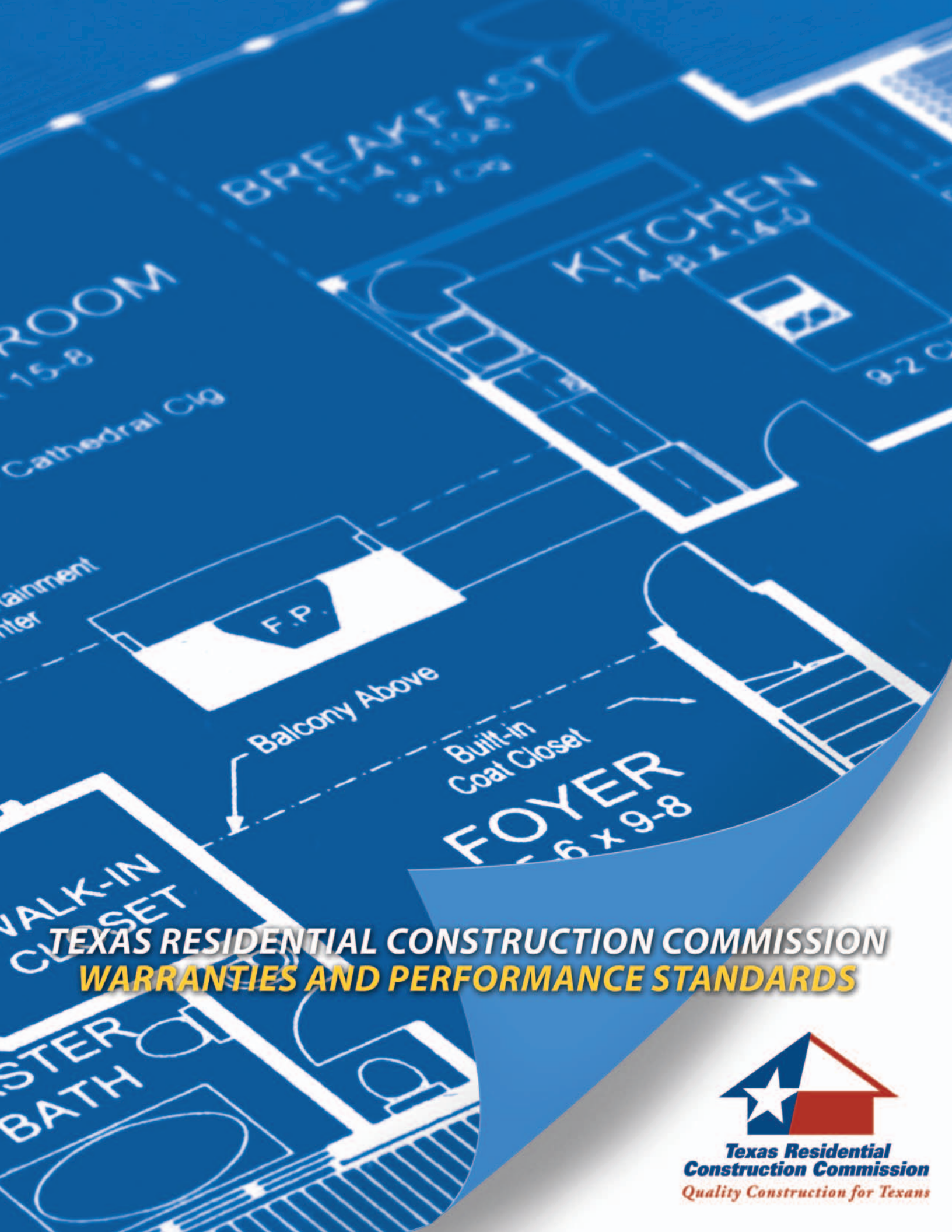

TEXAS RESIDENTIAL CONSTRUCTION COMMISSION
WARRANTIES AND PERFORMANCE STANDARDS

Texas Residential Construction Commission

Quality Construction for Texans

Texas Residential Construction Commission
Quality Construction for Texans

Dear Homeowner:

Congratulations on your new home or home renovation project. The Texas Residential Construction Commission has mailed you this booklet because you either purchased a new home or renovations to your current home have been recently completed.

The commission is the state agency established to assist homeowners and builders/remodelers who are unable to resolve disputes involving alleged defects that become apparent after construction has been completed.

As part of our ongoing efforts to provide information about the functions of the commission to the public, this booklet contains a 'user-friendly' version of the adopted warranties and building performance standards that became effective on June 1, 2005. If you signed a contract for construction on your home or remodeling project or if construction started on or after that date, the guidelines in this booklet will apply.

This booklet is intended to be used as a guide and does not replace the actual warranty and performance standards adopted by the commission that can be downloaded at www.trcc.state.tx.us.

Additionally, this booklet provides you with information on how to file a complaint with the commission and how to make a request to use the State-sponsored Inspection and Dispute Resolution Process (SIRP). The SIRP is a neutral process whereby neutral third-party inspectors, assigned by the commission, evaluate your home's alleged defects and based upon applicable warranties will provide a report of their findings.

The commission's procedures are intended to provide a fair, impartial and balanced review for both the homeowner and the builder/remodeler. The warranties and performance standards and the State-sponsored Inspection and Dispute Resolution Process are designed to help both parties achieve a common goal: a reliable, well-built home.

Sincerely,

Commissioner Patrick Cordero, Chair

311 East 14th Street • Suite 200 • P.O. Box 13144 • Austin, Texas 78711 • 512.463.1040 voice • 512.463.9507 fax • Dial 7-1-1 for Relay services • www.trcc.state.tx.us

Texas Residential Construction Commission

Our Mission

Provide Texas homeowners and the residential construction industry an opportunity to resolve differences through a neutral dispute resolution process and ongoing education.

Primary Responsibilities

- Register homes and home builders
- Oversee the state-sponsored inspection and dispute resolution process
- Prepare and adopt limited warranties and building and performance standards
- Provide a voluntary certification of arbitrators
- Provide for the filing of arbitration awards

How to file a complaint

TEXAS RESIDENTIAL CONSTRUCTION COMMISSION

311 E. 14th Street, Suite 200

P.O. Box 13144

Austin, Texas 78711

(512) 305-TRCC

(877) 651-TRCC (8722)

www.trcc.state.tx.us

info@trcc.state.tx.us

Homeowners are able to avoid costly, time-consuming lawsuits through an impartial process designed to help settle disputes with a builder/remodeler.

If you have problems after construction has been completed that have not been addressed by your builder/remodeler, the Texas Residential Construction Commission can help you resolve them.

The Texas Residential Construction Commission's state-sponsored inspection and dispute resolution process (SIRP) is available to provide a professional, impartial review of a construction problem.

How it works...

- A homeowner or builder/remodeler may initiate the SIRP with the commission.
- A homeowner, who believes there are problems with how the house was built, must give a written notice of the issues to the builder/remodeler at least 30 days prior to asking the commission to begin the SIRP. The homeowner must then give the builder/remodeler the opportunity to inspect the house and make any necessary repairs.
- The SIRP is conducted by neutral professionals who have expertise in the industry.
- It is always an option for the builder/remodeler to give the homeowner proposed solutions to the problems in writing and for the homeowner to accept the offer.
- A homeowner must go through the SIRP before pursuing further legal action.

More detailed information about the process is provided on page 5.

