



C&D RECYCLING COMMITTEE

August 28, 2014

DRAFT Construction Material Recycling Ordinance



THANKS

- Austin Energy Green Building
- Austin Public Works Department
- Planning & Development Review Department
- Green Building community
 - Builders
 - Haulers
 - Processors
 - Associations

OUTLINE

- Process & Schedule
- Ordinance Principles & Concept
- Affected Projects
- Requirements
 - Affected Projects
 - Qualified Processors
 - Contractors and Haulers
- Penalties

Ordinance Development Process & Schedule

Date	Meeting	Description
August 8 & 14	Stakeholders	Public input on ordinance parameters
August 28	C&D Committee	Considers staff-proposed intent document
October	ZWAC	Staff presents proposed ordinance
November	ZWAC	Considers proposed ordinance
Nov/Dec	City Council	Adopts proposed ordinance



BACKGROUND RESEARCH & Public Engagement

- Interview & Inquiries
 - 4 City departments
 - 4 professional associations
 - 9+ municipalities and counties
 - 25+ industry members
- 40+ at Stakeholder Meetings – August 8 & 14

PRINCIPLES

- **Support:** Green building initiatives for construction material management
- **Flexible:** Performance-based, rather than prescriptive
- **Inclusive:** Support hierarchy of beneficial use
- **Reference:** Rather than replicate other city, state, federal, or industry policies
- **Integrate:** Fit into existing practices

PROPOSED ORDINANCE CONCEPT

- Affected Project must either:
 - *Dispose less than 2.5 lbs/sq ft; or*
 - *Divert at least 50% of C&D materials*
- Affected Project acknowledges requirements before construction
- Affected Project reports after construction
- Provisions to allow for “Qualified Processors”

AFFECTED PROJECTS

- *Commercial or Multifamily Demolition project of any size that requires a permit*
- *New construction or renovation project permitted for 5,000 or more square feet*
- *Exempt projects that require only a single trade (e.g., plumbing, electrical, mechanical)*

AFFECTED PROJECTS - Rationale

Demolition

GENERATION (lbs/sq ft)		
<i>Project Type</i>	<i>Residential</i>	<i>Commercial</i>
Construction	4	4
Renovation	24	11
Demolition	50	158

EPA: Estimating 2003 Building-Related Construction and Demolition Materials Amounts

- Commercial demolition generates much more material per sq ft than commercial construction
- Residential demolition material tends to be less recyclable

AFFECTED PROJECTS - Rationale

Construction or Renovation > 5,000 sf

Small projects:

- More cost per ton for project and city
- Production home builders
 - Consolidate discards from several projects
 - Carryover materials rather than discard them
- Containers are more vulnerable to unauthorized use and contamination
- Quick Turnaround <5,000 sf

AFFECTED PROJECTS - Rationale

Construction or Renovation > 5,000 sf

Projects >5,000 sf

- Larger projects can more easily absorb costs to administer, educate crews and monitor
- Per PDRD FY2013 permitting data
 - 12% of all projects >5,000 sf (FY13: 1700/14,000)
 - 76% of total square footage (FY13: 47/63 Msf)

AFFECTED PROJECTS - Rationale

Construction or Renovation > 5,000 sf

FY2013 PERMITS

Project Type & Size	No. of Projects	Permit Sq Ft
< 5,000 Commercial	29%	9%
< 5,000 Residential	59%	15%
> 5,000 Commercial	11%	74%
> 5,000 Residential	1%	2%
Total	100%	100%

AFFECTED PROJECTS

Exempted Projects

*Exempt projects that require only a single trade
(e.g., plumbing, electrical, mechanical, irrigation)*

Rationale

- Smaller amounts of recyclable materials or reusable components
- Market forces determine whether to recover

AFFECTED PROJECT REQUIREMENTS

Permittee shall either:

- *Dispose less than 2.5 lbs/sq ft; or*
- *Divert at least 50% of C&D materials*

Eligible diversion:

*Documented quantities of construction materials
put to Beneficial Reuse on or off site*

Austin Energy Green Building Basic Requirement

50% Diversion, 4 Materials:

- Recycle and/or salvage at least 50% (by weight) of non-hazardous construction and demolition waste, excluding excavated soil, stone, and land clearing debris. Diverted material must include at least four material streams (i.e., concrete, metal, wood, gypsum wallboard, paper and cardboard, plastic).



