



BC Housing



BRITISH
COLUMBIA

Housing Provider Kit

Maintenance





Maintenance

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Chapter 1

INTRODUCTION

This *Maintenance Guide* is one in a series designed to help non-profit societies and housing co-operatives manage affordable housing developments. The guide explains how to set up maintenance systems for the buildings and property you manage in partnership with BC Housing. Together, these guides provide detailed reference material and form a comprehensive Housing Provider Kit that covers key areas of housing management:

- Operations
- Financial Management
- Governance
- Maintenance
- Management Performance

Following the practices outlined in this series will enable your organization to operate safe, secure, affordable housing communities that:

- Demonstrate excellence in management and maintenance.
- Provide residents with secure tenure and opportunities to participate in decision-making.

Your organization owns and manages the development, because community groups are in the best position to understand and meet local housing needs. BC Housing plays a dual role as a resource and monitoring agency. We provide the subsidies you need to run the development, and review the administration and use of public funds to ensure housing program goals are met.

For a copy of any of these guides, contact BC Housing's Home Office at 604-433-1711, or visit our website at www.bchousing.org, and select the Housing Provider Kit in the *Housing Provider* section.

What's in this Guide?

In the first chapter of the *Maintenance Guide*, we list the most Frequently Asked Questions about maintenance, with answers for quick reference. You'll also find these FAQs on our website at www.bchousing.org.

Chapter two outlines building and maintenance records you need to maintain.

Chapter three explains how to handle construction deficiencies and protect developments from liens.



In chapter four, we describe your maintenance responsibilities under the *Residential Tenancy and Co-operative Association Acts*, regular, cyclical and emergency maintenance requirements, and the asset planning necessary to maintain the structure, function and aesthetic value of the development.

In chapter five, we outline your maintenance obligations under the *Homeowner Protection Act* to ensure your warranties remain valid.

Chapter six defines the various maintenance inspections required to keep your facilities, equipment and property in good condition.

And chapter seven explains how to tender, set up and monitor contracts for goods and services needed to build and maintain a development.

Frequently Asked Questions

What maintenance work can be funded from the replacement reserve?

The Housing Provider Checklist in the *Housing Provider* section of our website – www.bchousing.org – contains a list of items you can pay for from replacement reserve funds. These items include:

- *Appliances* ~ dishwashers, dryers, fridges, wall ovens, stoves, washers.
- *Flooring* ~ carpets, linoleum/vinyl (suites and common areas).
- *Heating* ~ furnace, boiler, electric heat, hot water tanks, water/oil pumps.
- *Interior Structure* ~ air conditioning, countertops.
- *Painting* ~ exterior painting, exterior trim painting, interior painting (suites and common areas).
- *Paving* ~ driveways.
- *Roofing* ~ roof replacement.
- *Window Coverings* ~ blinds, drapes, awnings.
- *Exterior Structure* ~ balcony coverings, deck and deck coverings, fencing, playground equipment, security gate.
- *Other* ~ fresh water pump, sewage/pressure/relay.

See chapter six of the *Financial Management Guide* for more information on replacement reserves.



Are housing providers required to get three quotes for maintenance projects?

Here are BC Housing's purchasing guidelines for different price ranges, which can be adapted to suit your organization:

- *\$100 or less* ~ Make the purchase using petty cash.
- *\$101 to \$5,000* ~ Obtain a minimum of one verbal quote, preferably two or three.
- *\$5,001 to \$30,000* ~ Obtain a minimum of three written quotes.
- *\$30,001 to \$50,000* ~ Use an *Invitational Tender* to obtain a minimum of three written quotes.
- *More than \$50,000* ~ Advertise a *Public Tender* in the *Journal of Commerce* and local newspapers in the area where the work will be performed. Include the time and location tender documents will be available for pick up. You'll find sample advertisements on pages 71 and 72 in the appendix. A minimum of three sealed bids is required. We recommend you contact your Property Portfolio Manager for assistance setting up a contract of this value.

For amounts greater than \$5,000, BC Housing requires contractors to provide a *Statutory Declaration* that all supplies and labour have been paid, when the work is completed. You can use this amount or set a different level for the *Statutory Declaration* requirement. A *Statutory Declaration* form is included on page 99 in the appendix. See chapter seven, beginning on page 39, for more information on tendering projects.

Does BC Housing help housing providers tender large projects or provide tendering guidelines?

BC Housing's Regional Maintenance Managers are available to help societies and co-ops tender large projects. We have a list of contractors with expertise in a variety of trades. In most cases, you have two options:

- You can request the Maintenance Manager act as your agent and tender the project for you, or
- You can choose to tender the project yourself.

Refer to chapter seven, beginning on page 39, for information on tendering guidelines. You can also contact BC Housing's Purchasing Department at 604-433-1711 for assistance with tendering questions.

Does BC Housing have specifications that societies and co-ops can use for tendering purposes?

BC Housing has developed Master Specifications that are available in the *Housing Provider* section of our website at www.bchousing.org, in the *Resource Directory*. You can use these specifications verbatim or as guidelines to develop your own documents.



Does the *Builders Lien Act* require housing providers to hold back 10 per cent of development invoices?

Yes, the *Builders Lien Act* does require you to hold back 10 per cent of each invoice, for a period of 55 days from the date substantial completion is declared. You are also required to establish a holdback account for each contract valued at \$100,000 or more.

BC Housing holds back funds for projects exceeding \$5,000. You can use this figure or set a higher amount for holdbacks, when using reliable, reputable contractors you have worked with before.

Failure to hold back funds may have negative legal and financial implications. For example, a supplier or subcontractor can place a lien on a development if the contractor fails to pay them, until payment is received. If you hold back 10 per cent, you will limit your liability as owner.

Does the *Builders Lien Act* require housing providers to ask contractors for a Statutory Declaration, confirming they have paid all suppliers, subcontractors, and employees?

The Act gives you the right to ask contractors for a *Statutory Declaration*, confirming they have paid their bills. BC Housing requires contractors to submit a *Statutory Declaration Form 9A* for second and subsequent payment draws and when requesting release of the lien holdback. The lien holdback must be paid 55 days after the contractor declares substantial performance, provided no liens have been filed. Conduct a lien search before making the payment. The contractor is confirming bills have been paid when the *Statutory Declaration* is signed, which will limit your liability for unpaid contractor accounts. See page 13 for more information on lien searches.

What documentation should housing providers obtain from contractors before proceeding with a new development?

After the tender has closed and you have determined the lowest qualified bidder, use a “Notice of Award” letter to confirm your acceptance of the contractor or supplier’s bid, subject to receiving some or all of the following documents, within 10 business days:

- Proof of current Workers’ Compensation Board coverage.
- Proof of current Comprehensive General Liability insurance for not less than \$2,000,000, showing the society / co-op as the Additional Insured.
- Proof of Third Party Legal Liability Insurance covering the duration of the project (Insurance Corporation of BC form APV47).
- Names of subcontractors and a description of the work they will perform, or confirmation that no subcontractors will be involved in the project.
- A *Schedule of Work*. (This information is only required on construction projects where the work may take an extended period.)
- At least two copies of the contract document for the contractor to sign.



- Performance, and Labour and Material Bonds (if applicable).
- Business Number (BN) for GST registration.

Your contract administrator should select the appropriate documents from this list to include in your Notice of Award letter. If the contractor/supplier will be entering your work site, ensure their Workers' Compensation Board and liability insurance are kept current during the whole term of the contract.

Are there any advantages for societies or co-ops in hiring a building manager/caretaker on a contract basis?

Housing providers that manage small developments with no need for a full-time caretaker may benefit from hiring someone on a contract basis to perform specific tasks such as grounds work or cleaning common areas. Less supervision is required than with an employee. Organizations that manage larger or multiple developments may need one or more full-time caretaker(s), hired as employees.

If you hire a contractor rather than an employee, the *Real Estate Act* requires any contractor acting as an agent – collecting rent, showing suites, signing agreements, for example – to be licensed by the Superintendent of Real Estate.

If you choose to use a single contractor as a full-time caretaker, Revenue Canada may deem the position to be an employee. Please call Revenue Canada at 1-800-267-1267 for a copy of the pamphlet – *Employee or Self-Employed?* – which lists the criteria for determining whether someone is working as an employee or contractor.

Does the BC Non-Profit Housing Association (BCNPHA) help its members develop maintenance operating systems? What about the Co-operative Housing Federation of BC (CHF BC)?

The BCNPHA has a *Policy and Procedures Manual* for non-profit housing providers, and offers a property management workshop. Call 604-527-8859 or 1-800-494-8859. The CHF BC offers a maintenance and property management workshop. Call 604-879-5111 or 1-866-879-5111 for information.

How can we find reliable, competitive small contractors such as plumbers or roofers?

Your Property Portfolio Manager may be able to refer you to local suppliers and contractors. The BC Non-Profit Housing Association has prepared a *Supplier Directory* by geographic area, and can be reached at 604-527-8859 or 1-800-494-8859.

Provincial associations such as the Roofing Contractors Association of BC (www.rcabc.org or 604-882-9734), the BC Floor Covering Association (www.bcfc.ca or 604-689-9928), and the Master Painters and Decorators Association (www.paintinfo.com or 604-298-7578) can provide names of member tradespeople.



You can also visit the Better Business Bureau at www.bbbvan.org and select *Company Reports*, which lists member service providers and their service record. The Greater Vancouver Home Builders Association website at www.vancouverhomebuilders.org also lists member contractors in the *Members* section.

The Co-operative Housing Federation of BC has building envelope consultants who can assess damage and advise co-ops on the steps to take to remedy building envelope problems.



Chapter 2

MAINTENANCE RECORDS

Building Records

Store copies of the building records for each development to document important information on the history of the building. Keep records of the following documents:

- 1) Building specifications.
- 2) As-built drawings.
- 3) Contract documents.
- 4) Guarantees and warranties for contract work, equipment and appliances.
- 5) Building maintenance manuals.
- 6) Equipment maintenance manuals.
- 7) Equipment operating instructions.
- 8) Serial and model numbers of equipment and an equipment inventory.
- 9) An inventory of tools and supplies. (Minor supplies that are regularly replaced, such as floor wax and cleaners, don't require records.)
- 10) Site inspections, noting when maintenance work has been done, any observations, the cost, if applicable, and who performed the work.
- 11) Suite inspections and all work orders. (Refer to the next section on maintenance inventories for more information.)

