

# BUILDING DYNAMICS INC.

## Construction Standards and Deficiencies

The following Construction Standards and Possible Deficiencies are standards that have been developed and accepted by the residential construction industry in general. While it is virtually impossible to develop a construction standard for each possible deficiency, the construction industry and **BUILDING DYNAMICS INC.** have attempted to identify the most common deficiencies that occur and in so doing list the extent of **BUILDING DYNAMICS INC.** and the home owner's responsibility. Where a specific deficiency has not been identified, the standard practice of the construction industry will apply.

The following Construction Standards and Possible Deficiencies apply to the "ONE YEAR" Builder's warranty obligation. The locally approved structural, plumbing, mechanical and electrical codes will be used to establish minimum acceptable standards for the construction of all **BUILDING DYNAMICS INC.** homes.

Home buyer(s) should be aware that all new homes go through a period of settlement and movement. During the first year after "Closing", the home may experience some minor material shrinkage, cracking and other events which are unavoidable and considered normal. **The Home buyer(s) should also be aware that he/she is responsible for proper home maintenance**, such as maintaining builder set grades around the house. Damage caused by the Home buyer(s)'s negligence, improper maintenance or changes, alterations or additions performed by anyone other than the Builder, his employees, or subcontractors is excluded from the "ONE YEAR" Builder's warranty.

The Home buyer(s) understand that wherever a Standard Manufacturer's Warranty applies, such warrant will take precedence over this one year warranty obligation. In some cases (i.e., appliances, etc.) the manufacturer's warranty may cover a period of less than one year. The Builder has no obligation, in such cases, to extend the warranty longer than the manufacturer's standard warranty period.

The following Construction Standards and Possible Deficiencies are expressed in terms of required standards that the Builder's construction must meet. Noncompliance with these construction standards calls for corrective action by the Builder.

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## ONE YEAR WARRANTY ITEMS

### 1. SITE WORK

#### A. Site Grading

- (1) Possible Deficiency: Settling of ground around foundation, utility trenches or other filled areas.  
Construction Standard: Settling of ground around utility trenches or other filled areas shall not interfere with water drainage away from the house.  
Builder's Correction: If the builder has provided final grading: Upon request by the owner, the builder shall recompact and backfill excessively settled areas, one time only, during the first year of warranty. The owner shall be responsible for any grass, shrubs or other landscaping affected by placement of such fill. Homebuyer is also responsible for water damming caused by concrete, plastic or other landscape boards.

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#### B. Site Drainage

- (1) Possible Deficiency: Improper drainage of the site.  
Construction Standard: The necessary grades and swales should be established to insure proper drainage away from the house. Site drainage is limited to the immediate grades and swales affecting the structure (Grading shall be 2% for the first 10 feet from structure). No standing or ponding of water should remain in this immediate area (generally no more than 24 hours) after a rain, except swales which may drain longer than other areas after a rain, or sump pump discharge. The possibility of standing water after an unusually heavy rainfall should be anticipated. No grading determination shall be made while there is frost or snow on the ground, or while the ground is saturated.  
Builder's Correction: The builder is responsible only for initially establishing the proper grades and swales. The owner is responsible for maintaining such grades and swales once they have been properly established.

## 2. CONCRETE

### A. Expansion and Contraction Joints

- (1) Possible Deficiency: Separation or settling of concrete slabs within the structure or at expansion and contraction joints.  
Construction Standard: Concrete slabs within the structure are designed to move at expansion and contraction joints. Movement caused by expansion and contraction should not cause cracks and voids to appear in the slab.  
Builder's Correction: Builder to take whatever corrective action necessary to repair excessive cracks and voids. If cracking and movement are within designed tolerances, then no correction is necessary.
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### B. Cast-in-place concrete (Non-Structural)

