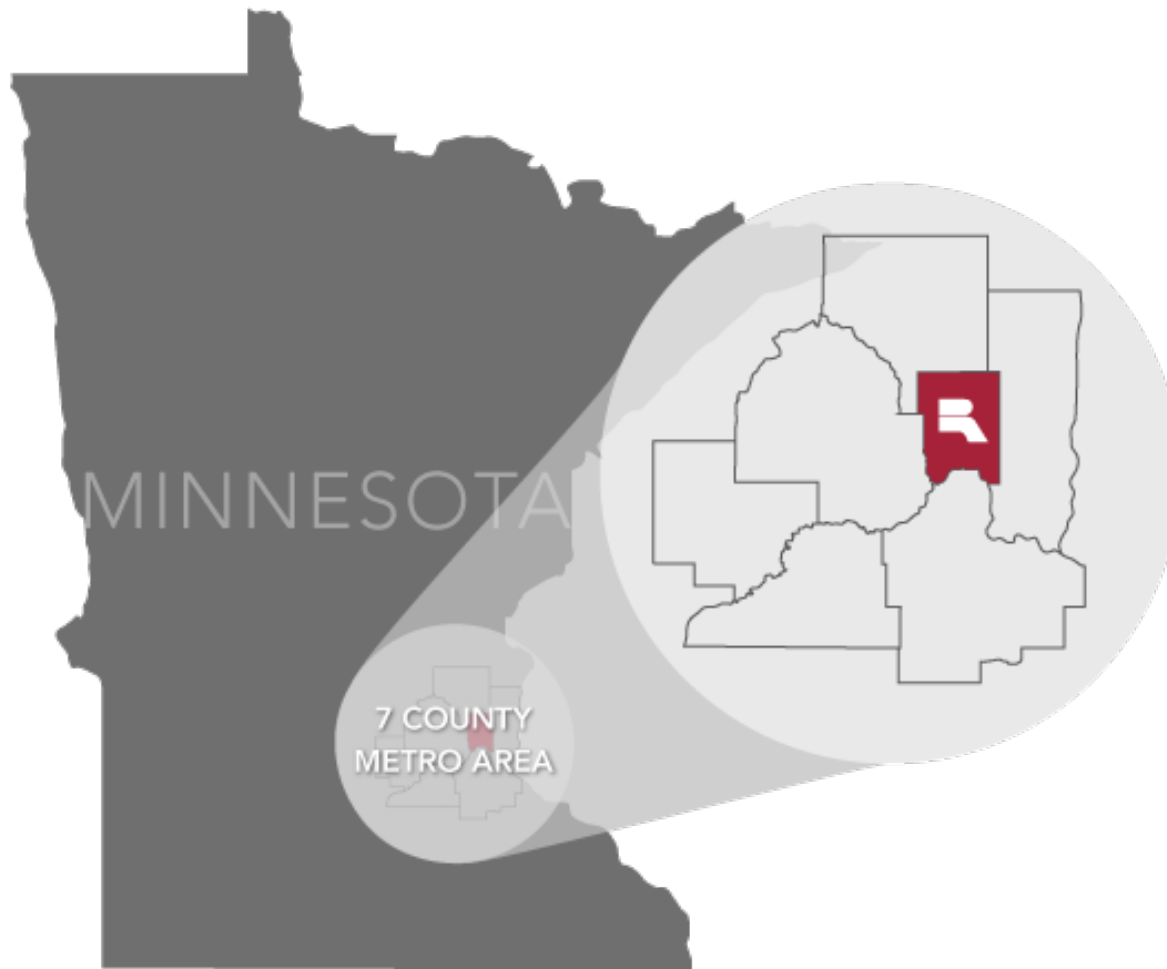


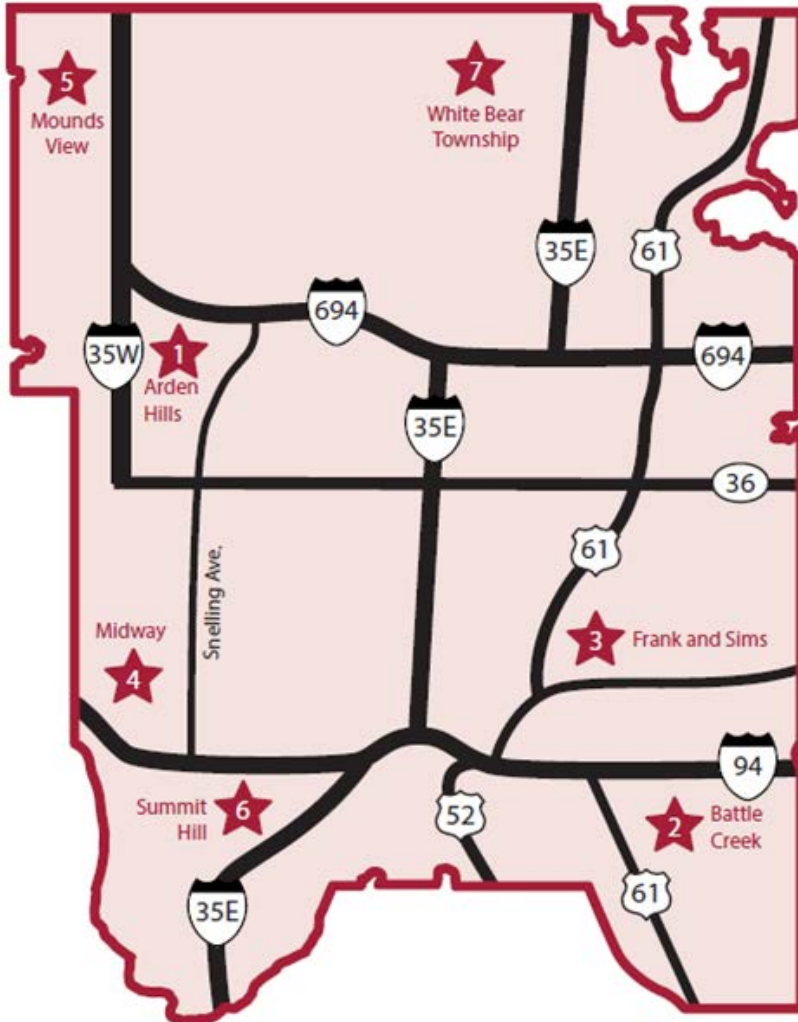
# Building a Food Waste Diversion Network: Experience and Drop-off Enclosure Standards

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- Population: 548,000
  - St. Paul: 302,000
- 130,576 Single-Family Households & 87,487 Multi-Family Units
- Most racially and ethnically diverse county in MN
- 126 languages spoken in St. Paul alone

## Yard Waste System



- 7 collection sites
- Residential waste only
- Open to Ramsey County residents only
- Hours (same at all sites):
  - 5 days/week April-Nov.
  - Weekends only Dec.-March
- All sites accept leaves/grass (soft material)
- 4 sites also accept tree/shrub waste

