STRATA CORPORATION MULTI-FAMILY PROJECT MAINTENANCE MANUAL

Provided to you by:

STRATA CORPORATION MAINTENANCE MANUAL

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These procedures are supplied by the builder and are project specific requirements in addition to the information provided in this document.

A. INTRODUCTION

The builder is pleased to provide this manual for the use of the Strata Corporation. It provides a summary of maintenance issues the Strata Corporation can expect to encounter with regard to the *Common Property* of the Strata Project. The information covered presents a clear picture that building maintenance is necessary and mandatory for your Strata Corporation. We hope this builds confidence that implementing a planned maintenance program will help protect your home and investment from unnecessary repairs.

Common Property

The Strata Property Act, 1998 defines *Common Property as*,

1) that part of the land and buildings shown on a strata plan that is not part of a strata lot, and
2) pipes, wires, cables, chutes, ducts and other facilities for the passage or provision of water, sewage, drainage, gas, oil, electricity, telephone, radio, television, garbage, heating and cooling systems, or other similar services if they are located:
    a) within a floor, wall or ceiling that forms a boundary,
        i. between a strata lot and another strata lot,
        ii. between a strata lot and the common property, or
        iii. between a strata lot or common property and another parcel of land, or
    b) wholly or partially within a strata lot, if they are capable of being and intended to be used in connection with the enjoyment of another strata lot or the common property.

The Strata Corporation must inform all owners in the Strata Project about the distinction between the individual unit and those areas specified as *Common Property.* In addition, it must be made clear to the owners that it is the duty of the Strata Corporation to address issues related to the *Common Property* and not the individual owner's responsibility. The owners should notify the Strata Corporation of any deficiencies or maintenance concerns and then the Strata Corporation may address the matter as they determine under their overall building maintenance program.

Why is Maintenance Required?

No home is maintenance free. All building components have a *design service life*. The life of a component is affected by the environmental conditions it exists in, and by installation, operating and maintenance procedures. As a result, all components of a building require regular inspections and scheduled maintenance to maximize their performance and durability, thus maximizing their service life.

Every building is subject to considerable wear and tear from both weather conditions and occupant usage. This manual attempts to be thorough with regard to the components covered, however, please recognize that the building(s) may contain components not discussed here. It is very important that the Strata Council and individual homeowners with assistance from the retained Property Management Company become educated about the building(s) and find out as much information about any additional components as possible.

The recommendations noted are intended to provide a basic understanding of the maintenance requirements, however, we must emphasize that the Strata Corporation must immediately set out to establish an annual maintenance program. Through the assistance of your builder and Property Management Company an effective cost efficient program can be developed. The Strata Corporation must then maintain clear and concise records of all work that is completed on the

building(s). Please refer to Section C of this manual for further information on the responsibility of the Strata Corporation to **mitigate and maintain** their building(s). **This responsibility is now a legislative requirement under the Homeowner Protection Act Regulation, Part 2, Item 17, and the Strata Property Act, Part 17, Item 2.**

When to Start Your Maintenance Program?

A budget for maintenance should be established once the building(s) has been turned over to the Strata Corporation. If funds have not been allocated in the initial budget for the required annual maintenance, please address this issue with your Property Manager to determine an appropriate amount for proper maintenance. Implementing an effective maintenance program will protect the Strata Corporation from needless repair costs in the future.

Establish a Maintenance Budget

Depending upon the number of individual unit owners within the Strata Corporation funds must be set aside specifically for maintenance. For example, say you are in a project consisting of forty units, to start with we suggest an annual maintenance budget of ten thousand dollars be established. To put that number in perspective, for a project this size each individual owner would pay just under twenty-one dollars per month towards maintenance. This amount may then be adjusted once the program is established and in operation to reflect the realistic long-term requirements for maintenance and replacement costs for both interior and exterior components of the building. Remember, just because there are fewer units in a project does not mean less maintenance is required. The cost per unit may in fact increase. The Property Manager should play an integral role in this budgeting process.

Renewal Versus Maintenance

Monies allocated to maintenance should not be confused with the additional requirement for the Strata Corporation to establish a renewal plan and appropriate budget. Renewal costs refers to the larger sums of money the Strata Corporation will incur when particular building components have achieved their serviceable life and must be completely replaced. Once the design service life of a component has been maximized, due to regular maintenance, then that component must be replaced with monies from the renewal budget that has been established. Carpet, roof cladding, fencing, painting, boilers are examples of building components that would be included in a renewal budget.

Another term that may often be used for renewal costs is a Contingency Reserve Fund. The Strata Property Act sets out guidelines for this fund that the Property Management Company should be aware of.

Who Should Complete Maintenance Repairs/Inspections on Behalf of the Strata Corporation?

Undertaking general maintenance and the specific maintenance requirements of your building(s) is not simple. This work should be completed by professionals; particularly with regard to the exterior envelope. Any questions that arise over specific maintenance requirements should be directed to your builder and/or the specific product supplier/manufacturer.

Proper Record Keeping is Imperative for an Effective Maintenance Program

Proper record keeping that catalogues when maintenance occurs and what actions were undertaken or recommended is imperative. Members of the Strata Corporation should be made aware of the building components and be familiar with the potential problems and maintenance requirements. It is suggested that an orientation meeting occur with the builder and the appropriate trades as soon after occupancy as possible.

Summarized at the back of this manual for the use of the Strata Corporation are the following:

- Common Property Maintenance Manual Sign-off Form
- Common Property Deficiency List Document
- Common Property Sub-trade and Supplier List
- Common Property Maintenance Log
- Common Property Professional Inspection Log

Warranty Coverage – General

The warranty coverage available to the Strata Corporation is comprised of distinct phases of coverage throughout the warranty period. Please refer to Appendix A and your 2-5-10 Home Warranty Certificate (see below) for further clarification noting the specific warranty coverage, exclusions and limitations.

Only those complaint items for which written notice was given to the Builder and St. Paul Guarantee Insurance Company prior to the expiry of the applicable warranty coverage can be considered. Failure to perform appropriate and required maintenance will void warranty coverage.

The St Paul

Home Warranty
Tel 604.682.3095
Toll Free 800.555.9431
Fax 604.682.3096

The St. Paul Companies, Inc.
St. Paul Guarantee Insurance Company
650 W. Georgia Street, Suite 2500
P.O. Box 11542
Vancouver, British Columbia V6B 4N7
www.stpaulguarantee.com

SCHEDULE "E-2" - 2-5-10 HOME WARRANTY CERTIFICATE

(For Dwelling Units in Multi Family Buildings and Common Property)

Address: _____

Legal Description: _____

Warranty Certificate #: «intBondNum»

Builder Name: _____ Builder #: _____

Builder's Phone: _____ Builder's Fax: _____

Builder's Address: _____

This is your Warranty Certificate which should be read and kept in a safe place. To ensure your Warranty rights are preserved, ensure that you understand what your rights and obligations are. Please note that all notice(s) of a claim under this Warranty Certificate must be delivered to the Builder and St. Paul Guarantee **in writing** prior to the expiry of the applicable warranty coverage. The important dates to note are:

		Dwelling Unit	Common Property
1.	Warranty Commencement Date:		
2.	Materials & Labour Warranty:		
a)	**1 Year** defects in Materials and Labour:	Expiry Date:	
	15 Months for Common Property:	Expiry Date:	
b)	**2 Years** defects in Materials and Labour supplied for;		
	i. the gas, electrical, plumbing, heating, ventilation and air conditioning delivery and distribution systems; and		
	ii. the exterior cladding, caulking, windows and doors that may lead to detachment or material damage to the New Home:	Expiry Date:	
3.	5 Years Building Envelope Warranty:	Expiry Date:	
4.	10 Years Structural Defects Warranty:	Expiry Date:	

For your convenience, enclosed with this Warranty Certificate please find a sticker outlining these important dates for you to affix in a conspicuous location in your new home.

In consideration of the payment to St. Paul Guarantee Insurance Company (hereinafter called "St. Paul Guarantee") of the premium for this Warranty Certificate, St. Paul Guarantee agrees to provide Warranty coverage subject to limits as set out herein, in accordance with the terms, conditions, forms, riders and endorsements contained in this Warranty Certificate.

In witness whereof St. Paul Guarantee has duly executed this Warranty Certificate.

ST. PAUL GUARANTEE INSURANCE COMPANY
("St. Paul Guarantee", formerly London Guarantee Insurance Company)

Executive Vice-President and Chief Executive Officer

Dated:

Here is a sample of the 2-5-10 Home Warranty Certificate provided to the Strata Corporation. This page along with the terms and conditions pages should be reviewed for an understanding of the Warranty Coverage available.

Review this highlighted area for the list of Warranty dates/deadlines.

B. STRATA CORPORATION'S DUTY TO MITIGATE AND MAINTAIN

As per Section G of your St. Paul Guarantee Insurance Company 2-5-10 Home Warranty Certificate, the owners are required to maintain their new homes and to mitigate any damage, including damage caused by defects or water penetration. This responsibility lies with the Strata Corporation when issues pertain to the performance of the Common Property.

The Strata Corporation must take all reasonable steps to restrict damage if the defect requires immediate attention. Legislative requirements are now established by the *Homeowner Protection Act* which sets out that the duty of an owner to mitigate survives even if;

a) the new home or residential unit is unoccupied,
b) the new home or residential unit is occupied by someone else other than the homeowner,
c) water penetration does not appear to be causing damage, or
d) the owner advises the Strata Corporation about the Defect.

Further, the *Homeowner Protection Act Regulation* states in Item 14 (1) that,

"If coverage under Home Warranty Insurance is conditional on an owner undertaking proper maintenance, or if coverage is excluded to the extent that damage is caused by negligence on the part of the owner with respect to maintenance or repair by the owner, such conditions or exclusions apply only to maintenance requirements or procedures which have been provided to the original owner by the residential builder or warranty provider."

and further Item 14 (2) states,

"To the extent that an original owner has not been provided with manufacturer's documentation or warranty information, or both, or with recommended maintenance and repair procedures for any component of a new home, the relevant exclusion is deemed to not apply."

In the event that St. Paul Guarantee Insurance Company is notified of a potential claim under the warranty, copies of all maintenance and inspection logs, reports and strata minutes will be requested to verify that all appropriate and required maintenance has been responsibly carried out.

Unfortunately, if a defect occurs or is made worse due to the Strata Corporation's failure to follow any and all maintenance procedures provided, or to mitigate any damage, it will be excluded from warranty coverage.

C. SERVICE PROCEDURES

Further to a review of your warranty documentation (please refer to Appendix A & B as well as your St. Paul Guarantee Insurance Company Warranty Certificate, Schedule C-3), if you feel that a defect in the Common Property exists and may be covered under the warranty, ***written notice*** must be forwarded to the builder, the warranty provider and we recommend that you also notify the Property Manager. Upon receipt, the builder will contact the Strata Corporation to set up an appropriate time to review the concerns so that they may be dealt with efficiently. The Builder must be allowed a reasonable time within which to respond and attempt a repair if they deem it to be their responsibility under the terms and conditions of the warranty.

Throughout the first year, the building(s) will generally experience some settlement/shrinkage of the building components (particularly the wood framing materials) which normally results in minor cracking of drywall, ceramic tiles or other cosmetic flaws. Floor squeaks may also occur and doors may rub against their frames. It is a good idea to deal with these items towards the end of the first year of occupancy for the individual unit and the 15-month allowance period for the Common Property to allow for the majority of the settlement to occur. ***Please ensure that the Strata Council reviews all of the warranty documentation closely so that they are aware of all deadlines and complaint procedures***. Following this procedure and making all individual owners aware of this process can save considerable time in addressing issues if within the appropriate warranty periods.

St. Paul Guarantee Insurance Company provides all of its Registered Builders with a Labour and Material Standards Guide that establishes the performance standards that must be adhered to with new construction.

