

For Your Consideration

Ask yourself these questions when planning a new transfer station or expanding an existing one.



By Michael Kalish

MANY TOWNS AND cities have used transfer stations to move trash to rural landfills efficiently and cost effectively. As communities grow, they must accommodate the corresponding growth in trash generation by either expanding or renovating existing transfer stations, or by constructing new ones. Whether planning for a new facility, or remodeling an existing one, several questions must be answered to aid in the decision process.

• **Why do you need a transfer station?**

It's a basic question but answering it is the key to the development of a facility that serves the needs of a community. Transfer stations must do more than efficiently ship trash for disposal. Changes in regulations and transferring costs are forcing these facilities to separate certain kinds of waste and reduce the amount of material sent to landfills. More diverse waste streams require larger facilities to properly separate and manage different materials. Recyclables, household hazardous wastes, yard wastes and electronic wastes are common waste streams

that require separate areas within a transfer station.

In addition to waste handling capabilities, transfer station planning must include office space, equipment maintenance areas, scales and the scale house. All of these factors combine to determine the amount of land required for a new facility. Expansion of an existing transfer station can be limited by the available land and surrounding buffer areas.

• **What time period are you considering for a facility?** When planning to either redesign an existing transfer



ELEVATE: If open-top trailers are going to be used to transport waste, a sloping site or the grading of a flat site is needed for a transfer station.

station or develop a new one, future waste handling needs must be considered. As communities grow, so does the amount of material that is sent to local waste management facilities. A site that is designed only to handle current waste needs can quickly become obsolete.

These projections are useful in planning facility expansions and determining the proper design accommodations for those expansions. Capital costs can be phased over time by planning for a series of smaller expansions to be completed as a community grows, rather than overbuilding from the start.

• **What is the preferred mode of transfer?** Transferring waste to trailer trucks is the most common method of facility operation. Larger, more remote landfills are commonplace, so the need to transport waste further distances is becoming standard, and the disposal of waste via rail haul is growing. When selecting preliminary sites for a transfer station, the site does not need to be adjacent to rail lines, but rail lines should be considered for long-term planning purposes. Sites close to an accessible rail yard or a property that is adjacent to rail lines and can be developed into a rail yard are most desirable.

In addition to planning how waste is transferred, the technology of the transfer station itself must also be considered. If open-top trailers are going to be used to transport waste, a sloping site or grading of a flat site will be required to provide the necessary elevation differential between the transfer station floor and the trailer thruway. Tipping floors with either full-depth or partial-depth tunnels are most commonly used to create these elevation changes. Compactors or pre-compactors also may be used to maximize trailer payloads or to load out waste into rear loading rail containers. The users of the facility also may impact the design. A facility that will primarily serve commercial traffic will be designed to handle the flow of waste, but a site that will primarily

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PLANNING FOR TOMORROW: When expanding a site or planning a new one, future waste handling needs must be considered.

serve the public and smaller hauling firms may be designed to minimize traffic backups caused by the manual unloading of waste.

• **What effect will the facility have on haul routes?** One of the most common citizen concerns with a transfer station is the impact of mixing large transfer vehicles with everyday traffic. Preferably, transfer

stations should be located close to major roadways and along a path that minimizes the impact on residential neighborhoods, churches, nursing homes and schools.

Facility owners also should consider the effect a transfer station location would have on waste collection, which typically begins early in the morning, especially in urban areas. Collection

routes usually are established by the locality to maximize the efficiency of waste collection, and the location of a new transfer station can significantly alter these routes, which, in turn, may impact the community.

• **What are the zoning and land-use restrictions?** A privately developed facility will be subject to zoning and land use regulations whereas a public

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facility may not be subject to those same rules. The perception of a transfer station can either be that of a "dump" or a community asset. To improve local perception, developers should seek community involvement during the planning process, and comply with local and state regulations. Current regulations and the long-term master plans for the area should be reviewed. The key to siting a facility that meets current and future community needs is to minimize the restrictions and impacts of developing the chosen site.

