

ACCEPTED BUILDING STANDARDS EFFECTIVE JANUARY 1, 2007



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Receipt of the Long Island Builders Institute's Accepted Building Standards January 1, 2007
Booklet is Hereby Acknowledged.

Acknowledgements

The Long Island Builders Institute (LIBI) gratefully acknowledges the leadership and commitment of the National Association of Home Builders (NAHB) in developing their Residential Construction Performance Guidelines for Professional Builders & Remodelers (Third Edition). The LIBI Standards are closely modeled after the NAHB Guidelines but have been adjusted for local practices.

We also acknowledge the contribution of the LIBI Accepted Building Standards Committee: Richard L. Raskin, Chairman, Ray Accettella, John Barrows, Gary Cannella, Larry Davis, Cliff Fetner, Paul Martino and Robert Wieboldt, LIBI EVP.

Purpose of the Book

A Level of Expectation

Homeowners, contractors, builders and remodelers are constantly seeking a measurable benchmark that deals with the quality and their expectations of performance in the goods and services provided by the residential construction industry. Quality is a term that is often used but is seldom defined, particularly in relation to construction; these Standards are an attempt to supply a benchmark for quality. Building codes and local regulations address matters of health, safety, and welfare and are the mandated responsibility of those codes and regulations but there is a greater likelihood of matching the “other” dimension of a consumer’s expectations by the acceptance of objective criteria regarding performance and building standards. On this premise, the two prior editions of LIBI Accepted Building Standards were developed to offer achievable minimum levels of workmanship and quality for the products delivered. LIBI first developed its own standards in 1988 and this current effort represents the second time that we have updated, refined and expanded our Standards.

It should be noted that the core of these standards were first established as a basis of coverage under insured warranty programs, which were initially offered some 30 years ago. More than 20 years ago, the Remodelers Council of the National Association of Home Builders embraced a similar compilation of guidelines, which led to the published editions of Quality Standards for the Professional Remodeler. The joint effort of the Remodelers Council and the Single Family Small Volume Builders Committee of NAHB culminated in their first edition in 1996. As such, many of the individual guidelines have remained as time-honored measures. LIBI’s Standards are closely modeled after the NAHB Guidelines but have been adjusted for local conditions and practices.

In certain geographical locations across the country the Residential Construction Performance Guidelines of NAHB have grown in acceptance to become the basis for evaluating performance by parties under residential construction contracts when dispute may lead to litigation or arbitration. Here on Long Island LIBI’s Standards have been accepted by many of the towns and villages for evaluating quality and performance and are acknowledged by Nassau and Suffolk counties as important benchmarks.

Review Procedure

The 2007 edition of the LIBI Standards not only follows the 3rd edition of the NAHB's guidelines but was also reviewed by over 200 Long Island builders, remodelers and many specialty trades people and by consumer groups including the Long Island Housing Partnership. Advertisements to the trade were published in "Builders and Remodelers" and "Hammer" magazines and to the public and consumers in "Newsday" soliciting comments on the Standards.

Written comments were received by Mr. Peter Elkowitz, President of the Long Island Housing Partnership and Mr. Joseph Valdini, Valdini Drywall Corp. Those comments were carefully reviewed and evaluated and some Guidelines were modified as a result of these comments. We thank the commentators for their time and effort and their thoughtful contributions.

The review has resulted in a manual that builders, remodelers, sub contractors and homeowners can reference with confidence in their communications.

Scope of the Accepted Building Standards

These standards are intended for use as a reference and should be interpreted with common sense. They should be applied only within the scope of the particular project to which they apply and are not intended to answer all questions pertaining to quality of construction that might arise in the course of a typical construction project. The guidelines published herein deal with the most frequently raised issues between contractors and homeowners. Although many contractors routinely build to higher standards, this is a collection of generally accepted performance criteria and should be interpreted as such.

The Accepted Building Standards construction performance guidelines do not constitute a warranty, nor are they intended as a substitute for a warranty. However, both parties may agree to incorporate them by reference within a warranty. They are separate and distinct from any manufacturer's warranty that may apply to materials and products used in the project. The use and applications of these standards with regard to residential and remodeling work is strictly optional and at the discretion of the individuals. These standards are not intended to be a Homeowner's Manual. Although they sometimes mention homeowner's responsibilities and maintenance requirements, no attempt has been made to address all facets of homeownership.

Standards Not Always Applicable

The standards, items, components, etc. mentioned in this booklet will not apply to all homes, as all items, components, etc are not in every home. Furthermore, when these standards are referred to as part of a Contractor's Warranty, the warranty may specifically exclude some of the items, components etc. referred to in this booklet.

Scope of Responsibilities

Typically, numerous parties are involved in a residential construction project, whether it is building

a new home or remodeling an existing one. Each of these parties has specific responsibilities to fulfill. The Contract Documents should provide a clear statement of the agreement between the contractor and the homeowner. In addition to the specific provisions of any contract, the following general responsibilities should be noted:

The Contractor: For the purposes of this book, the contractor is the entity named in the contract that has primary responsibility for completing the project. The contractor often employs others to assist him or her. In most cases, the contractor is responsible for all work assigned in the contract regardless of who actually performs the work. If the contractor is acting in a special role (for instance, as a construction manager), or the consumer selects others to work on the project who are outside the contractor's control, then the responsibility for evaluation and remedy of proposed problems may fall to other parties.

The Owner: The owner is the buyer of the product or service named in the contract; as such, the owner is responsible for carefully reviewing the contract to ensure it accurately represents his or her expectations for the final product. Once the owner accepts the project and moves into the home or occupies the newly renovated space, then he or she is responsible for routine maintenance and upkeep. Homes require a certain amount of care that is generally the owner's responsibility. Additionally, owners should note that in some of the standards contained in this publication, the contractor is not obligated to make repairs to items that fall within the owners' maintenance responsibilities.

Manufacturer or Fabricator: Manufacturers and fabricators warrant many residential construction components that may fall outside the scope of the contractor's responsibilities, such as kitchen appliances, furnaces, air conditioners, and the like. Other less obvious items may include certain types of siding, roofing, or flooring. If there is a warranty question with one of these components, the owner should be aware that the contractor might not be responsible for the performance of the product once it is installed. If a problem occurs, the owner will often deal directly with the manufacturer or fabricator to have the problem evaluated and, if necessary rectified unless otherwise specified in a contract. The contractor's responsibilities may end once he or she provides the appropriate information on how to contact the manufacturer or fabricator, unless otherwise specified in the contract.

Remodeling Projects

Remodeling is the process of expanding or enhancing an existing structure. There are inherent difficulties in melding the new and old in a way that meets the owner's needs and is also aesthetically pleasing. Therefore, there are circumstances that call for the suspension of the application of these standards in order for the remodeling project to be successfully completed. These include, but are not limited to: the meeting of old, out-of-plumb or out-of-level structures with new structures; the appearance of new materials near weathered, existing materials; and the practical considerations for new projects to work within the limitations of existing buildings.

Because of the unique challenges of joining new with old, a remodeling contractor may build part of or the entire project outside the scope of these guidelines to achieve the contract objectives. When it is reasonable, the contractor may note and discuss a condition with the owner before construction. It is also normal for a contractor (in the course of construction) to discover and accommodate conditions in the old structure that require solutions different from those the standards suggest. In these circumstances, the governing factor is meeting the needs of the owner as outlined in the contract and complying with the local building code. *Note: Remodeling-specific items are in italics.*

How to Use This Manual

This manual is divided into chapters generally organized according to the usual sequence of events in the construction process. Nearly every chapter has major categories or sections; some also have smaller subsections. Each chapter contains individual construction standards.

The standards in this book are numbered according to the following sequence: Chapter Number—Section Number—Guideline Number

Please note that the guideline numbering restarts under each new section within a chapter. Smaller subsections within chapters do not affect the numbering system.

Each construction performance guideline has three parts, with an optional fourth part:

Observation: A description of a particular construction condition, defect or potential problem.

Performance Guideline: The specific criterion for acceptable workmanship.

Corrective Measure: A description of the work required by the contractor to meet the performance guideline if any is required and/or the owner's maintenance responsibility.

Discussion: (optional) Occasionally, when more information would be helpful, there appears an additional part called Discussion; an explanation of unique factors pertinent to the observation, performance guideline, or corrective measure.

The guidelines are supplemented by a glossary and an alphabetical subject index. The subject index is a comprehensive listing of applicable guidelines. Most guidelines are referenced by several listings that generally capture both contractor terminology and a typical owner's description of a condition.

General Instructions

In many areas, construction is covered by a process that requires all work to be done in compliance with locally approved, applicable building and related codes or locally approved or adopted guidelines.

If any conflict arises between these guidelines and applicable requirements of locally approved codes or locally approved or accepted guidelines, as a matter of law, the code requirements or performance criteria may take precedence over these guidelines.

These performance guidelines apply only to contracting work as specified in the contract documents for the project. They do not apply to designs, plans, materials, or workmanship that is supplied by the owner or is outside the scope of the particular project. They are also designed to apply only to the part of the job addressed in each guideline.

Explanation of Terminology in This Manual

Substantial completion of the project - A project has met **substantial completion** where the areas are functional for their intended use as stated by the contract (except for items noted prior to final presentation), and clean-up on the site has been completed.

Warranty period is defined as the duration of the applicable warranty provided by the contractor or any other period agreed to by the parties.

How to Incorporate These Guidelines into a Warranty or Dispute Resolution Program

The warranty, like the contract, should clearly express the intent of the parties. The limited warranty describes the problems for which the contractor will be responsible after completion of the project, and specifies the time period during which the warranty is in force. Moreover, if a builder or remodeler warrants workmanship and materials in a warranty, he or she will want to provide some means of determining whether he or she is complying with the terms of the warranty. Without guidelines referenced, the parties run the risk of having to follow specified dispute resolution procedures where an arbitrary standard may be imposed.

Accordingly, the contract and/or warranty might include a statement such as the one that follows:

All workmanship shall conform to the guidelines found in the publication Long Island Builders Institute “Accepted Building Standards Effective January 1, 2007”. If an item is not covered in that publication, standard industry practice shall govern. This may include the dispute resolution process as specified in the contract documents or by applicable laws.

If there are particular guidelines within this publication that the contractor or owner does not feel are reasonable, they should be specifically excluded from all warranty or contract documents. Likewise, if there are particular guidelines that are not addressed, then by agreement, the contractor and consumer should add these to be part of the warranty and/or contract documents as referenced.

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Long Island Builders Institute

Performance Standards

SITE WORK

**–Coverage 1st Year Only, Workmanship and
Materials**

1-0-1 Observation: The ground has settled around the foundation, over utility trenches, or in other areas.

Performance Guideline: Settling of ground around foundation walls, over utility trenches, or in other filled areas shall not interfere with water drainage away from the home.

Corrective Measure: If the contractor provided final grading, upon request by the owner, one time only the contractor will fill areas that settle more than 6 inches and that affect proper drainage. The owner will be responsible for removal and replacement of shrubs, grass, other landscaping, pavement, sidewalks, or other improvements affected by placement of such fill.

1-0-2 Observation: The site does not drain properly.

Performance Guideline: The necessary grades and swales shall have been established by the contractor to ensure proper drainage away from the home. Standing or ponding water shall not remain for extended periods in the immediate area of the house after a rain (generally no more than 24 hours), except in swales that drain other areas or in areas where sump pumps discharge. In these areas a longer period can be anticipated (generally no more than 48 hours). The possibility of standing water after an unusually heavy rainfall should be anticipated by the owner. No grading determination shall be made while frost or snow is on the ground or while the ground is saturated or before any lawn or plantings are established.

Corrective Measure: The contractor 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 by the contractor.

Discussion: Grass and other landscaping are integral components of the storm water management practice needed to minimize erosion from the site. It is the owner's responsibility to maintain such grass and other landscaping to help ensure proper functioning of the site drainage system. The owner is responsible for maintaining such grades and swales once the contractor has properly established them. If a homeowner, their landscaper or another subcontractor changes the contractor grades or if they create impediments to the original drainage scheme, such as walkways, patios, decks, etc., the contractor is no longer responsible for proper drainage in the areas so affected.

1-0-3 Observation: The site has soil erosion.

Performance Guideline: The contractor shall grade the disturbed areas of the property in accordance with municipal requirements. Contractor is not responsible for soil erosion due to acts of God, or other conditions beyond the contractor's control.

Corrective Measure: No action required. The contractor is not responsible for erosion due to acts of God, site alterations by the owner, lack of maintenance by the owner, or other conditions beyond the contractor's control.

1-0-4 Observation: Water from a nearby or adjacent property flows onto the owner's lot.

Performance Guideline: The contractor is responsible for providing a means of draining water (rain, melting snow or ice) that originates from the lot he is working on (1-0-2). The contractor is not responsible for water flowing from a nearby or adjacent property that he does not own or control, onto the disturbed portions of the owner's lot. The contractor is obliged only to make a reasonable effort in accordance with the municipal requirements to control water flowing from another lot that he does not own or control or on which no dwelling has been erected by providing proper slopes around the newly erected dwelling.

Corrective Measure: It is the contractor's responsibility to control water only in the area immediately surrounding a new dwelling and in the areas he has disturbed.

1-0-5 Observation: Existing trees, shrubs, or other vegetation are damaged in the course of construction.

Performance Guideline: The contractor is only required to make a reasonable and cost effective effort to preserve and protect existing trees, shrubs, other vegetation and landscaping, if any, that he is trying to save. No attempted savings are guaranteed.

Corrective Measure: No contractor action is needed.

Foundation and Slabs - Coverage 1st Year Only Workmanship and Materials

General

2-1-1 Observation: The foundation is out of square.

Performance Guideline: As measured at the top of the foundation wall, the diagonal of a triangle with sides of 12 feet and 16 feet shall be no more than 1 inch more or less than 20 feet. *Remodeling Specific: A contractor and owner may agree to build an addition out of square in order to keep a new exterior wall on line with an existing wall of an out-of-square house.*

Corrective Measure: The contractor will make necessary modifications to the foundation to comply with the performance guidelines for squareness to provide a satisfactory appearance. The contractor may square the first-floor deck or walls by cantilevering over the foundation or locating the deck or walls inset from the outside face of the foundation.

Discussion: Squareness is primarily an aesthetic consideration. The corrective measure emphasizes the primarily aesthetic nature of squareness and makes the criterion for correction "a satisfactory appearance." This allows the contractor to make either a structural change or some cosmetic modification as most appropriate. There are many instances in which the squareness of a foundation is not of consequence because subsequent construction provides an opportunity to make corrections.

2-1-2 Observation: The foundation is not level.

Performance Guideline: This guideline applies only when the levelness of the foundation adversely impacts subsequent construction. As measured at the top of the foundation wall, no point shall be more than 1/2 inch higher or lower than any point within 20 feet. *Remodeling Specific: The contractor and the owner may agree to build an addition out of level in order to keep the floor of an addition on the same plane, and the roof ridge on the same line, as those of an existing, out-of-level structure.*

Corrective Measure: The contractor will make necessary modifications to any part of the foundation or to subsequent construction to meet the performance guideline for levelness. This can be affected by leveling the sills with shims, mortar, appropriate fillers, or other methods.

Discussion: There are many instances in which the levelness of a foundation is not of consequence because subsequent construction provides an opportunity to make corrections.

Interior Concrete Slab

2-2-1 Observation: There is a crack in a concrete footing.

Performance Guideline: Cracks greater than 1/4-inch in width are considered unacceptable.

Corrective Measure: The contractor shall repair any cracks in excess of the performance guideline.

2-2-2 Observation: A concrete slab within the structure has separated or moved at control (expansion and contraction) joints.

Performance Guideline: Concrete slabs within the structure are designed to move at control joints.

Corrective Measure: Because this is normal, no corrective action is required.

2-2-3 Observation: Efflorescence is present on the surface of the basement floor.

Performance Guideline: This is a typical condition caused by moisture reacting with the soluble salts in concrete and forming harmless carbonate compounds.

Corrective Measure: Because efflorescence is a typical chemical reaction within concrete, no corrective measures are required of the contractor.

Discussion: Efflorescence is evidenced by the presence of a white film on the surface of the concrete. It is a particularly common occurrence where masonry or concrete are in contact with high moisture levels as may be found in basements.

2-2-4 Observation: Concrete floor or slab is uneven.

Performance Guideline: Except for basement floors or where a floor or portion of floor has been designed for specific drainage purposes, concrete floors in rooms designed for habitability shall not have pits, depressions, or areas of unevenness exceeding 3/8 inch in 32 inches.

Corrective Measure: The contractor will correct or repair the floor to meet the performance guideline. Proper repair can be affected by thoroughly cleaning, filling, and troweling the surface level using a latex-fortified cement mixture or other materials designed to fill cracks and bond with concrete.

2-2-5 Observation: The concrete floor slab is cracked.

Performance Guideline: Minor cracks in concrete floor slabs are normal. Cracks exceeding 3/16-inch in width or 1/8-inch in vertical displacement shall be repaired if the slab is in conditioned space or basements or the crack interferes with the installation of finish flooring which is part of the contractor's responsibility.

Corrective Measure: The contractor will repair cracks that do not meet the performance guideline.

Discussion: Repairs can be made by using a material designed to fill cracks in concrete.

2-2-6 Observation: Interior concrete work is pitting or spalling. Pitting is evidenced by concrete that has flaked or peeled from the outer surface. Spalling is evidenced by concrete that has chipped.

Performance Guideline: Interior concrete surfaces shall not pit, spall or disintegrate. Aggregate pops are normal; minor scaling is not controllable. Exterior surfaces may not be warranted.

Corrective Measure: The contractor will repair defective concrete surfaces using materials designed for this purpose. The contractor is not responsible for deterioration caused by salt, chemicals, mechanical implements, or other factors beyond the contractor's control on interior or exterior concrete surfaces.

2-2-7 Observation: The interior concrete slab has a loose or sandy surface.

Performance Guideline: The surface shall not be so loose or sandy that it shows obvious deterioration.

