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DRAFT-Aldridge-DRAFT

The Barlow Hotel

Sebastopol, CA

Trash Management Plan

Task: Design a waste and recycling system for this hotel with 83 keys, a full service restaurant, bars, a meeting and retail space, a spa and gym, and a roof pool that minimizes costs, staffing requirements and environmental impacts, while providing convenient trash disposal for the building's segments. Please note the word "trash" when used in this plan covers waste, recycling, and compost. Trash plans are analyzed in cubic yards (CY).

Sebastopol Trash Regulations: "It shall be unlawful for any person, firm, or corporation to deposit, keep, accumulate or permit, cause or suffer any rubbish, wet garbage, or garbage to be deposited, kept or accumulated upon any lot or parcel of land, or on any public or private place, street, lane, alley or drive unless the same shall be kept deposited or allowed to accumulate as hereinafter provided." (Sebastopol Muni. Code 13.16.020)

"Requirements for Commercial Businesses. Generators that are commercial businesses, including multifamily residential dwellings, shall: Subscribe to the City's three-container collection services and comply with requirements of those services as described below in subsection (D)(2) of this section, except commercial businesses that meet the self-hauler requirements in subsection I of this section. The City or its designee shall have the right to review the number and size of a generator's containers and frequency of collection to evaluate adequacy of capacity provided for each type of collection service for proper separation of materials and containment of materials; and commercial businesses shall adjust their service level for their collection services as requested by the City." (Sebastopol Muni. Code 13.16.022)

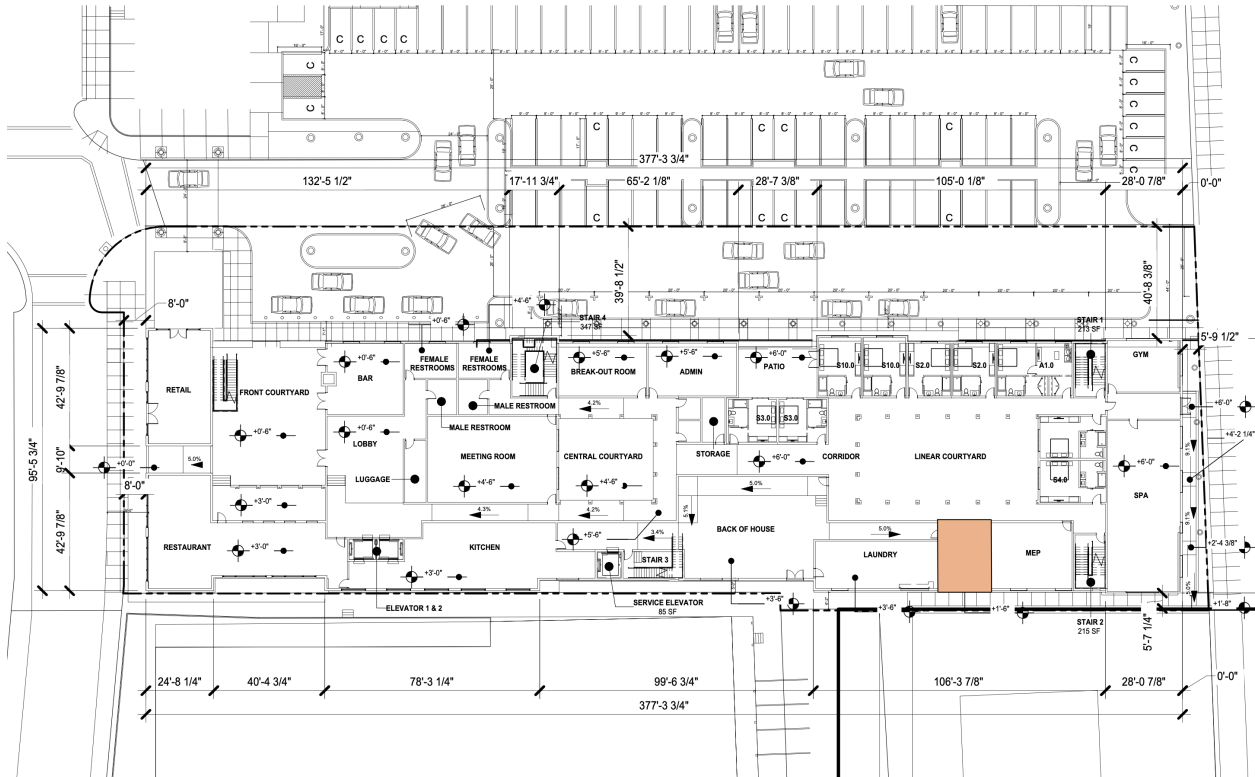
City Mandates and Requirements: As of July 1, 2012, under Assembly Bill 341, State law requires commercial establishments (businesses, schools, and apartments) to recycle. This law was further extended by AB1826 to require separation of organic materials from waste by all business with more than 4 cubic yards of waste per week and all residential properties with more than 5 units. However, residential properties were not required to divert organic food waste under AB1826. The food waste separation exception was eliminated under California Law SB1383 starting January 2022. This law implements mandatory food waste diversion for all residential, multi-family and commercial business without exception. The City of Sebastopol requires all persons to source separate their refuse into Mixed Recyclables (paper, newsprint, and cardboard, glass, plastic & metal containers) and waste, and eventually organics (under AB1383). Each material type is segmented into a specially-designated container for collection by the City's franchised waste and recycling vendor.