You can obtain copies of the first eight documents from your architect, engineer and/or contractor.

Maintenance Inventory

Keep a maintenance inventory for each unit that lists information on:

- The make, model, colour and serial number of each appliance.
- Paint colour.
- Colour and type of drapes/blinds.
- Colour and type of floor coverings and/or carpet.
- Any purchases and replacements, such as new flooring, fridges, etc., with dates.



- All maintenance work and renovations, with dates:

Using a *Maintenance Request Form* is an easy way to record maintenance work in resident units without a lot of paperwork. Residents fill out and sign the form identifying work that needs to be done and giving you permission to enter the unit. Simply write 'completed' and the date, initial the form, and then put it in the resident's file so you have a maintenance record you can use to track repairs, identify problems, or show proof of repairs in arbitration, if necessary. You'll find a sample form on page 52 in the appendix.

Maintenance records provide a history of the maintenance performed on every product. For example, these records will show when a suite was last painted, when carpets were installed and cleaned, and when a refrigerator or stove was replaced or repaired.

When you perform suite or building inspections, update your maintenance inventory records. Use up-to-date inspection information to plan short and long-term maintenance projects in your budget. For example, list equipment such as the type of hot water tank or furnace, and rate its condition, using a code:

- 1) Requires immediate replacement.
- 2) Requires replacement within 3 years.
- 3) Requires replacement in 3-5 years.
- 4) Requires replacement in 5-10 years.

In addition, store information on materials and appliances in common areas, such as the lounge, lobby and laundry room, in a maintenance inventory file.

Also maintain records of regular inspections such as fire alarm, elevator and boiler servicing, because you need these records to obtain warranty repairs.

Property management software programs are designed to track and maintain inventory lists and work orders. If you do not have a computer tracking system, ensure your files contain paper records.

The BC Non-Profit Housing Association has researched a property management software program for non-profit societies. Contact the BCNPHA at 604-527-8859 or 1-800-494-8859 for more information.

Maintenance Specifications

Keep records of the product brands and specifications you use to match products and find replacement parts when repairs are needed.

A comprehensive list of BC Housing's current product specifications is available on our website at www.bchousing.org, for everything from the grade and colours of paint to carpets, roofs, linoleum and countertops. You can use these specifications as a guide for any work at the development. Just click on the *Housing Provider* section and select the *Resource Directory - Purchasing Documents*.



Chapter 3

NEW DEVELOPMENTS

Construction Deficiencies

The architect will issue a *Certificate of Completion* when the contract for a new development is substantially complete, or when the outstanding balance payable on the contract reaches a particular amount defined in the *Builders Lien Act*. We explain how to calculate this amount on page 49.

Prior to issuing the certificate, the architect and someone from your organization should inspect the building to list any construction deficiencies, such as missing trim or defective window locks. The architect is responsible for ensuring the building is completed in accordance with the contract documents (drawings and specifications). A sample *Inspection Report* is included on page 97 in the appendix. The other design consultants should also conduct substantial performance inspections and prepare deficiency reports. The contractor should be present during this inspection.

The architect should make a list of the deficiencies and place a value on each. The contract allows you to hold back twice the value of the deficiencies, until the work is completed or corrected. Retain the full deficiency holdback until all deficiencies are corrected. This deficiency holdback is different from the builder's lien holdback, which is explained in the next section. Ensure your organization retains funds to cover both holdbacks.

In addition, whenever the contractor sends you an invoice for part of the work, ask for a *Statutory Declaration*, which is a sworn statement that all the supplies and labour used so far have been paid. This declaration will provide you with recourse if suppliers or subcontractors place liens against the development for unpaid materials or wages. (Refer to page 48 for more information on paying contractors.)

Identify deficiencies during the first year after the date of the *Certificate of Completion*, because the contract stipulates contractors must make repairs during this period. Ask residents to help identify any deficiencies they find in their suites or the common areas. Conduct a complete unit and building inspection ten months after the date of the *Certificate of Completion*. This timing allows the contractor time to correct any deficiencies before the expiry of the one-year warranty. Your organization or the architect will have to follow up with the contractor to ensure the remedial work is completed.



Builders Lien Act

The *Builders Lien Act* requires you to hold back 10 per cent of the contract value for 55 days, from the day the architect gives you a declaration of substantial completion. The holdback is intended to give you adequate funds to pay subcontractors or suppliers, if the contractor fails to pay them. You are also required to establish a holdback account for each contract valued at \$100,000 or more.

If you hold back 10 per cent, your liability as owner will be limited to this amount, unless more than 10 per cent is still owing.

The contractor can submit a *Statutory Declaration 9A* form requesting release of the lien holdback funds any time after substantial completion of the project has been declared. When you receive the *Statutory Declaration 9A*, do a lien search with the Land Titles office. The search can also be done online at www.bconline.gov.bc.ca, but first you need to set up an account with BC OnLine by calling 604-660-6970 in Vancouver, 250-952-6777 in Victoria, or 1-800-373-6393. If no liens are found related to the project, release the holdback to the contractor on the 55th day.

Contract Documents

Your contractor is required to provide you with a number of important contract documents including:

- Appliance warranties.
- As-built drawings and specifications.
- Maintenance manuals including registered material and product-specific warranties, and instruction manuals for the operating systems.
- A letter scheduling the date for the one-year warranty inspection.
- Copies of all municipal Building and Occupancy Permits.
- A list of construction contacts for the development, including the contractor and sub-trades.

The architect should review these documents to ensure they are complete and accurate.

The contractor is also required to conduct a demonstration of the mechanical and electrical systems and equipment before applying for substantial completion. The contractor should explain where to find operating and maintenance information in the maintenance manuals during this meeting. Your caretaker and/or building manager should attend. The architect should also attend to ensure the demonstration is complete. We recommend you videotape the demonstration for your caretaker to use as a reference.



Chapter 4

BUILDING MAINTENANCE

The Board's Responsibilities

Your buildings and land are home to the residents and part of the local community. Keeping the property well maintained enhances the quality of residents' housing, and reflects positively on your organization and its role in the neighbourhood.

Ultimately, responsibility rests with your Board of Directors to ensure maintenance systems and procedures are in place to keep developments clean, orderly and in good condition. Your organization must develop and implement a maintenance plan with an inspection schedule to ensure all maintenance work is completed on time. Review and update the plan annually.

The Board is also responsible for ensuring the people you choose to handle building and grounds maintenance have the experience and expertise to properly care for the facilities, equipment and property. Some organizations with larger portfolios may delegate this responsibility to management staff.

For example, only qualified tradespeople should be used to perform technical tasks, while volunteers could do some landscaping or painting jobs. Set up contracts with tradespeople such as plumbers and electricians, and service contractors who maintain fire alarm, elevator and heating systems. (Chapter seven explains how to set up and monitor a contract.)

In addition, ensure you consult with Regional Operations staff and the Building Envelope Coordinator at BC Housing before starting any structural or building envelope repairs.

Residential Tenancy Act Requirements

The *Residential Tenancy Act* (RTA) applies to non-profit housing societies, and explains resident and landlord responsibilities for maintenance and repairs, as well as the process for arbitration, should a disagreement arise. Keep a reference copy of the Act and the *RTA Regulations* on hand.

a) LANDLORD RESPONSIBILITIES

As landlord, you're expected to maintain the building and property to health and safety standards and to make necessary repairs. If you do not follow through on this responsibility, residents can apply to the Residential Tenancy Office for an order to have the repairs completed and the cost deducted from their rent.



Include terms in your tenancy agreement to explain both resident and landlord responsibilities for maintenance and repairs. Keep in mind that the terms of the RTA will apply under arbitration, even if these conditions aren't defined in the tenancy agreement.

The Residential Tenancy Office has produced a *Guide for Landlords and Tenants in BC*. You can obtain a copy of the guide or more information about the RTA at 604-660-3456 or 1-800-665-8779. Or visit the Residential Tenancy Office website at www.pssg.gov.bc.ca/rto for online assistance and to download forms and the guide.

b) RESIDENT RESPONSIBILITIES

Under the RTA, residents are entitled to expect:

- Maintenance and repair of the development will comply with health, safety and housing standards required by law.
- They will be informed about any work being done in their units.
- Contact phone numbers will be posted in the building for regular and emergency maintenance.

Residents need to understand their maintenance responsibilities under the RTA. Residents are required to:

- Maintain ordinary health, cleanliness and sanitary standards, but are not liable for reasonable wear and tear.
- Repair any damage they or their guests cause.

You can review this information and the tenancy agreement with residents before they move in. Information can also be communicated in a resident handbook, flyers, posters, at meetings, or through a residents' newsletter, if there is one. (Refer to page 31 for information on move-in and move-out suite inspections.)

If residents request permission to redecorate at their expense, you can approve painting or modifying a suite, as long as the modifications don't adversely affect the unit's value or appearance. Discuss changes with the resident so everyone is clear about what will be done, and give approval in writing before the work begins. If you expect the unit to be painted its original colour again before move-out, specify this condition in writing. Give the resident a copy of your paint specifications to ensure the work is completed using acceptable products.

Residents in non-profit buildings cannot be expected to perform building or property maintenance, unless they want to volunteer to help with this work. But you can ask people to report any general maintenance problems to the building manager or to notify your office staff.



Advise volunteers that BC Housing's group insurance program does not provide a disability policy for volunteers. If a volunteer is injured on your property, any legal suit launched would be filed against your liability insurance. Depending on the injury and whether your organization is shown to have any negligence, an injured volunteer may or may not be successful in a claim.

Housing Co-ops

The *Co-operative Association Act* does not contain maintenance regulations. Instead, some maintenance responsibilities are defined in the occupancy agreement each member signs. These terms state:

- Members are required to keep their units in good condition and repair.
- Members are liable for any damage they cause.
- Whether people are allowed to make alterations to their units, the process to obtain consent, and who pays for changes.
- The co-op can exercise a lien against the share purchase, if cleaning and repairs are required when a member moves out.