Corrective Measure: The contractor will repair defective concrete surfaces using materials designed for this purpose. The contractor is not responsible for deterioration caused by salt, chemicals, mechanical implements, or other factors beyond the contractor's control on interior or exterior surfaces.

Concrete Block Foundation Walls

2-3-1 Observation: A concrete block foundation wall is cracked.

Performance Guideline: Cracks in concrete block foundation walls shall not exceed 1/4-inch in width.

Corrective Measure: The contractor will repair cracks to meet the performance guideline.

Discussion: Shrinkage cracks are common in concrete block masonry and should be expected in crawl space and basements walls. Cracks may be vertical, diagonal, horizontal, or stepped-in masonry joints. Repairs can be made by using a material designed to fill cracks in concrete.

2-3-2 Observation: A concrete block wall is out of plumb or bowed.

Performance Guideline: Concrete block walls shall not be out of plumb greater than 1 inch in 8 feet when measured from the base to the top of the wall or bowed more than 1 inch in 20 feet when measured horizontally. *Remodeling Specific: If tying into an existing foundation that is out of plumb, the contractor and owner will review the existing conditions and scope of work. The contractor will make a reasonable and cost-effective*

effort to meet the performance guideline while complying with the existing building code.

Corrective Measure: The contractor shall repair any deficiencies in excess of the performance guideline. If the wall is to remain unfinished per contract, and the wall meets building codes as evidenced by passed inspections, then no corrective action is required.

Poured Concrete Foundation Walls

2-4-1 Observation: A poured concrete foundation wall is out of plumb or bowed.

Performance Guideline: Poured concrete walls shall not be out of plumb greater than 1 inch in 8 feet when measured vertically or bow more than 1 inch in 20 feet when measured horizontally. *Remodeling Specific: If tying into an existing foundation that is out of plumb or bowed, the contractor and owner will review the existing conditions and scope of work. The contractor will make a reasonable and cost-effective effort to meet the performance guideline while complying with the existing building code.*

Corrective Measure: The contractor shall repair any deficiencies in excess of the performance guideline. If the wall is to remain unfinished per contract, and the wall meets building codes as evidenced by passed inspections, then no corrective action is required.

2-4-2 Observation: An exposed concrete wall has pits, surface voids, or similar imperfections in it.

Performance Guideline: Surface imperfections larger than 1 inch in diameter or 1 inch in depth are considered unacceptable.

Corrective Measure: The contractor will repair holes that do not meet the performance guideline.

Discussion: Proper repair can be affected by thoroughly filling the holes and voids in concrete surfaces. The repaired area will not match the color of the surrounding area.

2-4-3 Observation: The basement wall is cracked (horizontal or vertical separation).

Performance Guideline: Cracks in basement walls shall not allow exterior water to leak into the basement. Shrinkage cracks (cracking caused by external or internal restraints as reduction in moisture content develops) are not unusual in concrete foundation walls. Such cracks greater than 1/8 inch in width shall be repaired.

Corrective Measure: The contractor will repair cracks that do not meet the performance guideline when leaks are present or if cracks exceed 1/8 inch in width.

Discussion: Shrinkage cracks are not unusual and are inherent in the drying process. They should be expected in basement walls due to the nature of concrete. Cracks may be vertical, diagonal or horizontal. The only cracks considered under warranty claims are cracks, which permit water penetration or those that exceed 1/8-inch in width.

2-4-4 Observation: A cold joint is visible on exposed poured concrete foundation walls.

Performance Guideline: A cold joint is a visible joint that indicates where the pour terminated and continued. Cold joints are normal and should be expected to be visible. Cold joints should not be an actual separation or a crack that exceeds 1/4-inch in width.

Corrective Measure: The contractor will cosmetically repair any cold joint that exceeds 1/4-inch in width by parging with a material intended for that purpose.

Basement Floor and Walls

Moisture and Leaks

2-5-1. Observation: Dampness is evident on basement wall or floor.

Performance Guideline: Dampness caused by wicking through the basement walls or floor and condensation of water vapor on cool walls and floors are not the responsibility of the contractor.

Corrective Measure: None. Dampness prevention is the responsibility of the owner.

Discussion: The owner's failure to maintain a proper grade (ground level and pitch of said ground) away from the house can contribute to dampness. Condensation of humidity, which is an owner's responsibility, also contributes to dampness.

2-5-2 Observation: The basement leaks.

Performance Guideline: Leaks resulting in actual trickling of water shall be repaired. Leaks caused by landscaping improperly installed by the owner, or by the failure of the owner to maintain proper grades, are not the contractor's responsibility. Walls and floors of new construction may become damp as concrete, mortar, and other materials dry, and dampness alone is not considered a deficiency.

Corrective Measure: The contractor will take such action as necessary to correct basement leaks, except where the cause is determined to result from the owner's actions or negligence. The owner will be responsible for removal and replacement of shrubs, fences and equipment, and other landscaping if they have to be moved so that the contractor may effect the repairs.

Crawl Space

2-5-3. Observation: Flowing or trickling water appears on interior crawl space surfaces.

Performance Guideline: Crawl spaces should be graded and drained properly to prevent water from accumulating deeper than $\frac{3}{4}$ inch and larger than 9 square feet in the crawl space area. The contractor is not responsible if the exterior grading was provided by the owner or the owner failed to maintain grades established by the contractor.

Corrective Measure: The contractor will take the necessary corrective measures to create positive flow within the crawl space to discharge to the exterior of the structure.

2-5-4. Observation: Condensation is evident on the floor or crawl space surfaces.

Performance Guideline: Condensation in the crawl space shall not result from lack of adequate ventilation as required by code. Condensation resulting from other causes is not the responsibility of the contractor.

Corrective Measure: The contractor will ensure that ventilation meets the appropriate code requirements. Further reduction of condensation is an owner maintenance responsibility.

Discussion: Temporary conditions may cause condensation that cannot be eliminated by ventilation and or a vapor barrier because: Night air gradually cools the interior surfaces of the crawl space. In the morning, moisture picked up by sun-warmed air is carried into the crawl space and condenses on cool surfaces. At night, outside air may rapidly cool foundation walls and provide a cool surface on which moisture may condense. If the house is left unheated in the winter, the floors and walls may provide cold surfaces on which moisture in the warmer crawl space air may condense. Excessive moisture inside a heated house may hit the dew point within or on the colder bottom surface of vapor-permeable floor insulation. The condensation can be reduced by placing a vapor barrier between the insulation and the floor sheathing. If condensation must be entirely eliminated, the owner can do so by sealing and dehumidifying or heating the

crawl space, or by heating and dehumidifying the houses.

Columns

2-6-1 Observation: An exposed wood column is bowed or is out of plumb.

Performance Guideline: When installed, exposed wood columns shall not be bow or be out of plumb more than 1/2-inch in 8 feet.

Corrective Measure: Exposed wood columns out of plumb in excess of 1/2-inch in 8 feet when measured vertically shall be replaced or repaired.

Discussion: Wood columns may become distorted as part of the drying process. Bows and other imperfections that develop after installation cannot be prevented or controlled by the contractor.

2-6-2 Observation: An exposed concrete column is installed bowed or out of plumb.

Performance Guideline: Exposed concrete columns shall not be installed with a bow in excess of 1 inch in 8 feet. They should not be installed out of plumb in excess of 1 inch in 8 feet.

Corrective Measure: The contractor shall repair any deficiencies in excess of the performance guideline.

2-6-3 Observation: A masonry column is out of plumb.

Performance Guideline: Masonry columns should not be constructed out of plumb in excess of 1 inch in 8 feet.

Corrective Measure: The contractor shall repair any deficiencies in excess of the performance guideline.

2-6-4 Observation: A steel column is out of plumb.

Performance Guideline: Steel columns shall not be out of plumb in excess of 3/8-inch in 8 feet when measured vertically.

Corrective Measure: The contractor shall repair any deficiencies in excess of the performance guideline.

Wood Floor Framing Floor Systems

-Coverage 1st Year Only, Workmanship and Materials

Floor Systems

3-1-1 Observation: Springiness, bounce, shaking, or visible sag is present in the floor system.

Performance Guideline: All beams, joists, headers, and other structural members shall be sized and fasteners spaced, according to the National Forest Products Association span tables or local building codes.

Corrective Measure: The contractor will reinforce or modify, as necessary, any floor, wall, ceiling, or roof not meeting the performance guideline.

Discussion: Deflection may indicate insufficient stiffness in the lumber, or may reflect an aesthetic consideration independent of the strength and safety requirements of the lumber. Joists and rafters are required to meet standards for both stiffness and strength. The span tables allow, under full design loadings, a maximum deflection equal to 1/360 of the span for floor and ceiling joists (3/8 inch in 12 feet), 1/240 for rafters up to 3/12 in pitch (1/2 inch in 12 feet), and 1/180 for rafters over 3/12 in pitch (3/4 inch in 12 feet). Structural members are required to meet standards for both stiffness and strength. When an owner's preference is made known before construction, the contractor and the owner may agree upon a higher standard.

Beams, Columns, and Posts

3-2-1 Observation: An exposed wood column or post is split.

Performance Guideline: Sawn wood columns or posts shall meet the grading standard for the species used. Splits that exceed 3/8-inch in width and more than 4 inches in length at time of installation or that develop during the warranty period are considered unacceptable.

Corrective Measure: The contractor will repair or replace any beam or post that does not meet the guideline. Filling splits is acceptable to have structural members meet the guideline.

Discussion: Some characteristics of drying wood are beyond the control of the contractor and cannot be prevented. Compensation is made in span tables for the probable reduction

in strength resulting from splitting caused by drying. Therefore, splitting is primarily an aesthetic concern rather than a structural problem. Checks and splits, which occur during the drying of lumber have the effect of reducing the area in the plane of shear resistance. Consequently, laboratory data developed for shear parallel to grain are reduced substantially for design purposes in order to accommodate the probability of the occurrence of checks and splits after drying.

3-2-2 Observation: An exposed wood beam is split.

Performance Guideline: Sawn wood beams shall meet the grading standard for the species used. Splits that exceed 3/8-inch in width and 4 inches in length at time of installation or that develop during the warranty period are considered unacceptable.

Corrective Measure: The contractor will repair or replace any sawn wood beam that does not meet the guideline. Filling splits is acceptable to have structural members meet the guideline.

Discussion: Some characteristics of drying wood are beyond the control of the contractor and cannot be prevented. Compensation is made in span tables for the probable reduction in strength resulting from splitting caused by drying. Therefore, splitting is primarily an aesthetic concern rather than a structural problem. Checks and splits, which occur during the drying of lumber, have the effect of reducing the area in the plane of shear resistance. Consequently, laboratory data developed for shear parallel to grain are reduced substantially for design purposes in order to accommodate the probability of the occurrence of checks and splits after drying.

3-2-3 Observation: An exposed wood beam or post is twisted or bowed.

Performance Guideline: Exposed wood posts and beams shall meet the grading standard for the species used. Posts and beams with bows and twists exceeding 3/4-inch in an 8-foot section shall not be installed, and those that develop bows and twists exceeding 3/4-inch in an 8-foot section are considered unacceptable.

Corrective Measure: The contractor will repair, sister, or replace any beam or post with a defect that exceeds the guideline.

Discussion: Beams and posts, especially those 3 1/2 inches or greater in thickness (which normally are not kiln dried) will sometimes twist or bow as they dry after milling or installation. Twisting or bowing is usually not a structural concern if posts and beams have been sized according to manufacturers' specifications or local building codes.

3-2-4 Observation: An exposed wood beam or post is cupped.

Performance Guideline: Cups exceeding 1/4-inch in 5-1/2 inches are considered unacceptable.

Corrective Measure: The contractor will repair, sister, or replace any beam or post with a defect that does not meet the guideline.

Discussion: Cupped lumber is lumber that has warped or cupped across the grain in a concave or convex shape. Beams and posts, especially those 3-1/2 inches or greater in thickness (which normally are not kiln dried), will sometimes cup as they dry after milling or installation.

Subfloor and Joists

3-3-1. Observation: Floor squeaks or the sub floor appears loose.

Performance Guideline: Squeaks caused by a loose sub floor are unacceptable, but totally squeak-proof floors cannot be guaranteed.

Corrective Measure: The contractor will refasten any loose sub floor or take other corrective action to eliminate squeaking to the extent possible within reasonable repair capability without removing floor and ceiling finishes.

Discussion: Floor squeaks may occur when a sub floor that has come loose from the joists is deflected by the weight of a person and rubs against the nails that hold it in place. The sub floor or joists may be bowed, and the nails also may be expelled from the wood during drying. Movement may occur between the joist and bridging or other floor members when one joist is deflected while the other members remain stationary. Gluing the sub floor is an acceptable method of code compliance in certain jurisdictions. Renailing floor joists with ring-shank nails will also substantially reduce severe floor squeaks. Because the performance guideline requires the contractor to make a reasonable attempt to eliminate squeaks without requiring removal of floor and ceiling finishes, nailing loose sub flooring with casing nails into the carpet surface and countersinking the head is an acceptable practice.

3-3-2. Observation: Sub floor is uneven.

Performance Guideline: Floors shall not have more than a 1/4-inch ridge or depression within any 32-inch measurement. Allowable floor and ceiling joist deflections are

governed by the local approved building codes. Measurements should not be made at imperfections that are characteristic of the code-approved material used. This guideline does not cover transition points between different materials.

Corrective Measure: The contractor will correct or repair to meet the performance guideline.

3-3-3. Observation: Sub floor is out of square.

Performance Guideline: The diagonal of a triangle with sides of 12 feet and 16 feet along the edges of the floor shall be no more than $\frac{1}{2}$ inch plus or minus 20 feet.

Remodeling Specific: The owner and the contractor may agree to build a wood floor out of square in order to match or otherwise compensate for pre-existing conditions.

Corrective Measure: The contractor will make the necessary modifications to any floor not complying with the performance guideline for squareness. The modification will produce a satisfactory appearance and may be either structural or cosmetic.

Discussion: Squareness is primarily an aesthetic consideration. Regularly repeated geometric patterns in floor and ceiling coverings show a gradually increasing or decreasing pattern along an out of square wall. The guideline tolerance of plus or minus $\frac{1}{2}$ inch in the diagonal allows a maximum increasing or decreasing portion of about $\frac{3}{8}$ -inch in a 12-foot wall of a 12 x 16-foot room. However, a contractor and client may agree to build an addition out of square in order to keep a new exterior wall on line with an existing wall of an out of square house. The corrective measure emphasizes the primarily aesthetic nature of squareness and makes the criteria for correction “a satisfactory appearance.” This criterion allows the contractor to make either a structural change, if the defect is discovered in time, or some cosmetic change to hide the defect, if the construction is in the finishing stages when the defect is discovered.

3-3-4 Observation: A floor is out of level.

Performance Guideline: The floor should not slope more than $\frac{1}{2}$ -inch in 20 feet. Crowns and other lumber characteristics that meet the standards of the applicable grading organization for the grade and species used are not defects. Allowable floor joist deflections are governed by the applicable building codes. Deflections due to overloading by the owner are not the contractor's responsibility. *Remodeling Specific: The contractor and the owner may agree to build an addition out of level in order to keep the floor of an addition on the same plane, and the roof ridge on the same line, as those of an existing, out-of-level structure, or to compensate for some other pre-existing condition.*

Corrective Measure: The contractor will make a reasonable and cost-effective effort to

modify the floor that does not comply with the performance guideline. Allowances should be allowed for shrinkage, cantilevers, and concentrated loads.

Discussion: Sloped floors have both an aesthetic and functional consideration. Measurements for slope should be made across the room, not in a small area.

3-3-5 Observation: Deflection is observed in a floor system constructed of wood I-joists, floor trusses, or similar products.

Performance Guideline: All wood I-joists and other manufactured structural components in the floor system and its components shall be sized and installed as provided in the manufacturers' instructions and code requirements.

Corrective Measure: The contractor will reinforce or modify as necessary any floor component not meeting the performance guideline.

Discussion: Deflection may indicate an aesthetic consideration independent of the strength and safety requirements of the product. When an owner's preference is made known before construction, a higher standard may be agreed upon in writing by the contractor and the owner.

3-3-6 Observation: *Remodeling Specific: Wood flooring is not level at the transition of an existing floor to a room addition floor.*

Performance Guideline: Flooring at a transition area shall not slope more than 1/8-inch over 6 inches unless a threshold is added. Overall step-down, unless previously agreed upon with the owner, shall not exceed 1-1/8 inches. Variations caused by seasonal or temperature changes are not a defect.

Corrective Measure: The flooring transition shall be corrected to meet the performance guideline. The contractor may add threshold or transition material, or pull up the flooring and reduce the high spot, or if possible, shim under new framing to bring floor within guideline.

Discussion: All wood members shrink and expand seasonally, with variations in temperature and humidity, and with aging. After installation, 2x dimensional lumber can shrink up to 1/2-inch. If the flooring, sub floor, or underlayment was not purposely overlapped onto the existing floor, the resulting irregularity is not a defect, but a natural result and characteristic of the wood's aging process. The drier the house becomes, the more shrinkage may be experienced. Either the old or the new floors may slope along the floor joist span. Joists in older homes may have deflected under load. This and other

conditions may cause a hump at the juncture of the old to new.

3-3-7 Observation: *Remodeling Specific: The floor pitches to one side in the door opening between the existing construction and the addition.*

Performance Guideline: If the pitch is the result of the floor of the existing dwelling not being level, then in most situations a transition threshold may be the most appropriate and acceptable means of addressing the condition.

Corrective Measure: The contractor will make a reasonable and cost-effective effort to meet the performance guidelines.

Walls

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Rough Carpentry

4-1-1. Observation: Wood framed wall is out of plumb.

Performance Guideline: Wood framed walls shall not be more than 1/4-inch out of plumb for any 32 inches in any vertical measurement. *Remodeling Specific: The owner and contractor may agree to intentionally build walls out of plumb to match the existing structure to accommodate or compensate for inaccuracies in the existing structure, and to disregard the performance guideline to match a pre-existing structural condition of the existing structure.*

Corrective Measure: The contractor will repair to meet the performance guideline.

4-1-2 Observation: The wall is bowed.