Situation: The City expects at minimum that all residents will source-separate their trash into mixed recyclables, waste, and organics to meet the requirements of the State of California AB 341, AB 1826, and AB 1383.. In Sebastopol the following factors are critical:

1. Exclusively: Recology, the sole franchise hauler, is the only entity that can legally engage in waste disposal for properties within the city limits.

2. Non-negotiated. Waste disposal rates for commercial customers are set by the City and cannot be negotiated. These rates are typically adjusted annually.

Site Plan:



Specific Project Design Issues & Recommendations: There are several critical trash system design issues:

1. To meet the State requirements of AB 341, AB 1826, and SB 1383, trash must be collected in three streams (waste, mixed recycling and compost(organics). We recommend yard waste be collected and taken to a compost facility per the building's landscaping contract.
2. Due to projected trash levels ATM recommends compacting both waste and mixed recycling. Compaction saves money in hauling costs, labor hours needed to move bins back and forth, and the number of bins required to be stored on site. Compost, due to relatively low volume, may remain loose.
3. A space for communal trash for the hotel must be provided. The designed trash room appears viable to serve as a communal trash room. All segments of the building will bring all streams to the shared trash room with material handling carts or Toter style carts.
4. A convenient and safe location or locations must be found for trash container staging. Front load service requires 25' clear height so it is not possible to service bins within the building. We recommend bins be serviced along Depot Street. Building staff will tow compacted waste and



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recycling bins to the staging location using electric bin moving equipment. Compost bins may be wheeled without assistance.

5. The trash collection room must have 1 CFM/SF mechanical ventilation per CBC, floor drain, hose bib and odor control.
6. ATM recommends taking measures to protect the walls where trash bins are stored and transported. In the trash room, we recommend a 12"H x 6"W concrete curb at the base of all non-concrete walls or 1/8" thick diamond tread backing 6'-0" AFF. Additionally, the trash room walls shall be finished with washable waterproof surface such as FRP or high-gloss enamel paint 8'-0" AFF. For corridors in the bin moving path of travel we recommend diamond tread 6'-0" AFF. Note that all wall protection is to be provided by others, even for projects where ATM provides the trash handling equipment.

Commercial Trash Volume Projections:

Commercial trash volumes are difficult to predict due to the variety of possible uses for the spaces. We have assumed that the commercial spaces will include a restaurant or other food & beverage (F&B). Please note that F&B operations generate far higher levels of trash than non F&B operations.

Trash Projections - ALL LOOSE See detailed cost benefit analysis at end of report

Use	SF/ Keys	LOOSE Waste Volume CY/WK	Total # of 4CY LOOSE Waste Bins/WK	LOOSE Recycle Volume CY/WK	Total # of 4CY LOOSE Recycling Bins/WK	LOOSE Compost Volume CY/WK	Total # of 2CY LOOSE Compost Bins/WK
Restaurant & Kitchen	3,590	12.6		21.4		5.6	
Spa & Gym	2,105	0.5		1.1		0.1	
Hotel	83	4.6		5.5		0.6	
Retail	2,000	0.5		1.0		0.1	
Meeting Space	1,472	1.4		1.3		0.6	
Admin Space	613	0.2		0.3		0.02	
Ground Bar	716	0.8		1.4		0.4	
4th Fl. Bar	1,000	1.4		2.4		0.6	
Total	N/A	22.1	8	33.4	11	7.9	4



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Combined Commercial Trash Projections - COMPACTED WASTE & RECYCLING

Use	SF/ Keys	COMP Waste Volume CY/WK	Total # of 4CY COMP Waste Bins/WK	COMP Recycle Volume CY/WK	Total # of 4CY COMP Recycling Bins/WK	LOOSE Compost Volume CY/WK	Total # of 2CY LOOSE Compost Bins/WK
Restaurant & Kitchen	3,590	3.1		5.3		5.6	
Spa & Gym	2,105	0.1		0.3		0.1	
Hotel	83	1.2		1.4		0.6	
Retail	2,000	0.1		0.3		0.1	
Meeting Space	1,472	0.4		0.3		0.6	
Admin Space	673	0.04		0.1		0.02	
Ground Bar	716	0.2		0.4		0.4	
4th Fl. Bar	1,000	0.4		0.6		0.6	
Total	N/A	5.5	2	8.3	3	7.9	4



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Commercial Trash Handling System

To adhere to State law, all commercial tenants must separate their trash in 3 different streams: waste, mixed recycling (paper, cardboard & containers) and compost (organics).

A space for shared trash disposal must be provided. All areas will bring all streams to the communal trash room in liner bags using material handling or Toter style carts. Once there, they will hand place the waste and recycling bags into the appropriate stationary compactor. Compacting the waste and recycling streams with 4 yard bins reduces service costs as well as reduce service days/truck traffic. Compost will be placed loosely into 2 yard bins.

Odor Control. To mitigate malodors in the trash room(s), a four-pronged approach is recommended including cleaning, proper ventilation, and installing a deodorizer system.

- Mechanical Exhaust of Trash Collection Room. The mechanical ventilation required rate is 1 CFM/SF, however, ATM recommends increasing this rate as needed, especially in areas with warmer climate. Exhaust should vent through the roof. ATM does not recommend a chilled/refrigerated trash room. A cooled space will not delay decomposition, and will have minimal impacts on odorous trash.
- Cleaning the Trash Room. Trash rooms should be swept clean of debris on a weekly basis. Trash room wash-downs should be scheduled quarterly. These should include cleaning any trash equipment such as compactors, as well as floors and the walls. If possible, bins or compactor receiver containers should be cleaned at the same time, assuming the containers are empty.(Bins should be cleaned by onsite staff. If hauler-provided dumpsters become especially dirty, the should be replaced by the hauler.)
- Odor Control Systems. Odor control systems can be helpful in controlling odors, but most have limited effectiveness or create other problems. Popular low-cost systems that spray a masking agent into the air, only serve to hide odors in the trash room and not eliminate them. Ozone generators are more effective, but the odor-destroying product they create — ozone — can have deleterious effect on human health and can also destroy compactor hoses and seals. One odor control system that avoids these problems is the Piiian Mini Vaporizer. It creates a very fine 50-micron mist that bonds with — and ultimately destroys — odor causing molecules. And unlike ozone, the entirely natural blend of plant extracts, essential oils and emulsifiers which is safe and does not damage equipment.