- (1) Possible Deficiency: Basement or foundation wall cracks.  
Construction Standard: Non-structural cracks are not unusual in concrete foundation walls. Such cracks greater than 1/8 inch are considered excessive.  
Builder's Correction: The builder shall repair non-structural cracks in excess of 1/8 inch. Surface patching is acceptable for non-structural cracks.
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- (2) Possible Deficiency: Uneven concrete floors.  
Construction Standard: Concrete floors in basements or rooms designed for habitability should not have pits, depressions or areas of unevenness that would prevent its use as a finished floor. The floor slope, unless designed for specific drainage purposes, shall not exceed a 1/4 inch in 32 inches of the room width. Structural slab foundation systems that have experienced some movement but are within the foundations designed performance criteria are excluded from this standard.  
Builder's Correction: Builder will correct or repair to meet the Performance Standard.
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- (3) Possible Deficiency: Pitting, scaling, spalling or non-excluded concrete work, and attached porch concrete work supported system.  
Construction Standard: Concrete surfaces should not disintegrate to the extent that the aggregate is exposed under normal conditions of weathering and use.  
Builder's Correction: Builder to take whatever corrective action necessary to repair or replace defective concrete surfaces. The builder is not responsible for deterioration caused by salt, chemicals, mechanical implements and other factors beyond the builder's control.
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- (4) Possible Deficiency: Excessive powdering or chalking of non-excluded concrete surfaces.  
Construction Standard: Powdering or chalking on concrete surfaces is not permissible, but should not be confused with surface dust.  
Builder's Correction: The builder shall take whatever corrective action is necessary to repair or resurface defective areas.
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- (5) Possible Deficiency: Standing water on stoops.  
Construction Standard: Water should drain from outdoor stoops and steps.  
Builder's Correction: The builder shall take corrective action to assure drainage of stoops and steps.
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- (6) Possible Deficiency: Cracking of basement floor.  
Construction Standard: Minor cracks in concrete basement floors are normal. Cracks exceeding 3/16 inch width or 1/8 inch in vertical displacement are considered excessive.  
Builder's Correction: Builder should repair cracks exceeding maximum tolerances by surface patching or other methods so as not to be readily apparent when the finish flooring material is in place.
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- (7) Possible Deficiency: Cracking of attached garage slab.  
Construction Standard: Cracks in garage slabs in excess of 1/4 inch in width or 1/8 inch in vertical displacement are considered excessive and unacceptable. (See expansion joints).  
Builder's Correction: Builder shall repair excessive cracks exceeding maximum tolerances by surface patching or other methods.
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- (8) Possible Deficiency: Cracking, settling, heaving or separating of structurally attached stoops or steps.  
Construction Standard: Stoops or steps should not settle, heave or separate in excess of 1 inch in relation to the

house structure. Cracks (less than 1/16 inch) are acceptable in structurally attached concrete stoops.

Builder's Correction: Builder to correct or repair to meet the above standard.

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- (9) Possible Deficiency: Cracks in structurally attached patios with footing or foundation system.  
Construction Standard: Cracks in excess of 1/4 inch in width or 1/8 inch in vertical displacement are considered excessive and unacceptable in structurally attached patios with footing and foundation system.  
Builder's Correction: Builder to repair as required.
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- (10) Possible Deficiency: Cracks in concrete slab-on-grade finished floors.  
Construction Standard: Cracks which significantly impair the appearance or performance of the finish flooring material shall not be acceptable.  
Builder's Correction: The builder shall repair cracks as necessary so as not to be readily apparent when the finish flooring is in place.
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### 3. MASONRY

#### A. Unit Masonry (Non-structural)

- (1) Possible Deficiency: Basement or foundation non-structural wall cracks.  
Construction Standard: Small non-structural cracks are not unusual in mortar joints of masonry foundation walls. Such cracks greater than 1/8 inch width are considered excessive.  
Builder's Correction: The builder shall repair non-structural cracks in excess of 1/8 inch by pointing or patching. These repairs should be made toward the end of the first year of the warranty.
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- (1) Possible Deficiency: Cracks in masonry walls or veneer.  
Construction Standard: Small cracks or hairline cracks due to shrinkage are common in mortar joints of masonry construction. Cracks greater than 3/8 inch in width are considered excessive.  
Builder's Correction: Repair cracks in excess of 1/8 inch by pointing or patching. These repairs should be made toward the end of the first year of warranty period to permit normal settling of the home to stabilize.
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### 4. WOOD AND PLASTIC

#### A. Rough Carpentry

- (1) Possible Deficiency: Floor squeak or subfloor appears loose.  
Construction Standard: Floor squeaks and loose subfloor are often temporary conditions common to new home construction.  
Builder's Correction: Builder should locate and make every reasonable effort to correct the problem.
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- (2) Possible Deficiency: Uneven wood floors.  
Construction Standard: Floors should not be more than 1/4 inch out of level within any 32 inch horizontal measurement. Allowable floor and ceiling joist deflections are governed by the approved building code.  
Builder's Correction: Repair interior and exterior walls as required.
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- (3) Possible Deficiency: Bowed walls.  
Construction Standard: All interior and exterior wall have slight variances on the finished surfaces. Bowing of walls should not detract from or blemish the walls' finished surface. Allowable structural deflections are governed by the approved building codes specifications, however bowing greater than 1/2 inch in 8 feet will be considered unacceptable.  
Builder's Correction: Repair interior and exterior walls as required.
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- (4) Possible Deficiency: Out of plumb walls.  
Construction Standard: Walls should not be more than 1/2 inch out of plumb for any 8 foot vertical measurement.  
Builder's Correction: Repair to repair to meet the above standard.
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#### B. Finish Carpentry - Interior