Performance Guideline: Walls shall not bow more than 1/2-inch out of line within any 32-inch horizontal measurement, or 1/2-inch out of line within any 8-foot vertical measurement. *Remodeling Specific: If new wall cladding is installed on existing framed walls, the owner and contractor may agree to straighten the wall as part of scope of work, to install new cladding over existing framing, and to disregard the performance guideline to match a pre-existing structural condition of the existing structure.*

Corrective Measure: The contractor will repair the wall to meet the performance guideline.

Discussion: All interior and exterior walls have slight variances in their finished surface.

On occasion, the underlying framing may warp, twist, or bow after installation.

4-1-3. Observation: Exterior wall leaks because of inadequate caulking or failure of the caulking material.

Performance Guideline: Joints and cracks in exterior wall surfaces and around penetrations shall be properly caulked to prevent the entry of water.

Corrective Measure: The contractor will repair or caulk joints and cracks in exterior wall surfaces, as required to correct deficiencies, one time only during the warranty period. Even when properly installed, caulking will shrink and must be maintained by the owner.

Insulation

4-2-1 Observation: Wall insulation is insufficient.

Performance Guideline: The contractor shall install insulation according to R-values designated in the contract documents or local code, as applicable. Insulation shall be installed according to locally accepted practices.

Windows, Mirrors

4-3-1 Observation: A window is difficult to open or close.

Performance Guideline: Windows should require no greater operating force than that described in the manufacturer's instructions. *Remodeling Specific: The contractor is not responsible for inoperable windows not covered by the remodeling contract.*

Corrective Measure: The contractor will correct or repair the window as required to meet the performance guideline.

4-3-2 Observation: Window grids (muntins) fall or become out of level.

Performance Guideline: Window grids shall not disconnect, fall, or become out of level.

Corrective Measure: Window grids will be repaired or replaced at the contractor's discretion one time only.

4-3-3 Observation: Mirror or glass surfaces are scratched.

Performance Guideline: Glass or mirror surfaces shall not have scratches visible from 10 feet under normal lighting conditions at the time of substantial completion of the project. *Remodeling Specific: This guideline does not apply to existing windows unless they are part of the remodeling contract or are damaged by the contractor. The owner and contractor should examine existing windows prior to contract execution.*

Corrective Measure: The contractor shall replace any scratched glass or mirror surface if noted prior to substantial completion of the project.

4-3-4. Observation: During rains, water appears on interior corner of glazed window unit.

Performance Guideline: Water leakage from improper installation is unacceptable.

Corrective Measure: The contractor shall repair any deficiencies attributable to improper installation.

Discussion: Leakage at the glazing interface is covered under the manufacturer's warranty.

4-3-5 Observation: Window glass is broken and/or a screen is missing or damaged.

Performance Guideline: Glass should not be broken and screens should not be damaged at the time of substantial completion of the project. Screens required by the contract shall be installed.

Corrective Measure: Broken glass and/or missing or damaged screens reported to the contractor before closing will be installed or replaced. Broken glass and/or screens not reported prior to substantial completion of the project are the owner's responsibility.

4-3-6 Observation: A mirror backing is deteriorating.

Performance Guideline: While looking at the mirror, from 10 feet away there should be no noticeable imperfections in the mirror as a result of damage to the mirror backing at the time of substantial completion of the project.

Corrective Measure: The contractor will replace or repair the mirror.

Exterior Doors

4-4-1 Observation: An exterior door is warped.

Performance Guideline: Exterior doors shall not warp to the extent that they become inoperable or cease to be weather-resistant. A 1/4-inch tolerance as measured diagonally from corner to corner is acceptable.

Corrective Measure: The contractor will correct or replace exterior doors that do not meet the performance guideline.

Discussion: Exterior doors will warp to some degree because of the difference in the temperature between inside and outside surfaces. Warping may also be caused by improper or incomplete finishing of the door. The contractor is not responsible for warpage if painting of doors is not within contractor's scope of work.

4-4-2 Observation: Raw wood shows at the edges of inset panel on exterior door.

Performance Guideline: Wooden panels will shrink and expand because of temperature and/or humidity changes, and may expose unpainted surfaces. This does not constitute a defect.

Corrective Measure: None.

4-4-3 Observation: A wooden door panel is split.

Performance Guideline: A split in a panel shall not allow light to be visible through the door.

Corrective Measure: One time only, the contractor will repair, paint, or stain the split panel that does not meet the performance guideline. Caulking and fillers are acceptable. The repainted area may not match the remainder of the door or other doors on the house.

Discussion: Wooden inserts are loosely fitted into the door to allow the inserts to move; this minimizes splitting of the panel or other damage to the door. On occasion, a panel may become "locked" by paint or expansion of the edges with changes in temperature and humidity and no longer "float" between the rails. This may result in the panel splitting.

4-4-4 Observation: An exterior door sticks.

Performance Guideline: Exterior doors shall operate smoothly, except that doors may stick during occasional periods of high humidity or with variations in temperature.

Corrective Measure: The contractor will adjust or replace the door to meet the performance guideline.

Discussion: Exterior doors may warp or bind to some degree because of the difference in the temperature and/or humidity between inside and outside surfaces. The contractor is not responsible for warpage if painting of doors is not within the contractor's scope of work or if the door is repainted by the owner in a color other than those recommended by the door manufacture.

4-4-5 Observation: An exterior door will not shut completely.

Performance Guideline: Exterior doors shall shut completely.

Corrective Measure: The contractor will adjust or replace the door to meet the performance guideline.

Discussion: Exterior doors may warp or bind to some degree because of the difference in the temperature and/or humidity between inside and outside surfaces. The contractor is not responsible for warpage if painting of doors is not within the contractor's scope of work or if the door is repainted by the owner in a color other than those recommended by the door manufacture.

4-4-6 Observation: The plastic molding on the primary door behind the storm door melts from exposure to sunlight.

Performance Guideline: The plastic moldings behind storm doors should not melt if the storm panel is removed and reinstalled by the owner as a part of normal seasonal maintenance operations (i.e., removed in the spring and reinstalled in the fall).

Corrective Measure: No corrective action is required.

Discussion: Plastic moldings may melt or deform if the exterior door is covered by a storm door panel during a warm season, or if it faces the sun. This is not a defect of the door, but a problem caused by the trapping of heat between the storm panel and the door. The owner is also cautioned to follow the manufacturer's recommendations on painting the moldings with a dark color, with or without the use of a storm panel. Dark colors should be avoided.

4-4-7 Observation: Caulking or glazing on the primary door behind the storm door cracks or peels.

Performance Guideline: Glazing or caulking behind storm doors should not crack or peel if the storm panel is removed and installed by owner as part of seasonal maintenance operations (i.e., removed in the spring and reinstalled in the fall).

Corrective Measure: No corrective measure is required.

Discussion: High temperatures may cause glazing and caulking to harden and/or fail prematurely if the door is covered by a storm panel during a warm season or if it faces the sun. This is not a defect of the door caulking, or glazing, but a problem caused by the trapping of heat between the door and the storm panel. The owner is reminded that dark colors tend to accumulate heat and are more likely to cause problems.

4-4-8 Observation: A door swings open or closed by the force of gravity.

Performance Guideline: Exterior doors shall not swing open or closed by the force of gravity alone. *Remodeling Specific: For remodeling projects, this guideline does not apply where a new door is installed in an existing wall that is out of plumb.*

Corrective Measure: The contractor will adjust the door to prevent it from swinging open or closed by the force of gravity.

4-4-9 Observation: Gaps are visible around an exterior door edge, doorjamb, and/or threshold.

Performance Guideline: Gaps between adjacent components shall not vary by more than 3/16-inch. *Remodeling Specific: This applies unless the existing building is out of square or plumb.*

Corrective Measure: The contractor will repair existing the unit to meet performance guideline.

Discussion: Doors must have gaps at their perimeter to accommodate expansion/contraction due to variations in temperature and/or humidity and to enable the door to operate over a wide range of environmental conditions.

4-4-10 Observation: Exterior door hardware or kick plate has tarnished.

Performance Guideline: Finishes on door hardware or kick plates installed by the contractor are covered by the manufacturer's warranty.

Corrective Measure: The owner should contact the manufacturer.

4-4-11. Observation: Sliding patio door or screen will not stay on track.

Performance Guideline: Sliding patio doors and screens shall slide properly on their tracks at the time the job is accepted. The use, cleaning and maintenance necessary to preserve proper operation are an owner responsibility.

Corrective Measure: The contractor shall repair once during the warranty period.

Discussion: Proper operation should be verified by the owner and the contractor at the time the job is accepted.

4-4-12. Observation: Sliding patio door does not roll smoothly.

Performance Guideline: Sliding patio doors shall roll smoothly at the time the job is accepted. The use, cleaning and maintenance necessary to preserve proper operation are an owner responsibility.

Corrective Measure: The contractor shall repair once during the warranty period.

Discussion: Proper operation should be verified by the owner and the contractor at the time the job is accepted.

4-4-13 Observation: A doorknob, deadbolt, or lockset does not operate smoothly.

Performance Guideline: A doorknob, deadbolt, or lockset should not stick or bind during operation.

Corrective Measure: One time only during the warranty period, the contractor will adjust, repair, or replace knobs that are not damaged by abuse.

Exterior Finish

Wood and Manufactured Siding

4-5-1 Observation: Siding is bowed.

Performance Guideline: Bows exceeding 1/2-inch in 32 inches are considered unacceptable. *Remodeling Specific: If new wall covering is installed on existing framed walls, the owner and contractor may agree to straighten out the walls as part of the scope of work. Alternatively, the parties may agree to install new wall covering over existing framing and disregard the performance guideline to match a pre-existing structural*

condition of the existing structure.

Corrective Measure: The contractor will replace any wood or manufactured lap siding with bows that does not meet the performance guideline, and will finish the replacement siding to match the existing siding as closely as practical.

Discussion: If the siding is fastened by nails driven into studs, expansion caused by changing relative temperatures and/or humidity may cause bulges or waves. Even with proper installation, siding will tend to bow inward and outward in adjacent stud spaces.

4-5-2 Observation: An edge or gap is visible between adjacent pieces of siding or siding panels and other materials.

Performance Guideline: Gaps wider than 3/16-inch or in excess of the manufacture's standard are considered unacceptable. This guideline does not apply to adjacent pieces or panels that have shiplap or similar joints.

Corrective Measure: The contractor will repair gaps that do not meet the performance guideline.

Discussion: Proper repair can be affected by providing joint covers or by caulking the gap. This is important if the gaps were intentionally made for expansion joints. If the siding is painted, the contractor will paint the new caulking to match the existing caulking as closely as practical, but an exact match cannot be ensured.

4-5-3 Observation: Lap siding is not parallel with the course above or below.

Performance Guideline: A piece of lap siding may not be more than 1/2 inch off parallel with contiguous courses in any 20-foot measurement, unless the owner and the contractor have previously agreed to disregard the performance guideline to match a pre-existing condition. *Remodeling Specific: The owner and contractor may agree to install siding to match existing conditions on existing structure and to disregard the performance guideline for this item.*

Corrective Measure: The contractor will reinstall siding to meet the performance guideline for straightness, and will replace with new siding any siding damaged during removal.

Discussion: *For remodeling projects, if the contractor and the owner have agreed that the floor of an addition is to be on a different plane from an existing floor (e.g., out of level), the siding on the addition may not be parallel and in line with the existing siding.*

4-5-4 Observation: Face nails are driven below the surface of the hardboard siding.

Performance Guideline: Siding nails should not be driven below the surface of hardboard siding such that visible fiber of the siding is exposed.

Corrective Measure: The contractor shall repair as necessary to meet performance guideline. The following repairs are appropriate in most instances: If visible fiber of hardboard siding is exposed, paint surface to coat fiber. If nail is 1/16 to 1/8-inch below the surface, fill or caulk and touch-up paint. If nail is more than 1/8-inch below the surface, fill or caulk and add an additional nail flush to the surface.

Tongue and Groove Wood Siding

4-5-5 Observation: Siding boards have buckled.

Performance Guideline: Boards that project more than 3/16-inch from the face of adjacent boards are considered unacceptable.

Corrective Measure: The contractor will repair or replace any boards that don't meet the performance guideline.

Discussion: Buckling is caused by wood expanding as a result of increased temperature and/or relative humidity. It can be minimized by leaving space between the tongues and grooves to allow room for expansion and by storing the product outside for a few days to allow it to adjust to the ambient conditions prior to installation.

Wood Shake Siding

4-5-6 Observation: Cedar shakes or shingles have "bled" through paint or stain applied by contractor.

Performance Guideline: Resins and extractives bleeding through paint or stain, or blackening of shakes or shingles are unacceptable. This performance guideline does not apply if "natural weathering" or semi-transparent stain, or other similar products, are specified for the job.

Corrective Measure: One time during the warranty period the contractor will clean and treat shakes to provide a reasonable appearance and prevent further bleeding.

Plywood or Other Veneer Siding

4-5-7 Observation: Siding has delaminated (layers have separated from one another).

Performance Guideline: Siding shall not delaminate.

Corrective Measure: The contractor will replace delaminated siding that is not covered under manufacturer's warranty, unless the delaminating was caused by the owner's actions or negligence. The repaired area may not precisely match the original siding.

4-5-8 Observation: Joints between sidings have separated.

Performance Guideline: Joint separations exceeding 3/16-inch are considered unacceptable.

Corrective Measure: The contractor will caulk or repair siding as necessary to fill the joint. The repaired area may not match the original siding precisely.

Discussion: Plywood siding, like all wood products, will expand and contract with changes in temperature and/or humidity.

4-5-9 Observation: Siding is bowed.

Performance Guideline: Bows exceeding 1/2-inch in 32 inches are unacceptable.

Corrective Measure: The contractor will install additional nails in siding to meet acceptable nailing schedules and will replace any siding that does not meet the guideline because of bows.

Discussion: Some waviness in siding is to be expected because of bows in studs. However, proper nailing of siding will straighten most bows.

Aluminum or Vinyl Lap Siding

4-5-10 Observation: Aluminum or vinyl siding is bowed or wavy.

Performance Guideline: Some waviness in aluminum or vinyl lap siding is to be expected because of bows in studs. Waves or similar distortions in aluminum or vinyl lap siding are considered unacceptable if they exceed 1/2- inch in 32 inches.

Corrective Measure: The contractor will correct any waves or distortions to comply with the performance guideline by reinstalling or replacing siding as necessary.

Discussion: This problem is often caused by the siding being nailed too tightly to the house instead of loosely “hung” in the center of the nail slots, or by not allowing adequate room for the siding to expand at the ends.

4-5-11 Observation: Siding color is faded.

Performance Guideline: Any color siding, when exposed to the ultra-violet rays of the sun, will fade and this condition cannot be prevented by the contractor.

Corrective Measure: The owner should contact the siding manufacturer.

Discussion: Color warranties are provided by the siding manufacturer. The owner should contact the manufacturer with questions or claims regarding changes in color of vinyl or aluminum siding. Color and fade imperfections beyond an expected degree may be covered by the manufacturer's warranty, except where siding is shaded differently from the rest of the wall, such as under shutters or behind vegetation.

4-5-12 Observation: Aluminum or vinyl lap siding trim is loose from house.

Performance Guideline: Trim shall not separate more than ¼-inch from the house.

Corrective Measure: The contractor will reinstall trim or repair separations as necessary to comply with the performance guideline.

4-5-13 Observation: Aluminum or vinyl lap siding courses are not parallel with eaves (the horizontal edge at the low side of a sloping roof) or wall openings.

Performance Guideline: Any piece of aluminum or vinyl lap siding more than ½-inch off parallel in 20 feet with contiguous courses, or contiguous break such as a soffit line, is unacceptable. *Remodeling Specific: The owner and contractor may agree to disregard the performance guideline to match a pre-existing structural condition.*

Corrective Measure: The contractor will reinstall siding to comply with the performance guideline and replace any siding damaged during removal with new siding.

Discussion: *Remodeling Specific: If the contractor and the owner agree that the floor of an addition is to be on a different plane from the existing floor (for example, a pre-existing out of level condition), the siding on the addition may not be parallel and in line with existing siding.*

4-5-14 Observation: Aluminum or vinyl lap siding nail shows under window, door, or eave.

Performance Guideline: All facing nails shall be of a color to match the trim they affix. No nail heads in the field of the siding shall be exposed.

Corrective Measure: The contractor will install trim as necessary to cover the nails.

Discussion: Vinyl siding generally should not be face nailed. However, there are appropriate and typical occasions when a single face nail may be needed to reinforce a joint or hold the siding to the wall when it is cut to fit around window frames, doors, roofs, or other obstructions on the wall. In most cases (the only exception would be the top piece on a gable end), vinyl siding should never need to be face nailed when proper accessory products are used. For example, under a window application the trim (J- channel) can be utilized in conjunction with utility trim and snap-punching the top of the modified vinyl siding. If face nailing is the only option, a 1/8-inch diameter hole should be pre-drilled to allow for expansion and contraction.

4-5-15 Observation: Aluminum or vinyl lap siding trim accessory is loose from caulking at windows or other wall openings.

Performance Guideline: Siding trim accessories shall not separate from caulking at windows or other wall openings during the warranty period.

Corrective Measure: The contractor will repair or recaulk as necessary once during the warranty period to eliminate the separation.

4-5-16 Observation: Aluminum or vinyl lap siding is cut crooked.

Performance Guideline: Visible cuts in siding shall be straight, plumb, and neat. Crooked cuts greater than 1/8-inch from true are not acceptable. *Remodeling Specific: The owner and contractor may agree to install siding to match conditions on the existing structure and to disregard the performance guideline for this item.*

Corrective Measure: The contractor will repair or replace siding, which has visible crooked cuts.

Discussion: Cut edges of vinyl siding should never be visible when proper trim and accessories are used.

4-5-17 Observation: Aluminum or vinyl lap siding is not correctly spaced from moldings.

Performance Guideline: Prescribed spacing between siding and accessory trim is typically 1/4-inch, or should comply with the manufacturer's installation instructions.
Remodeling Specific: The owner and contractor may agree to install siding to match conditions on existing structure and to disregard the performance guideline for this item.