## 25 Years of Operations



## 25 Years of Operations



## 25 Years of Operations



## 25 Years of Operations



## 25 Years of Operations



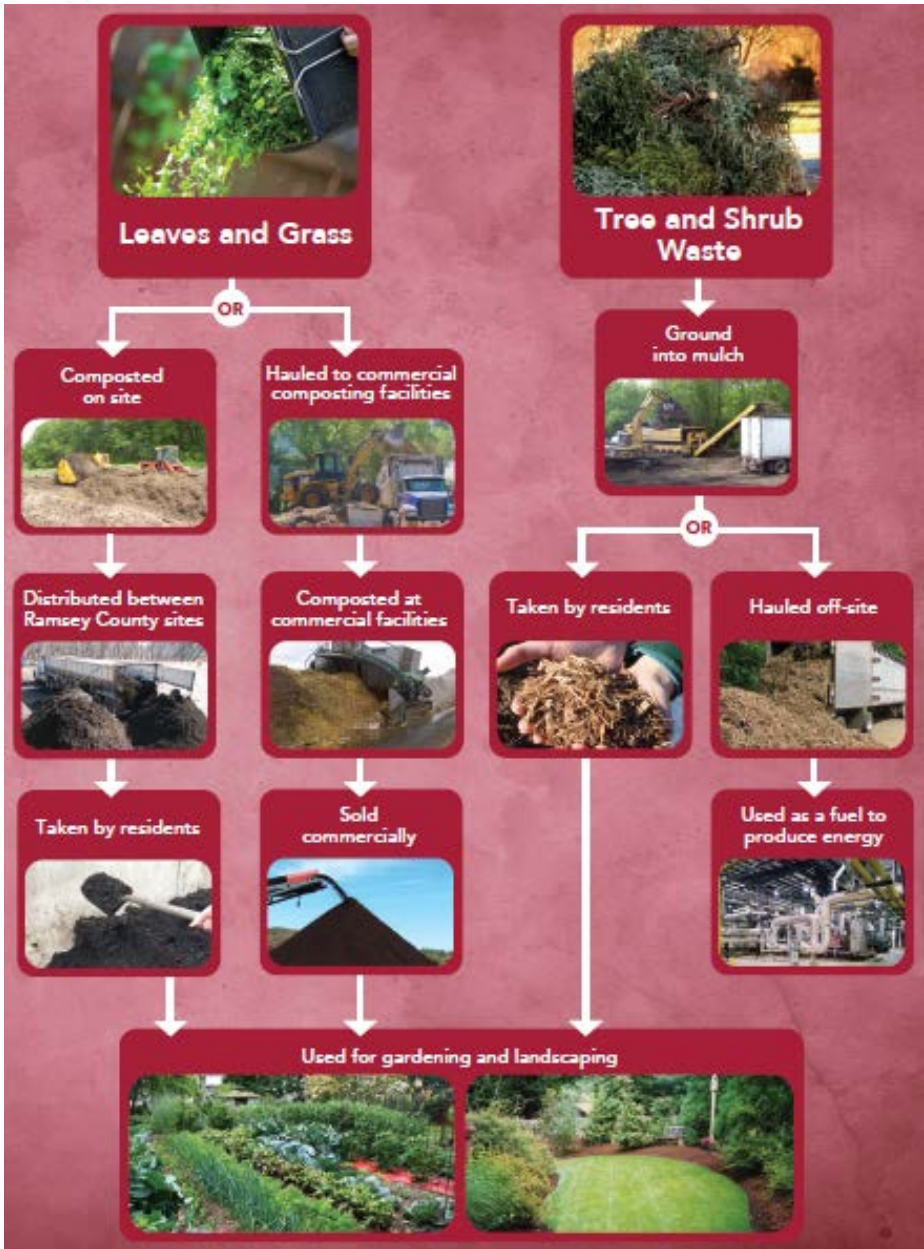


## 25 Years of Operations



## 25 Years of Operations





## Averages

- 413,000 site visits/year
- 132,000 cy leaves/grass/year
- 132,000 cy brush/year

## Organics (SSO) Collection at Yard Waste Sites

- Background
  - No current residential curbside SSO collection in east metro
  - 2013
    - County Board passes proposal to collect at yard waste sites
  - April 2014
    - SSO collection begins at county yard waste sites
- Intent
  - Drop-off sites provide a possible transition to curbside collection while increasing education and awareness



## SSO Collection at Yard Waste Sites

- 2 sizes of compostable bags provided to residents at no charge
- SSO collected/managed separate from yard waste
- “Wet” SSO must be received in BPI-Certified bags
- Hauling is done via County’s recycling/waste disposal contract
- SSO is hauled to commercial composting facility