- (1) Possible Deficiency: Quality of interior trim workmanship.  
Construction Standard: Joints in moldings or joints between moldings and adjacent surfaces should not result in joints exceeding 1/8 inch in width.  
Builder's Correction: Repair defective joints, as defined above. Caulking is acceptable.
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#### **C. Finish Carpentry - Exterior**

- (1) Possible Deficiency: Quality of exterior trim workmanship.  
Construction Standard: Joints between exterior trim elements, including siding and masonry, should not result in open joints in excess of 1/4 inch. In all cases, exterior trim, masonry and siding shall be capable of performing its function to exclude the elements.  
Builder's Correction: Builder to repair open joints. Caulking is acceptable.
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#### **D. Wood Treatment**

- (1) Possible Deficiency: Delamination or deterioration of exterior siding.  
Construction Standard: Siding should not delaminate or deteriorate within manufacturer's specifications. Natural wood sidings can be expected to weather and change color as they age.  
Builder's Correction: Builder will repair or replace as needed unless caused by owner's neglect to maintain siding properly. Repaired area of prefinished material may not match in color and/or texture. The owner can expect that the newly painted surface may not match original surface in color.
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## **5. THERMAL AND MOISTURE PROTECTION**

#### **A. Waterproofing**

- (1) Possible Deficiency: Leaks in basement.  
Construction Standard: Leaks resulting in actual trickling of water are unacceptable. However, leaks caused by improper landscaping installed by owner, or failure of owner to maintain proper grades that have been stabilized by the builder are not covered by the warranty. Dampness of the walls may occur in new construction and is not considered a deficiency.  
Builder's Correction: The builder shall take such action as necessary to correct basement leaks except where the cause is determined to result from owner negligence.
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#### **B. Insulation**

- (1) Possible Deficiency: Insufficient insulation.  
Construction Standard: Insulation should be installed in accordance with applicable energy and building code requirements.  
Builder's Correction: Install insulation in sufficient amounts to meet above standards.
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#### **C. Roof Vents**

- (1) Possible Deficiency: Leaks due to snow or rain being driven into the attic through vents and louvers.  
Construction Standard: Attic vents and/or louvers must be provided in order to properly ventilate your house. Infiltration of rain or snow depends on the force and the direction of wind.  
Builder's Correction: Builder not responsible for force and direction of driving rain or snow.
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#### **D. Roofing and Siding**

- (1) Possible Deficiency: Ice buildup on roof.  
Construction Standard: During prolonged cold spells, ice buildup is likely to occur at the eaves of a roof. This condition occurs when snow and ice accumulate, and gutters and downspouts freeze up.  
Builder's Correction: This is a homeowner maintenance item.
- (2) Possible Deficiency: Roof or flashing leaks.  
Construction Standard: Roofs and flashing should not leak under normally anticipated conditions, except where cause is determined to result from severe weather conditions, such as ice buildup.  
Builder's Correction: Builder shall correct or repair any verified roof leaks.
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- (3) Possible Deficiency: Delamination of veneer siding or joint separation.  
Construction Standard: All siding shall be installed according to the manufacturer's and industry's accepted standards. Joint separation and delamination is not acceptable, except where the

Builder's Correction: manufacturer indicates that some shrinkage may be anticipated. Builder shall re-secure, caulk, repair or replace to meet the above standard.

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#### **E. Flat Built-up Roofing**

- (1) Possible Deficiency: Standing water on flat built-up roof.  
Construction Standard: Water should drain from flat built-up roof, with minimum collecting.  
Builder's Correction: The builder shall take corrective action to assure proper drainage of roof.
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#### **F. Flashing and Sheet Metal**

- (1) Possible Deficiency: Flashing, valleys, gutters and/or downspouts leak.  
Construction Standard: Flashing, valleys, gutters and downspouts must not leak but gutters may overflow during heavy rain. It shall be the homeowner's responsibility to keep gutters and downspouts free of leaves and debris which could cause excessive overflow.  
Builder's Correction: Builder shall adjust and or seal any flashing, valleys and gutters so water may be properly channeled.
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- (2) Possible Deficiency: Water stands in gutters.  
Construction Standard: When gutter is unobstructed by debris, the water level may not exceed 1 inch.  
Builder's Correction: Industry practice is to install gutters with slight amounts of pitch. It is possible that small amounts of water will stand in certain sections of the gutter immediately after a rain.
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#### **G. Sealants**