Individual unit owner concerns pertaining to the interior of their residences are the responsibility of each individual owner(s). Regarding warranty issues, the owners follow a similar procedure by forwarding any concerns in writing to the builder and St. Paul Guarantee Insurance Company directly.

Please note that consequential damages arising from a defect are not covered under the warranty. These damages may be covered under a property damage claim to the appropriate insurer.

D. EXTERIOR MAINTENANCE ITEMS

The following information provides the framework for a Strata Corporation to establish an effective building maintenance program. This must be read in conjunction with the specific manuals provided on the various exterior building components.

GENERAL EXTERIOR

Maintenance Scheduling

The Strata Corporation must establish a maintenance plan that includes a specific maintenance schedule. For the plan to be effective it must be adhered to and adapted as the building ages. A sample maintenance schedule is provided as Section H at the end of this manual. This plan may be modified in consultation with the Building Envelope consultant, the builder, or the project architect. Input from the major sub-trades would also be beneficial.

A fundamental part of a good maintenance plan is to employ qualified party(s) to monitor the condition and performance of the building components. The maintenance schedule should allow space for a qualified inspector to "sign off" each component as it is inspected. The qualifications of this inspector should be attached to the maintenance schedule as an Appendix for easy reference.

General - Driveways or Parking Surfaces

Most driveway or parking surfaces can be adversely affected by oil or other contaminants. The Strata Corporation should have a program in place to routinely inspect for and correct dripping oil from the automobiles. In some cases a coating may have been applied to the surface to limit the effects of contaminants on the concrete. The Strata Corporation should be aware of the required maintenance of these coatings to protect the concrete surface from premature wear.

Concrete Driveways, Sidewalks and Patios

Driveways and sidewalks are generally made of concrete. Concrete is a strong material that wears well and will perform for many years.

Following installation, concrete will shrink as it cures. This shrinkage causes stress in the concrete, which often results in surface cracks as this stress is released. This cracking can be controlled by the installation of control joints in the concrete during construction. These deliberate joints in the concrete are more susceptible to cracking than the remainder of the slab, thereby preventing cracks from occurring in the slab surface itself. Unfortunately, these control measures are not always effective and surface cracks can appear despite the builder's best efforts. These cracks are generally cosmetic and do not require repair unless they constitute a tripping hazard that exceeds acceptable standards as set out by your warranty provider.

Seasonal variations in temperature may also cause cracks in concrete slabs. Soil movement beneath the concrete due to frost penetration can crack and/or raise sections of the concrete. This change in height may change the direction of surface drainage causing water to pool against the foundation wall of the building. Should this occur, repairs should be undertaken to prevent water from pooling as it may then seep through the foundation wall and into the home or underground parkade.

Both of the instances above are natural occurrences that are beyond the builder's control and, therefore, not considered to be warrantable defects.

Another potential cause of damage to concrete surfaces is road salt and other chemical contaminants. Road salt or other de-icing products used for ice control in the winter may adversely affect the surface of the concrete. As a result, road slush that contains road salt should not be allowed to melt on the concrete. A good alternative to de-icers is sand or cat litter for increased traction on icy sections of the driveway or sidewalk.

Common lawn fertilizer, contaminated surface water, and run-off from stored materials can cause staining of the concrete surface that cannot be removed. Concrete sealers that are commercially available may reduce damage due to chemical contaminants. Care should be taken in the handling and storage of potential contaminants on or near any concrete surface.

Concrete Pavers

Manufactured concrete products such as paving stones are also susceptible to surface damage and staining. The precautions pertaining to concrete surfaces listed above also apply to these products.

Concrete pavers are installed on a bed of course sand or fine gravel. Some localized settlement may occur due to compaction of these materials. Should some areas settle excessively, lift out the pavers in the low area and add sand to level the area out. Suitable material for this repair can be purchased in bag form from most home supply centers.

Asphalt

Asphalt surfaces are seldom smooth and often have indentations. Tire impressions and checking or cracking at the edges due to expansion and contraction are other common characteristics. Damage to the surface may also occur in hot weather as the surface softens due to the heat. Sharp or pointed objects such as motorcycle kickstands or trailer hitches can penetrate the surface under such conditions. Automobile tires can scuff the surface as well under hot conditions especially while turning.

Gasoline and solvents will dissolve asphalt quickly. Any spills or fluid leakage from automobiles should be removed immediately. Periodic sealing of the asphalt surface (every two to five years) with an acrylic-based sealant is recommended. These products are readily available at most home supply centers.

Site Drainage and Grading

The intent of site drainage patterns is to prevent surface water from pooling near or against the perimeter foundation wall of the building(s). This is accomplished adjacent to the building by sloping the soil away from the foundation walls on all sides.

Window wells are a means of providing a window for a basement below grade while maintaining reasonable grades around the building. Window wells must be kept free of ice, snow, leaves and other debris, which may block the drainage system provided and cause flooding of the building.

Depressions due to soil compaction following construction may occur adjacent to the foundation walls over time. These depressions should be filled as they become apparent and graded to direct surface water away from the walls for a distance of at least two meters (6'). At no time should water be allowed to pool against the foundation walls.

In addition to the drainage considerations adjacent to the buildings, overall property drainage systems may include surface depressions (swales), drain tile curtain drains and catch basins. Ice, snow, leaves and other debris can block the flow of drainage and must be seasonally maintained

by the Strata Corporation. Care must be taken not to permanently alter the drainage flow so as to cause an ongoing drainage problem.

During periods of excessive rainfall, standing water may occur due to soil saturation. Such conditions are beyond the control of the owner or builder.

Drain Tile and Sump

In most jurisdictions there is a requirement for a perimeter drain tile system to be located below the level of the basement, or the crawlspace floor, or the parking slab in an underground parking area. This system is generally comprised of perforated pipes that are covered with gravel to allow water to seep into them. This drain tile carries the water away from the perimeter of the foundation or the underside of the slab to prevent it from accumulating against the foundation wall or footing. The drain tile then carries the water to a sump or catch basin. The sump allows any sediment in the water to settle to the bottom of the sump. The clear water is then drained off by another pipe to the municipal storm sewer, ditch or a rock pit, or retention pond located on the property. Access pipes or cleanouts are installed to allow the perimeter drain tile to be inspected and cleaned. The location of these cleanouts should be identified for future reference.

Sumps and catch basins should be cleaned every year, as a minimum, to remove any excessive sediment, leaves or other debris. Exterior stairwells are often equipped with a drain and sump at the bottom of the stairwell to prevent flooding of the below grade areas. These drains must be kept clear of debris.

Deep-rooted plants or trees should be avoided next to the foundation walls as deep roots can clog a drain tile system.

The authority having jurisdiction may in arid regions, regions with free draining soils, or some rocky lots, waive the requirement for a perimeter drain tile system. In areas of blasted rock, it is virtually impossible to stop the movement of water through the rock. Exposed areas of rock in a crawlspace may seep water in wet conditions. Care must be taken to ensure that any visible water is drained away and that the area is adequately ventilated.

Landscaping

Frequent watering of the grass is essential during the first few weeks after an area has had sod laid or been seeded. Once the grass is established, weekly watering is adequate. This will promote a deep root system that will result in a healthier more drought resistant lawn. Frequent light watering results in a shallow root system that causes the lawn to dry out and die in drought conditions. For the same reason, grass should not be cut shorter than two inches in height. Fertilizing twice a year and controlling weeds will promote a healthy lawn. Consult your local home garden center or maintenance contractor for suitable products.

During the spring thaw, do not allow snow or ice to accumulate in shaded areas as this will damage the grass. Any accumulations of snow should be distributed evenly over a large area so that it melts evenly.

Some minor settlement will occur over some areas of new lawns or landscaping. These areas should be filled and re-seeded to maintain a level surface.

When installing flowerbeds be careful not to interfere with the drainage system. Ensure that flowerbeds are graded away from the foundation wall and that a minimum clearance of eight inches is maintained between the ground level and the bottom of the exterior wall cladding. Never allow soil or gravel to come in contact with untreated wood materials or the exterior finishes of the building.

Trees and shrubs should be kept clear of the buildings. Deep rooted plants or trees could interfere with the performance of the perimeter drainage system or slab drainage system.

Newly planted trees or shrubs require a shallow depression around their base. The depression should be worked periodically to loosen the soil to allow air and water to penetrate to the root system. Once the plant is established (approximately two years), the depression can be filled in; however, never raise the soil above the level of the base of the trunk as this will kill the tree.

In some arid locations, the installation of lawns, planters, trees or shrubs directly adjacent to the buildings is not recommended. The water required to sustain the health of the lawn or plants causes the soil to expand or collapse depending on the composition of the soil. This will adversely affect the load-bearing ability of the soil and may cause structural damage to the residences. Any questions regarding these concerns should be directed to the builder or the geo-technical engineer involved with the building.

If a sprinkler system has been installed careful attention should be taken to review the spray pattern regularly. Adjust sprinkler heads to **ensure they do not spray onto any building components.**

Wood Fencing

Wood fences should be checked annually. The base of posts should be protected to ensure landscaping firms do not cause damage due to weed whackers. Wearing of the posts may reduce the effectiveness of the preservative treatment, which may result in rot. Frost action may also cause movement of the fence that may result in the fence leaning and just general weakening of the fence.

EXTERIOR CLADDING AND MATERIAL COMPONENTS

Building Envelope - General

The building envelope is defined as the “assemblies, components and materials of a New Home which are intended to separate and protect the interior space of the New Home from the adverse affects of exterior climate conditions.” It is comprised of a series of assemblies intended to control rain penetration, heat flow, moisture and air flow. Depending on the design of the building, a Professional Engineer or Architect may have been retained to provide the conceptual design of the building envelope. These professionals are also responsible for ensuring that their envelope design concept was actually built as designed. St. Paul Guarantee Insurance Company places full reliance on these professionals for the adequacy of this design and their field inspections. The Strata Corporation must take their recommendations and maintenance requirements very seriously.

Rainscreen Wall System

The exterior cladding may utilize “rainscreen” technology. The rainscreen wall system provides a drainage plane to prevent water from being drawn into the framed wall assembly. Rainscreen systems incorporate a drainage cavity behind the cladding. By design, water that penetrates through the claddings, runs down the backside of the cladding, where it is intercepted and drained back to the outside by flashings or weep holes.

A Building Envelope Professional should monitor the maintenance of a rainscreen wall system. To the untrained person it may appear reasonable to seal with caulking an open space between a flashing and the exterior cladding. However, this space may have been designed as the drainage/ventilation cavity for the wall system and is integral to the design. A Building Envelope professional will understand the system and be able to provide the maintenance locations and how they should be maintained.

Rainscreen wall systems generally incorporate bug screens at the top and bottom of the cavity to protect the cavity from nesting insects. The bug screen should not be painted, as this will prevent airflow in and out of the cavity.

Vinyl and Metal Siding

Generally, vinyl and metal siding materials will not require refinishing. Metal siding materials can be re-painted, vinyl siding cannot. Due to their smooth surface, these materials can be kept clean by washing with a garden hose and mild detergent and some light scrubbing. **Never use a pressure washer to clean the exterior cladding.** Excessive water pressure can cause damage to the surface of the cladding and/or force water into the wall cavity behind.

Vinyl and metal siding materials are installed loosely to allow for expansion and contraction due to the variations in the outside temperature. Damaged or very loose siding should be replaced/refastened to prevent further damage to the siding and to prevent the entry of water into the wall cavity.

Wood Siding or Composite Siding

Wood siding and shingles can be cleaned with a mild detergent and a garden hose. Do not use a pressure washer to clean wood siding as this will damage the surface and force water into the pores of the wood.

