

Trash Enclosure Area Guidelines for New Construction and Redevelopment Projects

The following guidelines are intended to facilitate compliance with City of Palo Alto Municipal Code chapters governing solid waste management and stormwater pollution prevention. For questions or clarification regarding these guidelines, please contact Chuck Muir, Manager Environmental Control Programs, 650-496-6979.

An enclosure is required for each parcel and must be located on private property and may not be located in alleyways or other City owned rights-of-way, where they may disrupt circulation patterns.

A. Capacity

Enclosure areas must have adequate storage space for solid waste, recycling, and compost.

Per Section 42911(b) of the Public Resources Code of the State of California, a local agency shall not issue a building permit to a development project, unless the development project provides adequate areas for collecting and loading recyclable materials. The City of Palo Alto Municipal Code requires all persons to sort their refuse according to its characterization as solid waste, compostable materials, or recyclable materials, and place each type of refuse in a separate container designated for disposal of that type of refuse. Therefore, all new development must have sufficiently sized solid waste, recycling, and composting storage space (Municipal Code Section Chapter 5.20.030). Compactors, composting systems, food waste bins, and Fats, Oils, and Grease (FOG) bins should also be stored in an enclosure or inside a building.

For assistance calculating solid waste generation levels, consult the CalRecycle website:
<http://www.calrecycle.ca.gov/WasteChar/WasteGenRates/>

-The minimum enclosure must accommodate three containers (one each for waste, recycling and compost).

Food Service Establishments (FSEs) (such as bakeries, restaurants, take-outs, and businesses with cafeterias): Trash enclosures must accommodate the tallow bin. It is recommended that new FSE trash enclosures be plumbed to a grease control device and the sanitary sewer to facilitate clean up.

Mixed-Use Facilities: Residential and commercial waste streams should be collected separately.

B. Stormwater Pollution Prevention

Enclosure areas should be covered and enclosed to prevent rain from falling on containers, compactors, or the enclosure floor and carrying contaminants to the stormwater system or wind from distributing any items that may be on the floor of the enclosure. Though recycling/trash containers and compactors are required to be watertight, overfilled containers with partially raised lids allow rain to saturate waste and

recyclables, and compactors that are filled with wet waste commonly leak. Additionally, polluted water can enter the storm drain through leaks or spills when the containers are emptied. City Municipal Code 16.09.165 prohibits discharge of any domestic or industrial waste or other polluted waters into City storm drains. The property owner will be responsible for administrative citations and remediation related to stormwater contamination and any other violations of the City's Municipal Code.

- The cover/roof may be part of the trash enclosure or the roof of a building.
- The roof canopy should extend sufficiently outward in all directions so that wind-blown rain will not enter the interior of the storage area. A horizontal or sloped canopy measuring approximately one-half the height of the canopy to the ground is recommended.
- Accessible path of travel and entry is required per CBC 11B-206.2.2. A 3'-wide opening or man- door with an opening force of 5 lbs. or less is typically used.
- The minimum clearance inside a roofed enclosure shall be 7'6" with a 6'8"-high entryway for pedestrian access.
- The enclosure should include walls to prevent run-on and run-off as well as wind distribution of litter from any containers left open.

Stormwater runoff from the roof of the enclosure areas should drain away from the enclosure area.

- A grade break should be used to prevent run-off from outside of the enclosure area from entering the enclosure area.
- There should be no storm drains located inside the enclosure area or in the immediate vicinity of the recycling/trash storage area.
- Runoff from the roof of the enclosure area should drain to landscaping or other stormwater treatment system before discharging to the municipal storm sewer system

Enclosure areas can be plumbed to the sanitary sewer so that waste spills, leaks, and wastewater from bin washouts does not run out of the enclosure area and into storm drains. Food Service Facilities (such as bakeries, restaurants, take-outs, and businesses with cafeterias) may include a sanitary sewer connection in the enclosure area and inclusion of a water recommendation to facilitate clean up is recommended.