RECOMMENDED TRASH EQUIPMENT

COMPACTED OPTION (RECOMMENDED)

Compactor Qty	Bin Type	# of Bins	Bin Size Cubic Yards
(2) A-1000 (waste/ recycle)	Front Load	1 waste 1 recycle 2 compost	4CY compacted waste 4CY compacted recycle 2CY loose compost

LOOSE OPTION

Compactor Qty	Bin Type	# of Bins	Bin Size Cubic Yards
N/A	Front Load	3 waste 3 recycle 2 compost	3CY loose waste 3CY loose recycle 2CY loose compost

Compactors for Waste and Recycling

APOLLO A1000 STATIONARY COMPACTOR

SPECIFICATIONS A1000

MANUFACTURER'S RATING.....	1.00 cu.yd
CHAMBER OPENING.....	48" W x 32" L
TOP OPENING.....	48" W x 40" L
OVERALL DIMENSIONS.....	61" L x 52" W x 46" H
RAM DIMENSIONS.....	27" H x 48" W

PERFORMANCE SPECIFICATIONS

RAM CYCLE TIME.....	38 secs
VOLUME DISPLACEMENT PER HOUR.....	105 cu.yds
RAM PENETRATION.....	8 inches
RAM FACE PRESSURE (N).....	22 psi
RAM FACE PRESSURE (M).....	27 psi
PACKING FORCE (N).....	28,000 lbs
PACKING FORCE (M).....	35,000 lbs

STRUCTURAL SPECIFICATIONS

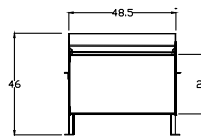
MAIN FRAME.....	1/4" plate
FRAME REINFORCEMENT.....	4"x2"x 1/2" Channel
FLOOR PLATE.....	3/8" plate
RAM FACE.....	3/8" plate

ELECTRICAL SPECIFICATIONS

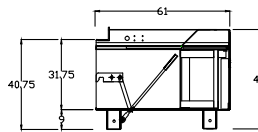
POWER UNIT.....	24H x 22W x 14D
MOTOR.....	5HP
MOTOR POWER.....	208/230/460V
CONTROL VOLTAGE.....	120VAC
CIRCUITS CONTROLLER.....	ZELIO PLC PROCESSOR
MONITORS.....	80% & 100% FULL
PHOTO ELECTRIC EYE.....	OMRON E3K
DOOR SAFETY SWITCH.....	TELEMECANIQUE

HYDRAULIC SPECIFICATIONS

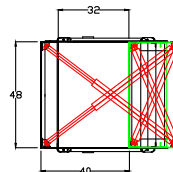
CYLINDERS.....	DUAL 3" BORE, 2" ROD
PUMP.....	6.5GPM GEAR TYPE
OIL TANK.....	20 GAL
OPERATING PRESSURE.....	1600 - 2000 PSI
RELIEF PRESSURE.....	2500 PSI
RATED PRESSURE.....	3000 PSI



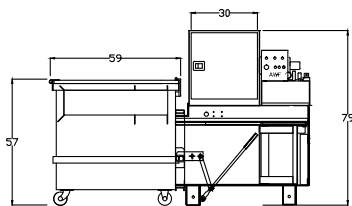
FRONT VIEW



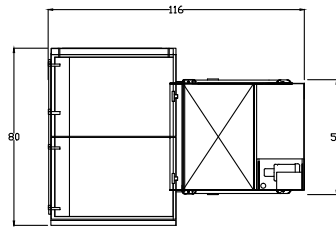
SIDE SECTION



TOP SECTION



SIDE VIEW

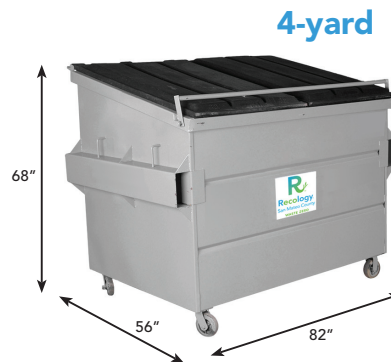
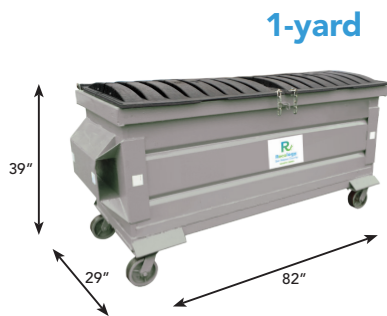


TOP VIEW

TYPICAL LAYOUT W/ 4CY CONTAINER

Trash Bin Examples. Please note that hauler bin dimensions are similar.