TEXAS RESIDENTIAL CONSTRUCTION COMMISSION
WARRANTIES AND PERFORMANCE STANDARDS

TABLE OF CONTENTS

General Provisions

One-Year Warranty for Workmanship and Materials

Two-Year Warranty for Plumbing, Electrical, Heating, Ventilation and Air Conditioning Delivery Systems

Ten-Year Warranty on Structural Components

Introduction

The warranties and performance standards are contained in rules adopted by the Texas Residential Construction Commission. This booklet is a summary of the warranties and performance standards in an easy-to-read format. It does not cover all aspects of the warranties and performance standards and is not an official version of the rules. If a conflict exists between this booklet and the actual rule language, the rules will apply. The warranties and performance standards and commission rules can be found in their entirety on the website at **www.trcc.state.tx.us.**

General Provisions

The performance standards adopted by the commission are the minimum standards of performance for the various elements or components of a home. Independent third-party inspectors appointed by the commission to inspect alleged defects will make recommendations for repair or replacement of those components of a home that do not meet these standards during the warranty period.

Warranties

New home construction, home improvements changing the square footage of the home's living area and interior remodeling projects exceeding $20,000 are covered by the adopted warranties and performance standards. The warranties and performance standards apply to a completed home or remodeling project, not the homeowner. Any remaining warranty period is transferred automatically to the new homeowner when a home is sold.

The length of the warranty coverage depends on the type of component. The length of each of the warranties is as follows:

- Warranty of habitability: *ten years*
- Major structural components: *ten years*
- Plumbing, electrical, heating, air-conditioning and ventilation delivery systems: *two years*
- All other components of a home: *one year*

The warranty of habitability covers a construction defect in a component that is otherwise covered by one of the other warranties, but was not discoverable by a reasonable prudent inspection during the original warranty period, and the defect has made the home unsafe or unfit for humans to inhabit. For example, a pipe under a new home's foundation is leaking but it is not reasonably discoverable by a homeowner during the two-year warranty period on plumbing systems.

After the expiration of the two-year warranty, the pipe leak causes the home's slab foundation to crack in several places making the house unfit or unsafe for human habitation. Although the pipe leak warranty has expired, the fact that it led to an unsafe or unfit condition within ten years of the completion of the home makes the defect subject to the warranty of habitability.

Major structural components are warranted for ten years. Major structural components include the load-bearing elements of the home. These elements include the footings, foundations, beams, columns, load-bearing walls, roof framing systems and other components that support the home. The delivery portion of the plumbing, electrical, heating, air-conditioning and ventilation system is covered by a two-year warranty. All other components of the home are covered by a one-year warranty.

Effective Date of Warranties

The warranties covering a new home begin either when the original homeowner occupies the home or on the day the title to the home is transferred to the initial homeowner from the builder/remodeler, whichever is earlier. Warranties that cover improvements or remodeling projects to an existing home begin on the day the improvements are substantially completed. Substantial completion means that the improvement can be used for the purpose intended. The original homeowner and the builder/remodeler may provide for a different effective date of the warranties by written agreement.

Time Limits for Reporting

For a defect to be covered, it must be reported to the builder/remodeler within two years of the date it is first discovered, but in no event more than 30 days after the applicable warranty period expires or ten years after the original warranty took effect.

Exclusive Warranties

The warranties and performance standards supersede all other implied warranties for new home construction, improvements and remodeling projects. The warranties and performance standards may not be waived, modified or reduced to limit the protection offered. However, a builder/remodeler or manufacturer may provide longer warranty periods and/or more stringent performance standards.

Manufacturer's Warranties

A home consists of many components that are manufactured and installed in the home without significant modification. These components are known as "manufactured products." Some common examples of manufactured products include the home's water heater, air conditioner, carpet and light fixtures. Many manufacturers of these products offer warranties that may provide different types of protection in addition to those provided by the builder/remodeler. All manufactured products shall be installed and used according to the manufacturer's instructions and specifications. Only new manufactured products and parts may be installed unless the parties agree otherwise in writing.

The manufacturer's warranty for all manufactured products will be transferred to the original homeowner at the same time the commission warranties begin. If a manufactured product fails to operate properly, the manufacturer is responsible for repair or replacement. The builder/remodeler is required to assist the homeowner in coordinating the necessary repairs by the manufacturer. If the manufacturer does not comply with its warranty within a reasonable period of time, the builder/remodeler is required to remedy the defect to comply with the warranties and performance standards.

Other Codes and Standards

In addition to complying with these warranties and performance standards, the builder/remodeler is also required to comply with the International Residential Code (IRC) for all non-electrical work and the National Electrical Code (NEC) for all electrical work. Compliance with the IRC and the NEC also include compliance with any amendments adopted by the local municipality. Other codes and standards that may apply include those of the Federal Housing Administration, the Department of Veterans Affairs, U.S. Department of Housing and Urban Development, the American National Standard Institute (ANSI) and the American Society of Heating, Refrigerating and Air-conditioning Engineers (ASHRAE). In the event of a conflict between the various codes and standards, the most restrictive will apply.

Notifying Your Builder/Remodeler

We hope that you are happy with your new home or remodeling project. The construction of a new home or a remodeled home consists of the assembly of different materials by various types of tradesmen essentially "from scratch." Given this, it is not entirely unusual for issues to arise that may need your builder/remodeler's attention during the months following completion of your project. We hope that with a clear understanding by both the builder/remodeler and homeowner of the appropriate way to notify and respond to issues such as these, all issues will be resolved to everyone's satisfaction in a timely manner.

Be sure to review your warranty or speak with your builder/remodeler to determine if there is a preferred method to request warranty work. While each builder/remodeler may have different ways that they would like to be informed of warranty issues, the following is a general procedure for notifying your builder/remodeler of warranty issues.

- Always request warranty work in writing. Even if your builder/remodeler accepts warranty requests verbally, be sure to follow-up in writing.
- Be sure that your written request provides a reasonably detailed description of each issue in need of repair.
- Allow your builder/remodeler an opportunity to inspect the issue(s) and, if necessary, determine the appropriate method(s) of repair.

Your Builder/Remodeler's Responsibilities

There may be instances where a builder/remodeler and a homeowner do not agree whether a particular issue is covered under warranty or what is an appropriate method of repair of a warranty issue. In order to resolve these types of disputes, the commission administers the **State-sponsored Inspection and Dispute Resolution Process (SIRP)**.

Builders/remodelers are responsible for all work performed under their direction. Work performed under the direction of the builder/remodeler includes any work performed by their subcontractors and suppliers. For example, the builder/remodeler is responsible for the work performed by their plumbing subcontractor and for the performance of the water pipes installed in the home. The builder/remodeler is not responsible for work performed by anyone not under the builder's direction and control. For example, if the homeowner contracted directly with a third party for installation of the water heater, the builder/remodeler would not be responsible for improper installation of the water heater. However, the builder/remodeler is responsible for items selected by the homeowner for installation in the home if the builder/remodeler pays for those items (allowances) as a part of the contract. Figure 1 is an illustration of typical home construction.