Painted or stained wood siding or shingles will generally require re-painting or staining within five years. This will vary depending on the type and quality of the product used, the initial coverage, and the exposure to the elements. The siding will require re-painting or staining whenever the surface begins to fade, discolour, or peel.

Moisture in wood siding causes most exterior paint failures. This moisture may be from garden sprinklers improperly directed at the building, damp shrubbery close to the wall, small cracks in the siding or around door and window details. Spot repair of affected areas can sometimes extend the life of the remaining surfaces. Please note that if spot touch-ups of the painted/stained surfaces are undertaken, the new paint/stain colour will likely not match that of the existing surface due to fading and weathering. This cannot be avoided.

Siding installed on the south and west elevations, especially dark and bright colours that fade more rapidly, may require more frequent repainting or staining to maintain their original appearance and also to provide adequate protection for the siding. For best results, follow the manufacturer's recommendations for surface preparation.

Wooden decks, handrails and windowsills may require cleaning and "touching up" more frequently than other components of the building due to their horizontal orientation.

Composite siding should be maintained to the manufacturer's specifications. It is typical that vertical butt joints be sealed.

Stucco

Stucco consists of a mixture of sand, lime, water and Portland cement. Conventional stucco applications, including those with an acrylic finish coat, are not waterproof. The protection from water penetration comes from the building paper and flashing installed prior to the application of the first coat of stucco. The stucco does help in shedding water, but will become saturated after a prolonged period of rain.

Control joints are installed at each floor to compensate for the movement of the building frame caused by the wood components that shrink in size as they dry. Hairline cracks may appear in the finish coat after the drying and shrinking process of the stucco is complete. These cracks should be expected and it is suggested that they be left until near the end of the first year, or until all

shrinkage has taken place and then, if desired, they can be repaired. Please note that the repair of the crack is often more unsightly than the original crack. Cracks less than 3mm (1/8") in width do not require repair. Larger cracks should be sealed to prevent the entry of bulk amounts of water into the wall assembly and to reduce damage from freeze/thaw cycles.

Most surface dirt on stucco can be cleaned with a garden hose. A pressure washer should never be used to clean stucco surfaces as considerable damage and excessive water penetration can occur.

Over time mildew and moss can grow on any shaded surface on any type of cladding. A mild solution of bleach and water may remove this growth. Wall surfaces should be washed from the bottom upwards, otherwise the lower portions of the wall will become excessively stained as they absorb the contaminants washing down from above.

Exterior Concrete Walls

Concrete is one of the most commonly used building materials, popular for its inherent strength and durability. Typically solid concrete walls are used as the sole cladding on a building, and are relied upon for their weatherproofing properties as well as their structural integrity. The mass of a concrete wall can be sufficient to provide an air and watertight building envelope.

In spite of concrete's inherent durability, it can and often does develop cracks. Most cracks occur early in the life of the building and are usually the result of the mass shrinking as the concrete dries. Thermally induced expansion and cracking can also create cracks. These cracks are generally superficial and easily repaired. Minor cracking is not an indication of structural failure, and should not be assumed to be of catastrophic proportions. As the concrete is the weather barrier portion of the wall, it is important to review the condition of the concrete walls on a regular basis.

Individual owners should report any cracking, spalling or staining they come across to the property manager. It is important that the cracking or spalling be evaluated and repairs made by someone capable of the assessing the severity of the problem.

In some cases the concrete walls are painted with an acrylic based elastomeric coating. This coating will enhance the water shedding capabilities of the concrete in addition to providing an esthetically pleasing appearance. The paint should be inspected for signs of peeling or flaking and repaired as required.

Masonry

Neither the mortar joints in the brickwork nor the bricks themselves are entirely waterproof. Periodically, the mortar joints should be checked for cracks. Hairline cracks are not problematic; however, if these cracks are excessive, they should be re-pointed to reduce the potential for moisture related problems. Re-pointing involves cleaning out loose mortar to a depth of at least ½" and filling the space with new mortar.

The bottom course of brick contains intentional openings (weep holes) that allow for the drainage of moisture from the cavity located behind the brick. These openings must remain unobstructed and must be a consideration when landscaping.

White dust or staining on the masonry surface is referred to as efflorescence. It is the result of salts within the masonry or mortar migrating to the surface of the brick over time. It can usually be controlled with water and a light scrubbing. More persistent occurrences can be washed off with muriatic acid or baking soda and water. Should efflorescence continually reoccur in a localized area, it may be due to a specific water source such as a leaking gutter. If so, the problem should be identified and corrected. It is otherwise normal and beyond the builder's control.

Sealants (Caulking)

Flexible sealing compounds are generally referred to as caulking. Numerous varieties exist and have many specialized uses. Caulking is generally used to seal gaps between dissimilar materials on the exterior of the building and to seal gaps or joints in exterior finishes in order to assure the continuity of the exterior surface. As the building moves due to the shrinkage of the building framing members and/or the finishing materials themselves, considerable stress is placed on the caulking materials. While a caulking joint should never be the only means of preventing water from entering a building, it is one of the initial means of keeping water out. Therefore, caulking requires examination annually before the wet weather arrives. Any cracked, damaged, or loose caulking should be removed and replaced.

When reinstalling caulking, you should consider a high quality urethane material formulated for your specific purpose. Some caulkings are for interior use or cannot be painted, such as silicone-based sealants. Another consideration is compatibility of materials. For example, urethane products cannot be used next to asphalt materials. Consult with your builder or retained consultant for all appropriate products for exterior usage.

Flashing

Metal flashing is installed at junctions between dissimilar materials and above unprotected door and window openings. Flashing may also be installed at each floor level to allow for movement in the exterior finish as the building structure shrinks and settles. These flashings are intended to redirect water from the face of the building and to drain any water from behind the exterior wall finish. The flashing will require washing periodically to remove accumulated grime and re-painting when corrosion of the metal becomes apparent.

At the time of installation flashing is sloped downwards to the outer edge in order to drain water. If, with the settlement of the building, these flashings begin to slope in towards the building repairs should be undertaken to correct the slope.

Windows

Window glazing is typically made of glass with the exception of some skylights that may use an acrylic glazing. Current building standards require the use of double glazed sealed units mounted in thermally broken frames. There is a wide assortment of frame types and the material used can vary widely. Windows may open in different fashions: they may slide horizontally or vertically, open outwards like a door or tilt open in the fashion of an awning. Typical windows require minimal maintenance. Window hardware should be cleaned and lubricated annually. Any accumulated grime or debris should be removed from between the window and the frame.

Most window designs incorporate a drainage track at the bottom of the window to collect any condensation that runs off of the glazing. These tracks will have weep holes to the outside to drain this moisture. These holes must be kept clean and can be maintained with a short piece of wire or a cotton swab.

Aluminum and vinyl windows are manufactured with mitre joint connections that must be inspected regularly. Particularly with aluminum windows, the mitre joints may fail and require the application of a small joint sealer.

If high relative humidity levels occur inside the home during periods of very cold weather, condensation and frost on the inside face of the windows will occur. This is a ventilation issue and is not a fault with the window. Condensation can result in the growth of mold on the window frame that can be controlled with a mild solution of bleach and water.

Condensation between the layers of glass within the window frame indicates that the sealed unit has failed. The glazing unit will require replacement, as there is no method of repairing sealed

units. If failure of the sealed unit occurs after the expiry of the first year of warranty coverage, contact your window supplier as the cost of this repair may be partially borne by the manufacturer.

Acrylic skylight glazing does allow the migration of moisture through it, therefore, condensation between the double-glazing can be expected. This form of skylight usually has a vent that can be opened to allow for additional airflow between the acrylic glazing units. Check with your skylight manufacturer for further information in this regard.

Doors

Exterior swing doors are generally made of solid wood, metal, wood over a foam core or fiberglass. Sliding patio doors are usually constructed with metal or vinyl frames and are supplied by the window manufacturer. Interior doors are usually a wood veneer over a hollow core. The man door between the garage and the house will be provided with an automatic door closer and seal (weather-stripping) to ensure that the door automatically closes to prevent the entry of exhaust gases from the garage into your new home. This closer may require periodic adjustment.

Exterior doors are exposed to detrimental weather conditions and extreme temperature variations from the inside to the outside that can harm the surface of the door. Variations in the relative humidity from the interior to the exterior can also affect the door. Collectively or separately, these conditions can cause doors to warp or change in dimension. Seasonal variations can occur up to ¼" in any direction. It is prudent to refrain from trimming a binding exterior door as the problem may rectify itself with a change in climatic conditions.

Some exterior doors have restrictions imposed by the manufacturer as to the colour the door may be painted. The heat absorbed by darker colours can cause failure of the sealing compounds in the glazing and/or cause excessive warping of the door. The use of dark paint colour may void the manufacturer's warranty; therefore, any such restrictions should be reviewed prior to the door being painted.

Interior doors are generally sized to allow a gap up to 18mm (¾") at the bottom of the door between the door and the floor covering. This gap is provided to allow for the circulation of air beneath the door.

The entry door to units in buildings with common hallways will not be sealed in order to allow airflow into the unit around the door. Hallways in multi-family buildings are pressurized to keep smoke and odors within each unit.

Overhead Doors

Overhead doors for both garages and leading into underground parking structures must be inspected regularly. They experience considerable wear and tear and should be regularly maintained for usage as well as security. Please refer to the manufacturer's product and maintenance manual for more information and set up a maintenance contract with a qualified contractor.

Weather-Stripping

Weather-stripping is installed around doors and windows to reduce air infiltration. Check the weather-stripping annually to ensure that the seal is adequate. Some weather-stripping is adjustable and the door should be slightly difficult to latch or lock in order to provide a good seal. Petroleum jelly can be used to lubricate rubber or vinyl products to maintain their flexibility.

Storm Doors

It is recommended that storm doors be installed where conventional swing doors are unsuitable for the weather conditions. Unfortunately, this may not often be determined until the first winter

season. Supplying a storm door after occupancy due to weather factors is not a builder responsibility.

Finish Hardware

The factory finish on exterior locks and door handles will wear with normal use. This is especially evident with brass finishes in marine environments. To restore this finish, remove the factory lacquer finish with a scouring powder, and then polish the hardware. Once a uniform appearance is obtained, the surface can be sealed with a coat of clear lacquer.

Interior door hardware can be wiped clean with a damp cloth and polished with a soft dry cloth. It should be noted that natural body oils and many hand lotions are detrimental to brass finishes and will cause tarnishing.

Door hardware and locks can be lubricated with powdered graphite or light oil.

Decking And Handrails

Sundecks, balconies and handrails are exposed to rain, snow and sun. Cracking, warping and splitting of wooden deck materials is normal and cannot be prevented. Painted surfaces will chip and peel and should be touched up annually before the onset of poor wet weather. Open seams in wood caps and exposed screws should be sealed with a suitable caulking to prevent the entry of water.

Care must be taken not to damage any deck membranes and any damage must be repaired immediately. Usually, cleaning with mild soap and water is adequate and will address any dirt accumulation. The Strata Corporation must ensure that owners with planters on the decks must not use excessive amounts of fertilizers nor use heavy furniture that may damage deck membranes.

Vinyl or liquid applied membranes are the most common and they must be maintained professionally. Drains and scuppers that tie into these membranes should be cleaned several times per year and checked annually for their adhesion or attachment to the membrane.

Paint and Exterior Coatings

Exterior paint or other coatings are applied primarily for decoration and to protect the substrate. Though not all substrate materials need to be protected most paint or coatings will increase the durability of the material. The Strata Corporation must review these coatings annually to check for wear and peeling. If areas are determined to need refinishing, the compatibility of these coatings with the substrate and surrounding finishes must be maintained. Consult with your Building Envelope professional for further information on compatibility of finishes and regular maintenance.