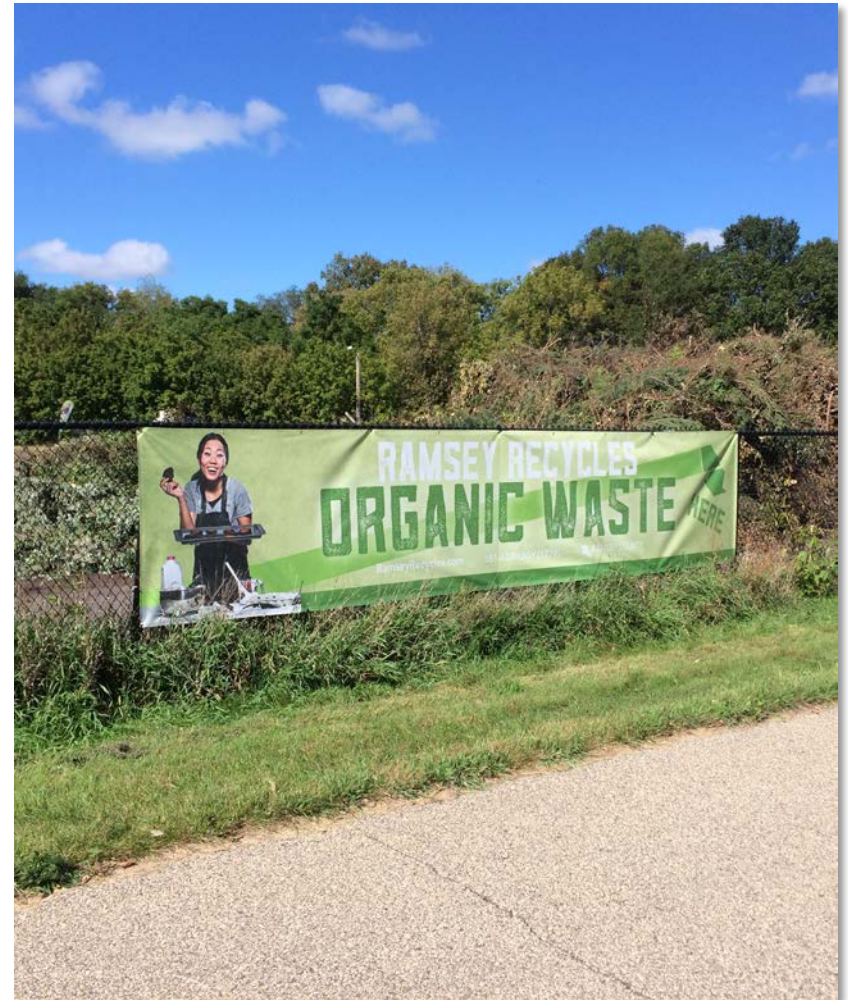


## 2017 Data

- 59,114 site visits dropping off SSO
- 574,588 pounds collected



# SSO Promotion



# SSO Promotion





# SSO Promotion

**RAMSEY RECYCLES**  
Organics Recycling

- Coffee grounds.
- Egg shells.
- Food-soiled paper products.
- Fruit/vegetable scraps.
- Grains.
- Meats, including bones.
- Nut shells.
- Paper towels.
- Tissues.
- And more!

RamseyRecycles.com #RamseyRecycles RAMSEY COUNTY

RAMSEY COUNTY  
**RECYCLING GUIDE**  
Household Recycling, Yard Waste, Organics Recycling,  
Household Hazardous Waste & More

2018

Llama al 651-266-1199 para una Guía en Español.

RECYCLE ME

RAMSEY COUNTY

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Recycling, Household Hazardous Waste, Yard Waste & more!

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# SSO Promotion



## Program Expansion

- County Board approval to expand SSO collection sites beyond the yard waste sites
- Included in Solid Waste Master Plan
  - Continue to provide free SSO drop-off for residents
  - Co-develop SSO drop-off site with municipalities
  - Incentives for increased State funding includes co-sponsorship of SSO drop off sites
  - Explore expansion to include very small businesses
- Began working with municipalities to site local 24/7 drop-off sites
  - Require an enclosure, at a minimum

# Organics Drop-Off Standards

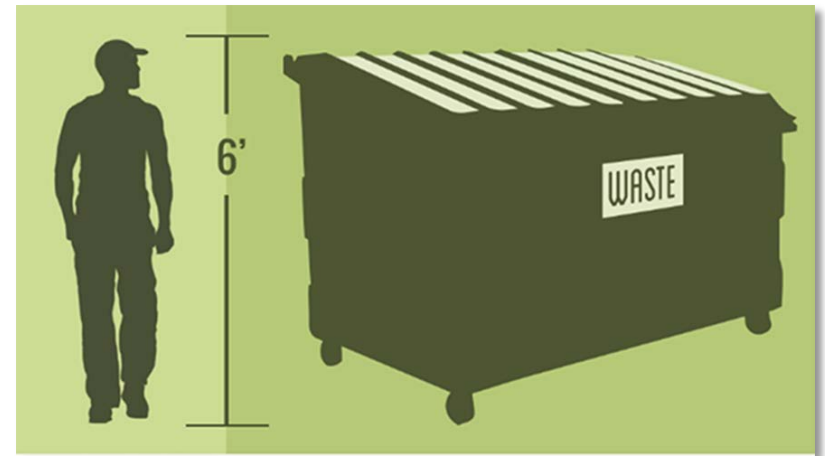
## Why Create Standards?

- No national standards yet developed
- Enclosure designs depend on local conditions and aesthetics



## Why Create Standards?

- Ramsey County wanted to ensure
  - Convenient, consistent, maintainable, safe drop-off locations
  - Serve environmental justice communities that are historically underserved



## How to Guide Development

- *Audience*
  - 19 Municipalities in Ramsey County
- Checklist to identify locations and build a standard design
- Paired with budget tool for construction costs

## Siting Criteria and Guidelines

- 1) Identify a site that is a natural fit for an organics collection drop-off enclosure within the community.
  - Publically owned
  - Sites that do not need local zoning





## Siting Criteria and Guidelines

2) Located in areas that provide increased convenience for users.