- If a sanitary drain is desired in the enclosure, the sanitary drain should discharge to a grease interceptor.
- Spills and leaks should be cleaned up immediately using a spill kit and/or appropriate Best Management Practices (BMP) that utilize absorbents or equivalent "dry" methods.
- Waste collection containers must be routinely inspected to verify that covers are in

place and that container and surrounding areas are clean and free of FOG and food residue, debris and leaks. Such containers include, but are not limited to, trash, recycle, food scrap and tallow receptacles. If FOG or food residue, debris, or leaks are found the FSE shall immediately take action to correct the noncompliance. This may include, placing cover(s) on containers and receptacles, cleaning up FOG or food residues or spills in the surrounding areas or contacting the appropriate vendor for container or receptacle repair/replacement.

C. Access

Solid waste enclosure areas should be accessible by garbage/recycling/compost trucks (unless other waste management practices will be implemented):

- The enclosure should be constructed on a flat area with a grade of no more than 2%, in order to ensure that containers can be safely serviced and returned to the enclosure. Enclosure capacity must provide for and maintain adequate space between containers to allow for access to and maneuverability of the containers for service. Enclosures that do not conform may incur additional service fees by the City's waste hauler.
- The enclosure should be constructed at street level and in a location that is accessible by the collection vehicle or serviceable from the street. Enclosures located in non-serviceable areas, or not at street level will incur additional service fees by the City's waste hauler. City's waste hauler does not enter interior areas of buildings.
- Provide a minimum 22-foot wide driveway, notwithstanding standards for fire truck access. For further information, consult with appropriate City Departments, such as Public Works and Fire.
 - At their discretion, the Fire Department may approve variances to driveway widths. In contrast to emergency vehicles, however, garbage trucks travel the routes on a weekly or more frequent basis and often under full load. The widths and radii provided in these Guidelines are the minimums recommended by the hauler operating in Palo Alto.
- Provide a minimum vehicle turning radius of 40 feet (see Figure 1).

- Do not allow parked cars and/or parking spaces to block access to the trash areas.
- Receptacle travel/service paths should be constructed of materials to allow unrestricted movement of receptacles and minimize noise disturbances.
- Provide a 20' overhead clearance above the enclosure area so that hauler vehicles can access and empty the containers therein.
- Collection cannot be performed in underground.
- Collection vehicle travel aisles, including concrete pads, should accommodate a vehicle weight of 60,000 lbs.