ROOF AND GUTTERS

Roof

If the roof of the building(s) is sloped, it will typically be clad with asphalt or fiberglass shingles, cedar shingles or shakes (which may or may not be treated with a preservative), clay or concrete tile, metal or a composite manufactured product. Flat or slightly sloped roofs may be surfaced in built-up tar and gravel or torched on rolled sheet goods. The typical life expectancy of these various roof materials ranges from 10 - 25 years.

The life expectancy of the roof will depend on the product used and the care and maintenance provided. Loose, broken or missing shingles following heavy windstorms should be repaired or replaced. It should be noted that most manufacturer's warranties for shingles do not cover wind damage in conditions exceeding 80 kph (50 mph) unless otherwise specified. Storm related damage is not the builder's responsibility; therefore, maintenance repairs should be made as soon as possible after such occurrences to prevent leakage. Leakage can cause serious damage to the interior of the building(s) or further damage to the remainder of the roof.

Asphalt shingles and some roll roofing have granules on the surface to protect the product from damage due to ultra-violet radiation from sunlight. If bare areas of the underlying roof material are present, they should be protected with additional granules. This material is available at most roofing material supply stores. In addition, these types of roofs will become soft in hot weather and the top surface can become damaged from people walking over it.

Deflection of the roof sheathing or the lifting of the shingles due to expansion can cause variations in the roof surface.

Cedar roofing should be washed annually with a garden hose and any accumulated debris such as needles or moss should be removed from between the shingles or shakes. The shingles should not be pressure washed as the high-pressure water causes irreparable damage to the composition of the shingle. Wood roofs become very slippery when wet and extreme caution must be undertaken when working on a wet roof.

Wood shingles will crack and split with time. This weathering is generally not a concern unless it causes a roof leak. If such a leak occurs, it should be repaired immediately by installing a piece of sheet metal beneath the cracked shingle. Older wooden roofs are very brittle and traffic on the roof can cause extensive damage to the shingles.

A professional should inspect flat roofs every year and all recommended maintenance should be carried out. Several membrane types are utilized in our province for most flat roof locations. Built-up roofs are very common and consist of multi-layers of roofing felts and regular maintenance is imperative to maximize and extend their life.

All forms of roofing are intended to shed water and prevent its entry into the residence. Obstructions that prevent the free flow of water off of the roof surface or to a drain can cause leakage and/or premature failure of the roofing material. The roof and ancillary flashings must also be kept free of debris and build-up of ice or snow. While cleaning the roof is recommended on a semi-annual basis, the roof surface should also be checked for excess debris after every heavy windstorm. This is especially true if trees surround the building. Please note that coniferous trees will also deposit debris in sufficient quantities to impede the free flow of water.

Regardless of the type of roof material used, the area beneath the roof surface will be vented to the outdoors. Sloped roofs generally have an attic that is vented at the perimeter (eaves), gables or at the ridge of the roof. Flat roofs are also vented. This unobstructed ventilation is crucial to the longevity of the roof structure and roofing material. At no time should you allow this venting to become blocked.

All penetrations through the roof, such as skylights, plumbing stacks, vents etc., need to be checked annually and re-sealed as necessary.

Ice Dams

Snow melting on the roof and freezing as it runs off at the un-insulated overhang or eave of the roof can cause ice damming. Ice dams can cause water to back up under the shingles and will result in a leak inside. This is a natural occurrence and generally is not due to a builder defect. When ice dams occur, the snow and ice should be removed off of the roof at the eaves and valleys.

Gutters and Downspouts

Gutters are often installed at the perimeter of the roof to control the runoff of rainwater from the roof. They also serve to prevent the rainwater from being deposited alongside the foundation wall where it could eventually seep into the basement or splash water and mud up onto the surface of the wall. If the gutters or the down pipes become clogged with debris or ice, water damage can occur.

Keep gutters, roof drains and downspouts free of obstructions such as leaves, tree needles and moss. Washed down by rain, particles from asphalt shingles can settle in the gutters and reduce their efficiency. As with the roof, the gutters should be checked for obstructions at least twice a year, after every heavy windstorm or after prolonged periods of freezing and thawing. When cleaning out the gutters, do not allow the leaves and debris to clog the down pipes that lead to the ground.

STRUCTURE

Foundation

The most common material used in foundation construction is poured-in-place concrete. Alternative methods of construction include masonry block walls and wood walls constructed of pressure treated preserved wood.

Concrete foundations and slabs shrink as they cure. The result of this shrinkage may be cracks as the stresses in the concrete are released. These cracks have little effect on the structural integrity of the building.

The exterior surfaces of the foundation walls are coated with a bituminous damp-proofing material below grade, which is often visible several inches above grade. Damp-proofing is placed on the foundation wall to prevent moisture from seeping into the concrete, but it is not waterproof. Ground water must be controlled by other means such as site grading or drainage. Care must also be taken to ensure that landscaping modifications do not cause the soil to be placed above the height of the damp-proofing material.

As previously referenced, hairline cracks in the foundation wall may allow the entry of water. These can be repaired from the outside with an asphalt-based sealant. If exterior access is not possible, numerous concrete patching compounds are available commercially which can be installed to the inside surface of the concrete wall.

Parkade, Basement Floor Slabs and Crawlspace Ground Seals

The floors of basement style homes will be cast-in-place concrete. This surface may not be perfectly smooth and is generally not intended as a finished floor surface. As concrete shrinks while curing, stress cracks are common. Cracks will generally form at corners and across doorways and at the perimeter of the floor where it abuts the foundation walls. As the floor is not a structural component there is generally no reason to repair cracks in a concrete floor unless they are larger than 3mm (1/8”) in width. These can usually be filled with concrete grout.

Concrete floor slabs can be painted. The product used should be alkali resistant and allow continued curing of the concrete. Painted concrete floors often flake or peel and require continual touch-up.

Efflorescence may appear on areas of the concrete floors and walls. Efflorescence is a white powder on the surface of the concrete that is caused by salts in the concrete mix that are brought to the surface by the moisture in the concrete. It is cosmetic only and can be removed with a brush. Once the concrete has cured it will likely stop appearing, although a secondary water source could cause efflorescence to continue indefinitely. If this is the case, this source of water should be identified and remedied.

A polyethylene moisture barrier is generally installed beneath the concrete floor to stop the migration of ground water through the concrete. Despite this moisture barrier, some moisture may still transmit through the concrete. Storage items should be raised up off of the floor and kept

away from the walls. This allows for the flow of air around the stored items and helps to prevent the growth of mold or mildew.

Crawl space floors are required to be sealed with a moisture retarder as well. This can be a polyethylene barrier weighted down with rocks or gravel or a concrete skim coat. Although it is common for both to be used together, either method alone is acceptable.

If a concrete skim coat is used, it will generally be a lower strength concrete and will measure approximately 50mm (2") thick. It may be very roughly finished and is not intended as a finished floor. It will likely crack extensively due to its weak strength and the manner in which it was installed. This is normal and no repair is necessary unless the cracks exceed 10mm (3/8") in width.

Strata Projects with multi-level underground parking structures require the installation of a waterproof membrane in specific locations. A membrane is placed between parking levels on the suspended concrete slab and any locations where the parking structure exceeds the footprint of the building above. Prior to the placement of any landscaping a membrane is placed over the concrete roof of the parkade. It is imperative that these membranes not be damaged if the Strata Corporation undertakes to change or replace existing landscaping.

Wood Frame

The most common means of building the structure of a new home is a method called "*western platform framing*". This method incorporates a vertical frame of 2"x4" or 2"x6" studs with continuous plates of the same width at the top and bottom of the wall. The wall studs are generally on a 16" or 24" spacing. Plywood, lumber or oriented strand board (OSB) sheathing is used on the exterior of the frame.

The floor "platforms" are constructed using 2"x8", 2"x10", 2"x12" floor joists of solid lumber or manufactured floor joists with sheathing screwed or nailed to the top surface. To help eliminate squeaks and to provide additional structural rigidity, glue is often applied to the top of the floor joist prior to the installation of the floor sheathing. The interior and exterior walls of the structure and/or the perimeter foundation wall generally support the floor joists.

For space considerations, beams constructed of several joists nailed together, or engineered wood products, may be used to support the joists in lieu of a wall. For larger loads or longer spans, a specialized manufactured beam may be used for added strength. Posts at intermediate locations may support these beams.

Most roofs are constructed using prefabricated wood roof trusses spaced 600mm (24") apart. Detailed roof structures may be framed by hand using roof rafters and ceiling joists.

Following installation, the wood used to construct your building(s) will shrink as it dries out. This shrinkage will cause minor changes in the size and the shape of the wood members. These changes do not affect the structural integrity of the wood frame, but may cause changes in the finishes used throughout your new home. The most common changes are cracks or nail pops in the finished surfaces of the drywall on the walls and ceilings. The movement that results from the shrinkage of the structure may also affect other finishes such as flooring and wood trims. Minor floor squeaks may appear and doors may begin to bind. Any necessary repairs in this regard should be postponed until towards the end of the first year to allow the majority of the wood shrinkage to occur.

Beams And Teleposts

As previously referenced, the main floor of the residence may be constructed with beams installed beneath the floor structure to support the floor joists above. In turn, posts may support these beams at specific intervals. Clay or other soils subject to shrinking or swelling may be common in some geographical regions. In these regions, adjustable posts may be used. These posts are

threaded and commonly referred to as teleposts. The beam should be checked for straightness at least twice a year and the posts adjusted as needed. A hairline crack between the wall and the ceiling over a main beam may be an indication that adjustments are required.

If further development is undertaken in unfinished areas with teleposts, the new walls must not come in contact with the underside of the beam, as this will not allow adjustments to be made to the posts.

E. MECHANICAL SYSTEM

The following information provides the framework for A Strata Corporation to establish an effective building maintenance program. This must be read in conjunction with the project specific manuals provided on the various building mechanical components.

ELECTRICAL

General

The electrical system has been installed in accordance with the requirements of the provincial electrical code. The power supply is fed to the building(s) via underground or overhead cable. With underground service cables, piping, gas lines, etc., care should be taken when digging on your property. For information on these underground services, contact your hydro, telephone, and gas provider, your cable supplier and/or your local building department.

The small glass enclosed meter(s) mounted on the side of each building or housed within a hydro room or closet, are the hydro meter(s). They are the property of the utility provider and measure the electrical consumption. The voltage at the point of entry is generally 120/240 volts and 60 cycles per second. This voltage may vary in some multi-family developments.

Circuit protection will be via circuit breakers located in the electrical panel(s). The main power shut-off will be located inside the electrical panel located in each residence or within the hydro room. These panels and the location of the main breakers should be located upon moving in, before an emergency occurs.

Should the circuit breaker “trip”, it is likely due to overloading of a specific circuit or a short circuit in an appliance cord. The start-up load of electric motors can also temporarily overload a circuit. To correct tripped breakers, isolate the cause of the overload or short and disconnect it. The circuit breaker can then be reset by turning it to the "off" position and then to the "on" position. If the breaker continually trips, contact an electrician.

G.F.C.I. Circuits

A ground fault circuit interrupter (G.F.C.I.) is an additional electrical safety device installed in the electrical system. This device is a breaker that can be located in the main electrical panel or within specialty outlet receptacles and is designed to provide protection from ground faults. The G.F.C.I. is extremely sensitive and will trip if grounding of the electrical current is detected. Ground faults usually occur in older appliances and electrical equipment or inexpensive extension cords. A poorly insulated extension cord lying on wet ground will often cause a ground fault. Because water and electricity are a poor combination, protection is installed to the outlets in the bathroom and outdoors. If this breaker trips, unplug the source of the ground fault and reset the breaker either at the panel or at the outlet itself.

G.F.C.I. outlets should be tested monthly to ensure their proper operation.