• **What environmental or cultural restrictions exist?** The presence of endangered species can severely limit the use of a site, while wetlands regulations and forest restoration ordinances may require that impacts of development be identified and mitigated, or they may set aside portions of a site as non-developable. Historic buildings or archaeologically significant areas may also affect the construction of a transfer station. Experts in all of these fields should be hired during the planning stages to identify the restrictions on sites being considered for transfer station development.

• **What are the available site utilities?** A transfer station and the associated site facilities will require electricity, water and sewer service, at a minimum. The availability of these utilities to the site will impact development costs. The closer these utilities are to the site, the lower the development costs. If public water is not available, then an on-site well and potable water storage tank will be needed for domestic and fire protection purposes. If public sewer service is not available, then an on-site treatment system will be required.

The development of design criteria that meets the regulatory requirements and the needs of the community will help determine whether to repair or modify an existing transfer station, or build a new one. Cost estimates for both should be prepared during the evaluation stage. However, the key to a successful project is the development of site criteria and the implementation of that criteria. **WA**

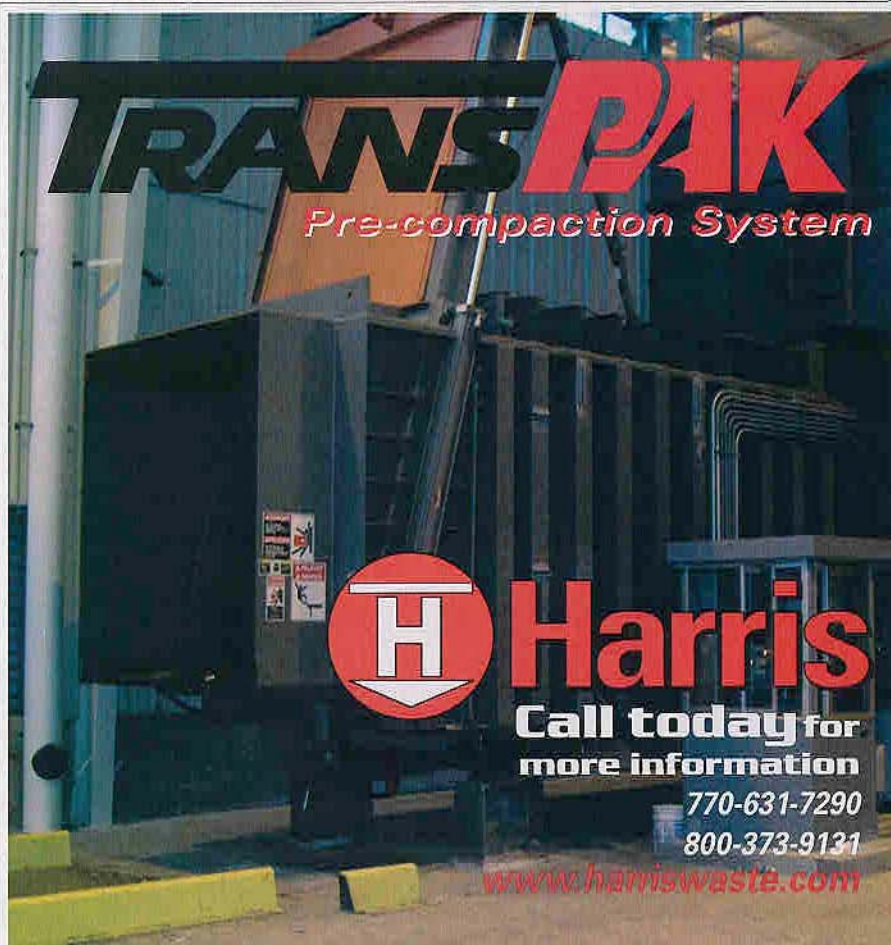
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KNOW YOUR LIMITS: Before embarking on a facility construction or expansion, investigate the zoning, land-use, environmental and cultural restrictions on the site.

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