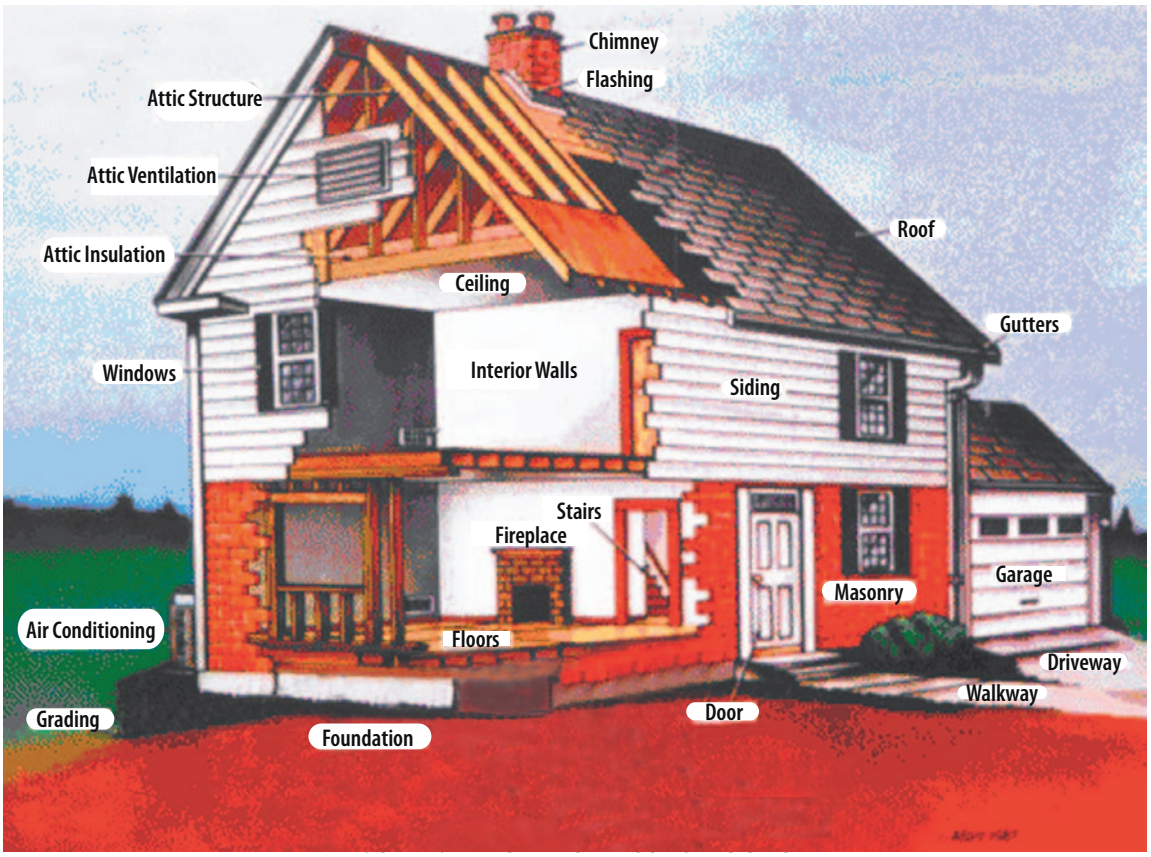

FIGURE 1: TYPICAL HOME CONSTRUCTION

How the State-sponsored Inspection and Dispute Resolution Process (SIRP) Works

The SIRP is a neutral administrative process available to resolve post-construction disputes between builders/remodelers and homeowners before pursuing other legal action. If a builder/remodeler and homeowner cannot resolve an alleged construction defect dispute between themselves, either party can make a request for a SIRP. *At any point before or during the SIRP process, the homeowner and builder/remodeler may agree to resolve their differences in any manner they choose. The commission encourages such resolutions.*

How To File a SIRP Request

Forms and information needed to file a SIRP request are available at **www.trcc.state.tx.us** under "SIRP/Complaints." The web site provides instructions on ways to submit the SIRP request and any fees that may be associated with the request. SIRP packets are also available upon request by contacting the commission toll free at 877-651-TRCC (8722).

STEP 1: A homeowner provides written notice to their builder/remodeler of any alleged defect(s) in the construction of the new home or remodeling project. The commission recommends that this notice be provided by certified mail, return receipt requested, although it is not required.

STEP 2: In the event that the homeowner is not satisfied with the builder/remodeler's response to this written notice, they can file a request for the SIRP. Thirty (30) days must pass between the time the written notice is provided and the time a homeowner files a request for the SIRP to resolve those issues. This provides the builder/remodeler with an opportunity to respond and inspect the alleged defect(s).

STEP 3: Once the commission receives a SIRP request, a professionally certified, neutral third-party inspector will be assigned to evaluate the issue(s) for compliance with the applicable building and performance standards. If the third-party inspector determines that a particular issue is out of compliance, the inspector will make a recommendation for the repair of the issue.

If the homeowner or builder/remodeler does not agree with the findings and recommendations of the third-party inspector, either can submit an appeal to the commission. Appeals are referred to a panel of state inspectors employed by the commission. This panel reviews the third-party inspector's findings and recommendations to determine if they are supported by the applicable building and performance standards.

STEP 4: At the conclusion of the SIRP, if there is a covered defect found, the builder/remodeler can make an offer to repair based on the findings and recommendations of the third-party inspector or the appeal panel, if the issue was appealed. This offer can be accepted or rejected by the homeowner.

STEP 5: After completing the required SIRP, if the parties are still unable to reach an agreement to resolve their dispute, the parties retain their rights to pursue other legal remedies. The final report issued by the commission carries a rebuttable presumption in subsequent legal proceedings.

Homeowner Responsibilities

The homeowner is responsible for proper maintenance, care and use of all components as recommended by the manufacturer or installer. Improper use, care or maintenance may void portions of the statutory warranty and the manufacturer's warranty.

Repair and Finish

Third-party inspectors make recommendations for the repair of construction defects. However, the builder/remodeler and homeowner may agree to an alternative remedy. For example, the parties may agree to a different method of repair than that recommended by the inspector. Repairs include any necessary additional work required to return the home to its original condition. The quality of the repairs and the finished surface areas must be equal to the quality of the original structure or component. The builder/remodeler is not responsible for locating discontinued items or patterns.

Exceptions and Exclusions

Although a builder/remodeler is responsible for all work performed under its direction, certain situations and/or actions release them from this responsibility. The following are some examples of when the builder/remodeler is not responsible for repair, loss or damage:

- Work performed or materials supplied by someone other than your builder/remodeler.
- The negligence, improper use or failure to follow the manufacturer's recommendations.
- Failure to take reasonable efforts to stop damage from getting worse after a defect is discovered. For example, if water leaks, the homeowner should shut off the water supply and dry the area to prevent further damage.
- Failure to take reasonable action to maintain the home.
- Failure to comply with homeowner's responsibilities.
- Changes to the soil that are not a direct result of construction activities.
- Normal wear and tear.
- Damage caused or made worse by extreme weather, vandalism, civil disputes, motorized vehicles, aircraft, fire, water, animals or insects.
- When the home is being used primarily for nonresidential purposes.
- When using a component in a way that it was not intended to be used.
- Any damage that does not include physical evidence of damage (i.e. damage from radon gas, formaldehyde, pollutants, contaminants, mold, mildew, toxic material, etc.).

One-year Warranty for Workmanship and Materials

The building and performance standards for the components of a home subject to a warranty of one year for workmanship and materials are discussed below. These components include exterior concrete, framing, drywall, insulation, exterior siding and trim, masonry, stucco, roofing, doors and windows and interior flooring.

Yard Grading

Yards are graded to provide proper drainage of water away from the home. The homeowner is responsible for maintaining the drainage patterns and the grading of the lot to prevent erosion, blockage, over-saturation or other changes to the set grade.

Proper grading of soil diverts water flow away from the home. Ponding of water within ten feet of the home for more than 24 hours after a rain or more than two inches deep in a crawl space may signal a drainage problem.

Foundations and Slabs

Foundations and slab areas include raised floor foundations, crawl spaces, basements, concrete slab foundations and exterior concrete areas if part of a monolithic slab. If the home has a crawl space under the foundation, it is considered a raised floor foundation. Figure 2 depicts an example of a pier and beam foundation with a crawl space and a concrete slab. If the home has a concrete slab, it is normal for small surface cracks to appear in the concrete. These small cracks will not affect the soundness of the slab,

The only time it is acceptable to have an uneven floor in the home is if the slab is designed and constructed to aid in draining water, such as the laundry room, garage or basement.