– Users need to be able to access by

- Car
- Public transit
- Bicycle
- On foot



## Siting Criteria and Guidelines

3) Identify a site that is safe for users and accessible to haulers.

- Sightlines
- Well lite
- Safe to leave traffic to park
- Accessible to walking users
- Look to prevent slips, trips and falls



## Enclosure Design

- Standard design benefits
  - **Residents** – improves ease of site usage regardless of location and have the same experience
  - **Municipalities** – improves ability to collaborate with construction vendors and maintain site usability
  - **County** – creates possibility for procurement of a county-wide construction contract
  - **Environmental Justice** – ensures municipalities serve residents in the same manner regardless of economic status or geography

## Design Criteria and Minimal Requirements

### 1) Durability and Design Life

*Minimal Requirement: Life expectancy of 10 years*

### 2) Signage

Should be well signed to ensure:

- Consistent user experience
- Provide easy to understand instructions
- Be attractive to promote participation
- Be visible and readable to passing traffic

*Minimal Requirement: Use signage provided by county*

*Minimal Requirement: Site must have ability to display signage.*

# Organics

RECYCLING COLLECTION SITE

[RamseyRecycles.com](http://RamseyRecycles.com)

# Organics Recycling **ONLY**

## Accepted:



Coffee grounds



Egg shells



Food soiled  
paper products



Fruit/  
vegetable scraps



Grains



Meats,  
including bones



Nut shells



Paper towels



Tissues

## NOT Accepted:



Dog, cat or animal  
waste of any kind



Trash



Grass, leaves  
or yard waste  
of any kind



Plastic, metal or  
glass of any kind



Wood, liquids,  
diapers, trash or  
other items that  
cannot be composted

For a detailed list: [RamseyRecycles.com](http://RamseyRecycles.com)

# Organics Recycling **ONLY**

## **We Accept:**

- Animal and pet food.
- Coffee grounds and filters.
- Delivery pizza boxes.
- Egg cartons.
- Food waste.
- Fur and hair.
- Paper cups and plates.
- Tissues and paper towels.
- Toilet paper tubes.

## **We DO NOT Accept:**

- Trash.
- Dog, cat or animal waste of any kind.
- Grass, leaves or yard waste of any kind.
- Plastic, metal or glass of any kind.
- Wood, liquids, diapers, trash or other items that cannot be composted.

For a detailed list: **[RamseyRecycles.com](https://www.ramseyrecycles.com)**

## Design Criteria and Minimal Requirements (Cont.)

### 3) Enclosure Surface or Floor

- Must have flat, level concrete floor.
- May need apron and or drainage

*Minimal Requirement: Concrete Flooring*





## Design Criteria and Minimal Requirements (Cont.)

### 4) Screening is Required

- Needed to improve visual appeal and meet municipality standards
- Cannot interfere with ADA compliance or site accessibility (i.e. ability to shovel snow)
- Vinyl screening, plastic wood, or composite materials preferred

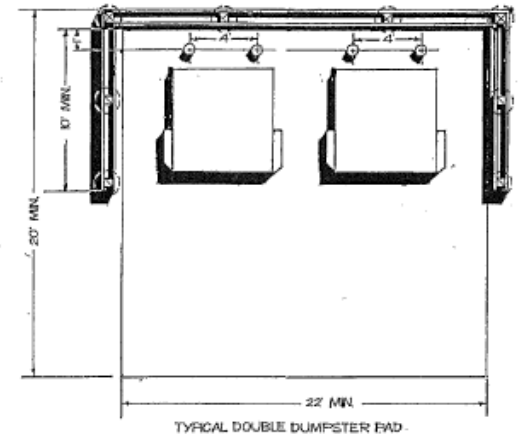
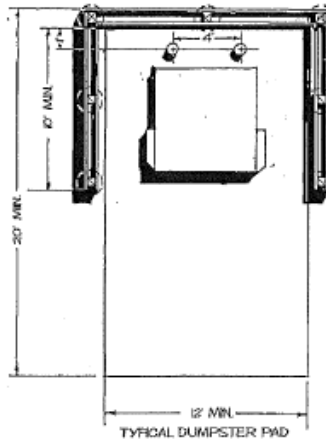
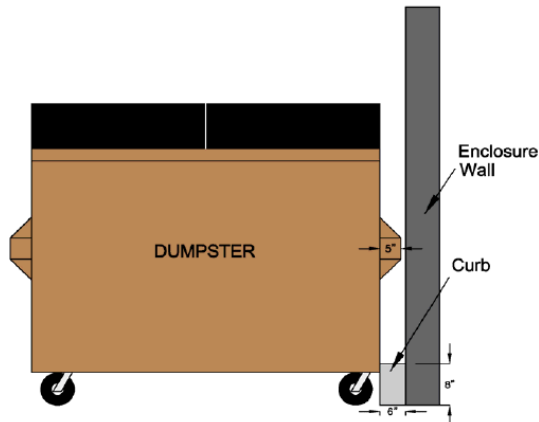
*Minimal Requirement: Maintenance free screening that guarantees 10-year life expectancy*