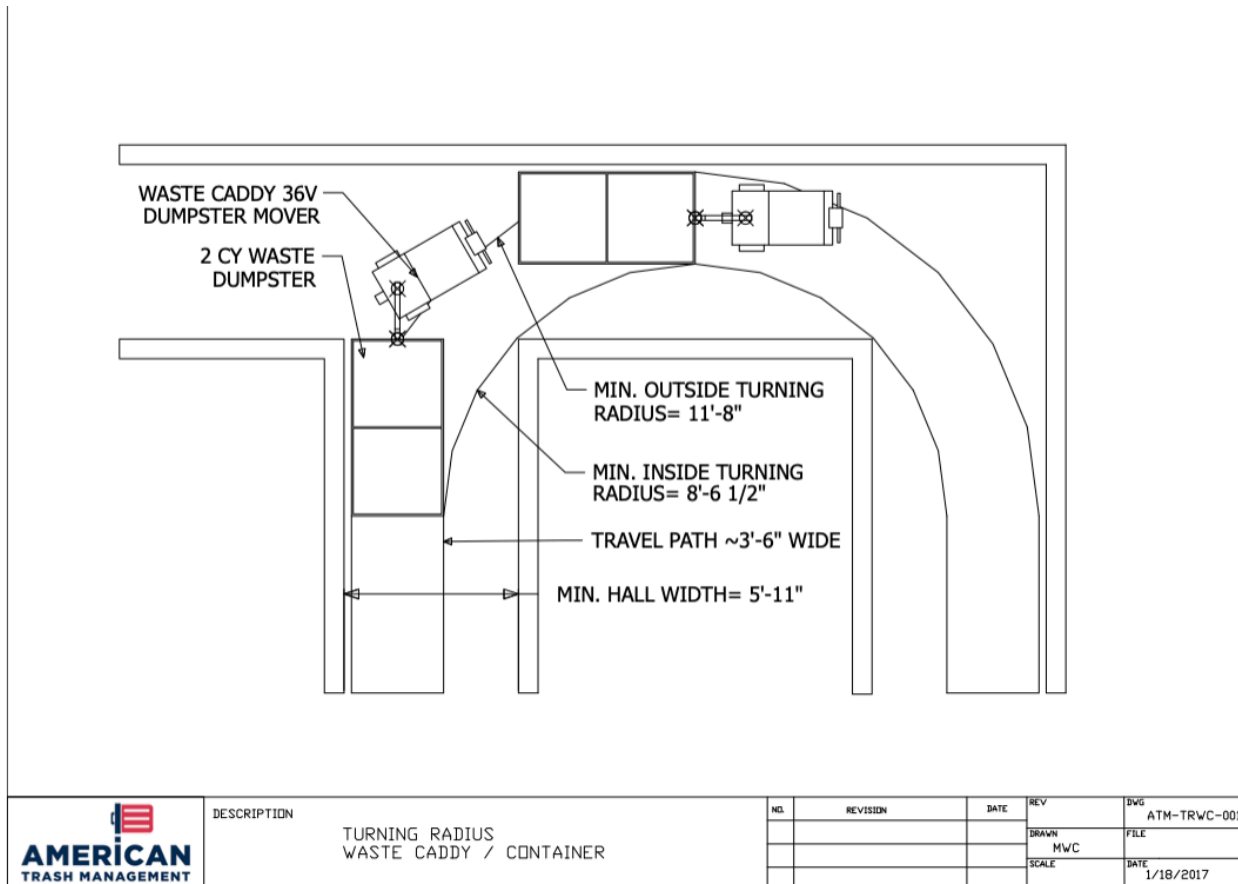
Front Load Bins



Dimensions may vary slightly. Measurements shown are exterior dimensions.
 Not all bins are available with wheels.



Bin Towing Turning Radius - Waste Caddy





**AMERICAN
TRASH MANAGEMENT**

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Bin Moving Equipment



**WasteCaddy
Dumpster Mover**

Prevents the physical strain and pain associated with pushing or pulling heavy dumpsters and trash containers to curb side for pickup by waste haulers.

Insert tube on the front of the WasteCaddy attaches to the bottom of the dumpster.

Custom receivers provided for quick and easy connection to containers.

