

WHAT TO CONSIDER WHEN PLANNING A TRANSFER STATION REDESIGN OR EXPANSION



The physical layout, size and design of a transfer station heavily influences both the scope and ease of operations within that facility. If the incoming volume surpasses the capacity of a facility, or the facility is no longer conducive for processing the materials coming through the door, it could be time to weigh the benefits of redesigning, expanding or building a new site altogether.

According to Evan Williams, who is in charge of project design at design-build specialist Cambridge Companies, there are a number of factors business owners should consider when deciding on what route might be best for enhancing the capabilities of their operations.

WHEN DOES IT MAKE SENSE TO BUILD?

Williams says that an increase in volume can signal a clear need for facility expansion or redesign. Increases in volume commonly arise from taking on new customers or diversifying the materials the facility processes. In these cases, improving capacity often becomes a must in order to stay competitive and continue serving customers' needs.

“When it comes to renovating or expanding a facility, it [usually boils down to either expanding the volume or changing the mix] of materials,” Williams says. “Some transfer stations receive municipal solid waste and they might innovate and renovate their facility so they can receive single-stream recyclables that might otherwise get transferred to another facility.”

Other reasons to consider upgrading a transfer station include issues with odor or dust and subsequent environmental compliance regulation; structural deficiencies that need to be fixed to maintain safe operation; or the desire to better separate different streams such as white goods, organics and construction and demolition materials within the facility.

Williams says a redesign or expansion might also be required if there is a change in a site's incoming vehicles or use of equipment.

“[Facilities might also be renovated or expanded] to receive a particular type of compactor or to accommodate a larger type of trailer,” Williams says. “I know some transfer stations are going away from the more traditional 53-foot empty box trailers to the newer chip trailers to handle more volume. Other operators might want to switch out their existing wheel loader for a material handler with a grapple and need more ceiling clearance, for example. ... In these cases, an operator may say, ‘Hey, what we’re doing now isn’t working. We need to improve it. So, what is the next step?’”



DETERMINING NEXT STEPS

Williams says that once operators determine there is a need to upgrade or expand a facility, decision-makers should go through a strategic process to help figure out what the best solution is.

SCOPING AND PROGRAMMING PHASE

In the scoping and programming phase, Williams says stakeholders should both look at current operations and envision how operations may change in the future to chart a course for a site’s redevelopment or expansion.

“When you go through a scoping and programming phase, you look at all of your appropriate options,” he says. “First of all, you look at your operations to evaluate what you’re doing to confirm what you’re doing well and where your shortcomings are. Then, you have to look into the future and determine where you want to be 5, 10, 15, 20 years down the road—you have to figure out what is on the horizon and what you see your business looking like then. You’d hate to renovate or modify your building to accommodate what you’re doing right now when in a few years, there could be a dramatic change.”

Williams says business owners can undertake this process in house or consult with a third-party builder or design-build firm to think about how future operational changes might warrant certain building modifications.

IDEA OF COST

Of course, a business must figure out what it can afford before ground can be broken on a building project. Once business owners determine what they want and need from a redesigned or newly built transfer station, they can ascertain whether this is feasible from a financial standpoint.

“During the planning process, you can assess your budget numbers through a very rough order of magnitude, you’re talking within 20 percent, but you want to have an idea of what you can spend,” Williams says. “You don’t want to spend a lot of time and money on detailed design and come up with a figure that is just way outside of what you can spend. So, you have to keep the budget top of mind as an integral part of this exercise.”

DEFINE YOUR STRATEGY

After a business owner plots out what they want from a build perspective and they determine what their budget will be, they can determine whether or not they can renovate their existing space, add on to their existing space, or build an entirely new facility.

Williams says owners should consider if the changes they want to make will allow the company to safely and comfortably operate within the confines of the existing site during construction, if adjacent property may need to be acquired or if a new location will have to be procured.



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Beyond the cost of building a new structure, Williams says that stakeholders must weigh what the cost will be if operations are impeded during construction inside an existing facility.

“When you’re looking at modifying your existing facility and you’re planning on potential growth or expansion, you need to plan those building interventions with an eye on, ‘Can this be built while the existing facility is operating and can we do this so work is not impacted?’” Williams says. “There’s a fair amount of coordination that may or may not need to be done with respect to the facility to support existing operations if you’re going to continue work while building.”

Williams says that although it might seem like renovating an existing facility may be less expensive than building new, the reality of total cost might favor new builds in many circumstances.

“In many ways, renovating can look cost-effective at the start, but the total cost can be more expensive because you basically have to pay to tear something out and pay to put it back in,” he says. “So, if at the end of the day, the total project costs including downtime end up being more than just building a whole new facility on a greenfield site or even on the existing site, that can definitely have an impact. The other way that building a new site would make sense is if it’s just not practical to be shut down for an extended period for renovations. If you don’t have other transfer stations in the marketplace you can send material to and you’re either going to have to pay to ship that a long distance to landfill or send it to a competitor’s transfer station, and neither of those situations are appealing based on the duration of the project and the fact you might be incurring those costs, building new might be the most sensible option.”

Despite these realities, Williams notes that if a facility can coordinate a site rebuild in stages without detrimentally impacting work, this can make sense for some owners.

FINDING THE RIGHT TEAM

Williams says that once a comprehensive plan is in place, operators should ensure they’re vetting potential contractors who can best meet their construction needs. Although any number of builders can design and construct a transfer station, experience matters when it comes to functionality and structural integrity.

“You’re going to want to be partnering with a design and/or a design-build company that has extensive experience in the industry. This isn’t meant to be disparaging or negative, but any engineer is technically able to draw [what a facility] is going to look like and they’ll be able to put lines on paper and show where concrete needs to go and the like, but the reality is they’re not going to know some of the approaches and practices to make these buildings hold up better in the long term,” Williams says. “So, what you’re doing when you go to somebody who doesn’t have experience, you’re basically paying for them to get the experience the hard way by your project being the guinea pig. To a certain extent, people that have a lot of experience in the industry, they’ve already made their mistakes, and they know what they need to be doing to get you the results that you want.”

Beyond the ability to design and build a structurally sound facility, Williams says that experienced teams can offer advice and solutions to an organization’s pain points that the business owner might not have thought of previously.

“You might have in your head an idea of what you want or what you need for an expansion. But when you bring someone in with a wealth of experience, they can give you some other ideas that maybe you hadn’t considered. ... You want to bring the best people in so that you get the best project results possible, but you also want to get as many options on the table as possible,” Williams says. “You might bring in a company and they have 15 different layout options. You might not end up using all this advice, and that’s fine, but at least you have those options.”

This article originally appeared in the April issue of Waste Today. To contact Cambridge Companies, call us at: 1-866-972-1155 or info@cambridgecoinc.com