# Design Criteria and Minimal Requirements (Cont.)

## 5) Interior curb stops or bollards

Optional best management practice to add curb stops or bollards help to ensure the dumpster does not damage interior walls during collection



## Design Criteria and Minimal Requirements (Cont.)

### 6) Gates

- Require at least two gates: one for people to access the enclosure and one for haulers to access dumpsters

*Minimal Requirement:  
Pedestrian gate (36" wide)*

*Minimal Requirement: Hauler  
access gate (105" wide)*



## Design Criteria and Minimal Requirements (Cont.)

### 7) Enclosure footprint size

*Minimal Requirement: Enclosure footprint size of 20' by 8'*

### 8) Accessibility

- Maximum slope of 5%
- Path of travel cannot be behind parked cars
- Crossing the vehicle path of travel is okay but signals or crosswalks are encouraged
- ADA compliant



## Design Criteria and Minimal Requirements (Cont.)

### 9) In relationship to Truck Assess Point (TAP)

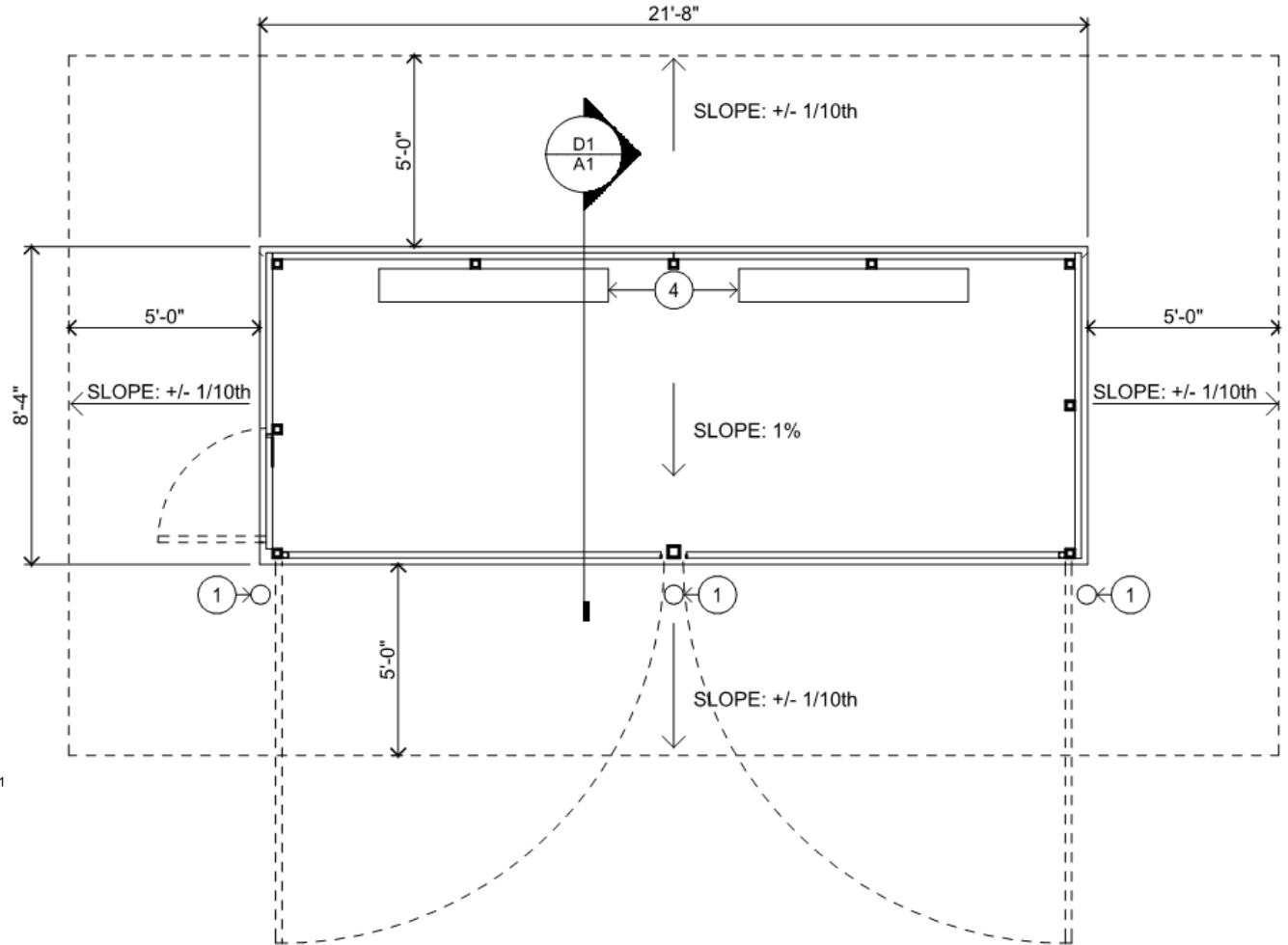
- Where truck stops and lifts containers into truck
- TAP ideally is on concrete apron and can withstand 20,000 pounds of direct force