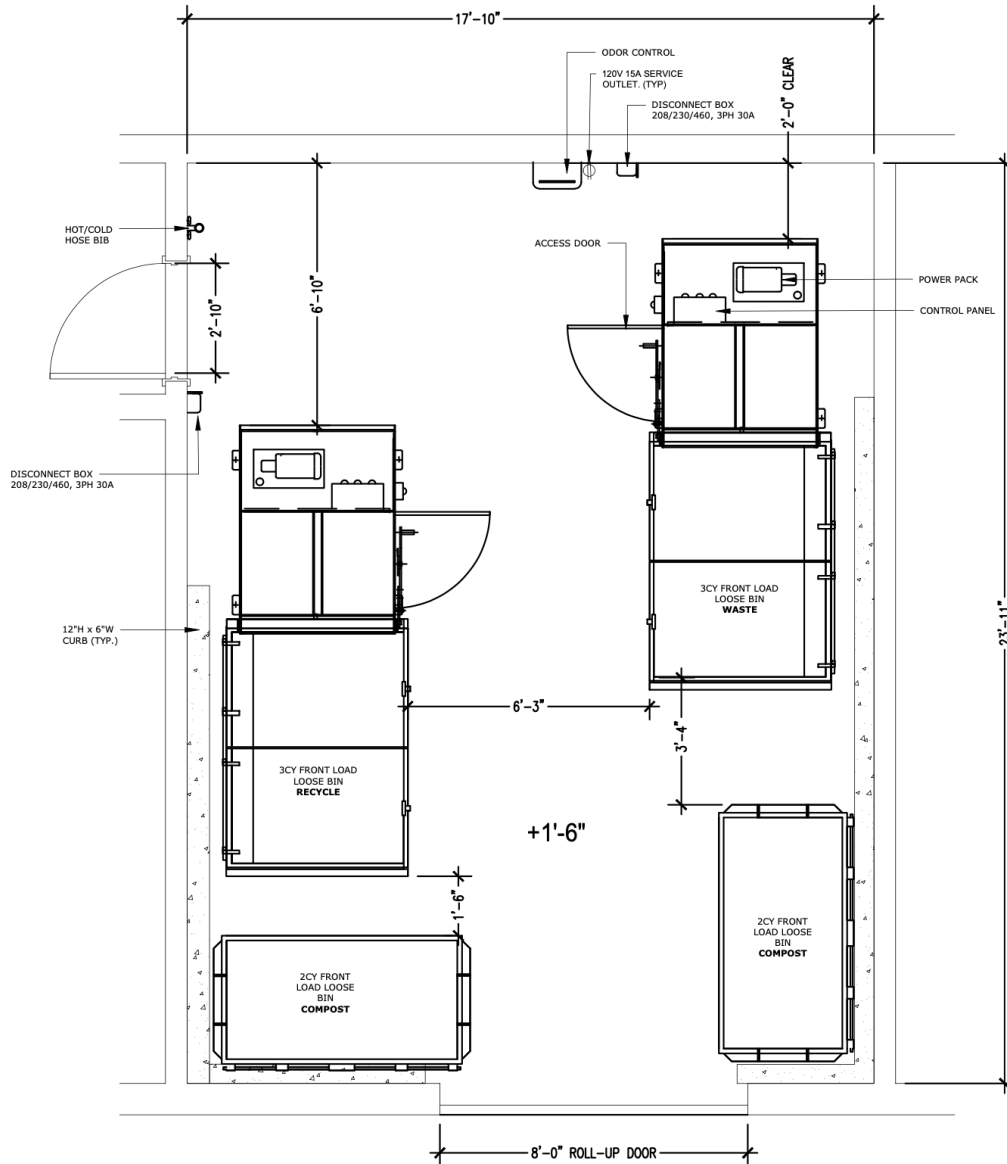
WasteCaddy Dumpster Mover can easily pull heavy trash containers up inclines through snow and ice.



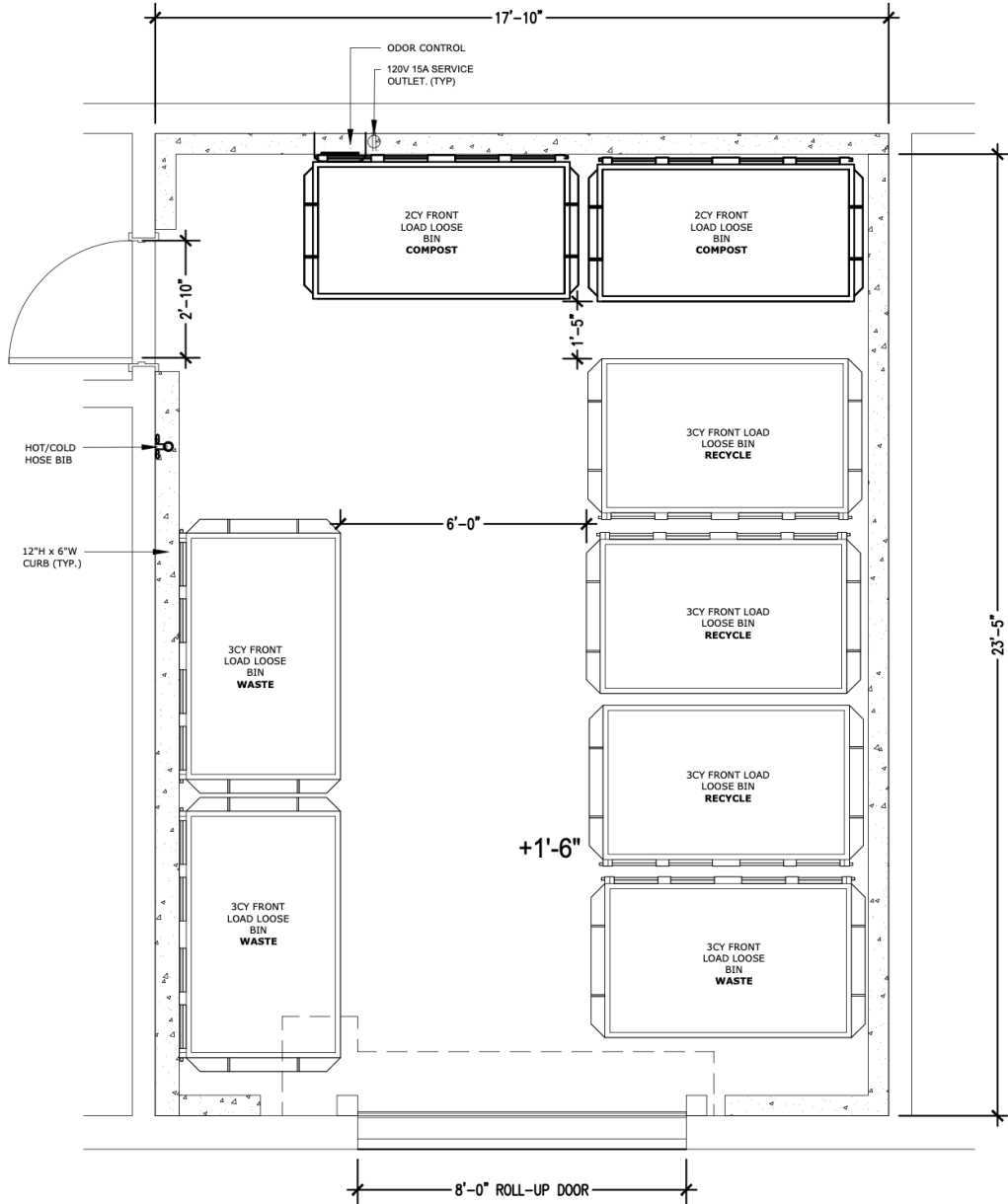
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RECOMMENDED COMMUNAL TRASH ROOM LAYOUT

Compacted Option (Recommended)



Loose Option





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Sample Building Collection Schedule. Note that actual collection schedules will depend on hauler, building management and operating trash levels.