- (1) Possible Deficiency: Leaks in exterior walls due to inadequate caulking.  
Construction Standard: Joints and cracks in exterior wall surfaces and around openings should be properly caulked to exclude the entry of water. Properly installed caulking will shrink and must be maintained by the homeowner during the life of the home.  
Builder's Correction: Builder shall repair and/or caulk joints or cracks in exterior wall surfaces as required to correct deficiency once during the first year of the warranty period.
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## **6. DOORS AND WINDOWS**

#### **A. Wood and Plastic Doors**

- (1) Possible Deficiency: Warpage of exterior doors.  
Construction Standard: Exterior doors will warp to some degree due to temperature differential on inside and outside faces. However, they should not warp to the extent that they become inoperable or cease to be weather resistant or exceed National Woodwork Manufacturer Association standards (1/4 inch).  
Builder's Correction: Correct or replace and refinish defective doors to match existing doors as nearly as possible.
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- (2) Possible Deficiency: Warpage of interior passage and closet doors.  
Construction Standard: Interior doors (full opening) should not warp to exceed National Woodworking Manufacturers Association Standards (1/4 inch), provided the proper levels of humidity have been maintained in the home.  
Builder's Correction: Correct or replace and refinish defective doors to match existing doors as nearly as possible.
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- (3) Possible Deficiency: Shrinkage of insert panels showing raw wood edges.  
Construction Standard: Panels may shrink and expand. Shrinkage of more than 1/16 inch is unacceptable.  
Builder's Correction: Refinish or replace door.
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- (4) Possible Deficiency: Split door panel.  
Construction Standard: Split panels should not allow light to be visible or allow the weather to get through the door.  
Builder's Correction: If light is visible or the weather is getting through the door, fill split to match paint or stain as closely as possible to adequately seal the door.
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**B. Garage Doors on Attached Garage**

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| (1)   | Possible Deficiency:   | Garage door fails to operate properly.   |
|       | Construction Standard: | Garage door should operate properly.   |
|       | Builder's Correction:  | The builder should correct or adjust garage doors as required, except where the cause is determined to result from owner installing an electric garage door.   |
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| (2)   | Possible Deficiency:   | Garage door allows entrance of snow or water.  |
|       | Construction Standard: | Garage door should seal properly under normal conditions.  |
|       | Builder's Correction:  | Some entrance of the elements can be expected under abnormal conditions. Builder shall adjust or correct garage doors meet normal conditions.  |
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| (3)   | Possible Deficiency:   | Malfunction of windows.  |
|       | Construction Standard: | Windows should operate with reasonable ease as designed.   |
|       | Builder's Correction:  | Builder to repair as required.   |
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| (4)   | Possible Deficiency:   | Condensation and/or frost on windows.  |
|       | Construction Standard: | Windows will collect condensation on interior surfaces when extreme temperature differences and high humidity levels are present. Condensation is usually the result of climactic humidity conditions. |
|       | Builder's Correction:  | Unless directly attributed to faulty installation, window condensation is a result of conditions beyond the builder's control. No corrective action required.  |

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**C. Wood and Plastic Windows Weather-stripping and seals**

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| (1) | Possible Deficiency:   | Infiltration around windows and doors.   |
|     | Construction Standard: | Infiltration is normally noticeable around doors and windows, especially during high winds. Poorly fitted weather stripping is not permissible. It may be necessary for the owner to have storm windows and doors installed to provide a satisfactory solution in high wind areas. |
|     | Builders Correction:   | The builder shall adjust or correct open cracks, poorly fitted doors or windows, or poorly fitted doors or windows, or poorly fitted weather-stripping.  |

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**D. Glass**

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| (1) | Possible Deficiency:   | Broken glass.   |
|     | Construction Standard: | None.   |
|     | Builder's Correction:  | Broken glass not reported to the Builder prior to closing is the Home Owner's responsibility. |
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## 7. FINISHES

**A. Lath and Plaster**

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| (1) | Possible Deficiency:   | Cracks in the interior walls.   |
|     | Construction Standard: | Hairline cracks are not unusual in interior wall surfaces. Cracks greater than 1/16 inch in width are considered excessive. |
|     | Builder's Correction:  | The builder shall repair cracks exceeding 1/16 inch as required.  |