Other maintenance responsibilities vary among co-ops. For example, co-op maintenance policies generally define responsibility for painting, plumbing, flooring and other minor repairs. At some developments, the co-op pays for these maintenance items, while at other buildings, individual members are responsible for paying.

Participation policies define whether members are expected to help with general cleaning and building maintenance. Some co-ops assign chores that rotate among members or hold biannual building and yard cleanups. Anyone who is physically unable to perform these tasks is asked to help in other ways, such as making calls to organize meetings or bringing food to the cleanup. Expectations for participation are explained when people apply to join a co-op. Other co-ops hire people to perform this type of work.

Some co-ops hire property management companies to handle maintenance and other tasks, such as collecting housing charges. Other co-ops oversee cleaning and maintenance requirements and use property managers for other responsibilities.



Caretakers

Many organizations hire resident or non-resident caretakers to handle day-to-day maintenance. We ask that you demonstrate the need to hire a caretaker. BC Housing's guideline for assessing whether a caretaker is needed is one full-time person for each 100 suites, depending on the job description and layout of the property. If the property is large, requires a lot of grounds work and common area maintenance, but has fewer units, a caretaker may be justified. Or there may be a higher number of units at a concentrated development requiring fewer staff. Generally, seniors' complexes have more common areas and require more maintenance, while family townhouse developments have less common areas, with residents responsible for maintaining their own yards. Smaller developments may not require a caretaker, or a position may be shared between more than one building, or a part-time caretaker may be needed.

A copy of BC Housing's *Cleaning Standards* for building managers and janitors is available on our website at www.bchousing.org. Select the *Housing Provider* section and go to the *Resource Directory - Maintenance Documents*. The standards list how often each task should be done, such as vacuuming common areas once a week and cleaning the lobby daily.

If you want to hire a caretaker, please send a written request to your Property Portfolio Manager.

Refer to the Rent Calculation section of the *Operations Guide* for information on how to calculate rent for a live-in caretaker.

Regular, Cyclical and Emergency Maintenance

Use a detailed maintenance checklist and schedule to ensure the building and site are regularly inspected and consistently well maintained. Routine maintenance can identify problems at an early stage, allowing remedial work to be completed before a problem becomes significant.

Whoever handles maintenance needs to be familiar with the systems and equipment at the development. Select qualified people with experience making repairs and keeping buildings and property clean and orderly. Maintenance staff require tools and equipment kept in good repair, and easy access to drawings, specifications, warranties, operating manuals, and accurate records of equipment repairs.

We recommend you schedule maintenance work by the season. For example, landscaping, grounds clean up and sign repair can be done in spring. Wash windows and buildings and paint the building exterior in the summer. Replace furnace filters and clean other equipment in the spring and fall, and clear drains of leaves or dirt in the fall. In winter, monitor and mend any frozen pipes. You can use the sample maintenance checklist on the next page as a guide, or download a copy from our website at www.bchousing.org. A copy is also included in the appendix on page 53.



Sample Maintenance Checklist

YEAR: _____

GROUNDS <small>(See Note 1 at the end of the checklist)</small>	FREQUENCY <small>(See Note 2)</small>	INSPECTION/MAINTENANCE PROCEDURES	DATE (3)	REFERENCE (4)	SERVICE CONTRACT (5)
Playground Equipment	Annually	Inspect for loose cracked parts, sharp edges, rot and fall protection.		02880	(6)
Planting	Annually	Inspect for plant and tree growth against building.		02900	(7)
Concrete Patios and Retaining Walls	Annually	Inspect for cracks, shifting, water damage and drainage		–	(8)
Sidewalks and Driveways	Annually	Inspect for cracks and trip hazards.		–	(8)
BUILDING EXTERIOR (#9)	FREQUENCY	INSPECTION/MAINTENANCE PROCEDURES	DATE	REFERENCE	SERVICE CONTRACT
Crawlspaces, Concrete Foundations	Annually	Inspect for dampness, vermin, inspect beams and posts for rot. Inspect foundations for cracks, shifting, water damage.		–	(10)
Masonry Veneer	Annually	Inspect for efflorescence (white powder), inspect sealants.		04200	(10)
Porches and Balconies	Annually	Clean and inspect for cracks, rot, trip hazards, secure railings and steps.		–	(8)
Wood Siding, Fascias and Trim	Annually	Inspect for cracks, water damage, deteriorated finishes and vermin.		06100	(8)
Attic Roof Sheathing	Annually	Inspect for water damage, mildew, condensation.		–	(10)
Attic Insulation	Annually	Inspect for moisture, vermin, voids, compressed insulation.		–	
Attic Ventilation	Annually	Inspect for obstructions, rot, vermin.		–	
Vinyl Decks	Annually	Check for lifting, water damage, damaged flashing.		07100	(8)
Concealed Waterproofing (parkade)	Annually	Check underside of slabs for evidence of leaks.		07100	(10)
Stucco	Annually	Check for signs of water leakage, mould, mildew and staining.		07240	(10)
Roof Shingles	Annually	Check for curled or missing shingles, excessive moss, damaged flashing, clean gutters.		07300	(11)
Vinyl Siding	Annually	Inspect for damaged siding and water damage.		07460	(8)



BUILDING EXTERIOR	FREQUENCY	INSPECTION/MAINTENANCE PROCEDURES	DATE	REFERENCE	SERVICE CONTRACT
Steel Siding	Annually	Inspect for water damage and damaged sheets.		07465	(8)
Flat Roofs	Annually	Inspect for ponding, loose flashing, plugged drains, air pockets, blisters, debris.		07500	(11)
Roof Hatch	Annually	Inspect for forced entry, hardware operation, leaks and weather stripping.		07700	
Metal Doors and Frames	Annually	Inspect for forced entry, correct hardware operation, weather stripping and sealants.		08100	(8)
Wood Doors and Frames	Annually	Inspect for forced entry, correct hardware operation, weather stripping and sealants.		08210	(8)
Automatic Door Openers	Semi-Annually	Inspect for damage, forced entry, wear, and test all safety features.		08710	(8)
Overhead Parkade Doors	Semi-Annually	Inspect for proper operation and damage to components, test safety features.		08360	(8)
Aluminum Entrances and Storefront	Semi-Annually	Inspect for forced entry, hardware operation, closer adjustment		08410	(8)
Windows and Doors	Annually	Inspect for leaks, hardware operation, sealing.		08500	(10)
Hose Bibs	Semi-Annually	Inspect for damage and winterize in advance of freezing temperatures.		15400	
Outdoor Outlets	Semi-Annually	Test ground fault plugs.		16000	
Dryer Vents	Monthly	Clean bird screens monthly and vents as required.		15500	
Floor and Trench Drains	Annually	Clean out drains and trenches.		15400	
Chimneys	Annually	Clean and check for cracks, loose bricks, leaks or damage. Include fireplaces and wood stoves.		-	(8)
BUILDING INTERIOR AND SERVICES (#12)	FREQUENCY	INSPECTION/MAINTENANCE PROCEDURES	DATE	REFERENCE	SERVICE CONTRACT
Door Handles, Hinges and Closures	Semi-Annually	Check hardware for proper function, check and test fire exit hardware.		08710	(8)
Residential Appliances	Semi-Annually	Check fridge seals and drain tubes. Check stove burners and wires for electrical shorting or grease build up. Check hood fans for filters, venting, grease build up and fire hazards.		11450	(8)
Walls and Ceilings	Annually	Inspect for mould, water damage, holes, cracking, paint and humidity levels.		09250	(8)



BUILDING INTERIOR AND SERVICES (#12)	FREQUENCY	INSPECTION/MAINTENANCE PROCEDURES	DATE	REFERENCE	SERVICE CONTRACT
Elevators	Monthly/ Quarterly (Subject to licensing requirements)	Have an elevator contractor service and maintain the elevator equipment		14200	(6)
Boiler - Large Building	Monthly	Service monthly, including circulating pumps. Adjust for seasonal temperatures.		15500	(6)
Boiler / Furnace - Small Building	Annually	Service annually, plus filter changes 3 to 4 times per year. Adjust for seasonal temperatures.		15500	(6)
Air Conditioning	Annually	Inspect for damage, icing, noise, leaks. Clean condenser.		15500	(6)
Ductwork	Annually	Clean and inspect for rust or damage.		15500	(8)
Gas Piping	Annually	Inspect for leaks and clearance between gas fired fixtures and combustibles.		15400	
Hot Water Tank	Annually	Open drain, inspect pressure reducer valve for leaks.		15400	
Electrical Panel and Wiring	Monthly	Inspect for loose, frayed, exposed or overloaded wires/plugs. Test ground fault plugs monthly.		16000	(8)
Electrical Radiant Heater	Annually	Inspect for damage.		16000	
Fire Alarm System, Extinguishers, Hoses, Sprinklers, Heat and Smoke Detectors	Daily / Weekly / Monthly / Annually	Inspect annually using a qualified inspection firm. Have staff conduct daily, weekly and monthly checks from Fire Safety Plan.		16000	(8)
Emergency Generators	Weekly / Semi-Annually	Run emergency generators once per week for 20 minutes, and have inspected by a qualified firm every 6 months. Maintain fuel supply.		16000	(8)

NOTES:

1. Includes site improvements outside the building envelope.
2. The recommended maintenance or inspection interval.
3. The date you complete the inspection and /or maintenance procedures.
4. The reference section found in the Design and Construction Standards and the building operating and maintenance manual submitted by the contractor. Review the manual to determine if product is still covered under warranty.
5. A purchase order or service contract to carry out independent inspection, maintenance, repair or re-construction.
6. Have the equipment manufacturer or subcontractor attend to the repairs.
7. Have the landscape maintenance service perform the work.
8. Employ a specialist trade contractor to perform the repairs.
9. Includes foundation walls, roofs, windows, and doors.
10. Employ an independent building envelope inspection agency to review suspect conditions.
11. Have an independent roof inspection agency inspect roof every 5 years. Have roofing contractor perform repairs annually as required.
12. Includes building services and interior finishes.