The homeowner has several responsibilities for maintaining a healthy foundation. The homeowner shall not make changes to the existing grade or slope of the yard affecting water drainage away from the foundation. The crawl space shall not be used for storage.

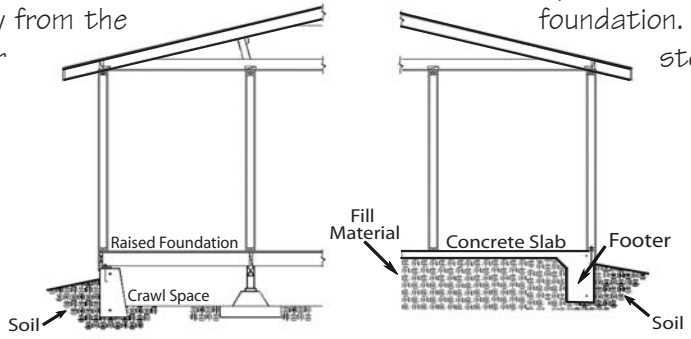

FIGURE 2: FOUNDATIONS OF A HOME

Slab Foundations

A concrete slab foundation consists of the portion of the slab under the living area as well as an attached garage. However, detached garages, driveways, sidewalks and patios that are not a part of a monolithic foundation are considered exterior concrete.

Pier and Beam Foundations

If the home does not have a concrete slab foundation, it most likely will have a pier and beam foundation. A pier and beam foundation consists of piers that are vertical supports that support horizontal beams upon which the home is built.

Other Structural Components

Other structural components consist of beams, headers, girders, lintels, columns, load-bearing walls, partitions, roof framing systems, ceiling framing, floor systems and masonry arches. These elements support the weight and provide a skeleton upon which the home's surfaces are attached.

Structural components shall not become defective to the extent that the defect compromises the structural strength or the performance of the structural system. Such defects could include cracks, bows, deterioration or separations between two components.

Exterior Concrete (Flatwork)

Exterior concrete areas, sometimes referred to as flatwork, include patios, driveways, walkways and detached garages. Some exterior concrete areas, such as walkways or sidewalks, may have control or expansion joints. These joints allow for expansion and are necessary to limit future cracking.

It is normal for small surface cracks to appear in the concrete. Exterior concrete surfaces, corners and edges must be relatively smooth and free from damage, with no objects that protrude through the surface. Cracks in exterior concrete may not equal or exceed certain tolerances in width or vertical displacement (see Figure 3). If the home has a concrete slab, it is normal for small surface cracks to appear in the concrete. These small cracks will not affect the soundness of the slab.

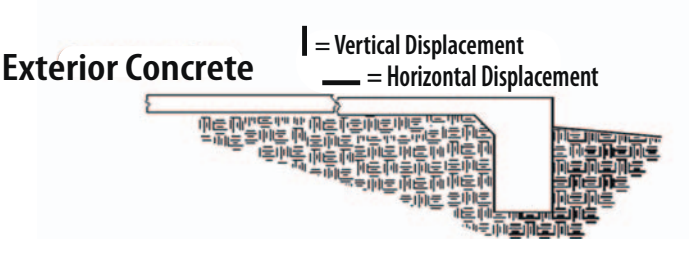

FIGURE 3: VERTICAL & HORIZONTAL DISPLACEMENT

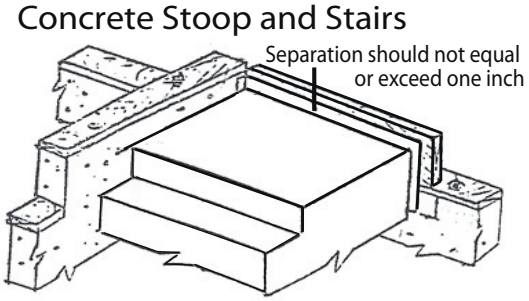

FIGURE 4: CONCRETE STOOP AND STAIRS

Exterior concrete surfaces are not to be so smooth as to cause the surface to become slippery when wet. Stairs or stoops are to be relatively level and not separate from the home by one inch or more. Handrails must be securely attached to the stairs and must remain that way. Figure 4 shows a typical stoop and stairs.

Driveways are designed to drain water away from the home. However, a slope towards the garage may be necessary when a home sits lower than the road. In this circumstance, the driveway shall be constructed so as to prevent water from running into the garage under normal weather conditions.

Recommendation: The homeowner should not over-water the soil around any concrete areas or allow the soil to become overly dry. Over-watering or lack of water will cause soil to expand and shrink thereby causing damage to the concrete. Keep heavy equipment off driveways, patios and sidewalks because they are not designed for heavy loads. For example, moving vans can cause damage to exterior concrete areas.

Framing

Framing includes beams, studs, posts, columns, joists, rafters, headers, sheathing and other components. Some walls provide structural support for the home while other walls do not. If remodeling is planned for the home, consult a professional concerning the removal or alteration of any wall. Figures 5A--wall framing, 5B--roof framing and 5C--pier and beam floor framing show the different components of framing.

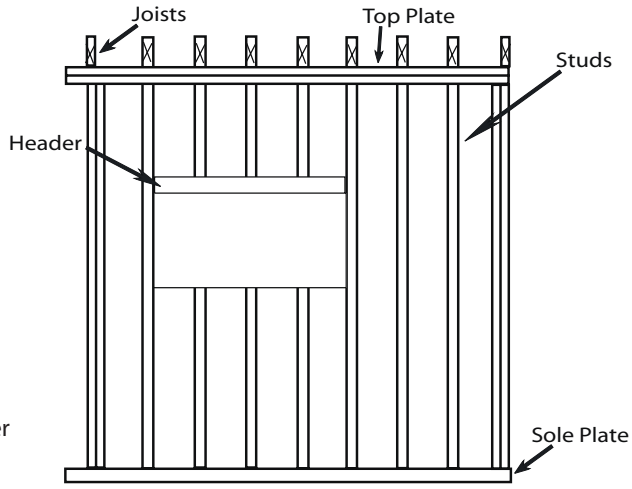

FIGURE 5A: WALL FRAMING

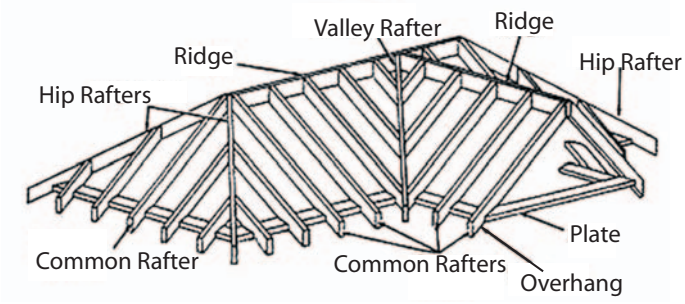

FIGURE 5B: ROOF FRAMING

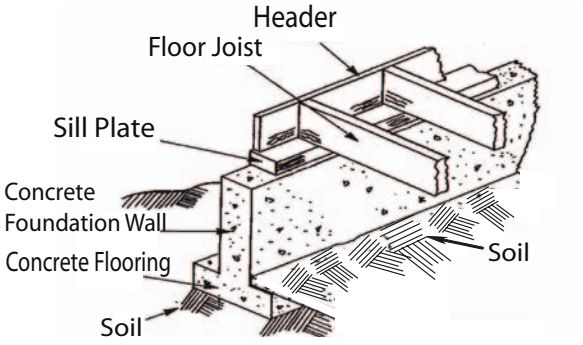

FIGURE 5C: PIER AND BEAM FLOOR FRAMING

Wall, Ceiling and Beam Tolerances

Slope changes in Walls, Ceilings and Beams	Tolerance
Wall crown, bow or depressions	< 1/4" over a length of 32"
Changes in any 8' vertical measurement	< 1/2"
Decorative Ceiling crown, bow or depressions	< 1/2" over a length of 32"
Decorative Beam and post cracks	< 1/2" in width

Sub-flooring and Stairs

Underneath the top layer of flooring is a layer referred to as the sub-floor that acts as the main support of the flooring. The sub-flooring shall be relatively smooth and not bow or have humps, ridges or depressions or slope that equals or exceeds 3/8 of an inch in any 32 inch direction.