Smoke and Fire Detectors

Smoke detectors have been installed in accordance with the requirements of the Building Code. They should be tested monthly to ensure their proper operation, and should be cleaned twice a year with a vacuum.

Please note that these devices are connected directly to the electrical system and do not require batteries. However, they will not operate in a power outage unless the unit has a backup battery.

HEATING AND VENTILATION

Heating

Regardless of type, the heating system is designed to maintain a minimum temperature of 21°C at the outside design temperature. The indoor temperature is measured in the center of the room. This calculation is a health and safety issue defined by the Building Code/Bylaw and is not directly related to comfort. Temperature variations from room to room can be expected. The heating system may temporarily not be able to meet comfortable temperatures in specific regions where the temperatures fall below the outdoor design temperature.

There are numerous types of thermostatic controls for any given heating system. The accuracy of these controls can vary due to internal heat gains within the thermostat caused by a continued demand for heat. At times, it may be necessary to ignore the numerical temperature settings and set the thermostat for a temperature that is comfortable. Adjusting a thermostat to a setting higher than the temperature desired will not speed the rise in temperature.

The various heating systems available all have specific requirements for maintenance in order to operate at maximum efficiency. The operation of the specific system is best determined by reviewing the instructions provided by the builder or the manufacturer.

Heating systems can be noisy at times due to the expansion and contraction of the pipes and other metal components of the distribution system. These noises are particularly noticeable when starting up or cooling down, or at night (when it is quieter) and do not affect the performance of the system.

Systems that rely on burning fuel to generate heat require makeup air for combustion. This air supply must not be blocked as potentially fatal back drafting conditions can occur.

Heating systems will not operate unless the thermostat setting is higher than the room temperature. Solar heat gains can warm a room or area to the extent that the thermostat is warm enough not to be calling for more heat. The heating system will then remain turned off and other rooms not positively affected by the heat of the sun can become cool.

With forced air systems, the heat outlets and cold air returns must be kept free of any furniture or floor coverings that could block the free flow of air. In addition, the filters must be cleaned or replaced at least twice a year to allow the unobstructed flow of air through the furnace. The quality of the replacement filter used dramatically affects the air quality within the home.

Ventilation, Condensation and Relative Humidity

The optimum year round humidity level to be maintained within the residences is approximately 50%. Due to seasonal variations of the relative humidity outdoors, this level of humidity can be impossible to maintain without the use of specialized mechanical equipment. Mechanical means of maintaining a constant humidity within the home are available.

Furnace humidifiers, which add moisture to the indoor environment, are available, but they must be checked frequently when in use to ensure that the proper water level is maintained within the unit.

Due to Building Code/Bylaw requirements pertaining to energy conservation, current standards for house construction require that the exterior envelope of the building be sealed against incidental air leakage. This sealing of the exterior walls prohibits the leakage of warm air to the outdoors from within the residence.

Warm air has the ability to hold more moisture than cold air; therefore, daily activities within your new home such as showering, boiling water, and even respiration create moisture in the form of water vapour. Surprisingly, this can total 7 - 9 litres (1½ to 2 gallons) of moisture per day with four occupants. The warm air holds this water in suspension and as this moisture-laden air comes in contact with cold surfaces it will condense and water will form. Condensation will fuel the creation of mold and mildew.

The failure of an owner to properly ventilate and maintain proper heating levels can seriously affect a new home and the health of the occupants. Any resultant damage due to an owner's actions would not be covered under the warranty.

The key to controlling humidity levels within the home and avoiding condensation is to properly heat and adequately ventilate. Ventilation allows the warm moist air to be exhausted from the home and replaced with dry cool air from the outdoors. This will marginally increase the cost of heating as this cold air is brought up to room temperature; however, this added cost is necessary to offset the harm the high humidity levels will cause.

As the outdoor temperature drops, the surface temperature of the exterior walls will also drop. The air inside the house will not be able to sustain as high a level of relative humidity. This will cause condensation to occur on cold surfaces.

The chart below provides a rough guideline as to the relative humidity levels that can be sustained within the house as the temperature drops.

Celsius	Outside air temperature Fahrenheit	Desirable maximum inside relative humidity (%)at an indoor temperature of 21°C (70°F)
-29	-20	20%
-24	-10	25%
-18	0	30%
-12	10	35%
- 7	20	40%

Windows or the toilet tank of the toilet used most frequently can be used as a guide to determine whether or not the proper relative humidity is being maintained. As soon as condensation occurs on inside window surfaces or on the tank of the toilet, steps should be taken to reduce the relative humidity by controlling the moisture sources and/or by increasing ventilation.

As previously stated, ventilation is often the only effective means for removing moisture. Dehumidifiers are only practical in limited areas. If vented outdoors, exhaust fans in the kitchen and bathroom will remove moisture created from cooking and bathing before the vapour can circulate through the house. These fans should not exhaust into the attic space as this will only

exhaust the moisture into the attic potentially causing problems. These fans need to be run often enough to remove the air borne moisture. The length of time required will depend on the number of occupants, the activities undertaken and outdoor climatic conditions. Many new homes are now provided with intermittent timer controls that regulate the operation of these fans. These controls should never be tampered with or turned off. Exhaust fans can become ineffective due to lint build-up on the vent cover. These covers should be kept clean.

Windows can be an effective means of ventilation and depending on weather conditions. In addition, opening a window near the source of moisture while the exhaust fan is in operation will allow for cross ventilation and more effective moisture and odour removal.

Range Hoods and Exhaust Fans

Range hoods and exhaust fans are provided to reduce or eliminate cooking odours and excess moisture. Not all range hoods vent directly outdoors. For efficient operation and to reduce potential fire hazards created by grease accumulation, filters should be washed in mild detergent. They can also be run through a dishwasher.

Range hoods that do not vent outdoors are usually provided with a charcoal filter that helps remove grease and odours. These filters should be replaced in accordance with the manufacturer's recommendations.

Dryer Vents

The exterior louvers or grilles for the unit dryers must be cleaned annually. In addition, the Strata Corporation must advise all homeowners of the importance to clean the dryer lint traps after every use. Failure to do so may create a fire hazard.

Heat Recovery Ventilators

Some homes will be equipped with a heat recovery ventilator (HRV) for ventilation purposes. This mechanical unit continually exhausts stale warm air from within rooms of a new home (usually, the kitchen, bathroom and laundry areas), and supplies fresh air to the remaining main living areas. The heat recovery aspect of this unit consists of a heat exchanger inside the unit that warms the fresh outside supply air with the latent heat of the stale warm air that is being exhausted. This is done via a series of plastic baffles that allows the heat transfer without mixing the two air sources.

HRVs run continuously and are a superior means of controlling humidity and air quality within the home. They are not required by the Building Code/Bylaw and at an additional cost are generally only installed if requested.

Freezing weather can affect the operation of the HRV due to ice build up within the unit. Precautions should be taken in severe weather to prevent this from occurring. Refer to the manufacturer's recommendations in this regard.

HRV's are engineered systems that have been designed and balanced for their specific installation. Annual maintenance by a qualified technician is recommended.

PLUMBING

General

The plumbing will likely consist of plastic or copper piping for the supply of potable water throughout your building(s) the home and PVC plastic, copper, or cast-iron piping for the waste disposal. Other products are available but are less common.

A main water supply shut off will have been provided to shut off the water supply to each building and possibly each unit as well. This can be used in the event of an emergency and should be located upon occupancy for future reference. Additional shutoffs will have been provided to the sink and toilets to allow for routine maintenance.

The waste lines have been provided with clean outs throughout the building(s) and units. These may be located within cabinets, inside closets, in service chases, or clearly visible on a wall surface. These clean outs must remain accessible as they are the means of access to the piping should a blockage occur.

P-traps are present at the outflow of all waste piping. These traps are designed to provide a barrier of water that prevents the entry of sewer gases into the residences. Sinks or drains that are used infrequently may lose this water barrier due to evaporation. If sewer gases are detected, running water down the waste pipe will re-prime the trap and likely stop the odour.

Any waste materials, including grease, fat and petroleum products, should not be disposed of down the plumbing system. These materials will accumulate in the piping, especially in the P-traps, and can significantly reduce the flow of water through the waste system. These substances are also very detrimental to the municipal sewage treatment systems and private septic systems.

Fixtures

The surfaces of the plumbing fixtures are susceptible to damage from abrasive cleaners. Use of abrasive products and steel wool pads should be avoided, as these products will cause the finish of the fixture to become dull and porous. Refer to the manufacturer's recommended maintenance procedures for specific information relating to your products.

Plumbing fixtures are intended for normal household use only. Caustic products should not be disposed of in the household fixtures.

Hot Water Tank / Boiler

The water temperature of a domestic hot water tank can be adjusted on the thermostat located on the tank. This may require the use of a screwdriver. An average setting for the water temperature is 140°F, adequate for dishwashers. This temperature is hot enough for most uses but will not cause scalding or burns. If hotter water is needed for a special purpose, the thermostat on the tank can be set to a higher temperature; however, the thermostat must be reset to a normal setting when finished. If the residence is to remain unoccupied for a substantial period of time, the water temperature should be turned down or switched off at the tank or breaker panel. Some hot water tanks have a “vacation” setting on the thermostat for this purpose.

Hot water tanks are equipped with a pressure relief valve at the top of the tank. This is a safety feature that will open and relieve water pressure if the tank exceeds its rated working pressure. If water or water stains are evident at the discharge pipe leading from the relief valve, contact a plumber, as this is an indication that the normal operating pressure of the tank has been exceeded.

A typical hot water tank has a life expectancy of 8 to 12 years. Periodic draining of the tank will remove sediment from the base of the tank and prolong its life. The sediment has an insulating effect, especially with immersion type elements, which causes the heating elements to operate longer than necessary with a consequent increase in cost and energy consumption.

Prior to draining water from the tank, the power supply or fuel source must be turned off. Do not restore power to the tank until it has been refilled as it may explode due to excessive pressure caused by the heating of air instead of water.

The tank can be drained by attaching a garden hose to the outflow drain at the base of the tank and routing the hose to a nearby floor drain. Draining can only be accomplished by gravity feed;

therefore, the outflow of the drain used must be lower than the base of the tank. Alternatively, the hose can be run outside as long as the outflow is lower than the tank.

Commercial grade boilers require specialized maintenance. Operating and maintenance manuals must be obtained from the builder or plumbing contractor and be kept for future reference.

Hose Bibs

Hose bibs (garden hose connections) often have a valve inside the building that can be shut off. This allows the hose connection to be drained from the inside before winter to prevent freezing and possible bursting of the exterior section of the piping. These shut-off valves should be identified and shut-off in the winter months. Once the water supply has been shut off, the exterior valve should be opened to allow the exterior portion of the piping to drain. This process is reversed in the spring once the threat of freezing is gone.

Some hose bibs are "frost free" which means that the exterior valve is connected to a long stem that causes the water supply to be shut off inside the wall in the warm environment. The outer portion of the piping then drains freely.

Garden hoses should not be left connected to the hose bib during freezing weather as neither can drain. Ice forming in the hose due to un-drained water can break the hose, or the hose bib and cause the supply pipe to freeze.

Toilets

Toilets generally refill as follows: a flush causes water in the tank to rise, which in turn lifts a ball float to a preset water level. Once the ball float reaches this level, the water flow valve is shut off. If set too high, the water level will rise in the tank and run down the overflow pipe into the toilet bowl without shutting off the water. To rectify this, simply adjust the height of the ball float so that the water is shut off before it reaches the height of the overflow outlet.

If water continuously runs into the toilet bowl from the tank, there may be a poor seal at the flapper valve at the base of the tank. This seal can be cleaned with a stiff brush or steel wool. A worn flapper valve would require replacement.

Water dripping from the base of the toilet tank is likely due to condensation on the tank versus a leak of any connections. High interior humidity levels will result in condensation on the cold surface of the toilet tank as the tank is refilled with cold water.