LEED for Homes

Construction Waste Management Credit

- Reduced construction waste. Generate 2.5 pounds or less of net waste (not including waste diverted for reclamation or recycling) per square foot of conditioned floor area.



Industry average is 4.2 pounds per square foot of conditioned floor area, based on data from National Association of Home Builders' Research Center.

DEFINITIONS

- **Construction or Demolition (C&D) Materials**
 - Non-hazardous materials that are directly or indirectly the by-products of construction work or that result from demolition of buildings and other structures
 - Includes, but not limited to, concrete, corrugated cartons, gypsum wallboard, metal, paper, paving, plastics, and wood
 - Excludes excavated soil, stone, and land-clearing debris

DEFINITIONS

- **Building Components** – Doors, windows, fixtures, structural members, architectural parts, masonry, etc.
- **Beneficial Reuse**
 - Includes salvage, reuse, or processing into a material or product with an open-market value
 - Does not include use as a fuel or alternative daily landfill cover

AFFECTED PROJECT REQUIREMENTS

<2.5 lb/sf or ≥50% Diversion

Flexible, Inclusive:

- Any or all count:
 - Waste prevention
 - Relocation
 - Source separation
 - Commingled material processing
- On-site reuse or recycling counts
- Off-site diversion at staging facility counts

AFFECTED PROJECT REQUIREMENTS

Pre-Construction Affirmation

- Acknowledgement that project is subject to diversion requirements
- Incorporated into permit application process

AFFECTED PROJECT REQUIREMENTS

C&D Material Management Report

After construction, permittee reports:

- *Documented tons of materials & components:*
 - *Diverted for Beneficial Reuse*
 - *Disposed*
- *Performance:*
 - *Project Disposal Rate, if applicable*
 - *Project Diversion Rate*

AFFECTED PROJECT REQUIREMENTS

C&D Material Management Report

Rationale:

- Report confirms Project diversion rate
- Report similar to:
 - AEGB minimum requirements for commercial or multifamily projects, credit for single-family
 - LEED Construction Waste Management Multifamily Prerequisites and New Construction credit



DEFINITIONS

Project Disposal Rate

Total pounds of C&D Material generated by the Project and disposed by a processor or delivered directly to a disposal facility divided by the square feet of the project

Project Diversion Rate

Percentage of the total quantity of C&D Materials or Building Components generated by the project that were diverted for *Beneficial Reuse* onsite or offsite

AFFECTED PROJECT REQUIREMENTS

C&D Material Management Report

Report documented tons for each load:

- Reused onsite
- Diverted by other processors or end-users
- Disposed by other processors or end-users
- Delivered to disposal facility

DEFINITIONS

- ***Qualified Processor***

Facility that meets certain third-party certification requirements including documenting its *Facility-Average Diversion Rate*

- ***Facility-Average Diversion Rate***

Percentage of all incoming material over a period of time that a processing facility diverts for *Beneficial Reuse*

QUALIFIED PROCESSORS REQUIREMENTS

- *Meet standards set by a third-party certifying organization (e.g., Recycling Certification Institute)*
- *Report its Facility-Average Diversion Rate to the City of Austin*



AFFECTED PROJECT REQUIREMENTS

C&D Material Management Report

If ONLY Qualified Processors (QP), report:

- Documented tons delivered to each QP
- Each QP's *Facility-Average Diversion Rate*
- Tons diverted by each QP
(Tons delivered times QP's Facility-Average Diversion Rate)
- *Project Diversion Rate*

QUALIFIED PROCESSORS

Rationale:

- Purpose: reduce administrative costs
- Simplifies processor tracking and reporting
- Similar to pilot credit for LEED
- Not required



HAULERS

- *A licensed hauler shall report the quantities of C&D Materials that it hauls directly to each of the following:*
 - *Disposal facilities*
 - *Diversion facilities*

PENALTY

If unable to meet the requirement, the Permittee pays the greater of the following fees:

- a. \$ _ for every **ton** the project should have diverted to meet 50%*
- b. \$ _ for each **percentage point** the project should have diverted to meet 50%*

- For item b, adopt higher fee rate for larger projects

PENALTY

Rationale:

- Ensure compliance through financial incentive
- Will not withhold certificate of occupancy
- Post-project payments require no upfront deposit
- **Challenge:** determining what financial incentive is sufficiently compelling and not merely the cost of doing business