Corrective Measure: The contractor will correct to meet the guideline.

Masonry Cement and Veneer Board Siding

4-5-18 Observation: Cement board siding is cracked or chipped.

Performance Guideline: A cement product, this siding is susceptible to the same characteristic limitations as other cement products. Cracks more than 2 inches in length and 1/8-inch in width are considered unacceptable. Chips or dents not reported at time of substantial completion of the project are not covered.

Corrective Measure: Cracked or chipped cement board will be repaired or replaced as necessary, as determined by the contractor.

4-5-19 Observation: Cement board siding is improperly fastened.

Performance Guideline: Siding shall be nailed flush and perpendicular per the manufacturer's instructions. Staples shall not be used.

Corrective Measure: Overdriven nail heads or nails driven at an angle shall be filled with cementitious patching compound to match the existing area as closely as possible.

Discussion: The manufacturer's instructions include guidelines to reduce chipping or cracking of siding.

4-5-20 Observation: Masonry or veneer wall is cracked.

Performance Guideline: Cracks visible from distances in excess of 20 feet or larger than 1/4-inch in width are not acceptable.

Corrective Measure: The contractor will repair cracks in excess of the performance guideline by tuck pointing (removing deteriorated mortar from the surface of the existing wall, and inserting fresh mortar), patching, or painting. The contractor will not be

responsible for color variations between original and new mortar.

Discussion: Small hairline cracks resulting from shrinkage are common in mortar (a substance used to join masonry units, consisting of cementitious materials, fine aggregate and water) joints in masonry construction.

4-5-21. Observation: Exterior cut bricks (less than full) are of different thickness below openings.

Performance Guideline: Cut bricks used in the course directly below an opening shall not vary from one another in thickness by more than 1/4-inch. The smallest dimension of a cut brick should be greater than 1 inch.

Corrective Measure: The contractor will repair the wall to meet the performance guideline.

Discussion: Bricks are cut to achieve required dimensions at openings and ends of walls when it is not possible to match unit/mortar coursing.

4-5-22 Observation: A masonry or brick veneer course is not straight.

Performance Guideline: No point along the bottom of any course shall be more than 1/4-inch higher or lower than any other point within 10 feet along the bottom of the same course, or 1/2-inch in any length. *Remodeling Specific: The owner and contractor may agree to install brick veneer to match conditions on the existing structure and to disregard the performance guideline for this item.*

Corrective Measure: The contractor will rebuild the wall as necessary to meet the performance guideline.

Discussion: Dimensional variations of the courses depend upon the variations in the brick selected.

4-5-23 Observation: Brick veneer is spalling.

Performance Guideline: Spalling of newly manufactured brick should not occur and is considered unacceptable. Spalling of used brick is acceptable.

Corrective Measure: The contractor will repair or replace newly manufactured bricks that have spalled. An exact match of brick and mortar cannot be assured.

4-5-24 Observation: Mortar stains are observed on exterior brick or stone.

Performance Guideline: Exterior brick and stone shall be free from mortar stains detracting from the appearance of the finished wall when viewed from a distance of 20 feet.

Corrective Measure: The contractor will clean the mortar stains to meet the performance guideline.

4-5-25 Observation: Efflorescence is present on the surface of masonry or mortar.

Performance Guideline: This is a common condition caused by moisture reacting with the soluble salts in the mortar.

Corrective Measure: No corrective actions are required of the contractor.

Discussion: Efflorescence is evidenced by the presence of a white film on the surface of masonry or mortar. It is a particularly common occurrence where masonry or concrete are in contact with high moisture levels as may be found in basements.

Stucco and Parge

4-5-26 Observation: An exterior stucco wall surface is cracked.

Performance Guideline: Cracks in exterior stucco wall surfaces shall not exceed 1/8-inch in width.

Corrective Measure: One time only, the contractor will repair cracks exceeding 1/8-inch in width. Caulking and touch-up painting are acceptable. An exact color or texture match may not be unattainable.

Discussion: "Stucco" includes cementitious coatings and similar synthetically based finishes.

4-5-27 Observation: The colors of exterior stucco walls do not match.

Performance Guideline: The colors of new exterior stucco walls may not perfectly match the colors of old exterior stucco walls, nor is it expected that exact matches will be attained for the same material that is applied on different days or under differing environmental conditions (e.g., temperature, humidity, etc.).

Corrective Measure: No corrective measure is required. Because of the unique nature of stucco finishes, exact match of color may not be possible.

Discussion: Coloring of stucco is affected by a number of variables. It is impractical to achieve a color match between stucco coatings applied at different times.

4-5-28 Observation: The textures of exterior stucco wall finishes do not match.

Performance Guideline: Texture of new exterior stucco walls applied at different times may not perfectly match the textures of old exterior stucco walls. *Remodeling Specific: The texture of new exterior stucco walls may not perfectly match the textures of old exterior stucco walls.*

Corrective Measure: No corrective measure is required. Because of the unique nature of stucco finishes, exact match of texture finish may not be possible.

Discussion: "Stucco" includes cementitious coatings and similar synthetically based finishes. Approved samples prior to installation can minimize misunderstandings about color and texture.

4-5-29 Observation: Separation of coating from base on exterior stucco wall.

Performance Guideline: The coating shall not separate from the base on an exterior stucco wall during the warranty period.

Corrective Measure: The contractor will repair areas where the coating has separated from the base.

4-5-30 Observation: Lath is visible through stucco.

Performance Guideline: Lath should not be visible through stucco, nor should the lath protrude through any portion of the stucco surface.

Corrective Measure: The contractor will make necessary corrections so that lath is not visible. The finish colors may not match.

4-5-31 Observation: Rust marks are observed on the stucco finish coat.

Performance Guideline: Rust marks on the stucco surface are considered unacceptable if more than 5 marks measuring more than 1 inch long occur per 100 square feet.

Corrective Measure: The contractor may repair or replace affected subsurface

components, or seal the rusted areas and recolor the wall.

4-5-32 Observation: There is water damage to interior walls as a result of a leak in the stucco wall system.

Performance Guideline: Stucco walls should be constructed and flashed to prevent water penetration to the interior of the structure under normal weather and water conditions. Damage to the stucco system caused by external factors out of the contractor's control that result in water penetration is not the contractor's responsibility.

Corrective Measure: If water penetration is the result of a system failure and doesn't result from external factors, the contractor will make necessary repairs to prevent water penetration through the stucco wall system.

Discussion: Water penetration resulting from abnormal external factors, such as windblown moisture or sprinkler systems, are not the contractor's responsibility.

Exterior Trim

4-6-1. Observation: Gaps show in exterior trim.

Performance Guideline: Joints between exterior trim elements, including siding and masonry, shall not result in joints opened wider than ¼-inch. In all cases the exterior trim shall perform its function of excluding the elements.

Corrective Measure: The contractor will repair open joints that do not meet the performance guideline. Caulking is acceptable.

4-6-2 Observation: Exterior trim board is split.

Performance Guideline: Splits wider than 1/8-inch are considered unacceptable.

Corrective Measure: The contractor will repair splits by filling with a durable filler. Touch-up painting may not match the surrounding area.

4-6-3 Observation: Exterior trim board is bowed or twisted.

Performance Guideline: Bows and twists exceeding 3/8-inch in 8 feet are considered unacceptable.

Corrective Measure: The contractor will repair defects that do not meet the performance guideline by refastening or replacing deformed boards. Touch-up painting may not match the surrounding area.

4-6-4 Observation: Exterior trim board is cupped.

Performance Guideline: Cups exceeding 3/16-inch in 5 1/2 inches are considered unacceptable.

Corrective Measure: The contractor will repair defects that do not meet the performance guideline by refastening or replacing deformed boards. Touch-up painting may not match the surrounding area.

Paint, Stain, and Varnish

4-7-1 Observation: Exterior painting, staining, or refinishing is required because of repair work.

Performance Guideline: Repairs required under these performance guidelines shall be finished to match the immediate surrounding areas as closely as practical.

Corrective Measure: The contractor will finish repaired areas as indicated.

Discussion: Touch-up painting, staining, or refinishing may not match the surrounding area.

4-7-2 Observation: Exterior paint or stain has peeled, flaked, or physically deteriorated.

Performance Guideline: Exterior paints and stains shall not fail during the warranty period.

Corrective Measure: If exterior paint or stain has peeled, developed an alligator pattern, or blistered, the contractor will properly prepare and refinish affected areas and match the color as closely as practical. Where deterioration of the finish affects more than 50 percent of the piece of trim or wall area, the contractor will refinish the entire wall.

4-7-3 Observation: Exterior paint or stain has faded.

Performance Guideline: Fading of exterior paints and stains is common. The degree of fading depends on environmental conditions.

Corrective Measure: Because fading is a common occurrence in paint and stains, no corrective action is required.

4-7-4 Observation: Varnish or lacquer finishes have deteriorated.

Performance Guideline: Clear finishes used on exterior surfaces may deteriorate rapidly. This is beyond the contractor's control.

Corrective Measure: Heat and sunlight can cause rapid deterioration of clear finishes. Maintenance is the owner's responsibility. No corrective action is required of the contractor.

4-7-5 Observation: There is paint or stain overspray on surfaces not intended for paint or stain.

Performance Guideline: Paint or stain overspray on surfaces not intended for paint or stain that is visible at a distance of 6 feet under normal natural lighting conditions is not acceptable.

Corrective Measure: The contractor shall clean affected surfaces without damaging the surface.

4-7-6 Observation: Cabinet stain is uneven. Cabinet paint is not uniform or is mismatched.

Performance Guideline: Uneven stain color on wood cabinets is considered acceptable and is a result of the natural wood grain. Painted cabinets should appear uniform under normal lighting conditions at a distance of 6 feet.

Corrective Measure: The contractor will repaint or replace painted cabinets that do not meet the performance guideline.

4-7-7 Observation: Mildew or fungus is visible on exterior painted surfaces.

Performance Guideline: Painted or finished surfaces shall be free of observable mildew and fungus at the time of substantial completion of the job. However, mildew or fungus may form on painted surfaces over time because of warmth and moisture.

Corrective Measure: The contractor will remove mildew and fungus before substantial completion of the job. Subsequent mildew or fungus formation is a condition the contractor cannot control. The owner is responsible for future cleaning of the painted

item as necessary to prevent or remove mildew and fungus.

ROOFS

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5-1-1 Observation: The roof ridge beam has deflected.

Performance Guideline: Roof ridge beam deflection greater than 1 inch in 8 feet is considered unacceptable. *Remodeling Specific: If this is not in the scope of work, the guideline will be disregarded.*

Corrective Measure: The contractor shall repair affected ridge beams that do not meet the performance guideline.

5-1-2 Observation: A rafter or ceiling joist bows (up or down).

Performance Guideline: Bows greater than 1 inch in 8 feet are unacceptable. *Remodeling Specific: If this is not in the scope of work, the guideline will be disregarded.*

Corrective Measure: The contractor shall repair affected rafters or joists that bow in excess of the performance guideline.

Roof Sheathing

5-2-1 Observation: Roof sheathing is wavy or appears bowed.

Performance Guideline: Roof sheathing shall not bow more than 1/2-inch in 2 feet. *Remodeling Specific: If new sheathing is installed over existing rafters, the sheathing will follow the bows of the existing rafters. The owner and contractor should agree on whether or not the rafters are to be straightened. If they are not to be straightened, the performance guideline for this item will be disregarded.*

Corrective Measure: The contractor will straighten bowed roof sheathing as necessary to meet the performance guideline.

Discussion: In rare instances, the contractor might have to install blocking between the framing members to straighten the sheathing.

Roof Vents

5-3-1 Observation: An attic vent or louver leaks.

Performance Guideline: Attic vents and louvers shall not leak. However, infiltration of wind-driven rain and snow are not considered leaks and are beyond the control of the contractor.

Corrective Measure: The contractor shall repair or replace the roof vents as necessary to meet the performance guideline.

Discussion: Properly installed louvers or vents may at times allow penetration of rain or snow under strong wind conditions and are not deficiencies.

Roof Installation and Leaks

Asphalt Shingles

5-4-1 Observation: The roof or flashing leaks.

Performance Guideline: Roofs and flashing shall not leak under normal conditions, except where the cause is determined to result from ice build-up or the owner's actions or negligence.

Corrective Measure: The contractor will repair any verified roof or flashing leaks not caused by ice build-up, leaves, debris, or the owner's actions or negligence. It is the owner's responsibility to keep the roof drains, gutters, and downspouts free of debris.

5-4-2 Observation: Ice builds up on the roof.

Performance Guideline: During prolonged cold spells ice is likely to build up on a roof, especially at the eaves. This condition naturally can occur when snow and ice accumulates.

Corrective Measure: No action is required of the contractor. Prevention of ice build-up on the roof is a owner maintenance item.

Discussion: In the event ice builds up on the roof and then melts causing damage, this consequential damage is also the owner's responsibility.

5-4-3 Observation: Shingles have blown off.

Performance Guideline: Shingles shall not blow off in winds less than stated in the manufacturer's warranty or applicable building codes.

Corrective Measure: If shingles were not installed properly, they will be repaired or replaced in the affected area.

5-4-4 Observation: Shingles are not horizontally aligned.

Performance Guideline: Shingles should be installed according to the manufacturer's instructions. *Remodeling Specific: The owner and the contractor may agree prior to installation that the horizontal line of shingles on the roof of an addition need not line up with those of the existing structure if the floors (and hence, the eaves and ridge) are not to be built on the same plane.*

Corrective Measure: The contractor will remove shingles that do not meet the performance guideline, and will repair or replace them with new shingles that are properly aligned.

Discussion: The bottom edge of dimensional shingles may be irregular; the irregularity is an inherent part of the design.

5-4-5 Observation: New shingles do not match existing shingles.

Performance Guideline: Because of weathering and manufacturing variations, the color of new shingles will not exactly match the color of existing shingles.

Corrective Measure: The contractor is not responsible for precisely matching the color of existing shingles.

5-4-6 Observation: Asphalt shingle edges or corners are curled or cupped.

Performance Guideline: Asphalt shingle edges and corners shall not curl or cup more than 1/2-inch.

Corrective Measure: No corrective action is required of the contractor. Cupping in excess of 1/2-inch should be reported to the manufacturer.

5-4-7 Observation: Asphalt shingles do not overhang the edges of the roof, or hang too far over the edges of the roof.

Performance Guideline: Asphalt shingles shall overhang roof edges by not less than 1/4-inch and not more than 3/4-inch unless the manufacturer's instructions indicate otherwise.

Corrective Measure: The contractor will reposition or replace shingles as necessary to meet the performance guideline.

5-4-8 Observation: Shading or a shadowing pattern is observed on a new shingle roof.

Performance Guideline: Shading or shadowing is a defect only if it results from failure to use shingles of the type specified in the contract.

Corrective Measure: The contractor will replace shingles not conforming to the manufacture's standards.

5-4-9 Observation: Asphalt shingles have developed surface buckling.

Performance Guideline: Asphalt shingle surfaces need not be perfectly flat. Buckling higher than 1/4-inch is considered unacceptable. *Remodeling Specific: If an owner elects to re-roof over an existing roof owner must be aware that the new roof will follow the contours of the underlying roof.*

Corrective Measure: The contractor will repair or replace the affected shingles to meet the performance guideline.

5-4-10 Observation: Sheathing nails have loosened from framing and raised asphalt shingles.

Performance Guideline: Nails shall not loosen from roof sheathing to raise asphalt shingles from surface.

Corrective Measure: The contractor shall repair all areas as necessary to meet the performance guideline.

Discussion: It is not uncommon for nails to "work themselves out" due to variations in temperature. The contractor can re-drive or remove and replace fasteners that withdraw from the framing. Any resulting holes should be sealed or the shingle should be replaced (a perfect color/shade match cannot be assured).

5-4-11 Observation: Roofing nails are exposed at the ridge or hip of a roof.

Performance Guideline: Nail heads shall be sealed.

Corrective Measure: The contractor shall repair areas to meet the performance guideline.

5-4-12 Observation: Holes from construction activities are found in asphalt shingles.

Performance Guideline: Holes from construction activities shall be flashed or sealed below the asphalt shingle tab to prevent leakage. If the patch is visible from the ground, the shingle should be replaced.

Corrective Measure: The contractor will repair or replace the affected shingles to meet the performance guideline.

5-4-13 Observation: *Remodeling Specific: Existing roof shingles are telegraphing through new asphalt shingles.*

Performance Guideline: *Remodeling Specific: Some telegraphing is common when re-roofing over existing roofing.*

Corrective Measure: Because this is a common occurrence, no corrective action is required.

Roll Roofing

5-4-14 Observation: Water is trapped under roll roofing.

Performance Guideline: Water shall not become trapped under roll roofing.

Corrective Measure: If water becomes trapped under roll roofing during the warranty period, the contractor will repair or replace the roofing as necessary to meet the performance guideline.

5-4-15. Observation: Roofing is blistered but does not admit water.

Performance Guideline: Surface blistering of roll roofing is caused by unusual conditions of heat and humidity acting on the asphalt and cannot be controlled by the contractor.

Corrective Measure: None.

5-4-16 Observation: Water is standing on a flat roof.

Performance Guideline: Water shall drain from a flat roof except for minor ponding within 24 hours of a rainfall. Minor ponding shall not exceed 3/8-inch in depth.

Corrective Measure: The contractor will take corrective action to ensure proper drainage of the roof.

Chimney

5-5-1 Observation: A crack in a masonry chimney cap or crown causes leakage.

Performance Guideline: It is common for caps to crack due to expansion and contraction. As a result, leaks may occur.

Corrective Measure: If cracking causes leakage the contractor will repair the cap or crown. Caulking or other sealant is acceptable.

5-5-2 Observation: New chimney flashing leaks.

Performance Guideline: New chimney flashing shall not leak under normal conditions.

Corrective Measure: The contractor will repair leaks in new chimney flashing that are not caused by ice build-up, other common occurrences, or by the owner's actions or negligence.

Discussion: The accumulation of ice and snow on the roof is a natural occurrence and cannot be prevented by the contractor.