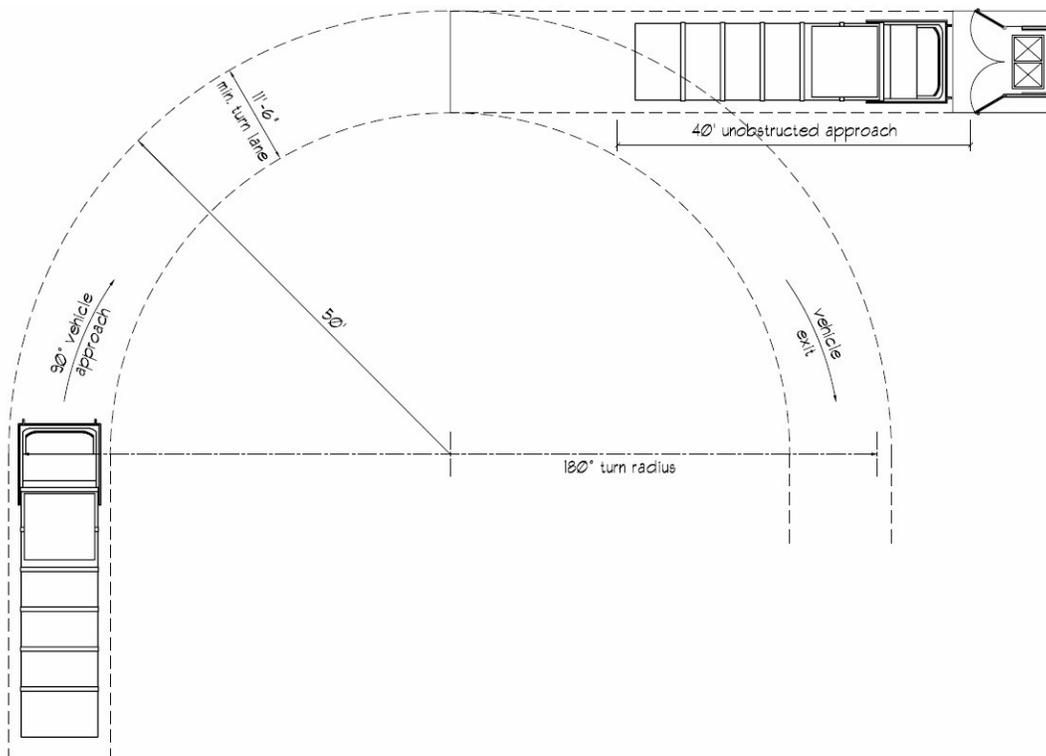


Figure 1

A stress pad should be installed in front of the trash enclosure area.

- Fortify the area in front of the trash enclosure area with a concrete stress pad.
 - The pad should be engineered to withstand up to 60,000 pounds of direct force.
 - The trash area pad and apron should slope 1/8 inch per foot to facilitate proper drainage proper
 - The apron surface should be the same elevation as the pad threshold and the surrounding surfaces.

Pull-Out Charges

Where enclosures are located in an enclosed area, such as a parking garage, arrangements may be made with the City's waste hauler to have pick-up occur outside the structure, but additional services charges will be assessed. Receptacles cannot block sidewalk, be placed in the street, gutter, or on/in

front of utility meters. If pick-up occurs inside the structure, it must meet vehicle access requirements as specified by the City's waste hauler and additional services fees will be incurred. Hauler contact information is available at: <http://www.greenwasteofpaloalto.com/>

Collection cannot be performed in underground. Underground bins locations require a minimum of 77" of vertical clearance. Pull out charges will apply. In instances where push services are not available (e.g., hauler driver cannot push containers up or down ramps), the property owner will be responsible for placing solid waste containers in an accessible location for collection.

D. Other Requirements. The following information is provided as a general guideline and should not be considered a definitive listing of Building and Fire Code requirements. For further information, please contact Development Services.

General Requirements

1. Trash enclosures should allow convenient access for each user. Enclosure locations should not be blocked by parking spaces.
2. Each enclosure should be enclosed on four sides, one of which includes a gate or door. The gate/door should open the full width of the enclosure.
3. Trash enclosures should be located away from residential uses and should not create a nuisance for the adjacent property owners.
4. Trash enclosures should be architecturally compatible with the project. Chain link enclosures are strongly discouraged.
5. New enclosures should consider rubber bumpers to reduce wear and tear on walls
6. Trash enclosures near residential areas and/or streets should include screens/solid covers to prevent odor and wind-blown litter.

Accessibility Requirements. For questions about Accessibility requirements, please contact the Building Department.

1. There must be an accessible path of travel and accessible door to the point of waste disposal, such as a trash or recycling chute in a multi-story building, or an exterior dumpster in most other cases.

Sprinklers and Wall Openings. Fire sprinklers will be required if the trash area has a solid roof. The fire sprinklers supply may be connected to a nearby domestic or irrigation water system. Depending on the proximity to a property line or structure, Building and Fire Code requirements may limit the size of openings allowed on building elevations that face a property line or structure. Please consult with the Building and Fire Departments.

Security. The trash enclosure areas should allow for visual scrutiny and observation into the enclosure. If possible, enclosure areas should have a light source for security to deter illegal activity and illegal dumping during the hours of darkness. Access into the enclosure area, including pedestrian access doors, should be lockable to discourage trespassing and illegal dumping. The removal of refuse that is illegally dumped on the subject property becomes the responsibility of the property owner.



Examples Only. Please work with Planning and Building staff to design a structure appropriate to your site.

E. Reference

For reference, some excerpts from the Municipal Code are provided below. The City of Palo Alto Municipal Code may be accessed online: http://www.amlegal.com/codes/client/palo-alto_ca/

Trash Enclosure Requirements – Palo Alto Municipal Code

Chapter 5.20: Collection, Removal and Disposal of Refuse

5.20.030 Discarding of refuse

(a) No person shall throw, drop, leave, place, keep, accumulate, or otherwise dispose of any refuse upon private property either with or without the intent to later remove the same from that place or premises, or upon any street, public right-of-way, sidewalk, gutter, stream, or creek, or the banks thereof, or any public place or public property.