**B. Gypsum Wallboard**

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|-----|------------------------|---|
| (1) | Possible Deficiency:   | Defects caused by poor workmanship such as blisters in tape, excess compound in joints, cracked corner beads, or trowel marks.  |
|     | Construction Standard: | Slight "imperfections" such as nail pops that break the surface, seams lines, and cracks are common but shall not exceed 1/8 inch in width.   |
|     | Builder's Correction:  | Builder to correct such defects to acceptable tolerance and cracks that exceed 1/8 inch in width or nail pops that break the surface and repaint repaired areas, one time only, during the one year warranty period. Builder is not responsible for color variation in the paint. |
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**C. Ceramic Tile**

- (1) Possible Deficiency: Ceramic tile cracks and becomes loose.  
Construction Standard: Ceramic tile should not crack or become loose.  
Builder's Correction: The builder shall replace any cracked tiles and re-secure any loose tiles unless the defects were caused by the owner's negligence. Builder is not responsible for discontinued patterns or color variations in ceramic tile.
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- (2) Possible Deficiency: Cracks appear in grouting in ceramic tile joints or at junctions with other material such as a bathtub.  
Construction Standard: Cracks in grouting in ceramic tile joints are commonly due to normal shrinkage conditions. Re-grouting of these cracks is a maintenance responsibility of the Home buyer within the life of the home. Builder is not responsible for color variations of discontinued color grout.  
Builder's Correction: Builder will repair grouting if necessary one time only, during the one year warranty period. Builder will not be responsible for color variations or discontinued colored grout.

**D. Finished Wood Flooring**

- (1) Possible Deficiency: Cracks developing between floor boards.  
Construction Standard: Cracks in excess of 1/8 inch in width shall be corrected.  
Builder's Correction: Builder will repair cracks in excess of 1/8 inch, one time only, during the one year warranty period, by filling or replacing, at builder's option.

**E. Resilient Flooring**

- (1) Possible Deficiency: Nail pops appear on the surface of flooring.  
Construction Standard: Readily apparent nail pops should be repaired.  
Builder's Correction: The builder shall correct nail pops, which have broken the surface. The builder shall repair or replace resilient floor covering in the affected area with similar material. Builder is not responsible for discontinued patterns or color variation in the floor covering.
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- (2) Possible Deficiency: Depressions or ridges appear in the floor due to subfloor irregularities.  
Construction Standard: Readily apparent depressions or ridges exceeding 1/8 inch should be repaired. The ridge or depression measurement is taken at the gap created at one end of the six inch edge placed over the depression or ridge with three inches on one side of the defect held tightly to the floor.  
Builder's Correction: Builder shall take corrective action, as necessary to bring the defect within acceptable tolerances so that it is not readily visible. Builder is not responsible for discontinued patterns or color variations in floor covering.
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- (3) Possible Deficiency: Resilient flooring loses adhesion.  
Construction Standard: Resilient flooring should not lift, bubble or become unglued.  
Builder's Correction: Builder shall repair or replace resilient flooring as required. Builder shall not be responsible for discontinued patterns or color variation of floor covering or for problems caused by owner neglect or abuse.
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- (4) Possible Deficiency: Seams or shrinkage gaps show resilient flooring joints.  
Construction Standard: Gaps shall not exceed 1/16 inch width in resilient floor covering joints. Where dissimilar material abut, a gap not to exceed 1/8 inch is permissible.  
Builder's Correction: Builder shall take action as necessary to correct the problem. Builder is not responsible for discontinued patterns or color variations in floor covering.

**F. Carpeting**

- (1) Possible Deficiency: Carpeting becomes loose, seams separate or excessive stretching occurs.  
Construction Standard: Wall-to-wall carpeting, installed as the primary floor covering, when stretched and secured properly should not come up, become loose, separate or stretch excessively at its points of attachment. Carpet seams will show, however, no visible gap is acceptable.

Builder's Correction: Builder is to re-stretch or re-secure carpeting as needed, one time only, during the one year warranty period.