Gutters and Downspouts

5-6-1 Observation: The gutter or downspout leaks.

Performance Guideline: Gutters and downspouts shall not leak.

Corrective Measure: The contractor will repair leaks in gutters and downspouts. Sealants are acceptable.

5-6-2 Observation: The gutter overflows during a heavy rain.

Performance Guideline: Gutters may overflow during a heavy rain.

Corrective Measure: The contractor shall repair the gutter if it overflows during normal rains.

Discussion: The owner is responsible for keeping gutters and downspouts free from

debris that could cause overflow.

5-6-3 Observation: Water remains in the gutter after a rain.

Performance Guideline: The water level shall not exceed 1/2-inch in depth if the gutter is unobstructed by ice, snow, or debris.

Corrective Measure: The contractor will repair the gutter to meet the performance guideline. The owner is responsible for maintaining gutters and downspouts and keeping them unobstructed.

Discussion: Contractors usually install residential gutters with minimal slope in order to maintain an attractive appearance. Installing gutters with 1/32-inch drop in 1 foot generally will prevent water from standing in the gutters. Even so, small amounts of water may remain in some sections of the gutter for a time after a rain. In areas with heavy rainfall and/or ice build-up, a steeper pitch or additional downspouts may be desirable.

- Skylights

5-7-1 Observation: Skylight leaks.

Performance Guideline: Skylights shall be installed in accordance with manufacturer's specifications. Leaks resulting from improper installation are unacceptable. Condensation on interior surfaces is not a leak and not considered a defect.

Corrective Measure: The contractor will repair any improperly installed skylight to meet the performance guideline.

Discussion: Leaks are often caused by other factors such as improper flashing of vents, chimneys or vertical walls. These defects often show up at the skylight opening. Before deeming the skylight to be defective other possible causes should be ruled out by careful examination and a thorough water test.

Plumbing

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Note: Remodeling Specific: The contractor is responsible only for areas of the property worked on and specified in the contract, and not for the entire house.

Water Supply System

6-1-1 Observation: Condensation appears on pipes, fixtures and plumbing supply lines.

Performance Guideline: Condensation on pipes, fixtures, and plumbing supply lines may occur at certain combinations of temperature and indoor humidity. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: The owner is responsible for controlling humidity in the home.

Discussion: The owner may insulate pipes and supply lines.

Plumbing Fixtures

6-1-2 Observation: A faucet or valve leaks.

Performance Guideline: No faucet or valve shall leak because of defects in material or workmanship. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: The contractor will repair or replace the leaking faucet or valve.

Discussion: Leakage caused by worn or defective washers or seals is homeowner maintenance item.

6-1-3. Observation: Water pipe is noisy.

Performance Guideline: Because of the flow of water and pipe expansion, the water pipe system will emit some noise. However, the pipes should not make the pounding noise called "water hammer" (noise occurring in a water pipe when air is trapped in the pipe).

Corrective Measure: The contractor cannot remove all noises caused by water flow and pipe expansion. However, the contractor will correct the system to eliminate "water hammer."

Plumbing Fixtures

6-2-1 Observation: A plumbing fixture, appliance, or trim fitting is defective.

Performance Guideline: Plumbing fixtures, appliances, and trim fittings shall not be damaged or defective at the time of substantial completion of the project. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: If the fixtures, appliances or trim were supplied by contractor and they are not in accordance with the manufactures guidelines they must be repaired or replaced. If supplied and or installed by the owner no action is required of the contractor. Defective trim fittings, appliances, and fixtures are covered under manufacturers'

warranties.

6-2-2 Observation: The surface of a plumbing fixture is cracked or chipped.

Performance Guideline: Cracks, scrapes and chips in surfaces of bathtubs and sinks are considered unacceptable if they are visible from 3 feet away in normal lighting conditions. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: If the fixtures were supplied by the contractor and they do not meet the performance guideline they must be repaired or replaced. If supplied and or installed by the owner no action is required of the contractor. The contractor is not responsible for repairs unless the damage is reported to the contractor prior to substantial completion of the project. Defective fixtures are covered under manufacturers' warranties.

Discussion: Fiberglass and acrylic fixtures often may be repaired.

6-2-3 Observation: A fiberglass tub or shower enclosure base flexes.

Performance Guideline: The tub or showers are to be installed according to the manufacturer's instructions. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: The contractor shall repair the base to meet the performance guideline.

6-2-4 Observation: A vanity top is cracked.

Performance Guideline: Vanity tops shall not have cracks at drain connections when installed. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: The contractor shall repair or replace the vanity top to meet the performance guidelines. Cracks must be noted prior to substantial completion of the project.

6-2-5 Observation: Staining of plumbing fixtures due to high iron content in water.

Performance Guideline: None.

Corrective Measure: None. High iron content in the water supply system will cause staining of plumbing fixtures.

Discussion: Maintenance and treatment of the water is the owner's responsibility.

Electrical

-Coverage 1st Year Only, Workmanship and Materials

Fuses and Circuit Breakers

Note: Remodeling Specific: The contractor is responsible only for areas of the property worked on and specified in the contract, and not for the entire house.

7-1-1 Observation: A fuse blows or a circuit breaker trips.

Performance Guideline: Fuses and circuit breakers shall not be tripped by normal usage. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: The contractor will check wiring circuits and components for conformity with applicable electrical code requirements. The contractor will correct noncompliant elements.

Discussion: Blown fuses and tripped breakers are symptoms of a problem in some part of the electrical system in the home or some consumer product connected to the system. Although defective components are possible, most electrical malfunctions are caused by consumer-owned fixtures and appliances. The consumer should unplug or disconnect fixtures and appliances on the circuit and then replace the fuse or reset the breaker. If the problem recurs, the contractor should be notified.

7-1-2 Observation: A ground fault circuit interrupter (GFCI) or arc fault circuit interrupter (AFCI) trips frequently.

Performance Guideline: Ground fault and arc fault circuit interrupters shall perform as designed. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: The contractor will install ground fault and arc fault circuit interrupters in accordance with applicable electrical codes. Tripping is to be expected and is not covered unless it is caused by a component failure or incorrect installation.

Discussion: Both ground fault and arc fault circuit interrupters are very sensitive devices and are easily tripped. GFCI's protect outlets in wet areas (for example, bathrooms, kitchens, garages, exterior, etc.). Outlets protected by GFCIs may be connected in series; it may not be readily apparent that an inoperative convenience outlet is the result of a tripped GFCI in another room (and not necessarily in the electrical panel). AFCIs

sometimes are installed to protect bedroom circuits. The most common cause of tripping by AFCIs is damaged cords or plugs on owners' lamps, small appliances, or other devices. AFCIs are usually found in the electrical panel.

7-2-1 Observation: A light fixture is tarnished.

Performance Guideline: Finishes on light fixtures may be covered under the manufacturer's warranty. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: No action is required of the contractor. Owner should contact manufacturer.

7-2-2 Observation: Receptacle or switch covers protrude from the wall.

Performance Guideline: Receptacle or switch covers should not be more than 1/16-inch from the adjoining wall surface. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: The contractor will adjust the covers to meet performance guideline.

7-2-3 Observation: The owner's 220-volt appliance cord does not fit the outlet provided by the contractor.

Performance Guideline: The contractor shall install electrical outlets required by applicable electrical code. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: No action is required of the contractor.

Discussion: The owner is responsible for obtaining an appliance cord that fits the outlets provided by the contractor.

7-3-1 Observation: A ceiling fan vibrates and/or is noisy.

Performance Guideline: The contractor shall install ceiling fans in accordance with the manufacturer's instructions (including blade balances). *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: The contractor shall correct any fan installation not in accordance with the performance guideline if the fan was supplied and installed by the contractor.

7-3-2 Observation: An exhaust fan discharges into attic or crawl space.

Performance Guideline: Fans shall discharge as required by applicable codes.

Remodeling Specific: See Note at beginning of chapter.

Corrective Measure: The contractor shall repair to meet performance guideline.

7-4-1 Observation: A smoke detector "chirps."

Performance Guideline: A smoke detector should not "chirp" at substantial completion of the project. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: The contractor will repair or replace the smoke detector to eliminate chirping.

Discussion: Most smoke detectors are powered by both the home's electrical power and a backup battery. "Chirping" is an indication that the battery is weak or is not installed. If the chirping occurs on a new smoke detector, the contractor will check the battery, verify that the detector is wired correctly, and replace the device if necessary. Safety officials recommend that owners change the batteries in smoke detectors semi-annually when daylight-saving time begins and ends.

7-5-1 Observation: Electrical outlets, switches, or fixtures malfunction.

Performance Guideline: All electrical outlets, switches, and fixtures shall operate as designed. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: The contractor will repair or replace malfunctioning electrical outlets, switches, and fixtures, if supplied and installed by the contractor.

7-5-2 Observation: Carbon monoxide alarm goes off excessively.

Performance Guideline: Carbon monoxide sensors shall be installed in accordance with manufacturer's standards and applicable codes.

Corrective Measure: None. The contractor is responsible to properly install the sensor.

Interior Climate Control

-Coverage 1st Year Only, Workmanship and Materials

Note: Remodeling Specific: The contractor is responsible only for areas of the property worked on and specified in the contract, and not for the entire house.

Air Infiltration and Drafts

8-1-1 Observation: Air infiltrates around exterior doors or windows.

Performance Guideline: Some infiltration is usually noticeable around doors and windows, especially during high winds. No daylight shall be visible around the frame when the window or door is closed. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: The contractor shall repair to meet the performance guideline.

Discussion: Proper repair can be performed by adjusting or installing weather stripping around doors and windows. In high-wind areas, the owner may elect to have storm windows and doors installed to further reduce drafts.

8-1-2 Observation: A draft comes through an electrical outlet.

Performance Guideline: Electrical outlets and switch boxes on exterior walls may allow cold air to flow through or around an outlet into a room. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: No action is required of the contractor. The owner may elect to install foam insulation pads under switch and outlet plates to help decrease drafts.

Humidity Control and Condensation

8-2-1 Observation: Water, ice, or frost is observed on a window.

Performance Guideline: Windows will be installed in accordance with the manufacturer's instructions and applicable building code, *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: No action is required of the contractor unless the water, ice, or frost is directly attributed to faulty installation (i.e., that deviates from the manufacturer's instructions and/or applicable building code).

Discussion: Condensation usually results from conditions beyond the contractor's control. Moisture in the air can condense into water and collect on cold surfaces, particularly in the winter months when the outside temperature is low. Blinds and drapes can prevent air within the building envelope from moving across the cold surface and picking up the moisture. Occasional condensation (water) in the kitchen, bath, or laundry area is common. It is the owner's responsibility to maintain proper humidity by properly operating heating and cooling systems and allowing moving air within the home to flow over the interior surface of the windows.

8-2-2 Observation: There is moisture between the panes of a double glazed window.

Performance Standard: Moisture between the panes of double glazed windows during the manufacturer's warranty period is unacceptable.

Corrective Measure: The owner should contact the manufacturer.

Air Distribution and Ventilation

8-3-1 Observation: The attic or crawl space is inadequately ventilated.

Performance Guideline: The attic and crawl space shall be ventilated as required by the applicable building code.

Corrective Measure: The contractor will provide for adequate ventilation. The contractor is not responsible for actions by the owner that interfere with the ventilation system.

8-3-2 Observation: There is airflow noise at a register.

Performance Guideline: The register should be correctly installed according to the manufacturer's instructions. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: No action is required unless registers are not installed in accordance with manufacturer's instructions.

Discussion: Under certain conditions, some noise may be experienced with the normal flow of air, even when registers are installed correctly. See the manufacturer's instructions.

8-3-3 Observation: There are gaps between HVAC (Heating, Ventilating and Air Conditioning) vent or register cover and the wall or ceiling.

Performance Guideline: This is a normal condition beyond the contractor's control. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: None.

Discussion: It is the inherent nature of the heating and cooling system to cause vents and registers to bend over time. This can result in gaps occurring between the vent or register cover and the wall. As long as the vent or register is securely attached, this is not a warranty item.

8-3-4 Observation: A condensate drain line is clogged.

Performance Guideline: The contractor will provide unobstructed condensate lines at the time of substantial completion of the project. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: The contractor shall unclog any clogged condensate line at the time of substantial completion of the project. Condensate lines will eventually clog under normal use and they must be kept free of all clogs to operate properly. The owner is responsible for maintaining them in proper condition.

8-3-5 Observation: There is condensation on the outside of air handlers and ducts.

Performance Standards: Air handlers and ducts will collect condensation on their exterior surfaces when extreme temperature differences and high humidity levels occur. Condensation usually results from humid conditions within the home that are created by the owner or during the curing process in a new space.

Corrective Measure: Unless the condensation or frost is directly attributed to faulty installation, it usually results from conditions beyond the control of the contractor. No corrective action is required.

Discussion: Condensation usually results from conditions beyond the contractor's control. Moisture in the air can condense (to form water) and collect on cold duct surfaces, particularly in the summer months when the outside humidity is high.

8-5-5 Observation: Kitchen or bath fans allow air infiltration.

Performance Guideline: Bath and kitchen fans shall be installed in accordance with the manufacturer's instructions and code requirements. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: No action is required of the contractor if fans meet the guideline.

Discussion: It is possible for outside air to enter the house through a ventilation fan. The dampers in most fans do not seal tightly. It is possible for the damper to be lodged open due to animal activity (including nesting in the outside opening), or the accumulation of grease, lint, and other debris. Maintenance of ventilating fans is the owner's responsibility.

INTERIOR

Note: Remodeling Specific: The contractor is responsible only for areas of the property worked on and specified in the contract, and not for the entire house.

-Coverage 1st Year Only, Workmanship and Materials

Interior Doors

9-1-1. Observation: Interior door is warped.

Performance Guideline: Interior doors (full openings) shall not warp in excess of 1/4-inch. *Remodeling Specific: see Note at beginning of chapter.*

Corrective Measure: The contractor will correct or replace and refinish defective doors to match existing doors as nearly as practical during the warranty period.

Discussion: In bathroom or utility areas, exhaust fans or an open window must be used to remove moisture to eliminate or limit warpage of door units. If customer is responsible for painting the door, the contractor is not responsible if the door is not painted to manufacturer's specifications.

9-1-2 Observation: Bifold doors come off their tracks during normal operation.

Performance Guideline: Bifold doors shall slide properly on their tracks at the time of substantial completion of the project. Cleaning and maintenance necessary to preserve proper operation are owner responsibilities. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: One time only, the contractor will repair any bifold door that will not stay on its track during normal operation.

Discussion: Proper operation should be verified by the owner and the contractor at the time of substantial completion of the project.

9-1-3 Observation: A pocket door rubs in its pocket during normal operation.

Performance Guideline: Pocket doors shall not rub in their pockets during normal operation if they are installed according to the manufacturer's instructions. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: One time only, the contractor will repair the pocket door to meet the performance guideline.

Discussion: Pocket doors commonly rub, stick, or derail due to the inherent nature of the product. It is common, however, for the door to operate against the guides provided by the manufacturer.

9-1-4 Observation: A wooden door panel has shrunk or split.

Performance Guideline: Wooden door panels shall not split to the point that light is visible through the door. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: One time only, the contractor will fill splits in the door panel with wood filler and will match the paint or stain as closely as practical.

9-1-5 Observation: Door rubs on jambs or contractor-installed floor covering, or latch does not work.

Performance Guideline: Doors shall operate smoothly and door latches shall operate correctly.

Corrective Measure: The contractor will repair the door and the door latch as necessary to meet the performance guideline.

9-1-6 Observation: A door edge is not parallel to the doorjamb.

Performance Guideline: When the contractor installs the doorframe and door, the door edge shall be within 3/16-inch of parallel to the doorjamb. *Remodeling Specific: Where the contractor installs the door in an existing frame that is out of square, the guideline does not apply. See Note at beginning of chapter.*

Corrective Measure: The contractor will adjust the door as necessary to meet the guideline one time.

9-1-7 Observation: A door swings open or closed by the force of gravity.

Performance Guideline: Doors shall not swing open or closed by the force of gravity alone. *Remodeling Specific: This guideline does not apply where a door is installed in an existing wall that is out of plumb. See Note at beginning of chapter.*

Corrective Measure: The contractor shall repair door operation to meet the performance guideline one time.

9-1-8 Observation: Interior doors do not operate smoothly.

Performance Guideline: Doors shall move smoothly with limited resistance. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: The contractor shall repair door operation to meet the performance guideline one time.

Interior Stairs

9-2-1. Observation: Interior stair tread deflects too much.

Performance Guideline: The maximum vertical deflection of an interior stair tread shall not exceed 1/8-inch within a 36-inch span at 200 pounds of static weight.

Corrective Measure: The contractor will repair the stair to meet the performance guideline.

9-2-2 Observation: Gaps exist between interior stair risers, treads, and/or skirts.

Performance Guideline: Gaps between adjoining parts that are designed to meet flush shall not exceed 1/8-inch in width.

Corrective Measure: The contractor will fix the gap with filler or replace parts as necessary to meet the performance guideline.

9-2-3. Observation: Squeaking stair riser or tread.

Performance Guideline: Loud squeaks caused by a loose stair riser or tread are unacceptable, but totally squeak-proof stair risers or treads cannot be guaranteed.

Corrective Measure: The contractor will refasten any loose risers or treads or take other corrective action to eliminate squeaking to the extent possible within reasonable repair capability without removing treads or ceiling finishes.

Discussion: Squeaks in risers or treads may occur when a riser has come loose from the tread, and is deflected by the weight of a person and rubs against the nails that hold it in place. Movement may occur between the riser and the tread or other stairway members when one tread is deflected while the other members remain stationary. Using trim screws to fasten the tread to the riser from above will sometimes reduce squeaking. If there is no ceiling below, gluing or renailing the riser to the tread or shimming will reduce squeaks but the total elimination of squeaks is practically impossible. The performance guideline requires the contractor to make a reasonable attempt to eliminate squeaks without requiring removal of treads or ceiling finishes. Note: Most cellar stairs are not designed to be squeak resistant.

9-2-4 Observation: Gaps exist between interior stair railing parts.