If there are stairs in the home, steepness and dimensions must be in accordance with the Code. Stairs may not make excessive squeaking or popping sounds under normal residential use.

Drywall

Drywall provides a finished surface that covers the framing, insulation and ductwork inside the home. The performance standards for drywall include its components, such as the surface, joints, nails and screws. A drywall joint is where two pieces of drywall are joined by tape and/or metal stripping and finished with drywall compound.

A drywall surface shall not have imperfections such as blisters, cracks, seam lines, excess joint compound, nail or screw heads protruding or noticeable trowel marks (unless by design). A drywall crack must not exceed 1/32 of an inch anywhere along the length of the crack. Figure 6 is an example of drywall cracking that exceeds acceptable tolerances.

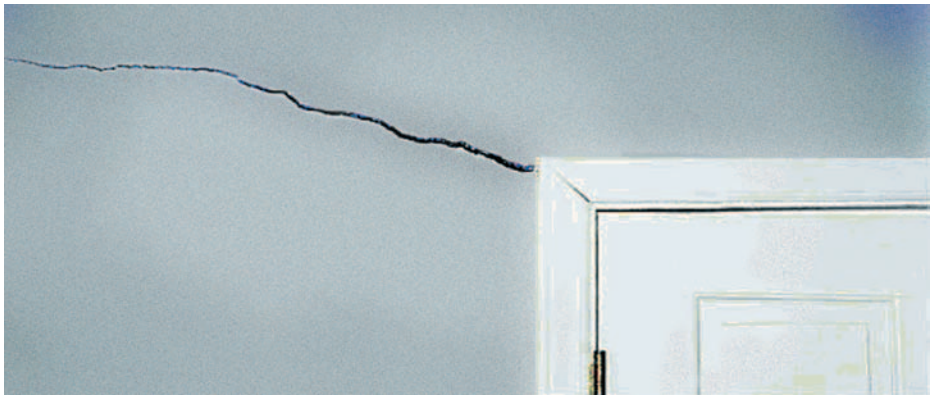

FIGURE 6: DRYWALL CRACK

Drywall Tolerances

Drywall	Tolerance
Bow or depressions	< 1/4″ over a length of 32″
Changes in any 8′ vertical measurement	< 1/2″
Ceiling bow or depressions	< 1/2″ over a length of 32″
Squared corners	Within 3/8″ over 32″
Cracks	< 1/32″
Crowning	< 1/4″ within a 12″ measurement

Performance standards may not apply to the drywall of some remodeling projects if the existing conditions prevent the builder/remodeler from being able to achieve the standards. For example, if a builder/remodeler is replacing drywall on existing studs in an older home, the drywall may not be level or square due to the condition of the existing studs. The builder/remodeler must notify the homeowner in writing at the time of discovery of the existing condition.

Insulation

Insulation within the walls and ceilings helps maintain the interior temperature. There are several types of insulation (see Figure 7). Batt insulation comes in a roll and is typically installed within walls. Blown insulation is loose and is typically used in attics. Some homes may contain foam insulation that is sprayed into the walls and ceilings. The R-Value of insulation is the measurement of the effectiveness of the insulation. Generally, the higher the R-Value, the more effective the insulation. A properly insulated home will be more comfortable and energy efficient.

Homes must have insulation installed in the ceilings, walls and certain types of floors in accordance with the building plans, specifications and the Code. Batt insulation with gaps that equal or exceed 1/4 of an inch between the batt insulation and the framing member loses insulating value. Blocking attic vents with insulation restricts the free flow of air in the attic. Homeowners should not take any action that would cause the insulation to become flattened or compressed.

Batt Insulation

Blown Insulation

FIGURE 7: INSULATION

Exterior Siding and Trim

Exterior siding can be made of wood, vinyl or cement. Exterior trim is installed at corners, eaves and around windows and doors. Figure 8 shows a typical layout of exterior siding. Exterior siding and trim shall perform in accordance with the following:

- Siding and knots within the siding shall not become loose or fall off.
- Siding and trim shall be properly spaced and aligned.
- Siding shall not bow or cup or have gaps equal to or exceeding 1/4 of an inch in width.
- Joints and gaps between two pieces of siding or between siding and adjacent materials shall be caulked.
- Siding, trim and eave blocks shall be installed with proper corrosion-resistant nails or screws.
- Fasteners (nails or screws) shall not protrude from the finished surfaces or leave stains.
- Siding shall not have cracks or splits equal to or exceeding 1/8 of an inch in width.
- Trim and eave blocks shall not have warp equal to or exceeding 1/2 of an inch in any eight-foot measurement.
- Trim and eave blocks shall not cup in an amount equal to or exceeding 1/4 of an inch in any six-foot measurement.
- Trim and eave blocks shall not have cracks or splits equal to or exceeding 1/8 of an inch in width.
- Siding shall not cup more than 1/4 of an inch in any six foot measurement.
- Siding shall not bow more than 3/8 of an inch in a 32 inch measurement.

Some types of exterior siding and trim will need to be repainted or restained periodically. The homeowner is responsible for proper maintenance of the exterior siding and trim, as well as repainting or restaining as necessary. Damage to the siding and trim may be caused by, but not limited to, the following activities: pressure washing, acid cleaning, drilling holes, attaching fixtures or ornamental décor, patio covers, plant holders, awnings or hose racks and other similar devices.

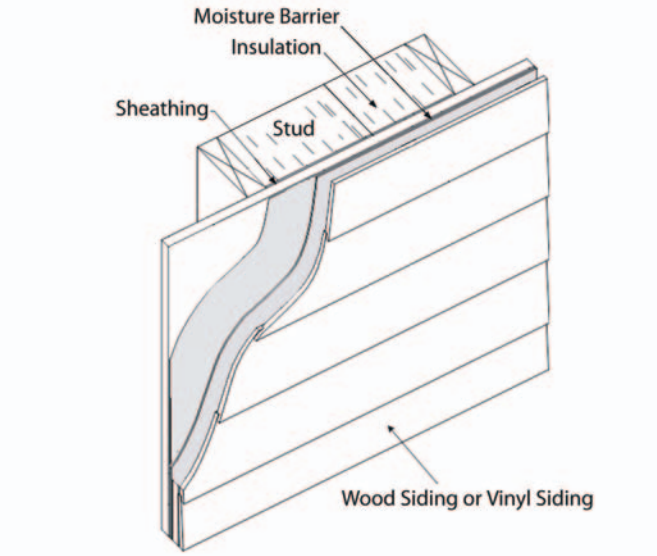

FIGURE 8: EXTERIOR SIDING AND COMPONENTS

Masonry

Masonry includes brick, block, stone and mortar. Figure 9 illustrates examples of defects in masonry walls.