Some toilets and some basins are made of glazed and kiln-fired vitreous china, while some basins and bathtubs are made of enameled steel. Both are very durable and attractive. To clean these fixtures, use mild powdered or liquid cleaners. Avoid abrasive cleansers or pads, as they will damage the finish.

Faucet Repairs

Noisy or leaking faucets are frequently due to loose or damaged washers. Turning the fixture off with too much force can damage washers. Faucet handles should be turned no further than the point at which they stop the flow of water.

Faucets can generally be easily repaired by either replacing the damaged washer or the faucet cartridge itself. Basic home repair books describe how to repair typical faucets; however, due to variations in the methods of manufacture, specific instructions may be required. Prior to beginning the repair, the water supply must be shut off at the shut off valves provided. If such valves are not present, the entire water supply system will need to be shut off at the main shut off valve.

Contact a plumber if you are uncomfortable attempting this repair.

Green staining of fixtures is usually a water related issue due to the chemical compositions in the water and is not a builder defect. This staining is most prevalent in large multi-storey buildings with copper piping as this piping will initially react with chlorinated water. The residents should be advised to run several loads of water through clothes washing machines prior to use to eliminate concentrations of the chemicals that cause staining.

Plugged Toilets and Drains

Toilets are very susceptible to blockage. New toilet designs use very little water per flush. This results in a lower volume of water carrying away the waste. Repeated flushing may be required in some instances to remove solid waste. Dense tissue paper and some thick toilet papers are unsuitable for these toilets. Never dispose of hair, grease, lint, diapers, sanitary products, "Q-tips" or plastic in the toilet.

Hair, grease, large food particles or other solid forms of waste can plug drains. Should they become plugged, try removing the debris from the trap beneath the fixture. Alternatively, a plunger can be used. Once partially cleared, very hot water may complete the job. A more severe blockage may require a plumber. As commercial drain cleaners are very corrosive they are not recommended.

Tub and Shower Enclosures

A shower curtain will prevent water from running onto the bathroom floor while the shower is in use. To prevent damage to the flooring or walls, any spills or puddles of water should be cleaned up immediately.

Caulking is used to seal seams and prevent water from entering behind the enclosure. If a separation occurs around a bathtub between the tub and the wall tiles or between the wall and the enclosure itself, it should be filled immediately with a tub sealer or caulking compound available at any home supply centre. Leaving the gap unsealed may cause serious water damage to adjacent materials.

A clear liquid silicone sealer should be applied to the grout joints of tub or shower enclosures that are finished with ceramic tile. This should be done every six months. This sealer is used to prevent the porous grout from allowing water to seep through to the substrate material behind the tile. This sealing cannot be done until the grout has cured for approximately six to eight weeks. Please note, this is a liquid product and should not be confused with silicon-based caulking products. Follow the manufacturer's recommendations for application.

Some tub enclosures have specific cleaning requirements. Generally, abrasive cleaners are not recommended and harsh chemical cleaners should be avoided entirely. Follow the manufacturer's recommendations for maintenance. Also, you should never step into a bathtub with shoes on as trapped grit and dirt can damage the tub surface.

Floor Drains

Many municipalities require a floor drain primer that automatically provides water for the P-trap located below the floor surface. This P-trap is similar to those used under sinks and when full of water, it will form a seal against gases entering from the sewer system. As this water will evaporate with time, the seal must be maintained by pouring a litre of water down the drain every two to three months if an automatic primer is not present.

Exterior floor drains on balconies or patios must be kept clear and free from debris.

Sprinkler Systems (Fire Suppression)

As required by the local building authority, your building(s) may have been constructed with a sprinkler system. These systems are installed as both wet and dry and annual testing of the

system may be required. The trade contractor responsible for the installation should have provided a maintenance manual. The Strata Corporation should educate all owners on what type of system the building(s) contain and how it functions.

ELEVATORS (Refer also to Maintenance Manual provided by the elevator contractor)

The BC Elevating Devices Safety Branch has a regulation on compulsory maintenance. The regulation states that all Elevating Devices in public use must have a maintenance program in place with a registered elevator contractor under a contract for a minimum duration of one year, with a minimum frequency of quarterly inspections.

F. INTERIOR COMMON AREA FINISHES

FLOOR FINISHES

Hardwood

Kiln dried material is used for the construction of hardwood floors. However, these materials are susceptible to movement caused by variations in humidity levels in the living space. Low humidity levels will cause the wood to separate slightly at the seams of the flooring. High humidity levels will cause the wood to expand. If excessive, this expansion may lead to cupping or swelling in the center of the board. These movements vary seasonally and can be somewhat controlled by monitoring the indoor moisture levels. The movement of the flooring may also create noises as it expands and contracts.

The appearance of hardwood flooring is easy to maintain and a damp mop is all that is required for cleaning. However, caution must be taken to ensure that the mop is only damp. Damage may occur if excess moisture is spread on the floor from the mop. The need for wax on hardwood floors is rare and many types of flooring are now factory finished and have specific maintenance requirements. Refer to your builder or flooring supplier for specific instructions.

Hardwood floors should be protected when furniture is moved across the surface. Likewise, with the increase in the use of laminate flooring, care must be taken to protect these finishes to ensure their durability.

Resilient Flooring

Whether it is a tile or sheet product, resilient flooring is susceptible to damage from indentations or scratches, particularly those caused by furniture. The floor should be protected from such damage by using furniture pads beneath heavy furniture legs. The ability of a given flooring product to withstand abuse varies greatly from product to product and related damage is not a warranty issue.

Resilient flooring should be cleaned with lukewarm water and vinegar. Harsh cleaners can cause fading or affect the composition of the flooring material making it hard and brittle. Consult with the supplier of the specific flooring product for their recommendations, as specialty products are available for different floorings to both clean and restore the sheen. Detergents often cause adjoining carpeted areas to mat down as the soaps are carried onto the carpet from the resilient floor areas.

Resilient flooring is prone to permanent discolouration when rubber backed floor mats are placed on them. This is a chemical reaction between the vinyl surface and the mat backing. Should such discolouration occur it is not a warrantable defect.

Once construction is complete, movement of the floor structure due to shrinkage can also affect the floor. While flooring installers apply filler at the seams of the wood underlay materials, it is not always possible to achieve and retain a perfectly level subfloor. This can result in minor ridges becoming visible beneath the flooring under certain light. Generally, these are only cosmetic and do not require any action.

Carpet

Carpet care basically consists of avoiding spills, cleaning high traffic areas regularly to remove surface dirt and vacuuming the entire carpeted area weekly to remove dirt. Consult your flooring supplier for the specific cleaning and maintenance requirements of the flooring products used in your home.

Carpets and rugs should be professionally cleaned every year or two depending on the use and appearance.

Less expensive carpeting is more susceptible to matting. This is primarily noticeable in high traffic areas and cannot be prevented other than by the use of carpet runners. Warranties from the carpet manufacturer generally pertain to fiber loss only and do not cover “appearance retention”.

Ceramic Tile

Ceramic tile is very durable. For routine cleaning use a mild detergent; do not use waxes or sealers. As the grout is porous and will absorb water which will lead to staining, annual sealing of the grout joints with a clear liquid silicone sealer should be carried out.

Natural Flooring Products such as Marble, Granite and Slate

Although strong and attractive, spills can permanently stain natural flooring. All spills should be cleaned up immediately. Cleaning of these materials should be done with a clean, soft cloth and warm water. Also, care should be taken to prevent scratching of the surface.

COUNTERTOPS AND CABINETS

Plastic Laminates

Laminated countertops will burn or de-laminate if hot pots or pans are placed directly on the surface. Protective potholders should be used if the hot items are to be placed on the countertop. Electrical appliances may also require protection when in use. The damage caused by hot items is generally not repairable so it is best to err on the side of caution.

Abrasive cleaners or steel wool should not be used as the surface of the laminate will scratch. The ability to withstand scratching does vary with the laminate material used. If allowed to remain on the surface, household bleach or solvents can stain or discolour the laminate.

Water must not be allowed to remain on joints in the countertop as this will result in the substrate of the countertop swelling due to the excess moisture. This damage is irreversible.

Clean the surface of plastic laminates with a damp, soapy cloth or sponge. For stubborn stains, use a mild household cleaner and rinse thoroughly with clear water. Be aware that some liquid cleaners contain abrasives and/or solidify at the mouth of the container. These hard solid pieces can scratch the surface if they inadvertently get on the cleaning cloth or sponge used to clean the laminate surface.

Manufactured Marble

Sinks and countertops made of manufactured marble or other man-made compounds often have specific cleaning requirements. The manufacturer of the product should be contacted for these instructions. Generally, they can be cared for in a manner similar to plastic laminates, abrasive cleaners should not be used. These surfaces are also heat sensitive.

Cabinets

Vinyl surfaced cabinets are very susceptible to heat damage. If the kitchen is equipped with a self-cleaning oven, the cabinet drawers and cabinet doors adjoining the range should be kept open when the range is in self-clean mode to allow excess heat to dissipate. If heat is allowed to build up, the surface may delaminate. This precaution should also be taken when the oven is used for a prolonged period at a high temperature.

Most cabinet surfaces can be cleaned using a damp cloth and a mild detergent. Abrasive cleaners should not be used. Grease splattered on the surfaces should be removed immediately as it becomes more difficult to remove as it solidifies.

PAINT

The majority of the interior drywall surfaces will be finished with either a latex (water-based) or alkyd (oil-based) paint. Maintenance can quite easily be carried out by gently washing the painted surfaces with a mild soap or detergent solution. Abrasive solutions or over scrubbing should be avoided, as this will remove the paint and possibly damage the wall surface beneath.

APPLIANCES

Any appliances included with the purchase of your new home, which have been installed by the builder or his agents, will have been checked to ensure their proper operation. Appliances generally come with instructions, which detail the operating procedures for the specific appliance. These instructions must be followed in order to maintain the manufacturer's warranty. Any warranty cards provided with the equipment should be completed and sent to the manufacturer to ensure your warranty obligations are met.

Check and clean the exterior dryer vents on a monthly basis as they commonly become plugged with lint that reduces the efficiency of the dryer. Lack of maintenance in this area could result in a fire hazard, or this could lead to water ingress into wall or ceiling spaces.

G. EMERGENCY SITUATIONS

In emergency situations, please contact your Property Management Company. If the Property Management Company cannot respond then you may attempt to contact your builder for assistance. Please keep in mind the warranty conditions and time periods for responsibility. If neither party can be reached, then contact your warranty provider, St. Paul Guarantee Insurance Company, for information on the appropriate actions to be taken. All Strata members should be advised of the situation and which units have been affected.

Many items pertaining to maintenance and emergency situations are not covered by warranty insurance since they are beyond the control of the builder, however, for your information we provide the following synopsis of a few emergency situations and what actions should be taken.

Please note that consequential damages arising from a Defect are not covered under the warranty. These damages may be covered under a property damage claim to the appropriate insurer.

PLUMBING

Fire Sprinkler Accidental Activation

If a fire sprinkler is accidentally activated the fire department is automatically signaled and they respond accordingly. The Strata Corporation should be prepared in the event that activation occurs by having several Strata representatives that understand what the fire department has to do when they receive this signal to alleviate owner concerns.

Water Line Burst

A water line can burst due to a number of reasons, such as a loose joint, freezing, excessive soil compaction etc. and should be dealt with immediately. If the burst occurs between a fixture and a main or unit shut-off valve, close the shut-off immediately. If no shut-off exists, locate the main water shut-off (usually located in a service chase in the hallway or outside in a common roadway), and turn it off until the problem can be repaired. It is also advisable to turn off any hot water tanks affected to prevent overheating while the water supply is shut off.