Develop a system for responding to resident requests for maintenance and repairs, and let them know how the system works. For example, do you want residents to fill out a request form when they need something fixed? Are the forms kept in a box in one of the common areas? Or do you want people to phone in requests, and leave a message?

If you decide to supply *Maintenance Request Forms* in common areas, people can advise you of maintenance problems, and grant permission for someone to enter their suites to complete repairs while they're out. There's a sample *Maintenance Request Form* on page 52 in the appendix. The forms also provide an easy way to keep a maintenance record for a suite.

Some cyclical maintenance automatically occurs as part of a service contract, such as the monthly elevator servicing. Plan non-cyclical maintenance following the annual suite and site inspections, outlined on pages 32 and 33.

In addition, the *Residential Tenancy Act* requires you to post a contact phone number in the building for after hour emergency maintenance, in case of an emergency such as a fire, flood, elevator break down, power or heat outage, broken window or leaking roof. The caretaker or a service company may be the contact.

To find out how other organizations handle these responsibilities or to arrange maintenance training, contact the BC Non-Profit Housing Association at 604-527-8859 or 1-800-494-8859, or the Co-operative Housing Federation of BC at 604-879-5111 or 1-866-879-5111.

The Mount Allison University Resource Kit for volunteer housing boards includes a session on facilities and maintenance management, and can be ordered at www.mta.ca/rstp/order.html.

Major Asset Planning*

Use the information you gather during annual suite and site inspections to accurately determine when major assets will need to be replaced. Use the inspections to identify what work needs to be done, and develop a five-year maintenance plan for major assets. Update the plan following annual inspections by qualified professionals. Include estimated dates and costs for asset replacements.

For example, during the annual suite inspections in the seventh year after opening, you discover the linoleum will need to be replaced in two years, even though it's supposed to last ten. Use this information to update your plan to replace the flooring in the ninth year. Or at year four, the interior paint looks like it will last six years, even though it's scheduled to last five. Update the plan to reschedule the painting for a year later.

*Major asset planning is referred to as capital planning in the *Financial Management Guide*.



You'll find a list of estimated useful life years for major assets on our website at www.bchousing.org. Click on the *Housing Providers* section and go to the *Resource Directory*.

The annual inspection should be detailed enough to identify specific numbers that must be replaced, such as 50 appliances or 20 carpets in a 90-unit development, in the coming year.

Give first priority for asset maintenance to immediate operational or structural needs, such as damage or a hazard that could affect the health or safety of residents and staff. Also consider technical and aesthetic implications when setting priorities. For example, exterior and interior painting may both be required, but you only have the resources for one job this year. Wood may begin to rot outside if the exterior painting is not done first, while the interior will be less visually attractive for another year. As a result, do the exterior painting first to preserve the wood. Or perhaps flooring and interior paint both need replacing. Paint first and install flooring next, so you don't risk getting paint on the new flooring.

There are three types of funding for major asset replacements in non-profit and co-op developments: replacement reserve, modernization and improvement projects, and extraordinary payments.

a) REPLACEMENT RESERVES

Most housing providers have a replacement reserve fund under the terms of your operating agreement with BC Housing. Replacement reserves are established to replace major assets that wear out. The replacement reserve is funded through an annual or monthly transfer from your operating bank account to the replacement reserve accounts.

Chapter six of the *Financial Management Guide* contains instructions on how to complete a Replacement Reserve Schedule, which estimates the:

- Amount to set aside each year in your budget to cover replacement costs.
- Life years for assets such as appliances, flooring, furnaces, hot water tanks, carpets, linoleum, window covering, painting and paving.

For example, if a major asset will cost \$100,000 to replace and has a life span of 20 years, you need to set aside \$5,000 per year for 20 years, so the money is available to replace it at the end of 20 years.

The list of eligible replacement reserve items specifies the only items that can be paid out of reserve funds.



b) MODERNIZATION AND IMPROVEMENT PROJECTS (M&I)

Modernization and Improvement projects include replacing and repairing major structural components of a building due to:

- Premature failure.
- Deficiencies in construction or design.
- Cosmetic or functional upgrades.
- Obsolescence of existing components.

A Modernization and Improvement replacement is not:

- An item that might normally be scheduled for replacement or upgrading within ten years of the Interest Adjustment Date (IAD) for the property.
- The replacement of an individual, small expense item that could be funded in the operating budget.
- An item already funded in the operating budget or through the replacement reserve provision.

Some examples of items that could be replaced under Modernization and Improvement include:

- Bathtub and bathtub surrounds.
- Toilets.
- Sinks.
- Cupboards.
- Light fixtures.
- Windows or doors.
- Exterior cladding or siding.
- Window screens.
- Elevators.
- Structural or building envelope components.
- Fire sprinkler systems.
- Building re-wiring.
- Building re-plumbing.
- Renovation or conversion projects.



M&I funds can also be used to add new items to improve a site rather than upgrading existing items, such as:

- Installing playground equipment or a sports court at a development that didn't previously have these facilities.
- Removing a standard bathtub and replacing it with a wheel-in shower or tub that is easier for seniors to use. The current equipment may still be in good condition, but no longer meets a client's physical needs.

BC Housing arranges financing for Modernization and Improvement projects, which are added as an annual expense item to your budget. Items costing less than \$5,000 may be funded as a non-recurring maintenance expense in your operating budget or as a one-time extraordinary payment.

Your Property Portfolio Manager (PPM) will send an M&I worksheet with your budget package. Send your plan for Modernization and Improvement replacements to your PPM, who will submit the plan for approval. M&I projects must be completed within the fiscal year they receive approval. Contact your PPM for more information on M&I projects.

c) EXTRAORDINARY PAYMENTS

Developments without sufficient funding for scheduled replacement reserve items may get funding for maintenance expenditures through an extraordinary payment from BC Housing. BC Housing may also provide a one-time payment for emergency repairs.

If a major maintenance project arises unexpectedly, contact your Property Portfolio Manager for assistance.



Chapter 5

WARRANTY PROTECTION

Warranty protection is provided for new construction and for repairs to developments with premature building envelope failure. As a building owner, non-profit societies and co-ops must meet mandatory maintenance requirements under the *Homeowner Protection Act* to file a warranty claim. If these maintenance obligations are not met, the warranty for a new building or building envelope repairs will become void. The Act applies to new construction and building envelope repair for multiple unit buildings and group homes. (A Home Warranty will not be issued for a renovated group home.)

For information on the *Homeowner Protection Act*, visit the Homeowner Protection Office website at www.hpo.bc.ca or call 604-646-7055 or 1-800-407-7757.

Home Warranty ~ New Construction

Under the *Homeowner Protection Act*, developers must provide warranty insurance on all new buildings that includes:

- 12 months on non-common property in units such as doors, cabinets, sinks and plumbing fixtures.
- 15 months on common property.
- 2 years on delivery and distribution systems such as the electrical, plumbing, heating ventilation and air conditioning systems.
- 5 years on the building envelope.
- 10 years on major structural components.

The warranty period begins when your architect issues a certificate of substantial performance or completion, generally issued at occupancy. Under the Act, the builder must give you a maintenance manual containing information on how to properly maintain the building, or forfeit the right to exclude coverage. If you receive all the information in the builder's maintenance manual and fail to maintain the building, you void the warranty. For example, if you don't have the gutters cleaned and water gets into the building, the warranty would not cover the cost of repairing this damage.



Maintenance manuals are broken into sixteen divisions, each of which covers specific categories with detailed specifications:

- *Division 1 ~ General Requirements* (including a summary of the work, quality control, maintenance and other items).
- *Division 2 ~ Site Work* (including site preparation, paving and surfacing, sewerage and drainage, landscaping).
- *Division 3 ~ Concrete* (including concrete formwork, reinforcement, grout, restoration and cleaning).
- *Division 4 ~ Masonry* (including mortar, accessories, corrosion resistant masonry).
- *Division 5 ~ Metals* (including metal materials, finishes, joists, decking, fabrications).
- *Division 6 ~ Wood and Plastics* (including fasteners and adhesives, heavy timber construction, finish carpentry, plastic fabrications).
- *Division 7 ~ Thermal and Moisture Protection* (including waterproofing, insulation, fireproofing, shingles and roofing tiles, flashing and sheet metal).
- *Division 8 ~ Doors and Windows* (including metal doors and frames, wood and plastic doors, metal windows, wood and plastic windows, hardware).
- *Division 9 ~ Finishes* (including aggregate coatings, tile, carpet, floor treatment, painting, wall coverings).
- *Division 10 ~ Specialties* (including louvers and vents, wall and corner guards, pest control, storage shelving, toilet and bath accessories).
- *Division 11 ~ Equipment* (including maintenance equipment, parking control equipment, unit kitchens).
- *Division 12 ~ Furnishings* (including fabrics, window treatment, furniture and accessories, multiple seating).
- *Division 13 ~ Special Construction* (including special purpose rooms, sound, vibration and seismic control, building automation systems).
- *Division 14 ~ Conveying Systems* (including elevators, material handling systems, scaffolding).
- *Division 15 ~ Mechanical* (including basic mechanical materials and methods, plumbing, heating, ventilation and air conditioning).
- *Division 16 ~ Electrical* (including basic electrical materials and methods, power generation, lighting).



a) MAINTENANCE PLAN

Have your architect or consultant produce a *Maintenance and Renewals Plan* for all components of the building, based on the maintenance manual requirements. You can use the sample maintenance checklist on page 53 as a guide, or print a copy from our website at www.bchousing.org. Include the following information in your maintenance plan:

- A generic inspection form for recording results of the annual inspections. Record when maintenance work is done, any observations, the cost, if applicable, and who performed the work.
- Expiry dates for the product warranties and guarantees, such as the two-year paint and window and five-year roof guarantees provided by trade associations. Before you begin deficiency repairs on components, equipment or systems that are covered by manufacturer or trade association warranties or guarantees, contact the manufacturer or supplier about providing the required notice. You need to ensure you do not void the warranty by not providing adequate notice.
- A list of contact names, phone/fax numbers, email and mailing addresses for consultants, the general contractor, specific trades and manufacturers.
- Definitions for building envelope terms such as moisture barrier, air barrier, vapour barrier, drainage cavity, insulation and cladding.
- A brief description of the building envelope wall, window/glazing and roof assemblies and their main components.