*Minimal Requirement: TAP must meet hauler vehicle needs to safely service organics collection dumpsters*



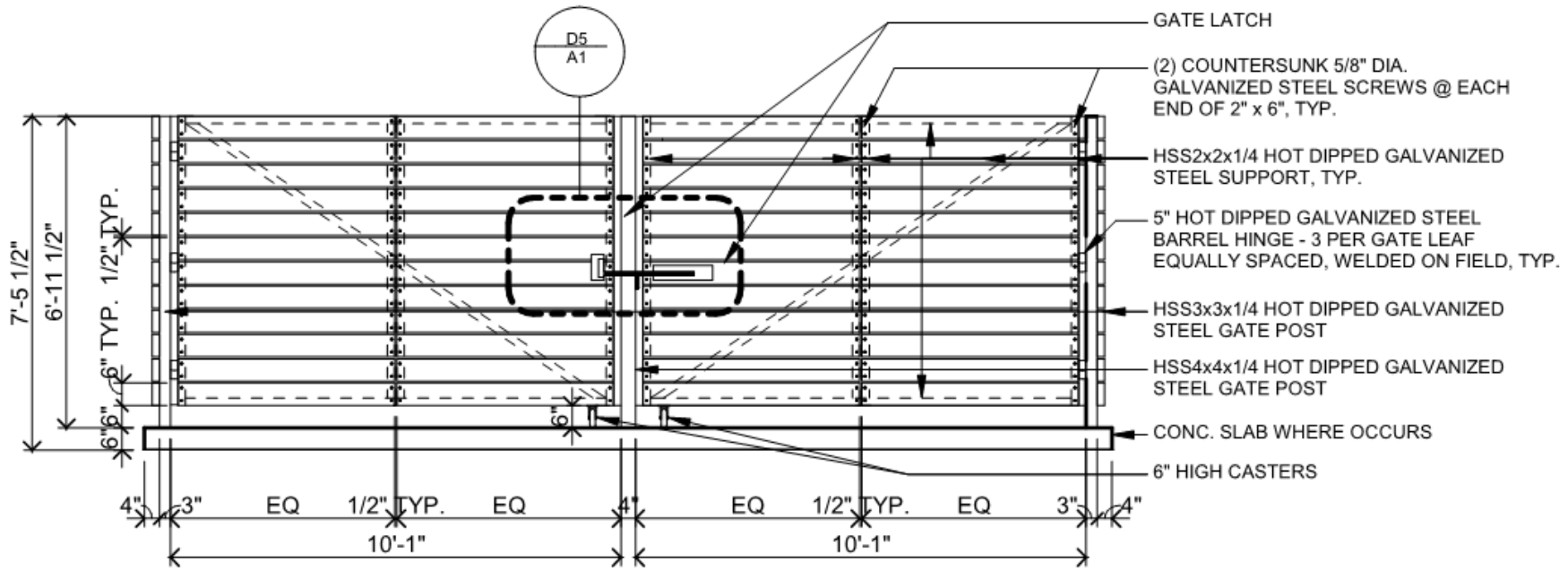
# Enclosure Designs





**FLOOR PLAN KEY NOTES:**

- 1 BOLLARD - SEE DETAIL F1/A1
- 2 HSS3x3x1/4 HOT DIPPED GALVANIZED VERTICAL STEEL GATE POST
- 3 ORGANICS CONTAINER (NIC)
- 4 PRECAST CONCRETE CURB. SEE DETAIL B5/A1
- 5 HSS4x4x1/4 HOT DIPPED GALVANIZED VERTICAL STEEL GATE POST
- 6 6" CONCRETE SLAB W/ #4 @ 2'-0" O.C. EACH WAY (AT OPTION A ONLY)
- 7 HSS5x5x3/8 HOT DIPPED GALVANIZED VERTICAL STEEL POST
- 8 HSS4x4x3/8 HOT DIPPED GALVANIZED HORIZONTAL STEEL POST
- 9 HSS3x3x3/8 HOT DIPPED GALVANIZED STEEL FRAME
- 10 CORRUGATED ALUMINUM PANEL AS SPECIFIED



**A1 FRONT ELEVATION - OPTION A1 (BASE BID) & A2**  
 1/4" = 1'-0"  
 0 3' 6'



## Budget Tool

- Budget tool was developed for municipalities to compare materials, design elements, and optional elements using engineering cost estimates
- A minimum requirement enclosure is estimated to cost \$10,000 in materials
  - Includes a 30% contingency
  - Does not include construction labor that can be completed by internal departments, such as Public Works.

## Organics Drop-off Enclosure Budget Tool

*NOTE: Difference columns in table will show if actual went over estimated amounts. Red numbers show went over (negative) and black shows under numbers (positive).*

		Engineer Estimate per Item (\$)		Total Project Costs (\$)			
Category	Items	Quantity	Engineer Estimated Cost per Item	Estimated costs	Actual [Enter project actuals after bidding]	Difference	Directions
Minimal	Base grading and 8-inch class 5 base material, compacted (typical)	1	\$1,750.00	\$1,750.00	\$0.00	\$0.00	Enter "1" for quantity. Note: Additional grading options are available in row 20 and 21. Only one grading cost per project is needed. Enter "0" for quantity if row 20 or 21 are selected.