Minor Plumbing Leak in the Line , Hot Water Tank or Boiler

Put a container under the leak and contact your Property Manager. If major leakage occurs at the hot water tank, immediately shut off the water supply as well as the gas valve or electrical breaker.

Plugged Fixture or Sewer Line

This generally occurs because of inappropriate materials being flushed down a toilet or drain by users of the facility. Do not continue use of toilets or sinks once a major blockage has occurred. Attempt to unclog the line using a plunger. If a larger blockage occurs, the services of a plumber may be required. If the blockage is due to a proven builder defect within the appropriate phase of warranty coverage then the builder would be responsible for the repair. Consequential damages are not within the scope of warranty coverage.

Frozen Water Line

If garden hoses are left attached to hose bibs during the winter, freezing of the water line can occur. This is problematic as once the pipes thaw they may leak. Individual owners should be notified in the fall to disconnect any hoses from the hose bibs. A Strata Corporation representative should confirm compliance with this notice. If a major leak occurs, follow the steps described above regarding "Water Line Burst". If accessible, heating the pipe with a hair dryer may thaw it out. If the frozen pipe is due to a proven builder defect, the builder will take responsibility for the repair.

ELECTRICAL

Circuit Overload (Breaker Tripping)

For the common property, this may occur in a recreation facility or meeting room. If this occurs, ensure that the circuit is not overloaded with too many appliances, or that the appliance itself is not faulty. Appliances such as space heaters, microwaves, toasters and kettles that generate heat tend to draw a lot of electrical current. More than one of these types of appliances in use at the same time on the same circuit can cause circuit overload. Should circuit overload occur, unplug one or more of the appliances and reset the breaker. If tripping reoccurs, contact your Property Manager. A certified electrician should immediately review continued tripping of the main electrical distribution system.

Ground fault circuit interrupters (G.F.C.I.s) protect the exterior plugs and those in bathrooms. These devices will either be located in the actual plug itself, or in another bathroom, or be a dedicated breaker in the electrical panel. It is sensitive and designed to trip when grounding occurs due to damp conditions, or when extension cords are excessively long and/or in poor condition, or if appliances are faulty/old. Ensure that no unsafe situations exist and that appliances and extension cords are unplugged then reset the G.F.C.I.

Plugs and Outlets

If a plug or outlet sparks excessively, immediately turn off the breaker contact the electrical contractor retained to service the electrical components for the building(s). A small spark when an appliance is unplugged is not uncommon.

All Power to the Common Property is Out

If, for any reason, all the power to the building(s) goes out, check to see if there is a power blackout in the neighborhood. If not, contact the electrical contractor retained to service the electrical components for the building(s) and allow them to determine the next course of action.

HEATING

If the heating system does not appear to be operating, ensure that the breaker has not tripped and refer to the operation manual to check lighting procedures. Check the service switch, switching the service off for approximately 30 seconds may reset the computer controls. Also, check the thermostat setting to ensure it has not been turned down.

GAS

If at any time you smell gas contact the gas utility supplier immediately. They will check the building system and advise the Strata Corporation of any problems. The BC Gas Emergency telephone number is 1-800-663-9911.

ROOF LEAKS (Response will vary depending on the type of Buildings)

If a roof leak occurs in a Strata Corporation of detached or row dwellings with pitched roof area, check for the following:

a) plugged gutters or downspouts;
b) debris on the roof;
c) ice damming; or
d) missing roof components

Until the leak is repaired, place a bucket under the leak to protect the affected areas and contact your builder if a builder defect appears to be the cause. If possible, place a tarpaulin over the affected area to prevent further water ingress.

For buildings with flat roof areas, similar actions are necessary to prevent further water ingress and only qualified persons should be inspecting these types of roofs to determine repair requirements.

SNOW

The coastal climate can often cause significant problems as a result of heavy wet snow that accumulates on roof areas. Snow build-up can cause excessive stress on the structure or cause flooding as the water is not allowed to reach the drains. It is important that a Strata Corporation have a snow removal plan for all roof locations in the event of heavy accumulations.

H. COMMON PROPERTY MAINTENANCE MANUAL SIGN-OFF

As a requirement of the Homeowner Protection Act, your builder is required to provide a maintenance manual outlining the requirements for the building and its components. Checked off below are the specific component manuals that have been provided in addition to this **maintenance manual**.

PRODUCT SPECIFIC MAINTENANCE/OPERATING MANUALS

1. □ Concrete
2. □ Siding: Type_____
3. □ Other Cladding: Type _____
4. □ Windows
5. □ Skylights
6. □ Doors, Exterior and Interior
7. □ Door Hardware
8. □ Garage Doors
9. □ Garage Door Opener(s)
10. □ Deck Membranes: Type: _____
11. □ Exterior Railings
12. □ Roofing: Type _____
13. □ Gutters & Downspouts
14. □ Flooring: □ Hardwood □ Tile □ Marble □ Carpet □ Resilient Flooring

Mechanical

15. □ Boiler
16. □ Plumbing Fixtures/Faucets
17. □ Hot Water Tank
18. □ Sprinkler System Exterior/Interior
19. □ Pressure Reducing Valve
20. □ Sump Pump/Pits
21. □ Irrigation/Sprinkler System
22. □ Septic System
23. □ GFCI Breaker/Outlet
24. □ Electrical Fixtures
25. □ Alarm System
26. □ Elevator
27. □ Smoke Detector
28. □ Furnace
29. □ Heat Pump
30. □ Heat Recovery Ventilators
31. □ Air-Conditioning
32. □ Gas Fireplaces
33. □ Common Property Maintenance Manuals

Other Project Specific Manuals

34. □ _____
35. □ _____
36. □ _____
37. □ _____
38. □ _____
39. □ _____
40. □ _____
41. □ _____
42. □ _____
43. □ _____
44. □ _____

I/We, _____ , on this _____ day of _____, 20___ confirm that I/we have received the Strata Corporation Multi-Family Maintenance Manual and the above-noted manuals for the residential project located at:

_____

_

from my/our Builder:

_____

I/We also acknowledge it is my/our responsibility to familiarize myself/ourselves with the contents of these manuals and undertake any maintenance requirements explained therein.

_____ _____

Strata Corporation Representative **Builder (signature)**

I. COMMON PROPERTY DEFICIENCY LIST

DESCRIPTION OF AREAS/ITEMS REQUIRING REPAIR/REPLACEMENT AND PARTY RESPONSIBLE	PARTY RESPONSIBLE	OWNER INITIALS	BUILDER INITIALS
	(Initial when completed)		

Strata Representative

Builder (signature)

Date

Date

J. COMMON PROPERTY SUB-TRADE AND SUPPLIER LIST

In the construction of your new home. These companies or individuals generally provide a one-year warranty for defects in material and labour. Should you require service, you may wish to contact the appropriate supplier or sub-trade directly. The following sub-trade contractors and product manufacturers or suppliers were used in your new home and if prompt service is not provided contact your builder directly.

TRADE/SUPPLIER	COMPANY NAME	CONTACT	TELEPHONE
Excavation/Grading	_____		
Concrete Supply	_____		
Concrete Finishing	_____		
Drain Tile	_____		
Landscaping	_____		
Foundation Forming/ Framing	_____		
Paving Stones	_____		
Siding	_____		
Stucco	_____		
Masonry	_____		
Soffits	_____		
Windows	_____		
Skylight	_____		
Doors	_____		
Garage Doors	_____		
Deck Finishing	_____		
Deck Railings	_____		
Roofing	_____		
Gutters and Downspouts	_____		
Flooring	_____		
Hardwood	_____		
Resilient Flooring	_____		
Carpet	_____		

PAGE TWO SUB-TRADE AND SUPPLIER LIST			
TRADE/SUPPLIER	**COMPANY NAME**	**CONTACT**	**TELEPHONE**
Tile	_____		
Marble	_____		
Counter Tops	_____		
Cabinets	_____		
Ceramic Tile	_____		
Insulation	_____		
Drywall	_____		
Painting - Interior	_____		
Painting - Exterior	_____		
Interior Finishing (Wood Work)	_____		
Mirrors	_____		
Plumbing	_____		
Plumbing Fixtures	_____		
Septic System	_____		
Elevator	_____		
Electrical	_____		
Electrical Fixtures	_____		
Heating	_____		
Fireplaces	_____		
Appliances	_____		
Range Hood	_____		
Alarm System	_____		
Central Vacuum	_____		
Warranty Company	St. Paul Guarantee Insurance Company		(604) 682-3095 or 1-800-555-3914

K. COMMON PROPERTY PROJECT PROFESSIONAL CONSULTANT LIST

CONSULTANT	COMPANY NAME	CONTACT	TELEPHONE
Building Envelope			
Architect			
Structural			
Mechanical			
Electrical			
Geotechnical			
Environmental			
Civil			
Landscape Architect			

L. PROJECT SPECIFIC SAMPLE MAINTENANCE LOG

PROJECT NAME:
BUILDER:
TECHNICAL REPRESENTATIVE:

DATE: **TIME:** **WEATHER:** **INSPECTION TYPE:**

ITEM:	**LOCATION:**	**OBSERVATIONS, WORK IN PROGRESS, & INFORMATION OR ACTION REQUIRED:**
1.1	(Description or picture)	

APPENDIX "A"

WARRANTY COVERAGE

1) MATERIALS & LABOUR WARRANTY

(a) in the first **12 months** of the Warranty, for **detached dwelling units** or **dwelling units** in a **multi-family building**, coverage for any Defect in Materials and Labour.
(b) in the first **15 months** of the Warranty, for the **Common Property**, common facilities and other assets of a Strata Corporation, coverage for any defect in Materials and Labour.
(c) in the first **24 months** of the Warranty,
   i. coverage for any Defect in Materials and Labour supplied for the gas, electrical, plumbing, heating, ventilation, and air conditioning Delivery and Distribution Systems,
   ii. coverage for any Defect in Materials and Labour supplied for the exterior cladding, caulking, windows, and doors that may lead to detachment or material damage to the new home or Common Property,
   iii. coverage for any Defect in Materials and Labour which renders the new home unfit to live in, and;
   iv. non-compliance with, or a violation of the Building Code if the non-compliance or violation:
      1) constitutes an unreasonable health or safety risk, or
      2) has resulted in, or is likely to result in, Material Damage to the new home.

2) BUILDING ENVELOPE WARRANTY - FIVE (5) YEARS

Coverage for the Building Envelope for up to five years for Defects in the Building Envelope of a new home, including a Defect which permits unintended water penetration such that it causes, or is likely to cause, Material Damage to the new home.

3) STRUCTURAL DEFECTS WARRANTY - TEN (10) YEARS

Coverage for Structural Defects for up to ten years for:
(a) any Defect in Materials and Labour that results in the failure of a Load Bearing part of the new home, and;
(b) any Defect which causes Structural Damage that materially and adversely affects the use of the new home for residential occupancy.

