved hydrogen gas and impurities from molten aluminum using inert gas injection and agitation
In: Molten aluminum from the furnace
Out: Refined molten aluminum ready for casting

9. Continuous Casting Machine
Use: Solidify molten aluminum into solid metal products through controlled cooling in molds
In: Refined molten aluminum
Out: Solid aluminum slabs ready for further processing

10. Coil Feeder
Unwinds and feeds flat metal sheet from a coiled roll into the production line at a controlled rate.

11. Cupping Press
Punches and forms flat sheet metal into shallow cup shapes, creating the initial form of the can.

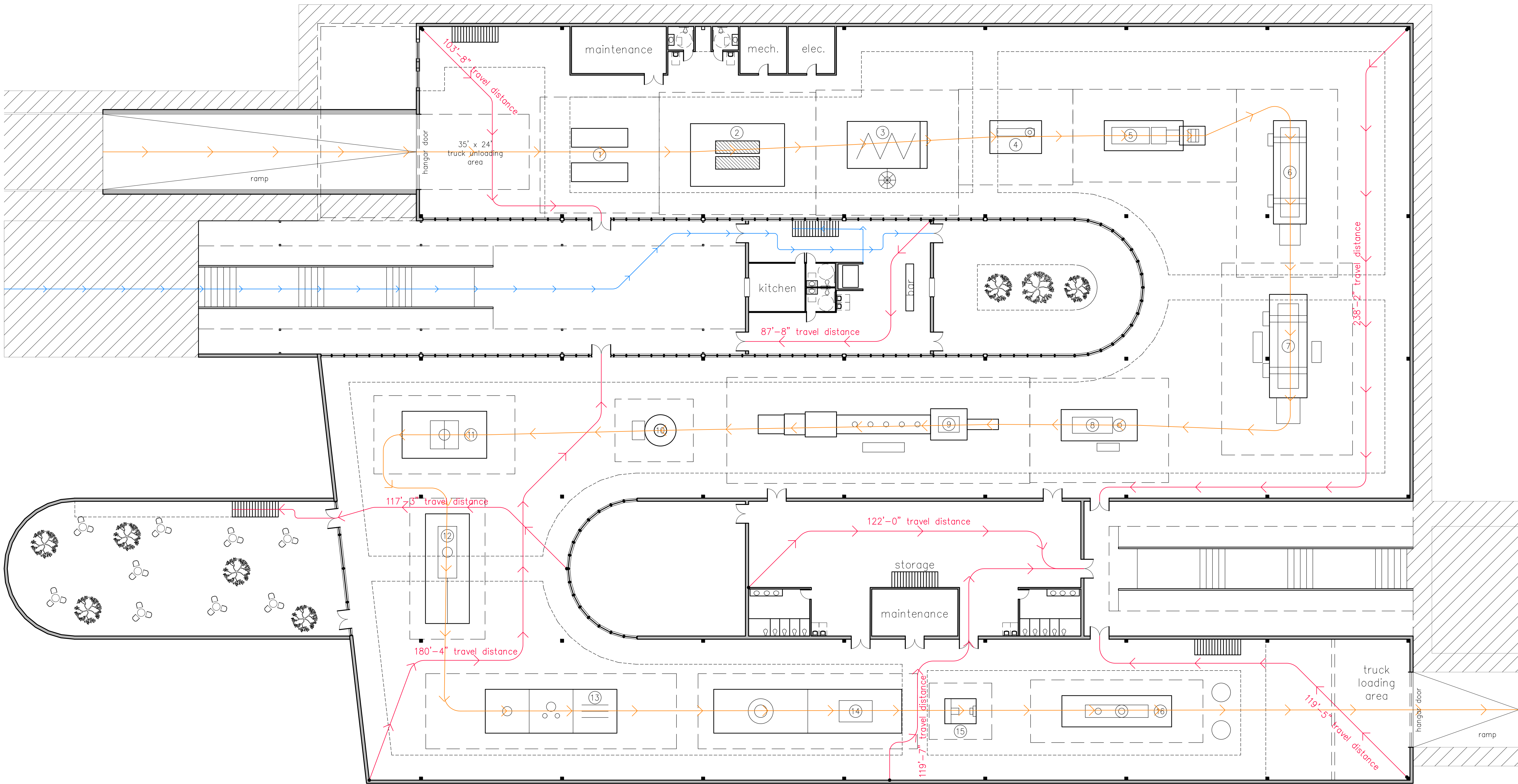
12. Body Maker
Draws and irons the cups into taller, thinner-walled can bodies while maintaining uniform thickness.

13. Trim, Wash, and Dry Machine
Trims excess material from the top edge of the can, then cleans and dries each can to prepare it for coating.

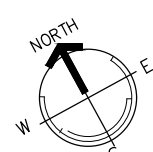
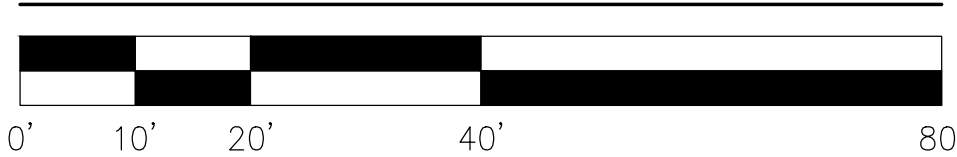
14. Interior Coating & Curing Machine
Applies a protective coating to the inside of the can and cures it using heat to ensure durability and food safety.

15. Stamping
Applies markings, branding, or structural features to the can through a pressing process.

16. Flanging
Forms a flange at the open end of the can to allow for proper sealing with a lid. This is also the stage where the cans are filled and then prepared for shipping and distribution.



LOWER LEVEL FLOOR PLAN



Life Safety	At Grade (all else below)
Metal Circulation	
Public Circulation	