Performance Guideline: Gaps between interior stair railing parts shall not exceed 1/8-inch in width.

Corrective Measure: The contractor will ensure that individual parts of the railing are securely mounted. Any remaining gaps will be filled or parts replaced to meet the performance guideline.

9-2-5. Observation: Interior stair railing lacks rigidity.

Performance Guideline: Interior stair railings shall be attached to structural members in accordance with applicable codes.

Corrective Measure: The contractor will repair any stair railings as necessary to comply with applicable codes.

Trim and Moldings

9-3-1 Observation: There are gaps at non-mitered trim and molding joints.

Performance Guideline: Openings at joints in trim and moldings, and at joints between moldings and adjacent surfaces, shall not exceed 1/8-inch in width at the time of installation.

Corrective Measure: The contractor will repair joints to meet the performance guideline.

Discussion: Separation of trim and moldings in excess of the performance guidelines may be caused by lack of control of indoor relative humidity. Joints that separate under these conditions are not considered defective. It is the owner's responsibility to control temperature and humidity in the home.

9-3-2. Observation: Nails are not properly set or, where puttied, nail holes are not properly filled.

Performance Guideline: Setting nails or filling nail holes are considered part of painting and finishing. After painting or finishing, except stained or natural finished woodwork, nails and nail holes shall not be readily visible from a distance of 6 feet under normal lighting conditions at the time of substantial completion of the project.

Corrective Measure: Where the contractor is responsible for painting, the contractor shall take action necessary to meet the performance guideline.

9-3-3. Observation: Inside corner is not coped or mitered.

Performance Guideline: Trim edges at inside corners shall be coped or mitered. However, square edge trim may be butted.

Corrective Measure: The contractor will finish inside corners to meet the performance guideline.

9-3-4. Observation: Trim or molding miter edges do not meet.

Performance Guideline: Gaps between miter edges in trim and molding shall not exceed 1/8-inch at time of installation.

Corrective Measure: The contractor will repair gaps that do not meet the performance guideline. Caulking or puttying with materials compatible to the finish is acceptable.

9-3-5 Observation: Interior trim is split.

Performance Guideline: Splits, cracks, and checking greater than 1/8-inch in width are considered unacceptable.

Corrective Measure: One time only, the contractor will repair the affected area to meet the guideline.

9-3-6. Observation: Hammer marks are visible on interior trim.

Performance Guideline: Hammer marks on interior trim shall not be readily visible from a distance of 6 feet under normal lighting conditions.

Corrective Measure: The contractor will fill hammer marks and refinish or replace

affected trim to meet the performance guideline. Refinished or replaced areas may not match surrounding surfaces exactly.

Cabinets and Counter Tops

9-4-1 Observation: Cabinets do not meet the ceiling or walls.

Performance Guideline: Gaps greater than 1/4-inch in width are considered unacceptable.

Corrective Measure: The contractor will repair the gap with caulk, putty, or scribe molding, or will reposition/ reinstall cabinets to meet the performance guideline.

Discussion: *Remodeling Specific: When installed in rooms with out-of-plumb walls or out-of-level floors and ceilings, "square" cabinets cannot be installed parallel to walls and ceilings and still keep the cabinets on line. For example, if the floor is not level and the installer measures up from it, "snaps" a line on which to place the tops of the wall cabinets, and then plumbs the first cabinet, one corner of the cabinet will leave the line, and the bottom of successive cabinets will not be in line. Similarly, cabinets will not line up with each other if they are installed on a level line, starting against an out-of-plumb wall instead of a plumb wall. The contractor should explain the aesthetic options to the owner and select the best option with the owner.*

9-4-2 Observation: Cabinets do not line up with each other.

Performance Guideline: Cabinet faces more than 1/8-inch out of line, and cabinet corners more than 3/16- inch out of line, are considered unacceptable, unless the owner and the contractor agree to disregard the guideline in order to match or otherwise compensate for pre-existing conditions.

Corrective Measure: The contractor will make necessary adjustments to meet the performance guideline.

Discussion: *Remodeling Specific: In remodeling projects, many times the rooms are out of square, walls are not plumb, and floors are not level. Cabinets and countertops may have to be shimmed or otherwise adjusted to make the cabinets and countertops fit together properly. Cabinets may not fit flush against the walls on the ends or bottoms and may not fit flat against the floor the contractor should explain the aesthetic options to the owner and select the best option with the owner. In rooms with out of plumb walls or out of level floors and ceilings, "square" cabinets cannot be installed parallel to walls and ceilings and still keep the cabinets on line. For example, if the floor is not level and the*

installer measures up from it, “snaps” a line on which to place the tops of the wall cabinets, then plumbs the first cabinet, one corner of the cabinet will leave the line, and the bottom corners of successive cabinets will leave the line, and the bottom corners of successive cabinets will not be in line. Similarly, cabinets will not line up with each other if they are installed on a level line, starting against an out of plumb wall instead of being plumbed. The contractor should explain the aesthetic options to the owner and select the best option with the owner.

9-4-3. Observation: Cabinet is warped.

Performance Guideline: Cabinet warpage shall not exceed ¼-inch as measured from the face frame to the point of furthest warpage, with the door or drawer front in closed position.

Corrective Measure: The contractor will correct or replace doors and drawer fronts as necessary to meet the performance guideline.

9-4-4. Observation: Cabinet door or drawer binds.

Performance Guideline: Cabinet doors and drawers shall open and close with reasonable ease.

Corrective Measure: The contractor will adjust or replace doors and drawers as necessary to meet the performance guideline.

9-4-5 Observation: Cabinet door will not stay closed.

Performance Guideline: The catches or closing mechanisms for cabinet doors shall be adequate to hold the doors in a closed position.

Corrective Measure: The contractor will adjust or replace the door catches or closing mechanisms as necessary to meet the performance guideline.

9-4-6 Observation: Cabinet doors or drawers are cracked.

Performance Guideline: Panels and drawer fronts shall not crack.

Corrective Measure: The contractor may replace or repair cracked panels and drawer fronts. No contractor action is required if the cracked drawer fronts or panels result from the owner's abuse.

Discussion: Paint or stain on the repaired or replaced panel or drawer front may not match the paint or stain on the existing panels or drawer fronts.

9-4-7 Observation: A cabinet door is warped.

Performance Guideline: Cabinet door warpage shall not exceed 1/8-inch as measured diagonally from corner to corner.

Corrective Measure: The contractor may replace or repair warped doors to meet the performance guideline.

9-4-8 Observation: Cabinet doors do not align when closed.

Performance Guideline: Gaps between doors should not exceed 1/8-inch.

Corrective Measure: The contractor shall adjust doors to meet the performance guideline.

9-4-9. Observation: Shrinkage of insert panels of cabinet doors and drawers show raw wood edges.

Performance Guideline: Panels will shrink and expand and may expose unpainted or unfinished surface.

Corrective Measure: None.

Countertops

9-5-1 Observation: High-pressure laminate on a countertop is delaminated.

Performance Guideline: Countertops fabricated with high-pressure laminate coverings shall not delaminate.

Corrective Measure: The contractor will repair or replace delaminated coverings, unless the delamination was caused by the owner's misuse or negligence.

Discussion: Owners should refrain from leaving any liquids near the countertop seams or allowing the surface to become excessively hot.

9-5-2. Observation: The surface of high-pressure laminate on countertop is cracked or chipped.

Performance Guideline: Countertops shall be free of cracks and chips at the time of substantial completion of the job. Cracks or chips occurring after acceptance of the job

are the owner's responsibility.

Corrective Measure: The contractor will repair or replace cracked or chipped countertops only if they are reported prior to acceptance of the job.

9-5-3 Observation: Solid surface countertops are visibly scratched.

Performance Guideline: At the time of substantial completion of the project, solid surface countertops shall be free of scratches visible from 6 feet away under normal lighting conditions.

Corrective Measure: The contractor shall repair scratches in the countertop to meet the performance guideline.

9-5-4 Observation: A countertop is not level.

Performance Guideline: Countertops shall be no more than 3/8-inch in 10 feet out of parallel with the floor. *Remodeling Specific: For projects where the floor is out of level, the countertop may be installed proportionately out of level.*

Corrective Measure: The contractor will make necessary adjustments to meet the performance guideline.

Discussion: *Remodeling Specific: In remodeling projects, many times the rooms are out of square, walls are not plumb, and floors are not level. Cabinets and countertops may have to be shimmed or otherwise adjusted to make the cabinets and countertops fit together properly. Cabinets may not fit flush against the walls on the ends or bottoms and may not fit flat against the floor: The contractor should explain the aesthetic options to the owner and select the best option with the owner.*

9-5-5 Observation: A tile countertop has uneven grout lines.

Performance Guideline: Grout lines should be straight and fairly consistent in width. However, if working with hand made tiles or tiles with broken edges grout lines may vary in width and straightness.

Corrective Measure: If applicable the contractor shall make corrections as necessary to bring the grout lines into compliance with the performance guideline.

Discussion: Different tiles require different widths of grout lines. Some tiles are designed to have varied-width grout lines.

9-5-6 Observation: Tile countertop grout lines are cracked.

Performance Guideline: Tile grout is a cement product and is subject to cracking. Cracks that result in loose tiles or gaps in excess of 1/16-inch shall be repaired.

Corrective Measure: The contractor will repair the grout lines by adding grout, caulking, or replacing grout one time. New grout may not perfectly match previously grouted areas.

9-5-7 Observation: A granite, marble, stone, or solid surface countertop is cracked at the time of substantial completion of the project.

Performance Guideline: Cracks at the time of substantial completion are considered unacceptable.

Corrective Measure: If the crack is found to be caused as a result of faulty installation or product, the contractor will repair or replace the countertop.

Discussion: Some granite, marble or stone have natural cracks and crevices these are allowed within the Performance Guideline and are not to be considered a defect. Some granite, marble and stones may develop cracks and crevices after substantial completion of the project and are not to be considered defects if properly installed.

9-5-8 Observation: A granite, marble, stone, or solid surface countertop has texture or color variations.

Performance Guideline: Color variations are acceptable. The contractor has no responsibility for countertop texture or color variations when the owner selects the material.

Corrective Measure: No action is required of the contractor.

9-5-9 Observation: A granite, marble, stone, or solid surface countertop is chipped at the time of substantial completion of the project.

Performance Guideline: Chips greater than 1/32-inch in width are considered unacceptable.

Corrective Measure: The contractor will repair or replace affected areas to meet the performance guidelines.

9-5-10 Observation: The surface of countertop tile has unacceptable lippage of adjoining tile.

Performance Guideline: Lippage greater than 1/16-inch is considered unacceptable, except for materials that are designed with an irregular height (such as hand-made tile).

Corrective Measure: The contractor will repair or replace the tile to meet the performance guideline.

9-5-11 Observation: A solid surface or laminate countertop has a bubble, bum, stain, or other damage.

Performance Guideline: Solid surface or laminate countertops shall be free of bubbles, bums, or stains at the time of substantial completion of the project.

Corrective Measure: The contractor will repair or replace the countertop to meet the performance guideline.

Discussion: Solid surface and laminate products may be subject to damage by hot surfaces placed on or near the product. The owner is responsible for maintaining the countertop and protecting it from damage.

Interior Wall Finish

Lath and Plaster

9-6-1 Observation: Cracks are visible on a finished wall or ceiling.

Performance Guideline: Cracks shall not exceed 1/16-inch in width. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: One time only, the contractor will repair cracks exceeding 1/16-inch in width. The contractor will touch up paint on repaired areas if the contractor was responsible for the original interior painting. A perfect match between original and new paint cannot be expected and the contractor is not required to paint an entire wall or room.

Gypsum Wallboard

9-6-2. Observation: Nail pop, blister, or other blemish is visible on finished wall or ceiling.

Performance Guideline: Slight “imperfections” such as nail pops, seam lines and cracks

not exceeding 1/16-inch in width are common in gypsum wallboard installations and are considered acceptable. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: The contractor will repair such blemishes only once during the warranty period. The contractor will touch up paint-repaired areas if the contractor was responsible for the original interior painting. A perfect match between original and new paint cannot be expected, and the contractor is not required to paint an entire wall or room. The contractor is not required to repair defects that are covered by wallpaper or other wall coverings.

Discussion: When drywall has been placed on lumber surfaces which are subject to shrinkage and warpage and which are not perfectly level and plumb, problems often occur through stress and strain placed on drywall during the stabilization of the lumber, which is inherent in the construction of the home. Due to the initial stabilization problem that exists with the new home, it is impossible to correct each defect as it occurs, and it is essentially useless to do so. The entire house will tend to stabilize itself. Some imperfections will not be visible under normal lighting but will become apparent under strong, high or diagonal lighting or strong sunlight. These imperfections are not to be considered defects. Nail and screw pops, showing seam lines and spackle cracks result from wood shrinkage, normal settlement and changes in temperature and humidity. These factors are normal and beyond the contractor's control, they should not be considered defects or unusual.

9-6-3 Observation: Cracked corner bead, excess joint compound, trowel marks, or blisters in tape joints are observed on the drywall surface.

Performance Guideline: Defects resulting in cracked corner bead, trowel marks, excess joint compound or blisters in tape are considered unacceptable. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: The contractor shall repair the affected area of the wall to meet the performance guideline one time within the warranty period.

9-6-4 Observation: Joints protrude from the surface.

Performance Guideline: Any joints that are visible from a distance of 6 feet under normal lighting conditions are considered unacceptable. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: One time only, the contractor will repair affected areas.

Discussion: Joints often occur in long walls, stairwells, and areas of two-story homes where framing members have shrunk and caused the drywall to protrude.

9-6-5 Observation: The texture of gypsum wallboard does not match.

Performance Guideline: Any variations that are readily visible from a distance of 6 feet under normal lighting conditions are considered unacceptable. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: The contractor will repair the affected area to meet the guideline.

Discussion: There will usually be some variation in texture between the wall board and the joint compound.

9-6-6 Observation: Angular gypsum wallboard joints are uneven.

Performance Guideline: This is a natural condition that occurs with randomly applied materials. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: No action is required of the contractor. This is a common condition.

9-6-7 Observation: Drywall is cracked.

Performance Guideline: Drywall cracks greater than 1/16-inch in width are considered unacceptable. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: One time only, the contractor will repair cracks and touch up paint in affected areas. The texture and paint color may not exactly match the existing texture and paint color.

9-6-8 Observation: Blown or textured ceilings have uneven textures.

Performance Guideline: This is a common condition that occurs with randomly applied materials. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: No action is required of the contractor. This is a common condition.

Paint, Stain, and Varnish

9-6-9 Observation: Interior paint does not "cover" the underlying surface.

Performance Guideline: The surface being painted shall not show through new paint when viewed from a distance of 6 feet under normal lighting conditions. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: The contractor will recoat affected areas as necessary to meet the guidelines as closely as practical.

9-6-10 Observation: An interior surface is spattered with paint.

Performance Guideline: Paint spatters shall not be readily visible on walls, woodwork, floors, or other interior surfaces when viewed from a distance of 6 feet under normal lighting conditions. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: The contractor will remove paint spatters to meet the performance guideline.

9-6-11 Observation: Brush marks show on interior painted surface.

Performance Guideline: Brush marks shall not be readily visible on interior painted surfaces when viewed from a distance of 6 feet under normal lighting conditions. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: The contractor will refinish as necessary to meet the performance guideline and match affected areas as closely as practical.

9-6-12 Observation: Lap marks show on interior painted or stained areas.

Performance Guideline: Lap marks shall not be readily visible on interior painted or stained areas when viewed from a distance of 6 feet under normal lighting conditions. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: The contractor will refinish as necessary to meet the guideline and match affected areas as closely as practical.

9-6-13 Observation: Interior painting, staining, or refinishing is required because of repair work.

Performance Guideline: A perfect match between original and new paint cannot be expected. Repairs required under these performance guidelines shall be finished to match the immediate surrounding areas as closely as practical. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: Where the majority of the wall or ceiling area is affected, the area will be painted from break line to break line. The contractor is not required to paint an entire room.

Discussion: The contractor is only responsible if he or she painted the home as part of the original contract.

9-6-14 Observation: Resin has bled through the paint on interior trim.

Performance Guideline: This is a common condition that can be expected to occur with natural materials such as wood. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: No action is required of the contractor. This is a common condition.

9-6-15 Observation: Varnish or clear lacquer finishes have deteriorated.

Performance Guideline: Clear finishes on interior woodwork shall not deteriorate during the warranty period.

Corrective Measure: The contractor will retouch affected areas of clear-finish interior woodwork and match the original finish as closely as practical; provided the owner has not used improper cleaning materials, including ammonia, or other improper methods.

Discussion: Finishes on window sills with south facing exposure may deteriorate due to climatic conditions.

Wallpaper and Vinyl Wall Coverings

9-6-16 Observation: The wall covering has peeled.

Performance Guideline: The wall covering shall not peel off the walls. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: The contractor will reattach or replace the loose wall covering if the contractor installed the covering.

Discussion: Wallpaper applied in high moisture areas is exempted from this guideline because the problem results from conditions beyond the contractor's control.

9-6-17 Observation: Patterns in wall covering are mismatched.

Performance Guideline: Patterns in wall coverings shall match. Irregularities in the patterns themselves are the manufacturer's responsibility. *Remodeling Specific: See Note at beginning of chapter. The guideline does not apply if material is installed on existing out-of-plumb walls or where trim is not square with corners.*

Corrective Measure: The contractor shall correct the wall covering to meet the performance guidelines.

FLOOR FINISHES

-Coverage 1st Year Only, Workmanship and Materials

Carpeting

10-1-1 Observation: Carpet does not meet at the seams.

Performance Guideline: It is not unusual for carpet seams to show. However, a visible gap at the seams is considered unacceptable.

Corrective Measure: If the carpet was installed by the contractor, the contractor will eliminate visible gaps at carpet seams.

10-1-2 Observation: Carpeting loosens, or the carpet stretches.

Performance Guideline: When stretched and secured properly, wall-to-wall carpeting installed as the primary floor covering shall not come up, loosen, or separate from the points of attachment.