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- (2) Possible Deficiency: Spots on carpet, minor fading.  
Construction Standard: Exposure to light may cause spots on carpet and/or minor fading.  
Builder's Correction: None.
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### G. Special Coating

- (1) Possible Deficiency: Cracks in exterior stucco wall surfaces.  
Construction Standard: Cracks are not unusual in exterior stucco wall surfaces. Cracks greater than 1/8 inch in width are considered excessive.  
Builder's Correction: Builder shall repair cracks exceeding 1/8 inch in width as required, one time only, during the one year warranty period. Builder not responsible for exact match of color/patterns.
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### H. Painting

- (1) Possible Deficiency: Exterior paint or stain peels or deteriorates.  
Construction Standard: Exterior paints or stains should not fail during the first year of ownership. However, fading is normal and the degree is dependent on climatic conditions.  
Builder's Correction: If paint or stain is defective, builder will properly prepare and refinish affected areas, matching color as close as possible. Where finish deterioration affects the majority of the wall area, the whole area will be refinished.
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- (2) Possible Deficiency: Painting required as corollary repair because of other work.  
Construction Standard: Necessary repairs required under this warranty should be refinished to match surrounding areas as closely as possible.  
Builder's Correction: Refinish repaired areas as indicated.
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- (3) Possible Deficiency: Deterioration of varnish or lacquer finishes.  
Construction Standard: Natural finishes on interior woodwork should not deteriorate during the first year of ownership. However, varnish-type finishes used on the exterior will deteriorate rapidly and are not covered by the warranty.  
Builder's Correction: Retouch affected area of natural finish interior woodwork, matching the color as closely as possible.
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- (4) Possible Deficiency: Interior paint application and coverage.  
Construction Standard: Interior paint shall be applied in a manner sufficient to visually cover wall, ceiling and trim surfaces where specified.  
Builder's Correction: Builder shall retouch wall, ceiling or trim surfaces where inadequate paint has been applied to cover original surfaces.
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- (5) Possible Deficiency: Mildew or fungus on painted areas.  
Construction Standard: Mildew or fungus will form on a painted surface if the structure is subject to abnormal exposures, (i.e. rainfall, ocean, lake or river front).  
Builder's Correction: Mildew or fungus formation is a condition the builder cannot control and is a home owner maintenance item.
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### I. Wall Covering

- (1) Possible Deficiency: Peeling of wall covering.  
Construction Standard: Peeling of wall covering is unacceptable.  
Builder's Correction: Builder will repair or replace defective wall covering applications. Builder is not responsible for discontinued patterns or color variations in wall covering.
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- (2) Possible Deficiency: Edge mismatching in patter of wall covering.  
Construction Standard: None.  
Builder's Correction: None.
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## 8. SPECIALTIES

## A. Louvers and vents

- (1) Possible Deficiency: Inadequate ventilation of attics and crawl spaces.  
Construction Standard: Attic and crawl spaces shall have a natural ventilation area required by the approved building code specifications.  
Builder's Correction: The builder shall provide for adequate ventilation. Builder is not responsible for homeowner alterations to the original system.
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## B. Fireplaces

- (1) Possible Deficiency: Fireplace or chimney does not draw properly.  
Construction Standard: A properly designed and constructed fireplace chimney should function properly. It is normal to expect that high winds can cause temporary negative draft situations. Similar negative draft situations can also be caused by obstructions such as large branches of trees too close to the chimney. Some houses may need to have a window opened slightly to create an effect draft.  
Builder's Correction: Determine the cause of the malfunction and correct as required if the problem is one of design and construction.
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- (2) Possible Deficiency: Chimney separation from structure.  
Construction Standard: Newly built fireplaces will often incur slight amounts of separation from the main structure. Separations of greater than 3/8 inch will be unacceptable.  
Builder's Correction: Builder to determine the cause of separation and correct as required. Caulking is acceptable for slight separations.
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- (3) Possible Deficiency: Metal firebox paint changed by fire.  
Construction Standard: None.  
Builder's Correction: None. Heat from fires will alter finish.
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- (4) Possible Deficiency: Cracked firebrick and mortar joints.  
Construction Standard: None.  
Builder's Correction: None. Heat and flames from "roaring" fires will cause cracking.
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# 9. EQUIPMENT

## A. Residential Equipment

- (1) Possible Deficiency: Warpage and operation of kitchen cabinet doors and drawers faces.  
Construction Standard: Cabinet doors and drawer faces should not warp to exceed 1/4 inch, provided the proper levels of humidity have been maintained. Both cabinet doors and drawer faces should be properly adjusted and operated in a smooth, efficient manner.  
Builder's Correction: Adjust, repair or replace defective cabinet doors and drawer faces to correct condition.
- (2) Possible Deficiency: Surface cracks, delaminations and chips in high pressure laminate vanity and kitchen cabinet countertops.  
Construction Standard: Counter tops fabricated with high pressure laminate coverings should not delaminate or have chips or surface cracks. The deck areas joint may have a maximum of 1/16 inch gap. All other areas of the joint have a maximum of 1/16 inch differential in surface alignment.  
Builder's Correction: Repair or replace to meet the above criteria.
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- (3) Possible Deficiency: Countertop separating from finished wall.  
Construction Standard: Countertop separation should not exceed 1/8 inch.  
Builder's Correction: The builder shall repair or replace the countertop to eliminate or correct the gap caused by the separation. Caulking is usual and acceptable.
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## 10. MECHANICAL

