



**Demolition Waste and Recyclable
Materials Bylaw No. 9516**

**No.: BUILDING-27
Date: 2016-03-17**

Purpose:

To inform owners, developers and contractors of the City of Richmond's new requirements for handling demolition waste and recycling of materials for single family and accessory structures.

Background:

The City of Richmond has set a target in the Integrated Solid Waste and Resource Management Plan of 70% diversion of municipal solid waste from disposal by 2015.

On March 14, 2016 Council adopted the Demolition and Recyclable Material Bylaw No. 9516 requiring waste and recyclable materials resulting from demolition work to be sent to an approved waste disposal & recycling facility.

Implementation:

Effective **April 1, 2016** all demolition applications must be accompanied with following:

1. Submission of Schedule "A" – Waste Disposal and Recycling Services Plan.
2. Non-refundable Application Fee of \$250.00.
3. Waste Disposal and Recycling Services Fee based on \$2.00 per square foot on structure to be demolished.

Upon completion of the demolition of the structure, the applicant must submit within 90 days a completed Schedule "B" Compliance Report along with all original copies of receipts, weight bills, etc. to the Building Inspector.

Should you have any questions, comments or suggestions concerning this bulletin, please contact the Building Approvals Department at 604-276- 4285.

See attached →

Schedule "A"
Waste Disposal and Recycling Services Plan
 (Single Family/Duplex - Residential)

Date _____

Demolition Project Site Address _____

Demolition Type Residential Building Other _____

Project Floor Space [square feet] _____ Estimated Total Waste and Recyclable Material Generation = _____ tonnes (from Table 1)

Main Floor Space [square feet] _____

Total Floor Space [square feet] _____

Estimated Waste and Recyclable Material Generation (from Table 1)

Walls and flooring = _____ kg (for complete demolition, or for walls and flooring calculated separately)

Roofing = _____ kg

Foundations and footings = _____ kg

Other material = _____ kg

Total = (Walls/Flooring _____ + Roofing _____ + Foundations _____ + Other _____) ÷ 1000 = _____ **tonnes**

Type of Structure (Wood frame, Concrete, Steel, etc) _____

Expected Project Completion Date (DD/MM/YYYY) ____/____/____

Name of Permit Applicant: _____ (please print)

Signature of Permit Applicant _____ Date _____

NOTE TO APPLICANT: Please complete the other side of the form

CITY STAFF USE ONLY	
Building Permit No. (<i>demolition</i>): _____	
Waste Disposal and Recycling Services Package	<input type="checkbox"/> Form 1 – Project information and checklist received from permit applicant
<input type="checkbox"/> Application Fee Received <input type="checkbox"/> Fee Received Waste Disposal and Recycling Services Fee Amount \$ _____	
Calculation of Fees: Fees set-out in the <i>Consolidated Fees Bylaw No 8636</i> .	
Waste Disposal and Recycling Services that will be required: <input type="checkbox"/> Removal of all recyclable materials to an authorized recycling facility or to a disposal facility for a purpose other than disposal <input type="checkbox"/> Re-use of recyclable materials as proposed in this Waste Disposal and Recycling Services Plan or in another acceptable manner	
Signature of Application Reviewer: _____	
<i>Keep a copy of this page and Form 2 in file</i>	

TABLE 1

Planning how you will manage the recyclable materials generated at your site will help you meet the recycling requirements. **Please complete the following checklist of the types of recyclable materials that your project is expected to generate and submit as part of Form 1.** Use this checklist for discussion with waste collection, recycling and disposal companies. A list of recycling facilities is available from the Permits Department or <http://www.metrovancouver.org/services/permits/Permits%20%20Regulations/ActiveSolidWasteLicenceList.pdf>

You must keep track of all materials generated over the duration of the project by keeping receipts from all recycling and disposal facilities or signed forms from all salvagers for material re-use (Form 3 –compliance report).

Materials	Will the Work generate this material?	Will this material be reused or used as backfill? If yes, specify how and where.	Estimate of material generated as waste (incl. recyclable material) (kg)	For information
Asphalt				Can be recycled
Cardboard				Can be recycled.
Cement and concrete				Can be recycled
Untaminated excavated soil and rocks				Can be reused or recycled
Drywall / Gypsum				All must be recycled.
Green waste (incl. shrubs, lawn, small trees)				Can be reused or composted
Glass				May be recyclable
Metal				Can be recycled
Plastic - rigid buckets, etc (no PVC)				Can be recycled
Plastic - wrapping and bags				Can be recycled
Roofing - Asphalt shingles				Can be recycled
Wood – clean				Can be recycled
Wood – roofing				Can be recycled
Other recycled/reused materials (Please list)				
Estimate of Total Waste (incl. Recyclable Material) Generated from Demolition (kg):				

*Note: Do not include **Hazardous Materials** in this Form. All hazardous wastes must be disposed of according to Work Safe BC and BC Ministry of Environment requirements, as well as any additional requirements imposed by the disposal facility.*

Schedule "B" Compliance Report

Submit this form following the completion of project and attach documentation (copies of receipts, weigh bills, etc.)