- ***For complete Warranty Coverage information, refer to your St. Paul Guarantee Insurance Company Home Warranty Certificate.***

APPENDIX "B"

WARRANTY EXCLUSIONS

The Warranty does not cover the following:

a) weathering, normal wear and tear, deterioration or deflection consistent with normal industry standards;
b) normal shrinkage of materials caused by drying after construction;
c) any loss or damage which arises while the new home is being used primarily or substantially for non-residential purposes;
d) materials, labour, or design supplied by an owner;
e) any damage to the extent that it is caused or made worse by an owner or Third Party, including:
   (i) negligent or improper maintenance or improper operation by anyone other than the builder or its employees, agents, or sub-contractors,
   (ii) failure of anyone, other than the builder or its employees, agents, or sub-contractors, to comply with the Warranty requirements of the manufacturers of appliances, equipment, or fixtures,
   (iii) alterations to the new home, including the conversion of the non-living space into living space or the conversion of the new home into two (2) or more units, by anyone other than the builder or its employees, agents, or sub-contractors while undertaking their obligations under the sales contract, and,
   (iv) changes to the grading of the ground by anyone other than the builder or its employees, agents, or sub-contractors;
f) failure of an owner to take timely action to prevent or minimize loss or damage, including the failure to give prompt notice to St. Paul Guarantee Insurance Company of a Defect or discovered loss or a potential Defect or loss;
g) any damage caused by insects or rodents and other animals, unless the damage results from non-compliance with the Building Code by the builder or its employees, agents, or sub-contractors;
h) accidental loss or damage from acts of nature including, but not limited to, fire, explosion, smoke, water escape, glass breakage, windstorm, hail, lightning, falling trees, aircraft, vehicles, flood, earthquake, avalanche, landslide, and changes in the level in the underground water table which are not reasonably foreseeable by the builder;
i) bodily injury or damage to personal property or real property which is not part of the new home;
j) any Defect in, or caused by, materials or work supplied by anyone other than the builder or its employees, agents, or sub-contractors;
k) changes, alterations, or additions made to the new home by anyone after initial occupancy, except those performed by the builder or its employees, agents, or sub-contractors under the construction contract or sales agreement, or as required by *St. Paul Guarantee Insurance Company*;
l) contaminated soil;
m) subsidence of the land around the new home or along utility lines, other than subsidence beneath footings of the new home or under driveways or walkways;
n) diminution in the value of the new home;
o) landscaping, both hard and soft, including plants, fencing, detached patios, gazebos and similar structures;
p) non-residential detached structures including sheds, garages, carports or outbuildings, or any structure or construction not attached to or forming an integral part of a multi-unit building or the new home;
q) any commercial use area and any construction associated with a commercial use area;
r) roads, curbs, and lanes;
s) site grading and surface drainage, except as required by the Building Code;
t) the operation of municipal services, including sanitary and storm sewer;
u) septic tanks or septic fields;
v) the quality or quantity of water, either from a piped municipal water supply or from a well;
w) a water well, but excluding equipment installed for the operation of a water well used exclusively for the new home, which equipment is considered to be part of the plumbing system for the new home;

x) damage caused or made worse by the failure of an owner to take reasonable steps to mitigate any damage.

APPENDIX "C"

Sound Transmission

St. Paul Guarantee Insurance Company's position with regard to airborne or flanking sound transmission is that typical wall/floor assemblies must be constructed to meet the minimum standards established by the British Columbia Building Code, or the City of Vancouver's Building Bylaw.

For sound transmission complaints to be considered a warrantable defect, the owner is required to provide evidence that a wall/floor assembly was not constructed in a manner that meets the minimum Building Code/Bylaw requirements. The fact that some noise or vibrations can be heard through adjacent wall/floor assemblies in itself is not evidence that a defect exists. It should be noted that the British Columbia Building Code/Vancouver Building Bylaw currently have no requirements for the control of impact noise transmission.

The Building Code has established the minimum measurable sound transmission standards that must be met; these minimum performance standards are known as Sound Transmission Class ratings (STC). The wall/floor assemblies listed in the Building Code have been laboratory tested to produce their typical STC ratings. Generally, Builders construct standard wall/floor assemblies from details tested to meet or exceed the minimum required STC ratings.

Field-testing is one method of evaluating a wall/floor assembly. Conducting a field test, however, may not demonstrate a valid Defect in Materials and Labour, because laboratory test results of a standard wall/floor assembly take precedence over field test results.

In order for St. Paul Guarantee Insurance Company to consider sound transmission as a Defect in Materials and Labour, one of the following criteria must be met:

- The owner must provide evidence to show that a violation of the Building Code/Bylaw is present in an assembly that has been constructed using typical building practices and that the STC rating of this assembly does not meet code.

- The owner must demonstrate that the type of assembly constructed is not listed as one of the standard assemblies in the Building Code/Bylaw. Further, a field test must then show that this assembly does not meet the minimum required STC rating.

L. MAINTENANCE LOG PREPARATION

A detailed maintenance log is one of the most important elements of an effective building maintenance program. Your building's maintenance log should document every aspect of your building's systems, keeping track of what work has been done and what needs to be done on a regular basis. A well-kept maintenance log helps prevent vital information from being lost or overlooked. This is especially important because Strata Corporations and committees change from year to year. Here are a few basic steps to establishing an effective maintenance log:

1. Obtain and retain as many of the mechanical system operating manuals as possible.
2. Obtain and retain an original set of design drawings for your building.
3. Document maintenance requirements and create a replacement schedule for all major components and systems affecting your building.
4. Document all work done on your building(s).
5. Review all components regularly.
6. Monitor building modifications.

The Maintenance Log that has been provided (see attached) is your framework within which to start. Utilize this format or one similar that clearly sets out the time frames and descriptions of when and what work/investigations are undertaken. Alter this document to reflect the Building Envelope detailing and the interior Common Area finishes of your building(s).

M. PROFESSIONAL CONSULTANT INSPECTION LOG PREPARATION

The Professional Inspection Log that has been provided (see attached) should be utilized separately to keep track of the companies and individuals who specifically carry out the inspections at your building(s). This allows for easy follow-up and questions if the need arises.

Selecting skilled, qualified and responsible consultants and contractors is vital to the success of your maintenance program. Your property manager typically handles this task and he/she should be able to identify the characteristics of a good contractor. Do not base your selection of contractor on cost alone. Developing good relationships with reputable contractors can be invaluable for all owners and prevent serious problems in the future. **This is not an area where the lowest price should be the determining factor.**

Some considerations in choosing a consultant or contractor are:

1. Provide a detailed list of the scope of work to be done which reflects the expectations of the owners.
2. There is no one professional contractor who can do all the tasks that are required.
3. Insist on references and be sure to contact them. If possible, visit the other locations to see first hand the work being done by the contractor.
4. Check contractors' ratings with the Better Business Bureau.
5. Check contractors' standing with the Credit Bureau.
6. Confirm that all workers on site will be covered by "Workers Compensation".
7. Most professions have certification requirements by government and/or professional associations. Request to see these credentials, and if possible retain a photocopy for your records. Make sure to call the issuer of the credentials to ensure they are still a member in good standing. If it is thought necessary, research the association/certifying body as well.
8. Contractors should have a municipal license to do business in your area. Request to see it and retain a photocopy if possible. Typically, these licenses are renewed annually so be sure to request the most current one each year.
9. What is the status of their liability and Errors and Omissions (E&O) insurance, including the dollar limit per claim, the aggregate annual amount and any major claims that could affect their limits? With **MUTI-FAMILY** projects some Architects and Envelope Consultants have exclusions in their E&O policies that only allows them to work on projects with a 10-year water penetration warranty, or their policies have total exclusions for water penetration coverage. St. Paul Guarantee Insurance Company provides a 5-year water penetration warranty. To prevent any delays in processing your multi-family applications please contact our office prior to selecting your Architect or Envelope Consultant, to ensure that they have proper E & O coverage in place.
10. Ensure the contractor you choose is absolutely clear about the scope of work that is expected and has the tools and equipment to do the work.
11. Establish a procedure with the contractor in case of an emergency. All contact names and telephone numbers for the contractor should be known by the Property Manager and all members of the Strata Corporation.

Once a consultant is chosen for the specified work, a letter of understanding or a written contract should be used to detail the agreed upon terms. Most importantly, ensure that you and others can rely upon the consultant's recommendations and reports, and that limiting legal disclaimers do not exist. Remember, they are your consultants and you must be able to rely on the information that they provide.

COMMON PROPERTY MAINTENANCE LOG

A fundamental part of a good maintenance plan is the qualifications of the party(s) monitoring the condition and performance of the building components. The maintenance items should be "signed off" by a qualified inspector/professional as they are inspected. The qualifications of this inspector(s) should be attached to the maintenance log as an Appendix for easy reference.

Year: _____

Maintenance Requirement	Req'd Review	Description of Work Completed	Date Completed	Contractor Name	Cost and Invoice #	Next Scheduled Review
EXTERIOR BUILDING ENVELOPE						
Check weather-stripping to exterior doors and repair/replace as necessary.	**Annually**					
Exterior flashing - clean and inspect for reverse drainage or corrosion.	**2 years**					
Check exterior caulking for cracking, bulging, discontinuities and re-caulk as necessary.	**Annually**					
Stucco and EIFS Stucco - inspect for cracks, staining and delamination of acrylic finish.	**Annually**					
Flat roof - inspect for wear, cracks, debonding and water leakage.	**2 years**					
Sloped roof - inspect for wear and shingle failure.	**2 years**					
Flat and sloped roof - inspect around all protrusions/vents and chimneys, parapet and edge flashings.	**2 years**					
Vinyl membranes on balconies and walkways - inspect for wear, open seams, debonding, damage and signs of leakage.	**Annually**					

Year: _____			Date Completed	Contractor Name	Cost and Invoice #	Next Scheduled Review
Maintenance Requirement	**Req'd Review**	**Description of Work Completed**				
Balcony railings guards and flashings - inspect all connections.	**Annually**					
Residential Windows - inspect for deteriorated finishes, gaskets and seals. Check for broken glass, failure of sealed units; or as required by window manufacturer.	**2 years**					

EXTERIOR GENERAL

Check foundation and concrete slabs for cracks, spalling and signs of leakage.	**2 years**					
Stucco and EIFS Stucco - recoat acrylic finish.						
Flat and sloped roofs - clean all drains and scuppers.	**6 month**					
Clean gutters and downspouts.	**6 month**					
Deck railings and guards – repaint.	**2 years**					
Check and clean sumps.	**Annually**					
Exhaust vents - check for debris and for damage and corrosion.	**Annually**					

UNDERGROUND PARKADES

Check parkade drains and sumps.	**Annually**					
Adjust and test entry gates and security doors as required.	**Annually**					

Year: _____

Maintenance Requirement	Req'd Review	Description of Work Completed	Date Completed	Contractor Name	Cost and Invoice #	Next Scheduled Review
LANDSCAPING						
Check grades around the perimeter of building(s) and fill low areas.	**Annually**					
Seasonally maintain automatic sprinkler system.	**Annually**					
Clean and check drains at patios and courtyards.	**Annually**					
PLUMBING						
Disconnect hoses and drain hose bibs.	**Annually**					
Blow out sprinkler lines.	**Annually**					
Drain and refill hot water tank.	**Annually**					
Check boilers and pumps for wear and corrosion.	**Annually**					
ELECTRICAL						
Check GFI circuits.	**Annually**					
Check smoke/carbon monoxide detectors.	**Annually**					

Year: _____

Maintenance Requirement	Req'd Review	Description of Work Completed	Date Completed	Contractor Name	Cost and Invoice #	
HEATING AND VENTING						
Clean fireplace.	**Annually**					
Service heating system and replace filters.	**Annually**					
Clean dryer ducts completely to the exterior.	**2 years**					
Service air handling system for the underground parking area.	**Annually**					
INTERIOR FINISHES						
Re-caulk showers and countertops as necessary.	**Annually**					
Seal grout.	**Annually**					
Lubricate all hinges on main entry and emergency exit doors.	**Annually**					
Wash range hood filter.	**Annually**					

COMMON PROPERTY PROFESSIONAL INSPECTION LOG

Year: _____

Inspection Requirement	Req'd Review	Consultant Company Name and Inspector	Date of Inspection	Report Date and Major Findings	Cost and Invoice #	Next Scheduled Review
Building Envelope	**Annually**					
Roof	**2 years**					
Mechanical Systems:						
Air handling system	**Annually**					
Water supply system	**Annually**					
Elevator	**Annually**					
Main electrical supply	**2 years**					
Main gas supply	**2 years**					
Sprinkler system	**Annually**					