### A. Heating Systems

- (1) Possible Deficiency: Inadequate heating.  
Construction Standard: Heating system shall be capable of producing and inside temperature of 70 degrees F, as measured in the center of each room at a height of 5 feet above the floor, under local outdoor winter design conditions as specified in ASHRAE handbook. Federal, state or local energy codes shall supersede this standard where such codes have been locally adopted.  
Builder's Correction: Builder will correct heating system to provide the required temperatures. However, the Home Owner shall be responsible for balancing dampers, registers and other minor adjustments.
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### B. Cooling Systems

- (1) Possible Deficiency: Inadequate cooling.  
Construction Standard: Where air-conditioning is provided, the cooling system shall be capable of maintaining a temperature of 78 degrees F, as measured in the center of each room at a height of 5 feet above the floor, under local outdoor summer design conditions as specified in ASHRAE handbook. In the case of outside temperatures exceeding 95 degrees F, a differential of 15 degrees F, from the outside temperature will be maintained. Federal, state, or local energy codes shall supersede this standard where such codes have been locally adopted.  
Builder's Correction: Builder will correct cooling system to meet temperature conditions, in accordance with specifications.
- (2) Possible Deficiency: Improper mechanical operation of evaporative cooler.  
Construction Standard: Equipment must function properly at temperature standard set.  
Builder's Correction: Correct and adjust so that blower and water system operate as designed.
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- (3) Possible Deficiency: Refrigerant line leak.  
Construction Standard: Refrigerant lines should not develop leaks during normal operation.  
Builder's Correction: Repair leaking refrigerant lines and recharge unit.
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- (4) Possible Deficiency: Condensation lines clog up.  
Construction Standard: None.  
Builder's Correction: Condensation lines will clog eventually under normal use. This is a Home Owner maintenance item. Builder shall provide unobstructed condensation lines at time of first occupancy.

### C. Air Distribution

- (1) Possible Deficiency: Ductwork noisy.  
Construction Standard: When metal is heated it expands and when cooled it contracts. The result is "ticking" or "cracking" which is generally to be expected.  
Builder's Correction: The stiffening of the ductwork and the gauge of the metal used shall be such that the ducts do not "oilcan". The booming noise caused by "oil canning" is not acceptable and the builder must take necessary steps to eliminate this sound.
- (2) Possible Deficiency: Ductwork separates or becomes unattached.  
Construction Standard: Ductwork should remain intact and securely fastened.  
Builder's Correction: Reattach and re-secure all separated or unattached ductwork.
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## 11. PLUMBING

### A. Water Supply System

- (1) Possible Deficiency: Plumbing pipes freeze and burst.  
Construction Standard: Drain, waste and vent or water pipes should be adequately protected, as required by the applicable code, during normally anticipated cold weather, and as defined in accordance with ASHRAE designed temperatures to prevent freezing.  
Builder's Correction: Builder shall correct the condition responsible for pipes freezing, and repair piping

damage caused by freezing except where there has been an obvious lack of heat due to homeowner's neglect such as garden hose left on hose bib during freezing weather.

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- (2) Possible Deficiency: Water supply system fails to deliver water.  
Construction Standard: All service connections to municipal water main and private water supply are the builder's responsibility. Private systems shall be designed and installed in accordance with all approved building, plumbing and health codes.  
Builder's Correction: Builder to repair as necessary if failure is the result of defective workmanship or materials. If conditions beyond his control disrupt or eliminate the sources of the supply then it is not his responsibility. There will be noise emitting from the water pipe system, due to the flow of water.
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## B. Septic Tanks

- (1) Possible Deficiency: Septic system fails to operate properly.  
Construction Standard: Septic system should be capable of properly handling normal flow of household effluent. It is possible that due to freezing, soil saturation, changes in the ground water table or excessive use of plumbing systems or appliances, an overflow can occur. Periodic pumping of the septic tank is considered Home buyer maintenance, and a normal need for pumping is not a deficiency.  
Builder's Correction: Builder shall be responsible for the installation of an operational system and shall take corrective action to repair. Builder shall not be responsible for malfunctions which occur through owner negligence or abuse and from conditions that are beyond his/her control. The following are considered owner negligence or abuse as an exclusion under the warranty.
- A. Excessive use of water such as overuse of washing machine and dishwasher, including their simultaneous use.
  - B. Connection of sump pump, roof drains or backwash from water conditioner, to the system.
  - C. Placing of non-biodegradable items in the system.
  - D. Addition of any harsh chemicals, greases or cleaning agents, and excessive amounts of bleaches or drain cleaners.
  - E. Use of food waste disposer not supplied by builder.
  - F. Placement of impervious surfaces over the disposal area.
  - G. Allowing vehicles to drive or park over the disposal area.
  - H. Failure to periodically pump out the septic tank, when required.
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## C. Plumbing System