Demolition Type: <input type="checkbox"/> Residential Building <input type="checkbox"/> Other _____	
Building Type: <input type="checkbox"/> Wood frame <input type="checkbox"/> Concrete <input type="checkbox"/> Other _____	
Project Site Address: _____	
Building Permit No. (<i>demolition</i>): _____	Name of permit holder: _____
Project Floor Space [square feet]: _____ (Main floor) _____ (Total)	
Project Start Date (DD/MM/YYYY): ___/___/___ Project Completion Date (DD/MM/YYYY): ___/___/___	

Waste Disposal and Recycling Services Plan Compliance

Diversion Form and documentation (i.e., receipts and weigh bills) attached

Tonnes recyclable material managed as authorized (i.e. non-hazardous material removed to a **Recycling Facility** or as approved in **Waste Disposal and Recycling Services Plan**) = _____ = "A"

Tonnes disposed (i.e. non-hazardous **waste** removed to a **Disposal Facility**) = _____ = "B"

Total non-hazardous tonnages of waste from demolition = _____ = A+B = **Total**

Level of Compliance = (A ÷ Total) x 100 = _____ % = "C" (use for refund calculation)

Waste Disposal and Recycling Services Fee Refund Calculation

Waste Disposal and Recycling Services Fee paid (from Form 1) \$ _____ = "D" (use for refund calculation)

Refund calculated as follows:

If C is 70% or greater, then D = Refund = \$ _____

If C is less than 70%, then (C ÷ 70) x (D) = Refund = \$ _____

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Compliance Report	Amount of Waste Disposal and Recycling Services Fee paid (Form 1) = \$ _____
<input type="checkbox"/> Complete	Amount of fee refunded = \$ _____
<input type="checkbox"/> Approved	

Compliance with Waste Disposal and Recycling Services requirements	<input type="checkbox"/> Yes	<input type="checkbox"/> Partial	<input type="checkbox"/> No
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Signature of Permit Holder

Signature of Compliance Report Reviewer

DATE: _____

DATE: _____

Diversion Form Example

Project Site Address _____		Building Permit No. (demolition) _____		
Calculate your achieved recycling rate as described below. Use recycling facility and disposal facility receipts to fill out the information below. Ask your hauler, recycler or site cleanup vendor to assist you. A volume to weight conversion table, if required, is on the next page.				
COMPLETE AND RETURN WITH RECEIPTS WITHIN 90 DAYS OF PROJECT COMPLETION Note: Each receipt must show the type and quantity of materials received and permit #				
Material Type	A		B	
	Tonnes Reused or taken to Recycling Facility	Reuse or Recycling Facility used for purposes other than Disposal (name, location)	Tonnes taken to Disposal Facility	Disposal Facility Used (name, location)
Asphalt				
Cardboard				
Cement and concrete				
Uncontaminated excavated soil and rocks				
Drywall / Gypsum		DRAFT		
Green waste (incl. trees/shrubs)		SAMPLE		
Glass				
Metal				
Plastic – rigid (no PVC)				
Plastic wrapping and bags				
Roofing – asphalt shingles				
Wood - Clean				
Wood - Roofing				
Other recycled/reused materials (Please list)				
Mixed materials (excluding hazardous materials)				
TOTAL non-hazardous MATERIALS	A = _____		B= _____	
Column Totals $A / (A + B) \times 100 =$ _____ % Materials managed as authorized				

* The building inspector will compare the total quantity of materials from columns A and B with the amount of waste expected from the project, based on estimates in Table 1 of Schedule C.

TABLE 1 - ESTIMATING WASTE GENERATION

Material type	Quantity	Lbs	Kg
Demolition			
Wood – floor (without conc. topping)	1 sq ft	10	4.5
Wood – floor (with conc. topping)	1 sq ft	20	9
Wood – wall (exterior)	1 lin ft	25	11.4
Wood – wall (interior)	1 lin ft	20	9
Wood – roof	1 sq ft	5	2.2
Concrete slab (4" thick)	1 sq ft	50	22.7
Asphalt	1 sq ft	50	22.7
Brick/masonry	1 sq ft	50	22.7
Spread footing (20" wide)	1 lin ft	265	120.5

TABLE 2 - VOLUME TO WEIGHT CONVERSION

Mixed C&D	Quantity	Lbs	Kg
Mixed C&D (structural)	1 cu yd	500	227.3
Mixed inerts (concrete, brick, dirt, asphalt)	1 cu yd	2000	909.1
Separated inerts	1 cu yd	2000	909.1
Wood	1 cu yd	375	170.5
Metals	1 cu yd	906	411.8
Roofing Materials			
Asphalt shingles/Composition	1 cu yd	419	190.5
Asphalt shingles/Composition	1 sq ft	3	1.4
Asphalt Tar Roofing	1 cu yd	2919	1326.8
Wood Shake/Shingle Roofing	1 cu yd	435	197.7
Wood Shake/Shingle Roofing	1 sq ft	2	0.9
Tiles (concrete roofing)	1 cu yd	10	4.5
Tiles (concrete roofing)	1 sq ft	2900	1318.2
Yard Waste			
Green waste (shrubs, turf, etc.)	1 cu yd	500	227.3
Yard trimmings	1 cu yd	108	49.1

Source: City of Santa Monica and Foster City Building Inspection Division (CA)