FIGURE 9: MASONRY WALL CRACKS

Masonry walls shall perform in accordance with the following:

- Masonry walls shall not bow in an amount equal to or exceeding one inch from bottom to top.
- Masonry shall not have cracks equal to or exceeding 1/8 of an inch in width.
- Masonry shall not contain loose pieces or deteriorate. Masonry shall not have dirt, stains or debris left from construction activities.
- Joints and gaps between masonry and adjacent material shall not equal or exceed 1/4 of an inch in width and shall be caulked to help prevent moisture and air penetration.
- Mortar shall not cover any designed opening, such as a vent, plumbing cleanout, weep hole, etc.

Weep holes are small holes in the mortar along the lower row of masonry that allow moisture to escape from the space inside the wall. It is important that the homeowner prevent the weep holes from becoming obstructed. Damage to masonry walls may be caused by the following types of activities: pressure washing, acid cleaning, drilling holes, attaching fixtures or ornamental décor, patio covers, plant holders, awnings or hose racks and other similar devices.

Stucco

This section includes stucco, stucco joints and openings, lath, screed and Exterior Installation Finish Systems® (EIFS). Lath is the wire mesh used underneath the stucco to adhere the stucco to the supporting surface and shall not be visible. Weep screed is a metal trim placed at the bottom of the stucco surface where the stucco meets the foundation. The function of weep screed is to act as a drip edge for water to run off. Weep screed shall be at least four inches above the soil or landscaped surface and at least two inches above any finished surface. EIFS screed shall be at least six inches above any surface. Figure 10 depicts stucco wall components.

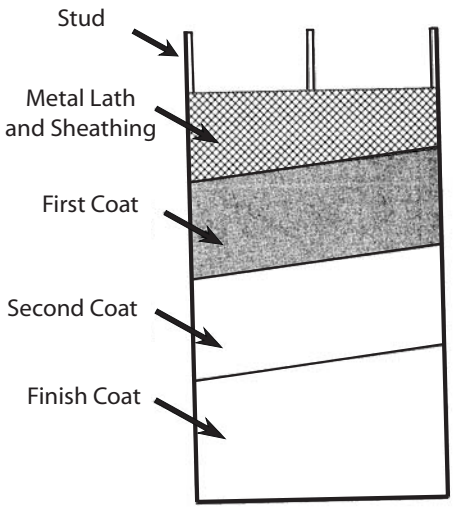

FIGURE 10: TYPICAL THREE COAT STUCCO WALL COMPONENTS

Stucco systems shall perform in accordance with the following:

- Stucco shall not be excessively bowed, uneven or wavy. It shall not be broken or loose.
- Stucco surfaces may have very small cracks that are normal and acceptable.
- Stucco surfaces shall not deteriorate excessively and shall not have dirt, stains or debris left from construction activities.
- Stucco shall not obstruct vents, weep holes or plumbing cleanouts.

Stucco Tolerances

Stucco	Tolerance
Cracks	< 1/8" wide
Gaps between stucco panels	< 1/16" wide
Gaps with another surface material	< 1/4" wide
Surface Imperfections	Should not be visible more than 6' away

Additional cracking and other damage to stucco may be caused by the following types of activities: pressure washing, acid cleaning, drilling holes, attaching fixtures or ornamental décor, patio covers, plant holders, awnings, hose racks and other similar devices. Improper use, care or maintenance may void portions of the statutory warranty and the manufacturer's warranty.

Roofs

Roofing includes flashing, vents, louvers or other installed attic openings, gutters and/or downspouts, shingles, tiles, metal, any other roofing material, skylights, pipes, vents, fireplace chimneys and the exterior moisture barrier. Roofs contain valleys, ridges, peaks and crickets (see Figures 11A & B).

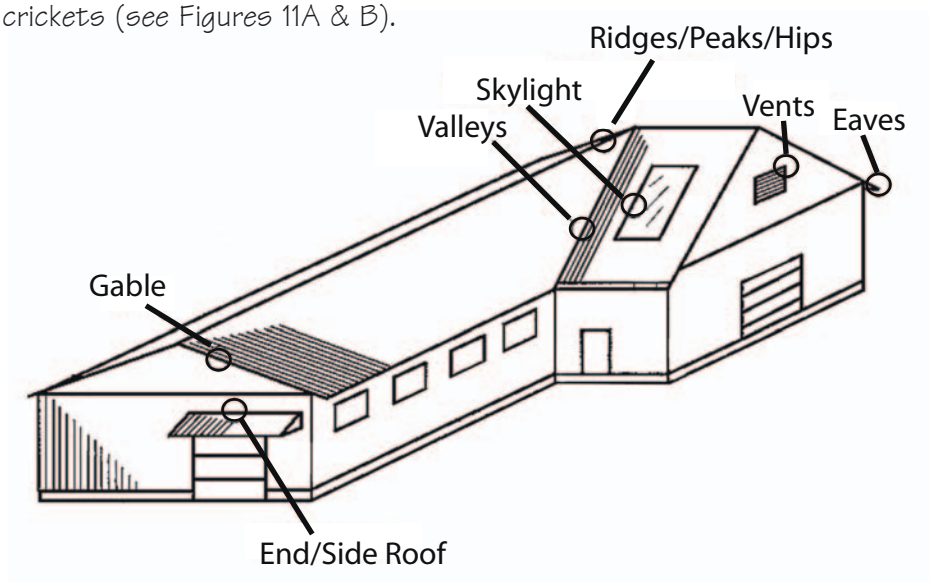

FIGURE 11A: ROOF CONSTRUCTION

A cricket is a built-up water diversion system that is placed on the high side of a chimney 30" or wider, so that water flow is directed around it (see Figure 11B).

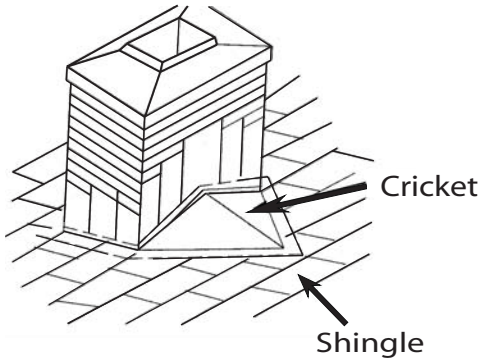

FIGURE 11B: CRICKET

Roofs, vents, louvers and other installed openings shall not leak. Gutters and downspouts shall not leak or retain standing water equal to or exceeding 1/2 of an inch after a rainfall. Shingles, tiles, metal or other roofing materials shall not become loose or fall off under normal weather conditions. Tile roofing shall not crack. A pipe, vent, chimney or other object designed to penetrate the roof shall not be located in a valley. The builder/remodeler is not responsible for leaks caused by extreme weather. Figure 12 shows typical flashing installation in roofs to prevent leaks.

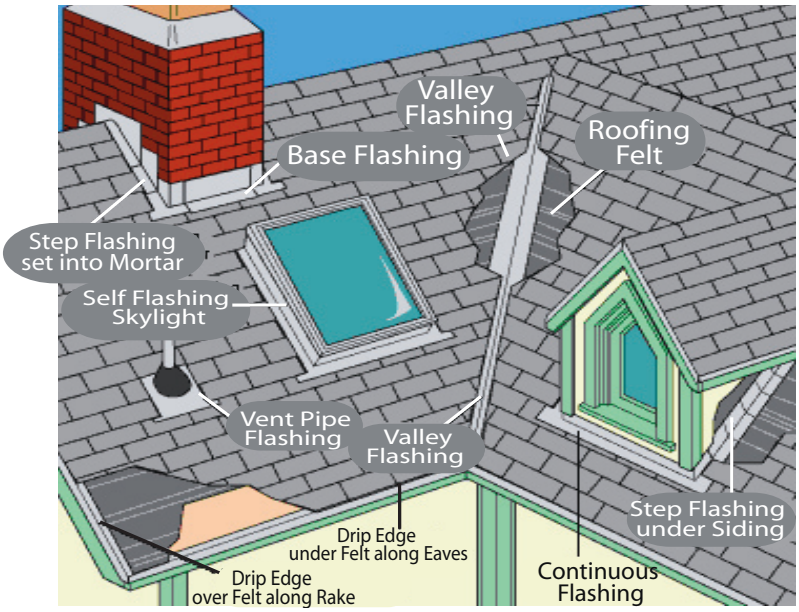

FIGURE 12: ROOF FLASHING

The condition of the roof should be inspected periodically by a professional to identify potential issues.