You also need a renewals plan to replace assets as they wear out to preserve the structure, function and aesthetic value of the development. Refer to page 21 for information on major asset planning and chapter six of the *Financial Management Guide* for instructions on setting up a replacement reserve fund.

b) WARRANTY INSPECTIONS

Always hire a qualified architect or engineering consultant with the expertise to assess the building condition to conduct the 1, 2, 5 and 10-year warranty inspections outlined on page 25. Have your consultant perform the inspections a month or two before the warranty periods expire, so you have time to file a claim if necessary. The inspection report should identify any warranty items that require repair. The architect should bring in other consultants, such as a building envelope specialist or mechanical or structural engineer, to assess the problem in detail, if symptoms are identified during an inspection.

The construction contract requires that the contractor repair any deficiencies identified by the owner during the one-year period after the date of substantial performance. The architect's basic services include conducting the one-year inspection and preparing a deficiency list. You and your residents will need to prepare a list of deficiencies before the inspection for the architect and contractor to review. Keep a record or log of all problems with warranty items during the first year. Warranty deficiencies include defects in workmanship or materials, not resident damage.



Your consultant should prepare a report on the warranty inspection results. Send a copy to your Property Portfolio Manager and the warranty provider. If warranty work is required, proceed with making a claim. You don't need to determine whether the claim is material and labour or design related, because the insurer will send an adjuster to determine the cause.

In addition, an annual maintenance review should be part of your ongoing, routine maintenance plan, because problems can usually be remedied at a lower cost if detected early, before obvious damage occurs. See page 32 for more on regular annual inspections.

At the five-year building envelope warranty inspection, a building envelope consultant can identify and assess damage and suggest repair options. Contact the Architectural Institute of BC at 604-683-8588, or the Association of Professional Engineers and Geoscientists of BC at 604-430-8035 for referrals. Your municipality or regional district may also be able to provide a list of building envelope consultants.

For more information on home warranty coverage and maintenance requirements, contact Technical Services at BC Housing at 604-433-1711.

Building Envelope Repair Warranty

Some non-profit and co-op developments are experiencing the same water penetration problems as buildings in the private market, and may require building envelope repairs. The building envelope includes all building components that separate the indoors from the outdoors, such as the exterior walls, foundations, roof, windows and doors. Common signs that indicate water problems include:

- Water flowing down the sides of a building.
- Water stains appearing on the insides of walls, ceilings or inside foundations.
- Pools of water on decks or balconies.
- Window leaks or ponding at the windowsill.
- Mould or fungi forming.
- Wood rot.



BC Housing will assist you to repair water penetration damage by providing technical and financial support, while your society or co-op signs the contracts and pays the building envelope consultant and contractor.

Our staff evaluate proposals and help housing providers select an architect or engineer as a building envelope consultant. The consultant assesses the building and provides repair options, by determining:

- How the water is getting in.
- Why the water isn't draining.
- What path water is taking inside the walls.
- How much damage has been done to the building.

For example, the building envelope consultant will identify whether the entire building requires repair or if the problem is located in a specific area. BC Housing discusses the repair options with you, develops a budget and timeframe, and helps you put the repair work out for tender. The flow chart on page 30 outlines the building envelope repair process. (Refer to chapter seven, beginning on page 39, for more information on tendering contracts.)

Under the *Homeowner Protection Act*, contractors performing building envelope renovations must be licensed by the provincial Homeowner Protection Office, and provide mandatory third-party warranty insurance. The minimum coverage is two years on labour and materials. An additional five-year warranty on water penetration must be provided, if 60 per cent or more of any wall is replaced. Design work is also covered in building repair warranties.

When the repair work is complete, the building envelope consultant will conduct a final inspection and prepare a project completion package for you, with building envelope maintenance and renewal plans, as-built drawings and warranties.

You must conduct regular maintenance procedures to meet your obligations under the warranty, or the warranty will become void. In addition, you must hire a qualified professional to conduct inspections prior to each warranty period expiring, so you have time to file a claim, if necessary. Send inspection reports to your PPM and the warranty provider. Some warranty providers may offer extended coverage for some components, such as 10 years of coverage for the building envelope, for *both* new construction and repair work.

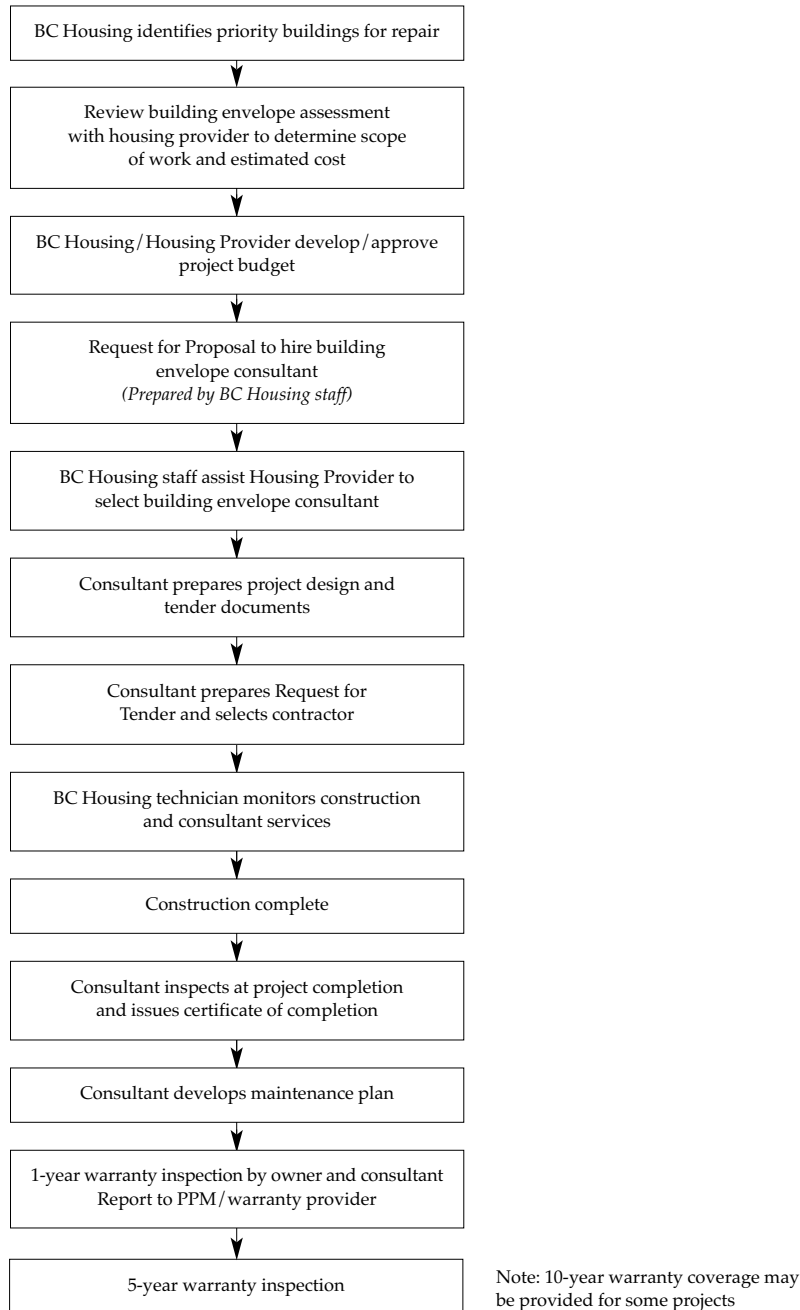
CMHC has produced two guides on building envelope repairs, *Building Envelope Rehabilitation – Owner/Property Manager Guide* and *Building Envelope Rehabilitation – Consultant Guide*. To purchase one of these guides, contact CMHC at 1-800-668-2642 or your local office:

Vancouver	604-731-5733	Victoria	250-363-8040
Kelowna	250-712-4333	Prince George	250-561-5433

Visit the CMHC website at www.cmhc-schl.gc.ca



Building Envelope Repair Flowchart



For more information on building envelope repairs, contact BC Housing's Building Envelope Coordinator at 604-433-1711.



Chapter 6

INSPECTIONS

Regulations

Ensure your development complies with all applicable statutory health and safety standards. Your staff need to be familiar with provincial and municipal regulations that govern the development and equipment. For example, the provincial government requires regular servicing and certification for elevator, boiler and fire safety systems, and regional governments have regulations governing septic fields and streams flowing through properties.

Municipalities also have various requirements that govern the condition and safety of local developments. For instance, some municipalities have tree bylaws that require prior approval to remove a tree. Local governments often have parking bylaws that can affect residents and staff. And municipal health department licensing requirements vary for different special needs clients. Call your municipality for details of the health and fire safety bylaws in your area.

In addition, municipalities are authorized to inspect the condition of a building if they receive a complaint from a resident, and can order repairs, maintenance work, or pesticide spraying, if the building doesn't meet municipal standards.

Move-in and Move-out Inspections

When a new resident moves in, inspect the suite with the resident present. You must both sign an inspection form describing the condition of the unit.

Before people move out, give them a list of cleaning they must complete by the move-out day. You can conduct a pre move-out inspection with the resident by walking through the unit to identify areas that require cleaning in a copy of the inspection form. Residents can make minor repairs themselves. Make an appointment to do another joint inspection on move-out day to compare the suite's condition to the move-in day. People are responsible for leaving the unit as clean as it was when they moved in, except for reasonable wear and tear.

Move-in and move-out inspections are needed in case any damage is done to the unit, so you have a basis for comparison. The *Residential Tenancy Act* requires landlords to provide bills or invoices showing how much was spent for repairs, if you want to keep some of the security deposit or have the resident pay for any damage. If a resident disagrees with the damage costs, the landlord must apply to the Residential Tenancy Office to withhold all or part of the deposit. Occupancy agreements allow co-ops to use funds from the share purchase for repairs.