(b) All persons shall separate their refuse according to its characterization as solid waste, compostable materials, or recyclable materials, and place each type of refuse in a separate container designated for disposal of that type of refuse. No person may mix any type of refuse, or deposit refuse of one type in a collection container designated for refuse of another type, except as otherwise provided in this chapter. This does not prohibit the placement of refuse in public solid waste or recycling receptacles, or in containers collection in accordance with the provisions of this chapter. This section does not prohibit any person from engaging in home composting. Administrative citations or any other enforcement actions will not apply to this paragraph for a person occupying a residential premise.

Chapter 18.23: Performance Criteria for Multiple Family, Commercial, Manufacturing and Planned Community Districts

18.23.020 Refuse disposal areas

(A) Purpose

Assure that development provides adequate and accessible interior areas or covered exterior enclosures for the storage of refuse in appropriate containers with storage capacity for a maximum of one week,, and that refuse disposal structures and enclosures are located as far from abutting residences as is reasonably possible.

(B) Requirements

(i) Refuse disposal and structures and enclosures shall be accessible to all residents or users of the property.

(ii) Compostable materials and recyclable materials facilities shall be located, sized, and designed to encourage and facilitate convenient use.

(iii) Refuse disposal areas shall be screened from public view by masonry or other opaque and durable material, and shall be enclosed and covered. Gates or other controlled access shall be provided where feasible. Chain link enclosures are strongly discouraged.

(iv) Refuse disposal structures and enclosures shall be architecturally compatible with the design of the project.

(v) The design, construction and accessibility of refuse disposal areas and enclosures shall be subject to approval by the Architectural Review Board, in accordance with design guidelines adopted by that Board and approved by the Council pursuant to Section 18.76.020.

Chapter 16.09 Sewer Use Ordinance

16.09.075 Food Service Establishments

(3) Storm water pollution prevention. (A) Routinely inspect and dry sweep as necessary outside areas such as

walkways, dining areas and waste storage areas to prevent storm water pollution. (B) Routinely inspect waste collection containers to verify that covers are in place and that container and surrounding areas are clean and free of FOG and food residue, debris and leaks. Such containers include, but are not limited to, trash, recycle, food scrap and tallow receptacles. If FOG or food residue, debris, or leaks are found the FSE shall immediately take action to correct the noncompliance. This may include, placing cover(s) on containers and receptacles, cleaning up FOG or food residues or spills in the surrounding areas or contacting the appropriate vendor for container or receptacle repair/replacement.

GCD Connections: All drainage fixtures where FOG may be discharged shall drain to a GCD. Such fixtures include, but are not limited to: ... Drains in trash/recycling enclosures; ...

16.09.180 Requirements for newly constructed, remodeled, or converted multi-residential, commercial and industrial facilities

(10) New buildings and residential developments providing centralized solid waste collection, except for single-family and duplex residences, shall provide a covered area for a dumpster. The area shall be adequately sized for all waste streams and designed with grading or a berm system to prevent water run-on and runoff from the area;

Chapter 18.28: Special Purpose (PF, OS and AC) Districts

Minor Site and Design Review: For minor projects (e.g., fences, landscape changes to an approved project, trash enclosures, accessory buildings 200 square feet or less, etc.), the review process shall follow the Minor Architectural Review (staff level) procedures as outlined in Section [18.77.070](#). To qualify as a minor project, the project shall have less than 10 cubic yards of excavation and or grading and be Categorically Exempt from the California Environmental Quality Act (CEQA).

Chapter 16.11: Stormwater Pollution Prevention

Source Control Requirements.