Doors and Windows

Doors and windows include exterior and interior doors and windows and their components. These components include weep holes, glass, screen, latches, paint, stain, tracks, rollers, chains, paneling and garage door openers/sensors. Weep holes are small holes in the lower parts of the windows and doors that are part of the moisture drainage system. Figure 13 shows the construction detail of a vinyl window.

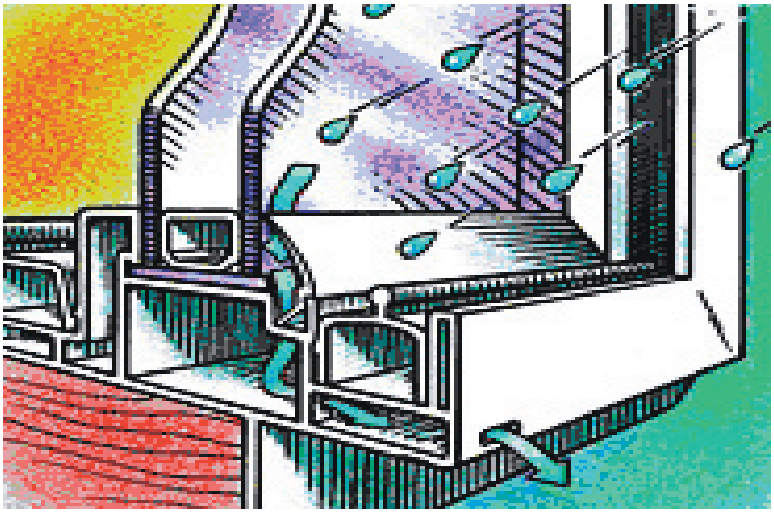

FIGURE 13: WEEP HOLE IN A VINYL WINDOW

Doors

General: All doors are to be painted or stained and free of scratches and dents. Locks and latches must work smoothly and secure the door snugly. Screens must be free from holes and securely installed in their framework.

Exterior: These doors are designed to provide security, weatherproofing and air infiltration seals to the exterior of your house. Weather-stripping is provided around the jamb of the door to seal the opening from air infiltration. Improper installation will allow visible light between the door and the frame.

Sliding Glass: Sliding glass doors are installed on tracks and shall operate smoothly. These door tracks require cleaning and lubricating periodically to keep them functioning properly. Glass panels within the doors must be free of cracks, condensation between sealed insulated panels or other damage.

Interior doors: All interior doors must have a gap at the bottom to allow for the flow of air throughout the home. A gap should be at least a 1/2 of an inch but should not exceed one and a half inches except on closet doors when the gap may not exceed two inches at the bottom. Laminated doors shall not separate.

Windows

Closed windows stop infiltration of air, dust and moisture. Glass in windows shall be fitted properly and not be damaged or broken as a result of construction activities. Windows with condensation between sealed insulated glass panels are considered broken and must be replaced. Windows installed properly will operate easily and smoothly without excessive pressure or force. Screens installed in windows shall not be torn or damaged as a result of construction activities. Gaps between the screen frame and the window frame may not equal or exceed 1/4 of an inch.

Weep holes allow condensation or minor moisture intrusions to drain outside. Keep weep holes free from dirt build-up and debris. Tinted window film or coating may damage some sealed insulated glass units. Improper use, care or maintenance may void portions of the statutory warranty and the manufacturer's warranty.

Garage Doors

Wood or metal garage doors shall be free of scratches and dents. These doors are designed with a spring system to operate smoothly. If the spring is loose or broken, have a professional replace or adjust the high-tension spring. Garage doors with openers have sensors to protect the homeowner. Do not block or remove sensors or other safety devices (see Figure 14).

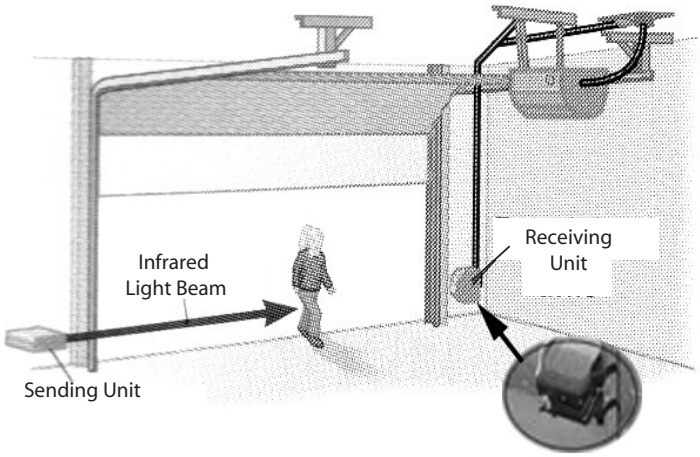

FIGURE 14: GARAGE DOOR SENSORS

Carpet

Carpet must be installed tight, flat and securely fastened (see Figure 15). Carpet shall not be damaged, stained or spotted during initial installation.

FIGURE 15: INSTALLED CARPET

Finished Concrete Flooring

A finished concrete floor, not intentionally designed for drainage, shall meet the tolerances listed below. Floors designed for drainage, such as a laundry room, garage or basement, will be purposely sloped to allow water to flow into a drain or in a particular direction.

Finished Concrete Flooring Tolerances

Concrete Flooring	Tolerance
Humps, depressions or unevenness	< 3/8″ over a length of 32″
Separation joints, cracks	< 1/8″ in width < 1/16″ in vertical displacement

Wood Flooring

Wood floors have natural variances that are characteristic of the material. Wood flooring can be installed in many different ways. Wood floors that are designed to be installed with nails, glue, adhesives or fasteners must remain securely attached to the foundation or sub-floor.

Wood Flooring Tolerances

Wood Flooring	Tolerance
Humps, depressions or unevenness	< 3/8″ over a length of 32″
Gaps or separations	< 1/8″ in width
Cupping of floorboard strips	< 1/16″ over a 3″ wide measurement

Vinyl Flooring Tolerances

Vinyl Flooring	Tolerance
Out of square	< 1/4″ over 6′ measurement
Alignment of patterned pieces	< 1/8″
Gaps in seems	< 1/16″ in width
Gaps between vinyl and similar materials	< 1/8″
Ridges or depressions	< 1/2″ over 6′ measurement

Vinyl Flooring

Vinyl floors shall not be discolored, stained, spotted, scratched, gouged, cut or torn when installed. There shall be no detectable debris, sub-floor seams, nails or screws under the vinyl flooring.

Hard Surfaces (grout, concrete countertops, ceramic tile, flagstone, marble, granite, slate, quarry tile and finished concrete)

Hard surfaces include grout, concrete countertops, ceramic tile, flagstone, marble, granite, slate, quarry tile and finished concrete. Flagstone, marble, granite, slate and other quarry tile are considered natural products.

