Hauling Company Facility Requirements

Basic design criteria and the changing work environment.

By Jeff Eriks

A hauling company is a big part of any waste company. It is where a majority of employees work from and directly affects the ability of the company to pick up customer trash every day. A hauling company typically houses all of the route trucks (residential, commercial, roll-off), containers (roll-offs or household), mechanics, drivers, operations team (dispatch, supervisors, ops manager), back office and management. However, at the same time, this facility is not typically "revenue producing" because revenue is driven from tipping fees and not hauling contracts. That being said, it is important that these facilities are able to be built economically and operate safely and efficiently. In this day and age where waste companies are competing for employees, it is important to make sure facilities are nice, clean and somewhere people want to go to work every day. Quality drivers and mechanics are getting harder to come by, so it has become necessary to set a company apart from the pack by offering more amenities and a nice environment, pay more or offer unique benefits. This article will focus on the facility itself and what it should be focused on in terms of the facility design.

Site Location and Amenities

The site location and amenities are the most important and most difficult to arrange. When it comes to operations of the facility, the focus should begin on the site location within the community. The site needs to be properly zoned (which varies by state), have good access to highways or other major thoroughfares and be close to the "end of day" tipping site for collection trucks. In my opinion, these are the three most important factors in site selection because if these do not work, everything else becomes very difficult.

The site needs to have well-built access roads that are made for heavy truck traffic; ideally, it will have access to the proper utilities required and will offer the ability to convert to CNG in the future, if desired. Next, the facility neighbors should have similar uses. Oftentimes, a commercial business park is not the best option for a hauling company facility. A light industrial park that has neighbors that don not get a lot of visitors and creates noise of their own is generally the best option. Truck backup noise can disturb nearby residents at 4:00 a.m. The facility should also be properly sized to handle current needs, future growth, fuel island or CNG requirements, storm water controls and other local requirements such as landscaping, green space, etc.

Container storage will need to be factored into the equation if any onsite storage will be required. The container storage area is typically not very attractive and should be located at the back-end of the site in order to mask its view to any passing traffic. The exact size requirements of sites are based on individualized operations and local requirements. A civil engineer, with waste facility experience, should be engaged to help develop these for the hauling company facility.

Last, but certainly not least, the site layout should ensure that all safety requirements are kept in mind. Ideally, commercial traffic should be kept separate from car traffic and the site needs to be properly lit both onsite and near the entrance/exits to the property.

Hauling facility including (from left to right) office, maintenance shop, container repair shop and truck wash.
Images courtesy of Cambridge Companies.

Inside the maintenance shop.

Office area break room.

Shop Areas

The hauling facility itself typically consists of the truck maintenance and container repair shop, the operations area and the office area. Let's start with the shop areas. I have seen many occasions where the container repair shop is a separate building; however, I have also seen them combined into one shop. I do not know that there is a clear answer for which is better, it really depends on the end user and their preference. Container repair shops typically require more welding and "banging", so they are louder and contain more nuisance smells than a typical truck shop. This is why they are sometimes separated. However, the drawback is that there is more management involved if they are in different buildings.

Once that decision is made, the focus shifts to the quantity of bays required for truck and container repair and maintenance. This is really based on the age and condition of assets, the ability to buy newer assets moving forward and existing maintenance records. If operations will continue with a fleet of, say, 10 years old or more, then more bays would be required compared to a company with an average fleet age of six to eight years. The same scenario pertains to containers. The type of containers used will determine how much maintenance is necessary and how many employees will be required. As long as there is enough floor space for the required equipment and employees to perform maintenance, the shop operations should run smoothly. Just remember, for both the truck maintenance and container repair areas it is necessary to factor in expected future growth for the next five to 10 years.

Along with the shop, you will likely want to have an area where you can wash trucks or a third party can come to the site to complete this. In some areas this can occur right on the pavement while others require that the water is captured and run through the sanitary system. This is where local code knowledge is required.