Minimal	<b>Slab:</b> Concrete (6-inch, 3000 psi, with 1 mat of rebar 16-inch on center) 8'x20' enclosure (sq. feet)	160	\$5.50	\$880.00	\$0.00	\$0.00	Enter square feet of enclosure for quantity. For example for an 8' by 20' enclosure enter "=8*20".
Minimal	<b>Apron:</b> Concrete (6-inch, 3000 psi, with 1 mat of rebar 16-inch on center). 6'x20' apron assumed. (sq. feet)	120	\$5.50	\$660.00	\$0.00	\$0.00	Enter square feet of the apron, if needed, for quantity. For example for a 6' x 20' apron enter "=6*20".
Minimal	<b>Screening:</b> Vinyl Fence (Minimum wall height of 6'6") (lineal feet, including posts)(40' basis)	40	\$50.00	\$2,000.00	\$0.00	\$0.00	Enter height of screening, in feet, for quantity.
Minimal	<b>Gates:</b> Hauler Collection (Swing outward, 2" off the ground and hung on separate posts from the outside. Open to at least 120 degrees. Gate opening of 105". (each)	2	\$750.00	\$1,500.00	\$0.00	\$0.00	Enter number of gates needed as quantity. Pricing is provided a cost per one gate.
Minimal	<b>Gate:</b> Pedestrian (36" wide with a 32" clearance of all hardware) (each)	1	\$500.00	\$500.00	\$0.00	\$0.00	Enter number of gates needed as quantity. Pricing is provided a cost per one gate.

# Current Project Status

## Partnerships with Municipalities

- Burdensome project for municipalities
  - Siting
  - No standardized enclosures
  - Enclosure construction costs vary
    - \$5,000 not enough incentive
  - Procurement of design and construction contracts
  - State notification

## Current Ramsey County Plan

- County develops standardized plan based on design criteria from Foth.
- City provides site/location for enclosure.
- County pays full cost of enclosure construction including signage.
- County provides hauling and compostable bags.

## Thank you!

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