There are move-in and move-out inspection forms on pages 56 and 57 in the appendix for bachelor/one bedroom units and family units with two to five bedrooms. The forms provide space to comment on the condition of walls, ceilings, windows, doors, fixtures, appliances, etc., in the kitchen, living room, bedrooms, bathrooms, entry-way and other areas. Use descriptive wording such as “clean,” “painted,” “washed,” or “dirty,” rather than less clear terms such as “okay” or “good.” A completed sample form is also included on page 58.

Annual Site Inspections

We recommend your Board Chair or President join your Property Manager, if you have one, to inspect the cleanliness, condition, appearance and standard of maintenance of the entire building and grounds once a year, including:

- All common areas.
- The roof.
- The basement.
- The boiler room.
- The electrical room.
- Storage areas.
- Public washrooms.
- Laundry rooms.
- Signs.
- Carpets.
- Floors.
- Landscaping.

The inspection will demonstrate the quality of your caretaker’s work, and help you identify:

- Preventative maintenance work that needs to be completed.
- Servicing, repairs or replacement work.
- A schedule for doing the work.

If you do not have a Property Manager, hire a qualified professional to conduct the site inspection. If a property management company handles maintenance for you, the Board needs to ensure annual inspections are performed to monitor the company’s work and ensure the property and building are kept in good condition. If necessary, conduct site inspections more frequently. There’s a sample *Multiple Unit Property Inspection* form on page 59 in the appendix.

Some Boards with large portfolios may delegate responsibility for the annual site inspection to management staff.



Annual Suite Inspections

Conduct a general maintenance, health and safety inspection of all suites at the same time as the site inspection to determine whether upgrading or repairs are required. You can use a move-in/move-out form to record these inspections.

Ensure residents understand the purpose of the inspection is to maintain the quality of their homes and plan for any maintenance that's needed, not to inspect their house-keeping. However, if there is a health or safety issue, you are entitled to give notice and enter the suite to rectify the situation when necessary. Refer to the *Residential Tenancy Act* for more information on your rights and obligations as a landlord.

In addition to any repairs, watch for the following safety considerations:

- Smoke alarms should be checked to ensure they're functioning properly and are not disconnected or covered.
- Materials should not be stacked around gas hot water tanks or furnaces, because they create a fire hazard.
- A child's bed should not be positioned underneath a flip out window, where the child could fall out.
- Sleeping quarters should not be set up in a basement where occupants have no fire exit. Basements must not be used as bedrooms.
- Attics and crawlspaces should be checked to ensure belongings are not improperly stored, there are no leaks or pests, and no illegal activity is underway, such as a marijuana grow operation. (Refer to the Resident Relations section of the *Operations Guide* for information on the Crime Free Housing Program, or visit the website www.bccpa.org/multi.)
- Growth of mould contamination, which is a health risk to residents. The areas where mould growth is most commonly found are bathrooms, around windows and doors, closets, cold sections of wall or floor assemblies, cooling coil sections of air handling units and ductwork, foundation walls, crawlspaces and tunnels. Watch for obvious signs of mould – black, grey, green or white growth – and for musty or dank odours and areas of high humidity. BC Housing has a Mould Management Program on page 63 in the appendix that you can use as a guideline for responding to mould. A *Mould Notification Order* form is included on page 70. BC Housing also has an information bulletin for residents on how to reduce the likelihood of mould growth in their units. Contact your PPM for information or if you require assistance.
- Large stacks of newspapers are a fire hazard and can block exit passageways, making it difficult for someone with mobility problems to get out easily if there is a fire.



- Be aware of non-housing issues such as a lack of food or a dangerous situation for a child. If this type of situation arises, you may want to contact home care staff, the provincial child protection service, or your PPM at BC Housing for recommendations on how to handle the situation.
- Pest infestations that require spraying.
- Overloaded electrical circuits with too many items plugged into a single outlet. A power bar is an acceptable alternative.
- Flammable materials such as propane tanks from a barbecue, paint thinners or oil-based paints stored in basements. These products should be kept in sealed airtight metal containers away from ignition sources.
- Damage to the unit, such as holes in the walls or doors, or soiled carpets.

If you find a safety hazard, advise the resident how to remedy the problem, and make an appointment to inspect the suite again in two weeks. If you encounter a situation where someone is unwilling to meet safety standards, you can consider taking action to remedy the problem or end the tenancy or membership under the *Residential Tenancy Act* or *Co-operative Association Act*.

Preventative Maintenance Inspections

Use your maintenance checklist to identify and track daily, weekly and monthly inspections, in addition to the annual maintenance inspections. These periodic inspections will help identify any preventative maintenance that needs to be done.

For example, you should check electrical panels and wiring for loose, frayed, exposed or overloaded wires and plugs monthly, and appliances and finish hardware for damage semi-annually. Use the information from the interim inspections to update the regular maintenance schedule.

Elevator Inspections

Regular elevator inspections are a legal requirement. Elevator maintenance companies offer full service contracts that cover bi-weekly, monthly or quarterly maintenance, parts and repairs. With this type of contract, the only additional charges are for vandalism repairs or upgrades required to meet a change in provincial standards.

The elevator company should send you a work sheet outlining the work done and parts replaced during the scheduled inspection. Keep the work sheets on file so your records are current, and post a sign-off sheet in the elevator machine room so service personnel can sign in and out.



We can give you BC Housing's standard elevator maintenance tender, which covers all components of an elevator contract. Call our Purchasing Department at 604-433-1711 for a copy.

Fire Protection Equipment Inspections

You are legally required to have a professional inspect the fire alarm systems annually. Set up a contract to have the fire alarm system, extinguishers, hoses, sprinklers and heat and smoke detectors regularly inspected. In some smaller communities, the local fire department may conduct an annual inspection as part of their duties. Also have staff conduct daily, weekly and monthly tests to make sure the system is operating properly. For example:

- Check daily to ensure fire doors are not propped open.
- Check the fire alarm panel daily to ensure the power light is on and the trouble and alarm lights are off.
- Check daily to ensure hallways and stairwells are clear of debris or boxes.
- Check monthly to ensure emergency lighting and fire alarm systems are working properly.

Refer to the Emergency Preparedness section in the *Operations Guide* for information on fire safety plans. A fire safety plan includes sheets for logging fire alarm system tests, and lists hazards to watch for during daily, monthly and annual inspections. If your building has a fire alarm system it is also required to have a fire safety plan. If you do not have one, contact your fire protection contractor, local fire department or the fire commissioner's office for more information. Visit the fire commissioner website at www.marh.gov.bc.ca/FIRECOM and click on *Services and Information* to view a sample fire safety plan.

It may be easier to have staff check the smoke alarms in people's suites during annual suite inspections, rather than trying to arrange for a contractor to enter every unit.



General Equipment Inspections

a) BOILERS

Set up a service contract to have boilers inspected and serviced each spring and fall. In addition, boiler rooms should be inspected daily. Keep a logbook in the room to log the date and time of each inspection.

b) MECHANICAL SYSTEMS

Have mechanical systems such as the air conditioning and plumbing inspected annually. You may be able to arrange these inspections as part of the boiler service contract.

c) EMERGENCY GENERATORS

Run emergency generators for 20 minutes each week to make sure they work properly, and have them inspected every six months by a qualified company.

Test emergency lighting monthly to ensure it's in good working order, because power may be lost in the event of a fire. If you have an older battery box with plug-in emergency lighting, pull the plug and drain the battery every three months. This will extend the life of the battery and test whether the lights last for the twenty minutes it takes to drain the battery.

Playground Equipment Inspections

The Standards Council of Canada (SCC) has developed a standards document governing play equipment and play spaces for children. The document outlines owner and manufacturer responsibilities, and includes detailed standards for:

- Materials.
- Installation.
- Structural integrity.
- Surfacing.
- Inspection and maintenance.
- Performance requirements.
- Requirements for access/exit.
- Play space layout.
- Equipment.
- Identification and information.

The maintenance and inspection requirements under this standard include checking:

- All equipment frequently for potential hazards.



- The entire playground area for hazardous debris or litter.
- For damage such as broken or missing components, wear or vandalism.
- For broken or missing handrails, guardrails, protective barriers, steps or rungs on ladders, or damage to fences, benches or signs on the playground.
- Added strings or ropes, which should be removed.

Post owner identification in the area so people have a contact to notify in case of emergency, defective equipment or hazards. Replace or repair all hazards promptly. The SCC standard includes the following inspection schedule:

- *Daily/Weekly* ~ Conduct a visual check at least weekly, preferably daily, to identify defects and emergency problems.
- *Detailed Monthly Inspection* ~ Keep a permanent record of the results and actions from this inspection.
- *Annual Comprehensive Written Report* ~ Document the results and action taken.

Follow the manufacturer's recommendations for inspection frequency. Some manufacturers provide a maintenance checklist and instructions. The SCC publication contains a detailed maintenance checklist for playground equipment and play areas. You can order this standard, CAN/CSA-Z614-98, by contacting the Standards Council of Canada at 604-273-4581 or 613-238-3222, or visit the SCC website www.scc.ca, select the *Standards* section, and enter playground equipment.



Group Home Health Inspections

Health department licensing requirements for group homes may vary from municipality to municipality and for different client groups. However, health department inspectors will generally review the:

- Temperature regulators on hot water tanks to ensure the water can't get hot enough to burn someone.
- Safety levers on taps so people can't scald themselves.
- Type of lifts and stretchers to ensure they're adequate for clients.
- Medication storage and security.
- Temperature setting on the dishwasher to ensure washed dishes will be hygienic.
- Disposal for diapers, medical wastes, etc., to ensure the system is adequate and safe.
- Back flow prevention devices on sprinklers and boilers to safeguard against contaminated water getting into the water supply.
- Health and safety conditions for staff to prevent problems like back stress.

A sample *Group Home Inspection Form* is included on page 61 in the appendix.



Chapter 7

PURCHASES AND SERVICE CONTRACTS

Purchasing Guidelines

BC Housing's purchasing policies are outlined below as a guide you can adapt to suit the needs of your organization.