Corrective Measure: If the carpeting was installed by the contractor, the contractor will restretch or resecure the carpeting, once during the first year, as necessary to meet the guidelines.

10-1-3 Observation: Carpeting is faded or discolored.

Performance Guideline: Fading or discoloration of carpet is a manufacturer's responsibility.

Corrective Measure: No action is required of the contractor.

Discussion: Fading or discoloration may result from the owner spilling liquids on the carpet, exposure to sunlight, or the owner's failure to properly maintain the carpet.

10-1-4 Observation: Dead spots are observed in padding areas below the carpet surface.

Performance Guideline: Carpeted areas shall have full coverage of padding consistently throughout the flooring area.

Corrective Measure: The contractor will repair/replace padding in the affected areas to meet the performance guidelines.

Roll Vinyl and Resilient Tile Flooring

10-2-1 Observation: Nail pops are observed on the surface of resilient flooring.

Performance Guideline: Readily visible nail pops on resilient flooring are considered unacceptable.

Corrective Measure: The contractor will repair the nail pops that are readily visible.

Discussion: The contractor will repair or replace, at the contractor's option, the resilient floor covering in the affected areas with similar materials. The contractor is not responsible for discontinued patterns or color variations when replacing the floor covering.

10-2-2 Observation: Depressions or ridges are observed in resilient flooring because of sub floor irregularities.

Performance Guideline: Readily apparent depressions or ridges exceeding 1/8-inch shall be repaired. The ridge or depression measurement is taken at the end of a 6-inch straightedge centered over the depression or ridge with 3 inches of the straightedge held tightly to the floor on one side of the affected area. Measure under the straightedge to determine the depth of the depression or height of the ridge.

Corrective Measure: The contractor will take corrective action as necessary to bring the affected area within the acceptable tolerance so that the depression or ridge is not readily visible and is not more than 1/8-inch. The contractor will not be responsible for discontinued patterns or color variations when replacing the floor covering.

Discussion: Contractor is not responsible for homeowner neglect or abuse or installations performed by others.

10-2-3 Observation: Resilient flooring has lost adhesion.

Performance Guideline: Resilient flooring shall not lift, bubble, or detach.

Corrective Measure: At the contractor's option, the contractor will repair or replace the affected resilient flooring as necessary. The contractor is not responsible for discontinued patterns or color variations when replacing the floor covering.

10-2-4 Observation: Seams or shrinkage gaps show at vinyl flooring joints.

Performance Guideline: Gaps at joints/seams in vinyl flooring shall not exceed 1/16-inch in width. Where dis-similar materials abut, the gaps shall not exceed 1/16-inch.

Corrective Measure: At the contractor's option, the contractor will repair or replace the vinyl flooring as necessary to meet the performance guideline. The contractor will not be responsible for discontinued patterns or color variations when replacing the floor covering.

Discussion: Proper repair can be accomplished by sealing the gap with seam sealer.

10-2-5 Observation: Bubbles are observed on roll vinyl flooring.

Performance Guideline: Bubbles resulting from trapped air and that protrude higher than 1/16-inch from the floor is considered unacceptable.

Corrective Measure: The contractor will repair the floor to meet the guideline.

Discussion: The performance guideline does not apply to perimeter attached vinyl floors.

10-2-6 Observation: The patterns on roll vinyl flooring are misaligned.

Performance Guideline: Patterns at seams between adjoining pieces shall be aligned to within 1/16-inch.

Corrective Measure: The contractor will correct the flooring to meet the performance guideline.

10-2-7 Observation: A resilient floor tile is loose.

Performance Guideline: Resilient floor tiles shall be securely attached to the floor.

Corrective Measure: The contractor will attach loose resilient floor tiles securely to the floor. The old adhesive will be removed if necessary to resecure the tiles.

10-2-8 Observation: The corners or patterns of resilient floor tiles are misaligned.

Performance Guideline: The corners of adjoining resilient floor tiles shall be aligned to within 1/8-inch. Misaligned patterns are not covered unless they result from improper orientation of the floor tiles.

Corrective Measure: The contractor will correct resilient floor tiles with misaligned corners to meet the performance guideline.

10-2-9 Observation: Yellowing is observed on the surface of vinyl sheet goods after installation and before substantial completion of the project.

Performance Guideline: The contractor shall install vinyl flooring per the manufacturer's instructions.

Corrective Measure: Yellowing resulting from a manufacturer's defect or from the owner's misuse or lack of maintenance is not covered by the contractor.

Discussion: Some chemical compounds, such as the tar residue from a recently paved asphalt driveway, may cause a chemical reaction with the flooring material and result in permanent damage to the floor. The owner is responsible for the proper use and maintenance of the floor. Yellowing caused by the owner's improper use of or inadequate maintenance of the floor is not the contractor's or the manufacturer's responsibility.

Wood Flooring

10-3-1 Observation: Gaps exist between strip hardwood floorboards.

Performance Guideline: Gaps between strip hardwood floorboards shall not exceed 1/8-inch in width at the time of installation.

Corrective Measure: The contractor will repair gaps that do not meet the performance guideline.

Discussion: Wood floors are subject to shrinkage and swell due to seasonal variations in the humidity level of home. While boards may be installed tight together, gaps or separations may appear during heating seasons or periods of low humidity. Gaps or

separations that close during non-heating seasons are not considered deficiencies. Homeowners should be familiar with the recommended care and maintenance requirements of their wood floor. Repeated wetting and drying, or wet mopping, may damage wood finishes. Dimples or scratches can be caused by moving furniture or dropping heavy objects, and certain high heel style shoes may cause indentations. These conditions are not covered by this Warranty. Relative humidity of the home can cause noticeable fluctuations in gaps between floor boards. This is a normal phenomenon in spaces that experience significant shifts in humidity. The owner is responsible for maintaining proper humidity levels in the home. Proper repair can be affected by filling the gap.

10-3-2 Observation: Strip hardwood floor boards are cupped.

Performance Guideline: Cups in strip hardwood floorboards shall not exceed 1/16-inch in height in a 3-inch maximum span measured perpendicular to the long axis of the board. Cupping caused by exposure to moisture beyond the contractor's control is not covered.

Corrective Measure: The contractor will correct or repair cupped boards to meet the performance guideline.

Discussion: The owner is responsible for proper maintenance of the floor and for maintaining proper humidity levels in the home.

10-3-3 Observation: Excessive lippage is observed at the junction of prefinished wood flooring products.

Performance Guideline: Lippage greater than 1/16-inch is considered unacceptable.

Corrective Measure: The contractor will repair lippage in the affected areas to meet the performance guideline

10-3-4 Observation: Voids ("holidays") are observed in the floor finish.

Performance Guideline: Voids that are readily visible from a distance of 6 feet under normal lighting conditions are considered unacceptable.

Corrective Measure: The contractor will repair the floor finish in the affected area(s) to meet the performance guideline.

10-3-5 Observation: The top coating on hardwood flooring has peeled.

Performance Guideline: Field-applied coating shall not peel during normal usage.

Prefinished coatings are the manufacturer's responsibility.

Corrective Measure: The contractor shall refinish any field-applied finishes that have peeled.

Discussion: The owner should contact the manufacturer regarding factory-applied finishes that have peeled.

10-3-6 Observation: Strip flooring has crowned.

Performance Guideline: Crowning in strip flooring shall not exceed 1/16-inch in depth in a 3-inch maximum span when measured perpendicular to the long axis of the board.

Corrective Measure: The contractor will repair the affected area to meet the performance guideline.

10-3-7 Observation: Hardwood flooring has buckled from the substrate.

Performance Guideline: Hardwood floor should not become loose from the substrate.

Corrective Measure: The contractor will repair the affected area to meet the performance guideline.

10-3-8 Observation: Unacceptable knots and color variations are observed in strip hardwood flooring.

Performance Guideline: The contractor will install the grade of hardwood specified for the project. All wood should be consistent with the grading stamp as specified.

Corrective Measure: The contractor shall replace any improperly graded wood.

Discussion: Hardwood is a natural product and consequently can be expected to exhibit variations in color, grain, and stain acceptance.

10-3-9 Observation: Slivers or splinters are observed in strip flooring.

Performance Guideline: Slivers or splinters that occur during the installation of the flooring are considered unacceptable.

Corrective Measure: The contractor will repair flooring in the affected areas to meet the performance guideline.

Discussion: Splinters or splinters that occur during installation can be shaved and the area filled prior to sanding and finishing.

10-3-10 Observation: "Sticker bum" is observed on the surface of strip flooring.

Performance Guideline: Discoloration from stacking strips in hardwood flooring is considered unacceptable in certain grades of flooring.

Corrective Measure: The contractor shall repair or replace areas with sticker bum if they are not permitted in the grade of wood specified for the project.

Tile, Brick, Marble, and Stone Flooring

10-4-1 Observation: Tile, brick, marble, or stone flooring is broken or loosened.

Performance Guideline: Tile, brick, marble, and stone flooring shall not be broken or loose.

Corrective Measure: The contractor will replace broken tiles, bricks, marble, and stone flooring, and resecure loose tiles, bricks, marble, and stone, unless the flooring was damaged by the owner's actions or negligence. The contractor is not responsible for discontinued patterns or color variations when replacing tile, brick, marble, or stone flooring.

10-4-2 Observation: Cracks are observed in the grouting of tile joints or at the junctures with other materials, such as a bathtub.

Performance Guideline: Cracks in grouting of ceramic tile joints commonly result from normal shrinkage conditions. Cracks that result in loose tiles or gaps in excess of 1/16-inch shall be repaired.

Corrective Measure: The contractor will repair grouting, if necessary, one time only. The contractor is not responsible for color variations or discontinued colored grout. The owner is responsible for regrouting these joints after the contractor's one-time repair.

Discussion: The use of an elastic substance at junctures between tile and other materials is often more effective than grout.

10-4-3 Observation: There is excessive lippage at adjoining marble or ceramic tile.

Performance Guideline: Lippage greater than 1/16-inch is considered unacceptable, except where the materials are designed with an irregular height (such as hand-made tile).

Corrective Measure: The contractor will repair lippage in the affected areas to meet the performance guideline.

Discussion: Lippage is the vertical distance between floor tiles or marble tiles at the point where they abut one another.

10-4-4 Observation: A grout or mortar joint is not a uniform color.

Performance Guideline: After the grout has cured, any color variation that is readily visible from a distance of 6 feet under normal lighting conditions is considered unacceptable.

Corrective Measure: One time only, the contractor will repair the joint to meet the performance guideline.

Discussion: When grout repairs are done a perfect match between the original grout and new grout cannot be expected. The contractor is not required to re-grout an entire floor, wall or room.

Miscellaneous

-Coverage 1st Year Only, Workmanship and Materials

Fireplace and Wood Stove

11-1-1. Observation: Fireplace or chimney does not consistently draw properly.

Performance Guideline: A properly designed and constructed fireplace and chimney shall function correctly.

Corrective Measure: The contractor shall correct as necessary if the problem is caused by a design or construction flaw.

Discussion: High winds can cause temporary negative or down drafts. Negative drafts can also be caused by obstructions such as tree branches, steep hillsides, adjoining homes, and interior furnaces.

11-1-2 Observation: The chimney is separated from the structure.

Performance Guideline: Newly built fireplaces will often incur slight amounts of separation. The amount of separation from the main structure shall not exceed 1/2-inch in any ten-foot vertical measurement.

Corrective Measure: The contractor will repair gaps that do not meet the performance guideline.

Discussion: Proper repair can be affected by caulking unless the cause of the separation is due to a structural failure of the chimney foundation itself. In that case, caulking is unacceptable.

11-1-3 Observation: The firebox paint is damaged by a fire in the fireplace.

Performance Guideline: Heat and discoloration is a common occurrence.

Corrective Measure: No action is required of the contractor.

Discussion: The owner should obtain the proper paint from the manufacturer if he or she chooses to touch up the interior of the firebox for aesthetic reasons.

11-1-4 Observation: A firebrick or mortar joint is cracked.

Performance Guideline: Heat and flames from normal fires can cause cracking.

Corrective Measure: No corrective action is required of the contractor.

11-1-5 Observation: A simulated firebrick panel has cracked.

Performance Guideline: This is a common condition.

Corrective Measure: No corrective action is required of the contractor.

11-1-6 Observation: Rust is observed on the fireplace damper.

Performance Guideline: This is a common condition.

Corrective Measure: No corrective action is required of the contractor.

Concrete Stoops and Steps

11-2-1. Observation: Stoops or steps have settled, heaved, or separated from the house structure.

Performance Guideline: Stoops and steps shall not settle, heave in excess of 1 inch, or separate in excess of 1 inch from the house structure.

Corrective Measure: The contractor will take whatever corrective action is required to meet the performance guideline.

11-2-2 Observation: Water remains on stoops or steps after rain has stopped.

Performance Guideline: Water shall drain off outdoor stoops and steps. Minor amounts of water can be expected to remain on stoops and steps for up to 24 hours after rain.

Corrective Measure: The contractor will take corrective action to ensure proper drainage of stoops and steps.

Garage

11-3-1 Observation: The garage floor slab is cracked.

Performance Guideline: Cracks in concrete garage floor greater than 3/16-inch in width or 1/8-inch in vertical displacement are unacceptable.

Corrective Measure: The contractor shall repair to meet the performance guideline.

Discussion: Proper repair can be affected by thoroughly cleaning, filling, and troweling the surface using latex-fortified cement mixture or other materials designed to fill cracks and bond concrete.

11-3-2. Observation: Garage concrete floor has settled, heaved, or separated.

Performance Guideline: The garage floor shall not settle or heave in excess of 1 inch, or separate in excess of 1 inch from the structure.

Corrective Measure: The contractor will take whatever corrective action is required to meet the performance guideline.

Discussion: The repaired area may not match the existing floor in color and texture.

11-3-3 Observation: Garage doors fail to operate properly under normal use.

Performance Guideline: Garage doors shall operate properly.

Corrective Measure: The contractor will correct or adjust garage doors as required, except where the owner's actions or negligence caused the problem.

Discussion: The contractor is not responsible for the door operation if the owner has installed a garage door opener.

11-3-4 Observation: Garage doors allow the entry of snow or water.

Performance Guideline: Garage doors shall be installed as recommended by the manufacturer. Some snow or water can be expected to enter under normal conditions.

Corrective Measure: The contractor will adjust or correct the garage doors to meet the manufacturer's installation instructions.

Driveways and Sidewalks

11-4-1. Observation: Asphalt driveway develops cracks.

Performance Guideline: This is a normal condition.

Corrective Measure: None.

11-4-2 Observation: Standing water is observed on an asphalt pavement surface.

Performance Guideline: Standing water greater than 1/8-inch in depth shall not remain on the surface 24 hours after a rain. It is not unusual to have some standing water after heavy rains.

Corrective Measure: The contractor shall repair or replace the affected area to meet the guideline if the warranty covers the driveway. Patched areas will generally be noticeable and not blend in with the rest of the driveway.

11-4-3 Observation: Exterior concrete flat work is pitting or spalling. Pitting is evidenced by concrete that has flaked or peeled from the outer surface. Spalling is evidenced by concrete that has chipped.

Performance Guideline: Exterior concrete surfaces shall not pit, spall or disintegrate. Aggregate pops are normal; minor scaling is not controllable at all.

Corrective Measure: The contractor will repair defective concrete surfaces using materials designed for this purpose. The contractor is not responsible for deterioration caused by salt, chemicals, mechanical implements, or other factors beyond the contractor's control.

Wood Decks

11-5-1 Observation: A wood deck is springy or shaky.

Performance Guideline: All structural members in a wood deck shall be sized, and fasteners spaced, according to appropriate building codes and manufacturers' instructions.

Corrective Measure: The contractor will reinforce or modify, as necessary, any wood deck not meeting the performance guidelines.

Discussion: Deflection may indicate insufficient stiffness in the lumber, or may reflect an aesthetic consideration independent of the strength and safety requirements of the lumber. Structural members are required to meet standards for both stiffness and strength. When an owner's preference is made known before construction, the contractor and the owner may agree upon a higher standard.

11-5-2 Observation: The spaces between decking boards are not uniform.

Performance Guideline: The spaces on opposite sides of individual deck boards shall not differ in average width by more than 3/16-inch at the time of substantial completion of the project, unless otherwise agreed upon by the owner and the contractor.

Corrective Measure: One time only, the contractor will realign or replace decking boards to meet the performance guideline.

Discussion: The spaces will naturally tend to change over time because of shrinkage and expansion of individual boards. The contractor is only responsible for correct spacing at the time of substantial completion of the project.

11-5-3 Observation: The railings on wood decking contain slivers in exposed areas.

Performance Guideline: Railings on wood decks shall not contain slivers longer than 1/8-inch in exposed areas at the time of substantial completion of the project.

Corrective Measure: One time only; the contractor will repair railings as necessary to remove slivers prior to substantial completion of the project. Repair of slivers after that time is an owner maintenance responsibility.

Discussion: Splinters can develop when unprotected wood weathers. The proper finishing of wood surfaces helps prevent splinters from forming.

11-5-4 Observation: A wood deck is out of level.

Performance Guideline: No point on the deck surface shall be more than 1/2-inch higher or lower than any other deck surface point within 10 feet on a line parallel to the house, or in proportional multiples of the preceding dimensions (unless a slope is incorporated in the design). *Remodeling Specific: The owner and contractor may agree to intentionally build a wood deck out of level in order to match or compensate for inaccuracies in the existing structure.*

Corrective Measure: The contractor will repair the deck as necessary to meet the performance guideline.

Discussion: A slope of approximately 1/8-inch per foot is desirable in the perpendicular direction to shed water and prevent ice build-up.

11-5-5 Observation: Wood decking boards are split, warped, or cupped.

Performance Guideline: At the time of substantial completion of the project, splits, warps, and cups in wood decking boards shall not exceed the allowances established by the official grading rules issued by the agency responsible for the lumber species specified for the deck boards.

Corrective Measure: The contractor will replace decking boards as necessary to meet the performance guidelines

11-5-6 Observation: A wood deck has stain color variations.