(A) Minimization of stormwater pollutants of concern in urban runoff through measures that may include plumbing of the following discharges to the sanitary sewer, subject to the city's authority and standards as contained in [Chapter 16.09](#):

(i) Discharges from indoor floor mat/ equipment/hood filter wash racks or covered outdoor wash racks for restaurants;

(ii) Dumpster drips from covered trash, food waste and compactor enclosures;

(iii) Discharges from covered outdoor wash areas for vehicles, equipment, and accessories;

(iv) Swimming pool water, if discharge to onsite vegetated areas is not a feasible option; and

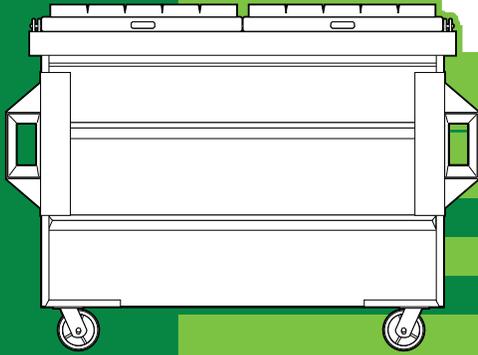
(v) Fire sprinkler test water, if discharge to onsite vegetated areas is not a feasible option;

(B) Properly designed covers, drains, and storage precautions for outdoor material storage areas, loading docks, repair/maintenance bays, and fueling areas;

(C) Properly designed trash storage areas;

(D) Landscaping that minimizes irrigation and runoff, promotes surface infiltration, minimizes the use of pesticides and fertilizers, and incorporates other appropriate sustainable landscaping practices and programs such as bay-friendly landscaping;

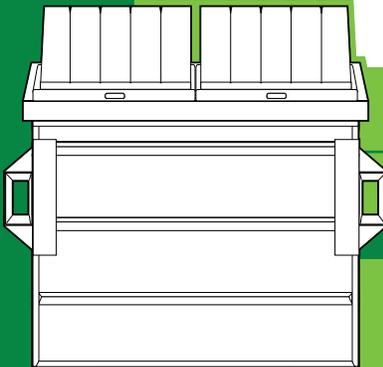
1-4 Cubic Yard Containers



Size	Length	Width	Height	Pocket Height
1 cu. yd.	81"	29.5"	37.0"	26.0"
1.5 cu. yd.	81"	32.5"	44.5"	27.5"
2 cu. yd.	81"	41.5"	51.5"	32.5"
3 cu. yd.	81"	46.5"	61.5"	39.5"
4 cu. yd.	81"	55.5"	66.5"	43.5"

- Measurements include castors/wheels
- To determine additional space needed within enclosure for maneuvering container at time of service, add 1/2 B (width) to A (length)

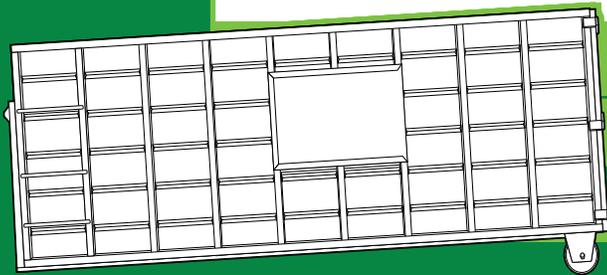
5-8 Cubic Yard Containers



Size	Length	Width	Height	Pocket Height
5 cu. yd.	81"	67.5"	63.5"	33.5"
6 cu. yd.	81"	68.25"	71.5"	41"
8 cu. yd.	81"	75"	92"	41"

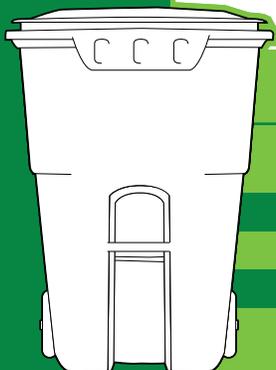
- Containers do not have castors/wheels
- Add 5 feet (2 1/2 feet each side) to A (length) for truck clearance to service container

Debris Box/Roll-Off Box



Size	Length	Width	Height
7 cu. yd.	14'	8'	2'
15 cu. yd.	18'	8'	4'
20 cu. yd.	16'	8'	5.3'
30 cu. yd.	21'	8'	4.5'
40 cu. yd.	21'	8'	7.5'

Wheeled Cart



Size	Depth	Width	Height
20 gallons	24.25"	19.25"	38.5"
32 gallons	24.25"	19.25"	38.5"
64 gallons	30"	27.5"	40"
96 gallons	34.5"	29.25"	46.75"



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