When equipment needs to be repaired or replaced or you need to hire a service provider, three or more competitive bids will allow you to compare the service and prices offered by different companies or contractors. In some cases, qualified tradespeople may need to do an inspection to provide an estimate for the work. Here are BC Housing's purchasing guidelines for services within different price ranges:

- *\$100 or less* ~ Make the purchase using petty cash.
- *\$101 to \$5,000* ~ Obtain a minimum of one verbal quote, preferably two or three. You can set up a purchase order or send a letter to the supplier you select.
- *\$5,001 to \$30,000* ~ Obtain a minimum of three written quotes. Again, set up a purchase order or send a letter to the supplier you select.
- *\$30,001 to \$50,000* ~ Use an *Invitational Tender* to obtain a minimum of three written quotes. Send the invitational letter to suppliers, and set up a contract with the company you choose.
- *More than \$50,000* ~ Advertise a *Public Tender* in the *Journal of Commerce* and local newspapers in the area where the work will be performed. Include the time and location tender documents will be available for pick up. You'll find sample advertisements on pages 72 and 73 in the appendix. A minimum of three sealed bids is required. Again, set up a contract with the supplier you select. We recommend you contact your Property Portfolio Manager for assistance setting up a contract of this value.

BC Housing's Regional Maintenance Managers are available to help societies and co-ops tender large projects. We have a list of contractors with expertise in a variety of trades. In most cases, you have two options:

- You can request the Maintenance Manager act as your agent and tender the project for you, or
- You can choose to tender the project yourself.

You can also contact BC Housing's Purchasing Department at 604-433-1711 for assistance answering your tendering questions.



For amounts greater than \$5,000, BC Housing requires contractors to provide a *Statutory Declaration* certifying that all supplies and labour have been paid, when the work is completed. You can use this amount, or set a different level for the *Statutory Declaration* requirement. For example, if you use reliable, reputable contractors who always meet their bid price, this requirement may not be necessary for a \$5,000 project, but would be appropriate for a new contractor on a \$10,000 project. See page 48 for more on statutory declarations. You'll find a sample declaration on page 99 in the appendix.

Tendering the Work

a) TENDER SPECIFICATIONS

Prepare tender documents for goods or services worth more than \$30,000. The cover page should include the project name and location, and identify the person handling inquiries. In the tender specifications, include:

- A summary of the work you want done, or a description of the goods you wish to purchase.
- The location of the work.
- Any related work that's excluded from the contract.
- The timeline for completing the contract.
- What criteria you will use to evaluate the bids.
- The type of contract you will use: a *Purchase Order*, *Service Contract*, *CCDC-2* Stipulated Price Contract*, or a *CCDC-4* Unit Price Contract*.
- If required, the site meeting date and time.
- The tender closing date and time for making bid submissions.
- Bond requirements.

(*CCDC stands for Canadian Construction Documents Committee.)

BC Housing requires bidders to provide a 10 per cent Bid Deposit with their submission for contracts with a value greater than \$30,000. If the lowest qualified bidder wants to withdraw a bid submission after the tender closes, you can retain the Bid Deposit to cover your out of pocket expenses, such as the difference between this bid and the next low bidder. Some organizations set a higher level for Bid Deposits, so you may want to consult other housing providers about the amount they use.

Bid deposits are returned to unsuccessful bidders with a letter notifying them they did not win the contract. Return the bid deposit to the successful bidder when you issue the "Notice to Proceed." See page 47 for an explanation of this notice.



Give each bidder a tender specification package. Make the specifications clear and detailed, so each company or person who submits a bid is bidding on the same job. Give all bidders the same written and verbal information about the contract.

If the tender refers to a specific product by its brand name – a Delta Faucet for example – the document should read Delta Faucet #1234 “*or equivalent*” because other manufacturers may provide comparable products that meet the same standards and specifications.

Ask your PPM for sample specifications for different types of contracts. In addition, BC Housing Purchasing staff can provide information on preparing tender documents and contracts. Call 604-433-1711.

Send the *Invitational Tender* to at least three contractors, unless this is not feasible. For example, there may not be three companies offering a specialized service in some remote areas. Document the reasons for sending the tender to less than three companies, if this occurs. When you prepare the tender document, consider:

- Product or service quality.
- Availability of goods or services.
- Duration of the contract.
- Credentials and reputation of the bidders.
- Financial and technical references of the bidders.

b) TENDER FORM AND ADDENDUM

Include two copies of the *Tender Form* in each package, one for the bidder to fill in and return and one they can retain as a file copy. The tender should include the:

- Pricing.
- Bid authorization.
- Addendum acknowledgement (see next paragraph on page 42).
- Technical and financial references.
- Authorization to perform reference and credit checks.

(You’ll find a sample form on page 73 in the appendix.)



If appropriate, hold a mandatory site information meeting with all bidders present to discuss expectations for the contract. Provide a sign-in sheet to record the names and addresses of the companies attending. Companies that do not attend a mandatory site meeting are not eligible to submit a bid. Sometimes questions raised at a site meeting require an addendum to clarify a particular section of the tender specifications. Issue the addendum to all bidders who attended the site information meeting. An addendum should not be issued later than four days before the tender closing date. If an addendum is needed after that time, the tender closing date must be extended to allow four business days before tender closing.

c) TENDER OPENING

Record the date and time on the tender envelopes when they are received, and place them in a locked tender box. Do not accept any tender submitted after the specified closing time. If a tender arrives after tender closing, stamp the time and date received, and return it to the bidder unopened.

Have three representatives of your organization present when you open a public tender, one to chair the meeting, one to read out the tender price, and one to record the bid results. Invite all bidders to the opening so they can be present when the tenders are opened, if they decide to attend. The chair should read out the tender number, title of the work to be performed, project location, and be responsible for opening the submissions. Do not debate a tender submission or the tendering process at a tender opening. The person reading the submissions should:

- Read the company name and bid prices, if applicable (see contracts below).
- Advise whether all addendums have been acknowledged (if applicable).
- Ensure the correct bid bonding is in place.
- Verify that an authorized representative of the contractor has signed the submission.

Your meeting secretary should record each bid, showing the company name, type of bid deposit, and total tender price, with all taxes included.

- For *Stipulated Price Contracts*, the bidder's name, bonding details, acknowledgement of addendum(s), if applicable, and total bid price (all taxes included) should be read.
- For *Unit Price Contracts*, the bidder's name, bonding details, and acknowledgement of addendum(s), if applicable, should be read. No unit prices will be read or released.

After awarding the contract, release only the successful bidder's estimated contract value, upon written request.

Refer to page 45 for an explanation of the CCDC-2 and CCDC-4 contracts.



d) PRE-QUALIFYING A CONTRACTOR

Establish a team to evaluate submissions according to the criteria you set for the project. Some criteria for a new development could include:

- How much work or experience does the consultant/contractor have in your development sector?
- What projects of comparable complexity and size has the candidate recently completed?
- What is the candidate's track record in maintaining budgets? How will costs be controlled, from preliminary estimates through construction?
- What knowledge and relationships does the candidate have in the construction industry?
- What knowledge does the candidate have of local conditions affecting the project?
- How will the candidate ensure architectural, mechanical, electrical and structural coordination?

Complete a reference check to ensure the contractor's quality of work performance and reputation. Establish a set of questions to ask each reference. If you're unable to reach a reference or feel the references provided by the contractor are not for similar projects, ask for additional references. Record your findings from the reference checks, in case you decide to disqualify a bidder based on a poor reference check. BC Housing will conduct credit checks for contracts worth \$30,000 and up. Call our Purchasing Department at 604-433-1711 for assistance.

If the low bid is significantly different from the others, check with the bidder prior to awarding the contract to ensure all the specifications were understood. For example, someone who put in a very low bid may have misunderstood the tender and left out part of the job.

Never tell a contractor they probably have the job and then advise them later that they have not been successful because part of the bid did not measure up. It is legally binding to accept a bid verbally or in writing, so make sure you are satisfied with all aspects of a bid submission before you offer either kind of acceptance.

Choose the lowest qualified bidder whenever possible. We recommend you award all contracts in writing, so you have a record.

You can use the CCDC-11 *Pre-Qualification Statement* to pre-qualify general contractors who are interested in tendering for minor or major contracts. In addition, the Home Protection Office maintains a list of licensed general contractors who are eligible for third-party warranty insurance, which indicates they are reputable and have already been pre-screened. Contact the HPO at 604-646-7055 or 1-800-407-7757 for information, or visit the HPO website at www.hpo.bc.ca.



Make sure your directors do not have a conflict of interest with any company you hire. Refer to the *Governance Guide* for detailed information on conflict of interest guidelines.

Setting Up Contracts

a) NOTICE OF AWARD LETTER

Use a “Notice of Award” letter to accept the lowest qualified bid. A sample letter is included on page 86 in the appendix. The letter confirms your acceptance of the contractor or supplier’s bid, subject to receiving some or all of the following documents, within 10 business days:

- Proof of current Workers’ Compensation Board coverage.
- Proof of current Comprehensive General Liability insurance for not less than \$2,000,000, showing the society / co-op as the Additional Insured.
- *Proof of Third Party Legal Liability Insurance* covering the duration of the project (Insurance Corporation of BC form APV47).
- Names of subcontractors and a description of the work they will perform, or confirmation that no subcontractors will be involved in the project.
- *A Schedule of Work*. (This information is only required on construction projects where the work may take an extended period.)
- At least two copies of the contract document for the contractor to sign.
- Performance, and Labour and Material Bonds, if applicable.
- Business Number (BN) for GST registration.

Your contract administrator should select the appropriate documents from this list to include in your Notice of Award letter. If the contractor / supplier will be entering your work site, ensure their Workers’ Compensation Board and liability insurance are kept current during the whole term of the contract.



One of the following types of contracts should accompany the letter of award:

1) *Purchase Order*

BC Housing issues a purchase order for non-construction contracts such as:

- Waste removal.
- Heating, ventilation and air conditioning (HVAC) services.
- Snow removal.
- Gardening and landscaping.
- Pest control.
- Appliance services.

2) *Service Contract*

We use service contracts to hire professional services such as:

- Lawyers.
- Consultants.
- Accountants.
- Engineers.
- Architects.