Performance Guideline: Stain color variations are not acceptable if they result from improper stain application or failure to mix the stain properly. Stain color variations resulting from other causes-such as weathering or varying porosity of the wood used to build the deck-are common and are not covered by this guideline.

Corrective Measure: The contractor will restain the affected area to meet the performance guideline.

11-5-7 Observation: A nail head protrudes from a wood decking board.

Performance Guideline: Nail heads shall not protrude from the floor of the wood deck at the time of substantial completion of the project.

Corrective Measure: The contractor will refasten nails whose heads protrude from the floor of the deck so that the heads are flush with the surface.

Discussion: Nails should be driven flush when the deck is installed, but they may pop from the deck over time as the wood shrinks and expands.

11-5-8 Observation: Nails on a wood deck are "bleeding."

Performance Guideline: Nail stains extending more than 1/2-inch from the nail and readily visible from a distance of more than 3 feet are not acceptable.

Corrective Measure: The contractor will eliminate nail stains to meet the performance guideline.

Discussion: This guideline does not apply if "natural weathering" or semi-transparent stains are specified.

11-5-9 Observation: A wood deck railing lacks rigidity.

Performance Guideline: Wood deck railings shall be attached to structural members in accordance with applicable building codes.

Corrective Measure: The contractor will repair wood deck railings as necessary to comply with applicable building codes.

Landscaping

-Coverage 1st Year Only, Workmanship and Materials

Note: Moving or protecting plants, trees, shrubs, and any other landscaping items prior to and during construction are the responsibility of the owner and must be dealt with before construction begins. Other handling of these items must be specified in the contract to designate the responsible party.

12-0-1 Observation: Tree stumps have been left in a disturbed area of the property.

Performance Guideline: If tree stumps were on the property in the disturbed area prior to the substantial completion of the project, the contractor is responsible for their removal.

Corrective Measure: The contractor will remove the stumps from the area.

12-0-2 Observation: Dead shrubs, plants, trees, or sod planted in disturbed area of property.

Performance Guideline: Any shrub, plant, tree, or sod planted by the contractor as part of the landscape package that are alive as of the acceptance of the project and die after that acceptance are not the responsibility of the contractor.

Corrective Measure: None.

12-0-3 Observation: Grass seed does not germinate.

Performance Guideline: Germination is dependent on certain climatic conditions, which are beyond the contractor's control.

Corrective Measure: The contractor is only responsible for seeding per the supplier's instructions.

Discussion: After installation, proper lawn and landscape care are the owner's responsibility.

12-0-4 Observation: Outdoor plants moved during work die after substantial completion of the project.

Performance Guideline: Plants that must be physically transported during the work shall be moved, maintained, and replanted by the owner.

Corrective Measure: No action is required of the contractor.

Discussion: The contractor shall not be responsible for delays in the schedule when plants are moved by the owner.

Systems: First and Second Years

Plumbing System

-Coverage 1st and 2nd Year, Systems

Note: Remodeling Specific: The contractor is responsible only for areas of the property worked on and specified in the contract, and not for the entire house.

Water Supply System

13-1-1 Observation: The water supply system fails to deliver water.

Performance Guideline: All on-site service connections to the municipal water main or private water supply are the responsibility of the contractor. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: The contractor will repair the water supply system if the failure results from improper installation or failure of materials and if the connections are a part of the construction agreement. Conditions beyond the control of the contractor that disrupt or eliminate the water supply are not covered.

13-1-2 Observation: Pipes leak.

Performance Guidelines: No leaks of any kind shall exist in any soil, waste, vent, or water pipe.

Corrective Measure: The contractor will make repairs to eliminate leakage.

13-1-3 Observation: Water in plumbing pipes freezes, and the pipes burst.

Performance Guideline: Drain, waste, vent, and water pipes shall be adequately protected to prevent freezing as required by the applicable plumbing code for normally anticipated cold weather and in accordance with the de-sign temperatures established by the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE). *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: The contractor will correct situations not meeting the applicable code. The owner is responsible for draining or otherwise protecting pipes and exterior faucets exposed to freezing temperatures.

Discussion: Leaks occurring due to owner's neglect and consequential damage are not contractor's responsibility. The owner is responsible to maintain suitable temperature in the home to prevent pipes from freezing and bursting. Homes which are periodically occupied such as summer homes, or where there will be no occupancy for an extended period of time must be properly winterized or periodically checked to insure that a reasonable temperature is maintained.

Sanitary Sewer or Septic System -Coverage 1st and 2nd Year, Systems

13-2-1 Observation: Septic system fails to operate properly.

Performance Guideline: Septic system shall function adequately during all seasons, under climatic conditions normal or reasonable anticipated (based on local records) for the location of the home. Septic system shall be designed and installed to comply with applicable, approved code requirements.

Corrective Measure: Contractor will repair, or otherwise correct, a malfunctioning or non operating system, if failure is caused by inadequate design, faulty installation, or other cause relating to actions of the builder or contractors or subcontractors under the contractor's control. Contractor will not be responsible for system malfunction or damage which is caused by owner negligence, lack of system maintenance, or other causes attributable to actions of the owner or other owner's contractors, not under the control of the contractor, including, but not necessarily limited to: the addition of fixtures, items of equipment, appliances or other sources of waste or water to the plumbing system served by the septic system; and damage, or changes, to the septic system installation or surrounding soil conditions critical to the system's functioning.

13-2-2 Observation: Sewers, fixtures, or drains are clogged.

Performance Guideline: Sewers, fixtures, and drains shall drain. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: The contractor will not be responsible for sewers, fixtures, and drains that are clogged because of the owner's actions or negligence. If a problem occurs, the owner should consult the contractor for corrective action. If defective installation is the cause, the contractor is responsible for correcting the problem. If the owner's actions or negligence is the cause, the owner is responsible for correcting the problem.

Discussion: With respect to septic systems, owner actions that constitute negligence under this guideline include but are not limited to the following:

- Connection of sump pump, roof drains, or backwash from a water conditioner into the system.
- Placement of nonbiodegradable items into the system.
- Use of a food waste disposer not supplied or approved by the contractor the contractor.
- Placement of surfaces not permeable to water over the disposal area of the systems.
- Allowing vehicles to drive or park over the disposal area of the system.

- Failure to pump out the septic tank periodically, as required.
- Use, which exceeds the system's design standards.

Heating, Ventilating and Air Conditioning (HVAC) System

–Coverage 1st and 2nd Year, Systems

Note: Remodeling Specific: The contractor is responsible only for areas of the property worked on and specified in the contract, and not for the entire house.

Heating System

14-1-1 Observation: The heating system is inadequate.

Performance Guideline: The heating system shall be capable of producing an inside temperature of 70 degrees Fahrenheit, 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 the ASHRAE Handbook: Fundamentals. National, state, or local energy codes shall supersede this performance guideline where such codes have been locally adopted. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: The contractor will correct the heating system to provide the required temperature in accordance with the performance guideline or applicable code specifications. The contractor will re-balance a warm air system once during the first heating season. However, the owner will be responsible for balancing the system thereafter and for adjusting dampers and registers and for making other minor adjustments.

Discussion: For new living spaces created by remodeling jobs, heating guidelines may not apply to areas where living space has been created without resizing the HVAC system.

Central Air-Conditioning System

14-2-1 Observation: Cooling of rooms is inadequate.

Performance Guideline: If air-conditioning is installed by the contractor, the cooling system shall be capable of maintaining a temperature of 78 degrees Fahrenheit, 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 the ASHRAE Handbook: Fundamentals. In the case of outside temperatures exceeding 95 degrees Fahrenheit, the system shall keep the inside temperature 15 degrees Fahrenheit cooler than the outside temperature. National, state, or local codes shall supersede this guideline where such codes have been locally adopted. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: The contractor will correct the cooling system to provide the required temperature in accordance with the performance guideline or applicable code specifications. The contractor will re-balance an air-conditioning system once during the first cooling season. However, the owner will be responsible for balancing the system thereafter and for adjusting dampers and registers and for making other minor adjustments.

Discussion: For new living spaces created by remodeling jobs, heating guidelines may not apply to areas where living space has been created without resizing the HVAC system.

14-2-2 Observation: There is a refrigerant leak.

Performance Guideline: Refrigerant lines and fittings shall not leak during normal operation. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: The contractor will repair leaking refrigerant lines and recharge the air-conditioning unit unless the damage was caused by the owner's actions or negligence.

Ventilation System

-Coverage 1st and 2nd Year, Systems

14-3-1 Observation: The ductwork is separated or detached.

Performance Guideline: Ductwork shall remain intact and securely fastened. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: The contractor will reattach and secure all separated or unattached ductwork.

14-3-2 Observation: The ductwork makes noises.

Performance Guideline: Ductwork will be constructed and installed in accordance with applicable mechanical code requirements. When metal is heated, it expands, and when cooled, it contracts. The resulting "ticking" or "crackling" sounds generally are to be expected and do not constitute a defect. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: Unless the duct is not in compliance with the local code, no corrective action is required.

14-3-3 Observation: The ductwork produces excessively loud noises commonly known as "oil canning."

Performance Guideline: The stiffening of the ductwork and the thickness of the metal used shall be such that ducts do not "oil can." The booming noise caused by oil canning is considered unacceptable. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: The contractor will correct the ductwork to eliminate noise caused by oil canning.

14-3-4 Observation: The air handler or furnace vibrates.

Performance Guideline: These items shall be installed in accordance with the manufacturer's instructions and applicable codes. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: If installed incorrectly; the contractor will correct the items according to the manufacturer's instructions and code requirements.

Discussion: Under certain conditions some vibrating may be experienced with the normal flow of air, even when air handlers and furnaces are installed correctly. See the manufacturer's instructions.

Electrical System

-Coverage 1st and 2nd Year, Systems

Note: Remodeling Specific: The contractor is responsible only for areas of the property worked on and specified in the contract, and not for the entire house.

15-1-1 Observation: Wiring fails to carry its designed load.

Performance Guideline: Wiring shall be capable of carrying the designed load for normal residential use. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: The contractor will verify that wiring conforms to applicable electrical code requirements. The contractor will repair wiring not conforming to code.

15-1-2 Observation: Electrical outlets, switches, or fixtures malfunction.

Performance Guideline: All electrical outlets, switches, and fixtures shall operate as designed. *Remodeling Specific: See Note at beginning of chapter.*

Corrective Measure: The contractor will repair or replace malfunctioning electrical

outlets, switches, and fixtures, if supplied and installed by the contractor.

Major Structure

-Coverage through 6th Year, Material Defects

Load-Bearing Portions of the Home

16-1-1 Observation: The failure of any of the following load bearing portions of the home: foundation systems and footings, beams, girders, lintels, columns, structural walls and partitions, floor systems, and roof framing systems. (Note: load-bearing portions do not include, for example: roofing and sheathing, drywall and plaster, exterior siding, brick or stone or stucco veneer, floor covering material, wall coverings, non-load bearing walls and partitions, concrete floors in attached garages and basements that are built separately from foundation walls or other structural elements of the home, electrical systems, plumbing systems, heating or cooling systems, ventilation systems, appliances, fixtures and items of equipment, paint, doors and windows, trim, cabinets, hardware or insulation.)

Performance Guideline: The failure of these load-bearing portions of the home shall not affect their load bearing functions, making the home unsafe, unsanitary or unlivable.

Corrective Measure: The contractor will repair or replace the defective item(s), or will pay the owner the reasonable cost of such repair or replacement. The contractor's total liability is limited to the amount specified in the Limited Warranty. The choice as to repair, replacement or payment is solely that of the contractor.

Repair of defective item(s) is limited to (1) the repair of damage to the load-bearing portions of the home, which are necessary to restore their load-bearing function; and (2) the repair of those items of the home damaged by the material defect, which make the home unsafe, unsanitary or otherwise unlivable.

GLOSSARY OF COMMON TERMS

AFCI (Arc Fault Circuit Interrupter) – A type of circuit breaker that is designed to reduce the likelihood of fire caused by electrical arcing faults.

beam – A structural member that transversely supports a load.

bifold doors – Doors that are hinged at the center and guided by an overhead track.

blocking – A solid, tight closure used between framing members.

breakline – A dividing point between two or more surfaces.

brick veneer – A non-structural outer covering of brick.

bridging – Wood or metal structural members between horizontal (joists) or vertical (studs) framing that provide lateral rigidity to the members to which applied.

bug holes – Pits, surface voids, and similar imperfections in a concrete wall. Bug holes generally are up to 1 inch wide or deep.

cantilever – Construction that is unsupported at one end and that projects outward from the site of the structure to carry loads from above or below.

ceiling joist – The horizontal structural members to which the ceiling is fastened. Some members may support a floor above.

checking – Cracks in wood.

chimney cap – A metal or masonry surface that covers the top portion of a chimney that prevents the penetration of water.

circuit – The complete path of electricity away from and back to its source.

circuit breaker – A device that automatically interrupts an electrical circuit when it becomes overloaded.

cold joint – A joint in poured concrete that indicates where the pour terminated and continued.

control joint – A joint that is molded or cut in concrete to allow for expansion and contraction and to attempt to control random cracking.

corner bead – A strip of wood or metal fastened over a corner for protection.

crawl space – An area under a home which is not a basement or cellar.

damper – A device used to regulate draft in a furnace or fireplace chimney.

dead spots – Areas below a carpeted surface where padding appears to be missing or improperly installed.

deflection – The amount a truss or beam bends under a load.

dew point – The temperature at which moisture in the air condenses into drops.

disturbed area – Any area adjacent to a dwelling where original vegetation has been altered or removed.

downspout – A pipe that carries rainwater from the roof to the ground or to a sewer connection.

drywall – Gypsum wallboard.

duct – A round or rectangular pipe used to transmit and distribute warm or cool air from a central

heating or cooling unit.

eave – The lower or outer edge of a roof that projects over the side walls of a structure.

efflorescence – A white powder that appears on the surface of masonry walls. It is usually caused by moisture reacting with the soluble salts in concrete and forming harmless carbonate compounds.

finish flooring – The top flooring material that covers the subflooring surface; usually carpeting, hardwood, tile, vinyl, etc.

flashing – Strips of metal or plastic material used to prevent moisture from entering roofs, walls, windows, doors, and foundations.

floor joist – A horizontal framing member to which flooring is attached.

footing – A flange-like part at the base of a foundation wall which ties and distributes loads from the foundation into the ground and prevents shifting and settling.

foundation – That part of a building which is below the surface of the ground and on which the superstructure rests.

frost lift – A condition caused by water freezing and causing soil to expand, which can cause two overlying, adjoining surfaces to separate from each other. Frost lift sometimes occurs at the junction of a garage floor and driveway.

GFCI (Ground Fault Circuit Interrupter) – A type of circuit breaker that is extremely sensitive to moisture and changes in resistance to an electrical current flow. A GFCI protects against electrical shock or damage.

gypsum – Hydrated calcium sulphate mineral rock.

gypsum wallboard – See “drywall.”

hardboard – A wood fiber panel with a density range of 50 to 80 pounds per cubic foot. It is made of wood fibers pressed into solid boards by heat and pressure.

hardwood – A term used to designate wood from deciduous trees (which lose their leaves annually).

header – A structural member placed across the top of an opening to support loads above.

hinge-bound – A condition of a passage or entry door where hinge function impedes proper operation.

holidays – Voids or inconsistencies in a finished surface.

honeycomb – Voids in a concrete wall that are larger than bug holes (see “bug holes”).

HVAC – The abbreviation for Heating, Ventilating, and Air Conditioning Systems.

jamb – The side framing or finish material of a window, door, or other opening.

joist – An on-edge-horizontal lumber member, such as a 2x6, 2x8, 2x10, or 2x12, which spans

from wall to wall or beam to provide main support for flooring, ceiling, or roofing systems.

junction box – A box that forms junctions between sections of house wiring.

lath – Any material used as a base for plastering or stucco surfacing.

lippage – The difference in surface alignment between two materials.

mortar – An adhesive and leveling material used in brickwork, stone, block, and similar masonry construction.

muntins – Strips of wood, metal, or plastic that divide a window into panes. Muntins can be installed within two pieces of glass or on the surface of the glass.

parging – A rough coat of mortar applied over a masonry wall.

pitch – The degree of incline in a sloped roof or structure.

plumb – A measurement of true vertical.

rafter – Structural members which shape and form the support for the roof deck and the roof covering.

raveling – A condition in which aggregate is loose from asphalt pavement.

register – A louvered device that allows air travel from the ducts into a room.

riser (stairway) – A vertical stair member that supports a tread.

riser (plumbing) – A water pipe that extends vertically one full story or more to convey water to branches or to a group of fixtures.

roof ridge – The apex of a roof system.

scaling – The flaking or peeling away of a surface portion of hardened concrete.

setting – The driving of a fastener flush or below the surface of a material.

shakes – Split wooden shingles that are random in thickness.

sheathing – The application of panels to the face of framing members. Also known as “decking.”

shim – A thin, tapered piece of material (usually wood) that is used to adjust or provide support for a member.

sill – A framing member placed on top of and around a foundation to serve as a level base on which to support exterior wall studs.

slab – A concrete floor/surface.

soffitt – The enclosed under surface of an eave.

spalling – The breaking away of a small piece of concrete.

stair skirt – A finishing board that may cover the outside staircase edge.

stud – A vertical framing members.

subflooring – A floor decking material laid on top of the floor joists.

substantial completion of the project – A project has met substantial completion where the areas are functional for their intended use as stated by the contract (except for items noted prior to final presentation), and clean-up on the site has been completed.

sump pump – A pump that is installed in a crawl space, basement, or other low area to discharge water that might collect.

swale – A shallow depression in the ground that is used as a drainway for water.

telegraphing – A condition of a subsurface projecting through the finish material.

tread – A horizontal stair member. A tread is the part you step on when walking up or down stairs.

truss – An engineered assembly of wood or metal components that generally is used to support roofs or floors.

vapor retarder – Plastic film or other material used to limit the amount of moisture vapor that passes through a material or wall assembly.

warranty period – The duration of the applicable warranty provided by the contractor or any other period agreed to by the parties.

weather stripping – Material placed around doors, windows, and other openings to prevent the infiltration of air, dust, rain, etc.

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