While designing the shop, many factors come into play such as:

- Equipment requirements (welders, compressors, lube systems, cranes, etc.)
- Clear heights for proper opening and closing of the various types of trucks
- Overhead door size
- Proper lighting
- Tool and other small equipment storage
- Parts storage and mechanic access
- Lube liquid storage
- Safety items (eye wash and emergency showers)
- Many other important pieces

Engaging the right design team from the start of this journey will help with navigation through these various pieces.

Offices and Operations Area

The remaining sections of the building are the offices and operations area. As mentioned previously, the aesthetics and layout of these areas should be driven by corporate or management preferences. How operations need to function and what amenities are available to employees is strictly driven by these areas. In laying out these facilities, the locker rooms, restrooms and break rooms are typically housed between the shop and office areas. This is done to create a shared area for mechanics, office staff and drivers, keep the size of the building footprint to a minimum and limit the amount of footsteps required to walk from their work area to the restrooms.

Another important factor is the drivers and how they interact with dispatch, supervisors and maintenance. This interaction affects where they park, enter the building, enter the locker rooms, gather their daily paperwork, conduct the pre/post trip inspections and turn in paperwork at the end of the day. This is a flow chart that should be developed prior to starting design of the facility to help an experienced design team layout the new hauling company. The driver check-in/check-out and break room for the staff is typically a large area, dedicated to reducing worker footsteps, with an adjacent kitchen including vending options and an ice machine. This area plays an important role in the facility because it is used for many different functions on a daily basis. It is very important to think through this layout and plan accordingly so it can be multi-functional and support various activities. The changing world around us has worked hard to modify this space to be high-tech, comfortable, durable and engaging. The management team should be involved to identify important factors and work with the design team to incorporate these items into the facility plan. The locker rooms are also changing and companies are looking at ways to be more progressive to keep up with others. The important factor with the locker rooms is that they are sized properly and laid out to be expandable.

As more of the waste industry becomes automated, amenities for both male and female drivers should be included to accommodate all members of the workforce. These decisions should be based on what is right for the operations and budget of the facility. There are many more workflow items that will need to be thought through before starting a floor plan to ensure the facility is as efficient for employees as possible including:

- Is the preferred work areas open or private offices?
- Who will require secure storage locations? What will their size requirements be and who will use them? Human Resource files? Sales transactions? Accounting information? PPE for operations?
- Will the office require meeting areas such as large training rooms, conference rooms for eight to 14 people and small huddle rooms?
- Should vacant work areas for visiting staff be factored in?
- Will other amenities such as a mother's rooms or unisex restrooms be required?

In terms of employee perks and aesthetics, many of the features that go into a building today are ample natural lighting, fitness centers, comfortable break/common areas, open work spaces, comfortable and private locker rooms, and lots of interior windows in the office areas. The last thing to mention about this space is that there should be plenty of room for wall displays, monitors, HR information and other company specific items that may be posted on the walls. This is a space that all employees will touch on a daily basis and so it is a good space to display any information they will need to see. Wall space gets eaten up quickly, so doing a layout for the space is important and should identify all items that would need to be displayed. The focus of the wall spaces in a hauling company should be safety, IT infrastructure and company branding. Someone should be in charge of these items and ensure that they are fully incorporated into the plans and not put off until construction begins. The earlier planning begins, the smoother the project will proceed. Finally, do not forget to properly size this section of the facility as well to also accommodate future growth through vertical or horizontal expansion. When completed, hauling companies are highly customized facilities and should work for the long run of the company.

The Size of the Facility is Key

In conclusion, I want to reiterate one point that has been mentioned several times. The size of the facility is the key here. The hauling company facility should be designed and constructed to accommodate future growth, so be careful when calculating this. Do the best in forecasting growth of population, percent of market share gained and other factors to adequately predict how many routes will be added five to 10 years from now to this facility. Also, the changing work environment driven by progressive companies are landing the best employees. Keep this in mind as this process is created or modified and do things that fit within the budget to give employees a great place to work. Not all companies can do all things, but there are small things that can be done to make it a better place to work while not significantly impacting the budget. | WA

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