LOOSE Bin Service (Not Recommended)

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Loose Waste 3CY	3		2		3	
Loose 3CY Recycling	3		3		3	2
Loose Compost 2CY	2				2	
Total	8	0	5	0	8	2

COMPACTED Bin Service (Recommended)

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Compacted Waste 4CY	1				1	
Compacted 4CY Recycling	1		1		1	
Loose Compost 2CY	2				2	
Total	4	0	1	0	4	0

TRASH SYSTEM SPECIFICATIONS: Provided separately.

1. Section 11 82 26 - A-1000 Hand Fed Compactor
2. Section 41 63 23 - Bin Moving Equipment-Waste Caddy
3. Section 44 31 00 - Odor Control



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Waste, Recycling and Compost Analysis

Below is a comparative analysis of the disposal and labor costs of handling waste and recycling in loose versus compacted bins. Please note that the projections below are estimates derived from actual audits of comparable multifamily complexes in the San Francisco Bay area. They are not guaranteed. They are to be used for planning purposes only and may be higher or lower than projected.

TOTAL BUILDING WASTE & RECYCLING ANALYSIS

restaurant wastes:	125	lb. per loose cubic yards
retail wastes:	84	lb. per loose cubic yards
compost:	200	lb. per loose cubic yards
recyclables:	84	lb. per loose cubic yards
Staff Labor Rate	\$25.00	per hour - 1 person
Time move bins	0.33	hr to move to unloading area & back to 1
Compaction Ratio	4	cubic yard front load bins
Compacted Service	4	cubic yard front load bins
Loose Waste Service	3	cubic yard front load bins
Loose Recycling Service	3	cubic yard front load bins
Loose Compost Service	2	cubic yard front load bins

COST BENEFIT CALCULATIONS: PROJECTED PROJECTED

	Total Loose	Total Compacted
SERVICE-Waste	Loose	Compacted
SERVICE-Recycling	Loose	Compacted
SERVICE-Compost	Loose	Loose
Loose Waste Volume - CY	22.1	
Compacted Waste Volume - CY		5.5
Loose Recycling Volume - CY	33.4	
Compacted Recycling Volume - CY		8.3
Loose Compost Volume - CY	7.9	7.9
Waste Bins/week	8	2
Recycling Bins/week	11	3
Compost bins/week	4	4
Bins/week	23	9
SYSTEM CAPITAL COST	\$0.00	\$72,698.00
WASTE COST/MONTH	\$4,823.12	\$2,488.24
RECYCLING COST/MONTH	\$0.00	\$0.00
COMPOST COST/MONTH	\$0.00	\$0.00
TRASH COST/MONTH	\$4,823.12	\$2,488.24
COMPACTION SAVINGS/MONTH	N/A	\$2,334.88
STAFF LABOR COST/MONTH	\$821.62	\$321.50
STAFF SAVINGS/MONTH	N/A	\$500.12
NET MONTHLY TRASH COSTS	\$5,644.74	\$2,809.74
Monthly Trash Cost per SF	\$0.27	\$0.14
PAYBACK-MONTHS		26



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HOTEL WEEKLY WASTE AND RECYCLING SYSTEM ANALYSIS

ASSUMPTIONS:

Keys	83	
Hotel trash\$	14	lbs/key/wk per CalRecycle Studies
% Waste	50%	
% Recycle	40%	
% Compost	10%	
wastes:	125	lb. per loose cubic yards
recyclables:	84	lb. per loose cubic yards
compost:	200	lb. per loose cubic yards
Compaction Ratio	4	to 1
Compacted Service	4	cubic yard front load bins
Loose Waste Service	3	cubic yard front load bins
Loose Recycling Service	3	cubic yard front load bins
Loose Compost Service	2	cubic yard front load bins

COST BENEFIT CALCULATIONS: PROJECTED PROJECTED

	Hotel	Total
SERVICE-Waste	Loose	Compacted
SERVICE-Recycling	Loose	Compacted
SERVICE-Compost	Loose	Loose
Loose Waste Volume - CY	4.6	
Compacted Waste Volume - CY		1.2
Loose Recycling Volume - CY	5.5	
Compacted Recycling Volume - CY		1.4
Loose Compost Volume - CY	0.6	0.6
Waste Bins/week	2	1
Recycling Bins/week	2	1
Compost bins/week	1	1
Total Bins/week	5	3



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RESTAURANT & KITCHEN WASTE & RECYCLING ANALYSIS

Square Feet	3,590		
Retail %	0%		0
Restaurant %	100%		3,590
restaurant trash*	1.25	lbs/sf/wk	
retail trash§	0.07	lbs/sf/wk	
% recycled - restaurants	40%		
% compost - restaurants	25%		
% recycled - retail	60%		
% compost - retail	10%		
restaurant wastes:	125	lb. per loose cubic yards	
retail wastes:	84	lb. per loose cubic yards	
compost:	200	lb. per loose cubic yards	
recyclables:	84	lb. per loose cubic yards	
Staff Labor Rate	\$21.00	per hour - 1 person	
Time move bins	0.33	hr to move to unloading area & back to 1	
Compaction Ratio	4		
Compacted Service	4	cubic yard front load bins	
Loose Waste Service	3	cubic yard front load bins	
Loose Recycling Service	3	cubic yard front load bins	
Loose Compost Service	2	cubic yard front load bins	