BC Housing defines professional services as any profession requiring post-secondary training to achieve a designation. Identify the work to be performed and a fee structure. When the work can be defined, obtain a lump sum quote. If it isn't possible to define the scope of work, request an hourly or per diem rate and define a maximum price. Allowable expenses should not exceed current government rates for mileage, hotels, meals, travel, photocopying, car rentals, etc.

The appendix contains samples of a *Purchase Order* on page 90 and a *Service Contract* on page 91.

3) *CCDC-2 or CCDC-4*

These documents are used for larger construction projects with a value greater than \$50,000, and are the accepted contract documents within the construction industry. You can also use these contracts for projects with lower values, if you prefer. There are two types of CCDC contracts:

- *CCDC-2 Lump Sum or Stipulated Price Contract* ~ Used for all-inclusive bids to cover a specific service or task, for example, "To construct a 4-bedroom group home." There are two versions of *Supplementary Conditions* used with this contract. Although similar, the 10-page version should be used for renovations or changes to an existing building, while the 11-page version is used for constructing new buildings.
- *CCDC-4 Unit Price Contract* ~ Used when a series of individual or unit prices are required for specific tasks or products, such as "Move-Out Painting," or "Glass Replacement."



BC Housing's policy for CCDC contracts worth between \$30,000 and \$50,000 (excluding GST) is to obtain either:

- A Performance Bond for 50 per cent of the contract value before taxes, or
- A Performance Security in the form of a certified cheque, irrevocable letter of credit, or a bank draft for 10 per cent of the tender price, before taxes.

For contracts worth between \$50,000 and \$150,000 (excluding GST) BC Housing obtains either:

- A Performance Bond, and a Labour and Material Payment Bond, each in the amount of 50 per cent of the contract value, when the contract is awarded, or
- A Performance Security, and a Labour and Material Security in the form of a certified cheque, irrevocable letter of credit, or a bank draft for 10 per cent of the contract value.

And for contracts worth greater than \$150,000, we obtain both a Performance Bond, and a Labour and Material Payment Bond, each in the amount of 50 per cent of the contract value.

You may set differing amounts that are more suitable for your organization for these requirements. Stipulate the bonding requirements in the original tender document. The purpose of bonding is to give you the financial resources to arrange for the contract to be completed, if the contractor defaults. Bonds are in force for two years after the final invoice is paid, then they are returned to the contractor.

You can visit the CCDC website at www.ccdc.org to purchase a registration number needed to download the CCDC contract documents. Canadian Construction Association documents are also available through the:

- Vancouver Regional Construction Association, at 604-294-3766 in Vancouver.
 - Vancouver Island Construction Association, at 250-388-6471 in Victoria.
 - Mid Island Construction Association, at 250-758-1841 in Nanaimo.
 - Northern British Columbia Construction Association, at 250-563-1744 in Prince George.
 - Southern Interior Construction Association, at 250-372-3364 in Kamloops.
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The contractor should always sign at least two copies of the contract. The original copy will be countersigned by someone authorized to sign for your organization, and becomes the contractor's copy. The countersigned photocopy becomes your file copy. Both copies of the contract should have original signatures.

b) NOTICE TO PROCEED LETTER

Issue a "Notice to Proceed" letter when the contractor has signed and returned the contract copies and provided the required documents. This letter:

- Identifies who will administer the contract on your behalf.
- Asks the contractor to confirm that all permits are in place.
- Tells the contractor where to send invoices, either to the consultant overseeing the project for you, or the contract administrator in your organization.

Attach the following to the notice:

- An original copy of the countersigned contract.
- A photocopy of the contractor's original price page from the bid.
- A return of the bid deposit.
- A copy of the *Statutory Declaration 9A* form. See page 48 for information on how this form is used.

Do not give contractors access to the jobsite until they receive the Notice to Proceed, which will ensure the necessary Workers' Compensation Board and insurance coverage are in place.

Monitoring Contracts

Assign a property manager, consultant, director or someone else on staff to act as the contract administrator. The contract administrator needs to maintain contact with the contractor or a representative to oversee the contract and periodically review the work.

A pre-construction meeting is usually held to launch a contract and provide orientation for all parties involved in the project. Confirm a checklist of logistical concerns at this meeting to ensure everyone has a common understanding of the sequence and scope of the work.

Establish a bring-forward system to monitor any contractor renewal dates for WCB and liability insurance to ensure the coverage is kept current for the full contract term.

Document any concerns with the contractor's performance in writing. This information will be important if you need to terminate a contract or to determine whether past performance warrants future work.



Record any deficiencies in an *Inspection Report*, and establish a date with the contractor for correcting the deficiencies. If tender specifications still aren't being met, send a "*Letter of Notification*" to advise the contractor in writing and set a time for rectifying the problems. If the contractor fails to resolve the issue within this time frame, issue a "*Notice of Default*," clearly stating the contractor's obligations, and reference:

- Section GC 7.1 of the General Conditions, where a CCDC-2 contract is being used; or
- Section GC-5, where a CCDC-4 contract is being used.

Give the contractor five business days to correct the deficiencies. If the deficiencies cannot be corrected within this period, establish a time frame that is mutually agreed to by both parties. Follow up after the appropriate time to ensure the work has been completed. If not, you are now in a position to terminate the contract. (A sample *Letter of Notification* and *Notice of Default* are included on pages 92 and 93 in the appendix.)

If you identify a need for changes to the original contract, complete a *Contemplated Change Order* and have the contractor submit a cost estimate for the work. Once approved, transfer the information to a *Change Order*, give it a sequential number, and authorize the contractor to proceed with the work. You can obtain an alternate quote from another source, if you're not satisfied with the contractor's price. Keep a copy of all change orders with the original contract. Copies of the *Contemplated Change Order* and *Change Order* are included on pages 95 and 96 in the appendix.

When the contract is complete, ensure the contractor provides you with any warranties and guarantees that were specified in the contract, prior to releasing the final payment.

You can use the sample *Contractor Performance Report* on page 100 in the appendix to evaluate a contractor's work.

Paying Contractors

Contract work is not paid for in advance. Generally, contracts are paid in instalments as the work progresses, or in full if the work is completed within 30 days. Specify the terms and conditions for payment in the original bid document.

On large construction projects, most contractors will request payment through a series of 'progress draws.' A sample *Progress Invoice* is included on page 98 in the appendix. Your contract administrator should ensure the value of each invoice matches the percentage of work completed. Compare the percentage of work completed to the *Schedule of Work* given to your organization at the Notice of Award. If there are any deficiencies, deduct double the estimated value from the invoice. The contractor must submit a signed *Statutory Declaration 9A* form for the second and all subsequent progress draws and when the builder's lien holdback is requested. When the contractor signs a *Statutory Declaration* confirming labour and supplier bills have been paid, you limit your liability for unpaid contractor accounts.



When a construction project reaches substantial completion, your contract administrator should conduct a complete inspection and report all deficiencies, with an estimated value for the deficiencies. A sample *Inspection Report* is included on page 97 in the appendix. Give the contractor the deficiency list with a time frame for correcting them. Attach a copy to the *Certificate of Completion*, and deduct two times the value of the estimated deficiencies from the progress invoice. The contractor can declare *total performance* of the contract when all deficiencies have been corrected and any uncompleted work is finished. Your contract administrator should conduct a final inspection before approving the final invoice for payment. The contractor can then submit the final invoice along with a *Statutory Declaration 9A*, requesting the balance of any outstanding payment and the deficiency holdback, which starts the 55 day period for returning the lien holdback.

Substantial completion is declared when the outstanding balance payable on the contract reaches an amount based on the following calculation from the *Builders Lien Act*:

- 3 per cent of the first \$500,000.
- 2 per cent of the second \$500,000.
- 1 per cent of the balance of the total contract price.

Example calculation

<i>Total Contract Value = \$1,025,647</i>	
3% of first \$500,000 =	\$15,000.00
2% of next \$500,000 =	\$10,000.00
1% of the balance, or \$25,647 =	\$256.47
Substantial completion declared when outstanding amount payable =	\$25,256.47

Add three change orders to this contract, which increase the total contract value:

	Additional Work	Contract Value
		\$1,025,647.00
Change Order #1	\$2,876.50	\$1,028,523.50
Change Order #2	\$4,769.75	\$1,033,293.20
Change Order #3	\$87,399.40	\$1,120,692.60



<i>Revised Total Contract Value = \$1,120,692.60</i>	
3% of first \$500,000 =	\$15,000.00
2% of next \$500,000 =	\$10,000.00
1% of the balance, or \$120,692.60 =	\$1,206.92
Substantial completion declared when outstanding amount payable =	\$26,206.92

Assume your consultant finds deficiencies totalling \$1,839.46 when you inspect the project before certifying substantial completion. Twice this amount would be deducted from the amount payable on the progress invoice. But if the outstanding amount payable on the contract after deducting this progress invoice is less than \$26,206.92, the project must be declared substantially complete:

	Progress Invoice	Balance
<i>Progress Invoice #1</i>		
10% of work completed	\$112,069.26	
Balance of Contract Payments Outstanding		\$1,008,623.40
<i>Progress Invoice #2</i>		
40% of work completed	\$336,207.78	
Balance Outstanding		\$672,415.70
<i>Progress Invoice #3</i>		
65% of work completed	\$280,173.15	
Balance Outstanding		\$392,242.55
<i>Progress Invoice #4</i>		
85% of work completed	\$224,138.52	
Balance Outstanding		\$168,103.89
<i>Progress Invoice #5</i>		
Substantial Completion Declared	\$145,690.00	
Two times the value of deficiencies identified at substantial completion	-\$3,678.95	
<i>Revised Progress Invoice #5</i>	\$142,011.05	
Balance Outstanding		\$26,092.98
Calculated Value of Substantial Completion		\$26,206.20

Even though the inspection at substantial completion identified \$1,839.46 in deficiencies in this example, the outstanding balance to be paid on the contract of \$26,092.84 is less than the calculated value for substantial completion. As a result, substantial completion would be declared and the 55-day holdback period begins. Refer to page 13 for information on the holdback period.

Most contractors bill for materials as they are incorporated into the project. If a smaller contractor in a rural area requests a deposit or advance for materials, contact your Property Portfolio Manager.