- (2) Possible Deficiency: Faucet or valve leak.  
Construction Standard: No valve or faucet should leak due to defects in material or workmanship.  
Builder's Correction: Builder shall repair or replace the leaking faucet or valve.
- (2) Possible Deficiency: Defective plumbing fixtures, appliances or trim fittings.  
Construction Standard: Fixtures, appliances or fittings should comply with their manufacturer's standards.  
Builder's Correction: Builder shall replace any fixture or fitting which is outside of acceptable standards as defined by the manufacturer.
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- (3) Possible Deficiency: Noisy water pipes.  
Construction Standard: There will be some noise emitting from the water pipe system, due to the flow of water.  
Builder's Correction: Builder cannot remove all noises due to water flow and pipe expansion. Builder will use best efforts to eliminate "water hammer".
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- (4) Possible Deficiency: Leakage from any pipe.  
Construction Standard: No leaks of any kind should exist in any soil, waste, vent, gas or water pipe.
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Condensation on piping does not constitute leakage, and is not covered. Should a gas pipe leak occur, the homeowner should call the appropriate public utility service immediately.

Builder's Correction: Builder shall make necessary repairs to eliminate leakages in any piping he/she installed. If gas or water leak occurs in a piping system the builder installed, then the builder will make the necessary repairs. If a gas or water leak occurs in a piping system installed by a public service utility authority, then the public service utility authority should be contacted to make the necessary repairs.

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(5) Possible Deficiency: Stopped up sewers, fixtures and drains.  
Construction Standard: Sewers, fixtures and drains should operate properly.  
Builder's Correction: Builder is not responsible for sewers, fixtures and drains which are clogged through the owners negligence. Where defective construction is the cause, the builder shall assume the cost of the repair; where owner negligence is shown to be the cause, the owner shall assume all repair costs.

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(6) Possible Deficiency: Cracking or chipping of porcelain or fiberglass surfaces.  
Construction Standard: Chips and cracks on surfaces of bathtubs and kitchen sinks can occur when the surface is hit with sharp or heavy objects.  
Builder's Correction: Builder to repair any chips or cracks noted prior to first occupancy.

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## 12. ELECTRICAL

### A. Electrical Conductors

(1) Possible Deficiency: Failure of wiring to carry its designed fuse load to the electrical box.  
Construction Standard: Wiring should be capable of carrying the designed load for normal residential use to electrical box.  
Builder's Correction: Check wiring for conformity with local and state electrical code requirements. Repair wiring if it does not conform to code specifications.

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### B. Switches and Receptacles

(1) Possible Deficiency: Malfunction of electrical outlets, switches or fixtures.  
Construction Standard: All switches, fixtures and outlets should operate as intended.  
Builder's Correction: Repair or replace defective switches, fixtures and outlets.

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(2) Possible Deficiency: Drafts from electrical outlets.  
Construction Standard: Electrical junction boxes on exterior walls may produce air flow whereby the cold air can be drawn through the outlet into a room. The problem is normal in new home construction.  
Builder's Correction: None.

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### C. Service and Distribution

(1) Possible Deficiency: Ground fault interrupters trip frequently.  
Construction Standard: Ground fault interrupters are sensitive safety devices installed into the electrical system to provide protection against electrical shock. These sensitive devices can be tripped very easily.  
Builder's Correction: Builder is to install ground fault interrupter in accordance with approved electrical code. Tripping is to be expected and is not covered, unless due to faulty installation.

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**BUILDING DYNAMICS INC.**  
**Construction Standards and Deficiencies**

**DOCUMENT RECEIPT**

I/We \_\_\_\_\_ acknowledge receipt of a copy of the **BUILDING DYNAMICS INC.** Construction Standards and deficiencies, "ONE YEAR WARRANTY ITEMS" document.

**BUYER(S):**

\_\_\_\_\_  
Buyer Date

\_\_\_\_\_  
Buyer Date

**BUILDING DYNAMICS INC:**

\_\_\_\_\_  
Seller Date