COST BENEFIT CALCULATIONS:

	PROJECTED Rest. & Kitch.	PROJECTED Rest. & Kitch.
	Loose	Compacted
SERVICE-Waste		
SERVICE-Recycling	Loose	Compacted
SERVICE-Compost	Loose	Loose
Loose Waste Volume - CY	12.6	
Compacted Waste Volume - CY		3.1
Loose Recycling Volume - CY	21.4	
Compacted Recycling Volume - CY		5.3
Loose Compost Volume - CY	5.6	5.6
Waste Bins/week	5	1
Recycling Bins/week	8	2
Compost bins/week	3	3
Bins/week	16	6



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SPA & GYM WASTE & RECYCLING ANALYSIS

Square Feet	2,105		
Retail %	100%	2,105	
Restaurant %	0%	0	
restaurant trash*	1.25	lbs/sf/wk	
retail trash§	0.07	lbs/sf/wk	
% recycled - restaurants	40%		
% compost - restaurants	25%		
% recycled - retail	60%		
% compost - retail	10%		
restaurant wastes:	125	lb. per loose cubic yards	
retail wastes:	84	lb. per loose cubic yards	
compost:	200	lb. per loose cubic yards	
recyclables:	84	lb. per loose cubic yards	
Staff Labor Rate	\$21.00	per hour - 1 person	
Time move bins	0.33	hr to move to unloading area & back to 1	
Compaction Ratio	4		
Compacted Service	4	cubic yard front load bins	
Loose Waste Service	3	cubic yard front load bins	
Loose Recycling Service	3	cubic yard front load bins	
Loose Compost Service	2	cubic yard front load bins	

COST BENEFIT CALCULATIONS:

	PROJECTED Spa & Gym Loose	PROJECTED Spa & Gym Compacted
SERVICE-Waste		
SERVICE-Recycling		
SERVICE-Compost		
Loose Waste Volume - CY	0.5	
Compacted Waste Volume - CY		0.1
Loose Recycling Volume - CY	1.1	
Compacted Recycling Volume - CY		0.3
Loose Compost Volume - CY	0.1	0.1
Waste Bins/week	1	1
Recycling Bins/week	1	1
Compost bins/week	1	1
Bins/week	3	3



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RETAIL WASTE & RECYCLING ANALYSIS

Square Feet	2,000		
Retail %	100%	2,000	
Restaurant %	0%	0	
restaurant trash*	1.25	lbs/sf/wk	
retail trash§	0.07	lbs/sf/wk	
% recycled - restaurants	40%		
% compost - restaurants	25%		
% recycled - retail	60%		
% compost - retail	10%		
restaurant wastes:	125	lb. per loose cubic yards	
retail wastes:	84	lb. per loose cubic yards	
compost:	200	lb. per loose cubic yards	
recyclables:	84	lb. per loose cubic yards	
Staff Labor Rate	\$21.00	per hour - 1 person	
Time move bins	0.33	hr to move to unloading area & back to 1	
Compaction Ratio	4		
Compacted Waste Service	4	cubic yard front load bins	
Loose Waste Service	3	cubic yard front load bins	
Loose Recycling Service	3	cubic yard front load bins	
Loose Compost Service	2	cubic yard front load bins	

COST BENEFIT CALCULATIONS:

	PROJECTED	PROJECTED
	Retail	Retail
	Loose	Compacted
	Loose	Compacted
	Loose	Loose
Loose Waste Volume - CY	0.5	
Compacted Waste Volume - CY		0.1
Loose Recycling Volume - CY	1.0	
Compacted Recycling Volume - CY		0.3
Loose Compost Volume - CY	0.1	0.1
Waste Bins/week	1	1
Recycling Bins/week	1	1
Compost bins/week	1	1
Bins/week	3	3



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BARS & ADMIN SPACE WASTE AND RECYCLING SYSTEM ANALYSIS

Square Feet	2,549	
Cafes SF	0	
Retail SF	1,833	
Restaurant SF	716	
Cafe %	0%	
Retail %	72%	
Restaurant %	28%	
Bar trash*	0.42	lbs/sf/wk
Restaurant Trash	1.25	lbs/sf/wk
Retail trash§	0.07	lbs/sf/wk
% recycle - cafe/rest.	40%	
% compost - cafe/rest.	25%	
%recycle - retail	60%	
% compost - retail	10%	
Cafe/rest. wastes:	125	lb. per loose cubic yards
Retail wastes:	84	lb. per loose cubic yards
compost:	200	lb. per loose cubic yards
recyclables:	84	lb. per loose cubic yards
Compaction Ratio	4	to 1
Staff Labor Rate	\$25.00	per hour - 1 person
Time move bins	0.25	hr to move to unloading area & back
# of Trash Rooms	1	
Compacted Service	4	cubic yard front load bins
Loose Waste/Recycling Bin Service	3	cubic yard front load bins
Loose Compost Service	2	cubic yard front load bins

ASSUMPTIONS:

COST BENEFIT CALCULATIONS:	PROJECTED	PROJECTED	PROJECTED
Weekly	Ground Floor Bar	Admin Space	4th Floor Bar
Square Feet	716	613	1,220
SERVICE-Waste	Loose	Loose	Loose
SERVICE-Recycling	Loose	Loose	Loose
SERVICE-Compost	Loose	Loose	Loose
Loose Waste Volume - CY	0.8	0.2	1.4
Compacted Waste Volume - CY	0.2	0.0	0.4
Loose Recycling Volume - CY	1.4	0.3	2.4
Compacted Recycling Volume - CY	0.4	0.1	0.6
Loose Compost Volume - CY	0.4	0.02	0.6
Waste Bins/week	1	1	1
Recycling Bins/week	1	1	1
Compost Bins/week	1	1	1
Total Containers/week	3	3	3

	Total	Total
Square Feet	2,549	2,549
SERVICE-Waste	Loose	Compacted
SERVICE-Recycling	Loose	Compacted
SERVICE-Compost	Loose	Loose
Loose Waste Volume - CY	2.4	
Compacted Waste Volume - CY		0.6
Loose Recycling Volume - CY	4.2	
Compacted Recycling Volume - CY		1.0



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Loose Compost Volume - CY	1.0	1.0
Waste Bins/week	1	1
Recycling Bins/week	2	1
Compost Bins/week	1	1
Total Containers/week	4	3

MEETING SPACE BANQUET WASTE AND RECYCLING SYSTEM ANALYSIS

ASSUMPTIONS:	Meals Per Week	300	
	lb. per meal	1	
	% waste	37.5%	
	% recycling	25%	
	% compost	37.5%	
	waste lb/CY	80	
	recycling lb/CY	60	
	compost lb/CY	200	
	Compaction Ratio Waste	4	to 1
	Compacted Service	2	cubic yard front load bins
	Loose Bin Service	3	cubic yard front load bins
	Loose Compost Service	2	cubic yard front load bins

COST BENEFIT CALCULATIONS:	PROJECTED	PROJECTED
SERVICE-Waste	Loose	Compacted
SERVICE-Recycling	Loose	Compacted
SERVICE-Compost	Loose	Loose
Loose Waste Volume - CY	1.4	
Compacted Waste Volume - CY		0.4
Loose Recycling Volume - CY	1.3	
Compacted Recycling Volume - CY		0.3
Loose Compost Volume - CY	0.6	
Compacted Compost Volume - CY		0.1
Waste Bins/week	1	1
Recycling Bins/week	1	1
Compost bins/week	1	1
Total Bins/week	3	3



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WASTE AND RECYCLING RATES (PARTIAL) CURRENT RATES - 7/12/24

City: Sebastopol Rates subject
Franchise: YES To change
Hauler: Recology

Front Load Monthly Rates: Frequency:	Waste		Waste		Waste	
	4CY COMPACT	3CY LOOSE	4CY LOOSE	2CY COMPACT	3CY COMPACT	
1 x Week	\$1,244.12	\$602.89	\$682.61	\$622.06	\$810.35	
2 x Week	\$2,488.24	\$1,205.78	\$1,365.22	\$1,244.12	\$1,620.70	
3 x Week	\$3,732.36	\$1,808.67	\$2,047.83	\$1,866.18	\$2,431.05	
4 x Week	\$4,976.48	\$2,411.56	\$2,730.44	\$2,488.24	\$3,241.40	
5 x Week	\$6,220.60	\$3,014.45	\$3,413.05	\$3,110.30	\$4,051.75	
6 x Week	\$7,464.72	\$3,617.34	\$4,095.66	\$3,732.36	\$4,862.10	

Recycling & compost included with waste charge

20 yard roll off compactor \$522.26
Push Fee per 25 feet \$66.27

Hand Fed Compactor Cost \$36,349.00 A1000, 1-4CY bin, tax, ship, install

The system capital costs above are estimates utilized for planning purposes only pricing includes tax, shipping and install costs. Due to frequently changing values, do not use these estimates for any other purpose.



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Appendix: RESTAURANT Projected Waste and Recycling Levels:

Restaurants. CalRecycle (*Waste Disposal and Diversion Findings for Selected Industry Groups, 2006*), estimates restaurants generate 6537 lb. of trash per employee per year. Using this information, the following are projected waste and recycling levels for restaurant tenants.

Diversion levels, conservative (50%) vs. optimal (75%). The CalRecycle study estimated 2/3s of restaurant materials are disposed of as municipal solid waste (MSW) (66% for fast food restaurants and 68% for standard restaurants). Their study also shows that potentially a very high percentage of these non-diverted materials (68% for fast food and 83% for other food retailing establishments) are recyclables.

Restaurant employee assumptions are based on the Restaurant Industry Operations Report, compiled by Deloitte for the National Restaurant Association in 2010.

Food Services Retailer	Employees	PROJ trash per week (lb.)	Waste (35% of trash)	Recycling (40% of trash)	Compost (25% of trash)
Restaurant Large	30	3,771	1,320	1,509	943
Restaurant Moderate	23	2,891	1,012	1,157	723
Restaurant Small	18	2,263	792	905	566
Restaurant QSR	15	1,886	660	754	471
Restaurant Cafe	10	1,257	440	503	314

Because the descriptive terms in the industry report are vague and difficult to apply to each individual tenant space in the project, for the purposes of our analysis we have assumed that a 'large' restaurant is 3,000 square feet or 1 employee per 100 square feet of F&B space. Using the 6,537 lb/trash/year/employee metric, this results in a proxy metric of 1.25 lb/day/square foot.

Other assumptions: waste 125 lbs/cubic yard, recycle 84 lbs/cubic yard, compost 200 lbs/cubic yard