Grout is the material placed in the gap between two adjoining hard surfaces. This area is referred to as a grout line (see Figure 16). Grout lines shall not excessively crack, deteriorate, change shade or discolor.

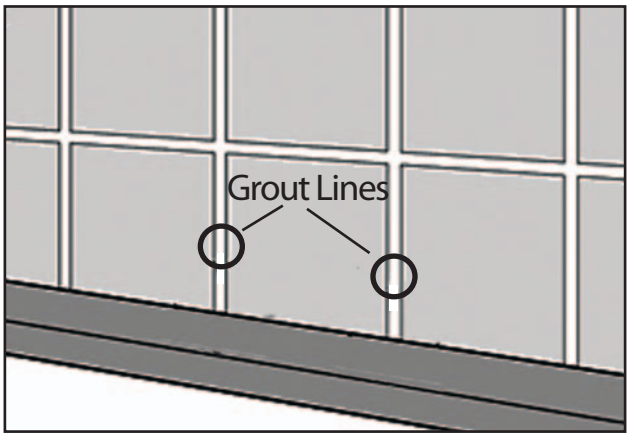

FIGURE 16: GROUT LINES BETWEEN TILES

Hard Surface Tolerances

Hard Surfaces	Tolerance
Variation between adjacent material surfaces	< 1/16″
Levelness of hard surfaces and countertops	< 1/4″ over a 6′ measurement
Pits, depressions or unevenness on concrete countertops	< 1/8″ over a 32″ measurement
Separations or cracks in concrete countertops	< 1/16″ in width < 1/64″ in vertical displacement

Hard surfaces must not be broken, cracked, stained, chipped or have great color variations. Hard surfaces made of natural products have size variations that may cause irregular layouts or grout lines. Moreover, natural products may have color variations and small surface imperfections. An imperfection in a non-floor hard surface must not be noticeable when viewed from a distance of two feet.

Painting, Staining and Wall Coverings

Surfaces receiving paint or stain shall not have excessive color, shade or sheen variations and will cover all intended surfaces. Paint over-spray must be cleaned by the builder/remodeler from all other surfaces. Interior surfaces that are painted, varnished or finished are not to be scratched, dented, nicked, or gouged as a result of the builder/remodeler's activities. The manufacturer's specifications detail the extent to which a homeowner can wash or scrub a painted surface. Be aware that direct sunlight may deteriorate paint, varnish, polyurethane and lacquer finishes.

Wallpaper shall not peel, bubble, have lumps, ridges, scratches, gouges, cuts, tears, discoloration, stains, spots or have visible seams or gaps that are noticeable when viewed from a distance of six feet. Patterns or designs in the wall coverings that repeat must match and be square.

Plumbing Fixtures and Accessories

Plumbing fixtures include faucets, tubs, toilets, sinks, drains and gas connections to appliances. Plumbing fixtures shall not have chips, cracks, scratches or dents, or corrode, tarnish, blemish or stain. The home's water supply may contain harsh minerals that can cause damage to fixtures and their parts. Imperfections caused by minerals in water are not covered by this standard. Plumbing fixtures shall be properly secured, not drip or leak, or run continuously. Properly installed shower pans and tubs shall not squeak.

Chemicals and certain cleaning agents can damage or corrode plumbing fixtures. Corrosive chemicals and cleaners include abrasive pads and cleaners, harsh chemicals, alcohol and organic solvents and may void portions of the warranty. (see Figure 17)

FIGURE 17: PLUMBING FIXTURE

Pipes and Vents

Water pipes shall not make excessive hammering or banging sounds. Changes in water temperature may cause a ticking sound that is normal as a result of changing temperature in the pipes.

Sewer gas odors escape the plumbing system through vent stacks or air admittance valves that are designed to allow gas to escape. Do not block or cover plumbing vents (see Figure 18). Plumbing traps are part of every drain that prevents sewer odors from entering the home (see Figure 19). These devices are shaped so that they retain water to seal the line. Traps in drains that are not regularly used, such as a floor drain in a laundry room, may dry out allowing odor to enter the home. The homeowner can keep plumbing traps filled with water by occasionally using each fixture.

FIGURE 18: PLUMBING VENT

FIGURE 19: PLUMBING TRAP

Heating and Cooling

A drip pan and drain line may be installed under the indoor portion of the air conditioner. The condensation drain line drains water that accumulates on your air conditioner condenser coils. Blockage of the drain line will cause overflow of the pan. The exterior compressor unit is installed on a stable pad. Insulation must be properly installed around the refrigerant line of the air conditioner unit and should not be removed by the homeowner (see Figure 20).

Take care when performing landscaping work around the home to ensure that there is no interference or damage to the lines connecting to the heating and cooling system.

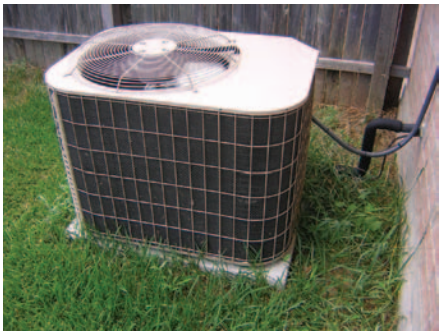

FIGURE 20: OUTDOOR PORTION OF AIR CONDITIONING UNIT

Ductwork

Ducts distribute heated or cooled air throughout the home. The flow of air through the ductwork may cause slight noises. Vents are to be open and free of obstructions in order to move air throughout the home. Ductwork in the attic is not designed to support heavy loads. Do not place or store objects on the ductwork (see Figure 21).

FIGURE 21: DUCTWORK

Electrical Fixtures

Electrical fixtures include trim plates, electrical boxes, ceiling fans, exhaust fans, etc. Electrical systems and fixtures should be installed according to the manufacturer's recommendations and shall perform in accordance with the following:

- Fixtures and trim plates must not be tarnished or have chips, cracks, dents, scratches, blemishes or stains as a result of the builder/remodeler's activities.
- Fixtures, trim plates and electrical boxes shall be plumb and level. There shall not be excessive air infiltration around electrical system components or fixtures.
- Exhaust fans may make some noise; however, the noise level shall not exceed the manufacturer's specified level.

Smoke Detector and CO^2 Detector

Smoke detectors and CO^2 detectors must operate according to the local fire code and the manufacturer's recommendations. All safety equipment should be checked at least once a month and the batteries replaced every six months to ensure they remain in proper working order. Press the test button on all smoke detectors once a month to ensure that they work properly (see Figure 22).

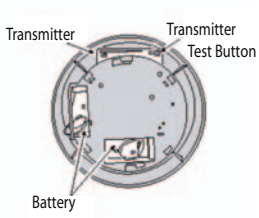

FIGURE 22: SMOKE DETECTOR

Interior Trim

Hammer marks, scratches, chips, dents, cracks, nails and nail holes on interior trim shall not be noticeable from a distance of six feet. Joint separations occur when two pieces of trim meet at a corner or are joined over a long distance. Separations of trim joints shall be caulked or puttied if the gap is equal to or in excess of 1/8 of an inch.

Closet Shelving

Shelving and rods shall be supported by stud-mounted brackets that are securely mounted and spaced no more than four feet apart. End supports for the shelving and rods shall be securely fastened to the wall.

Mirrors, Interior Glass and Shower Doors

From a distance of two feet, there shall be no noticeable damage or imperfections in mirrors, interior glass and shower doors. Mirrors, interior glass and shower doors as well as other fixtures, such as towel bars and door handles, shall be securely attached to a supporting surface. Shower doors must not leak and must open or close smoothly without requiring excessive force (see figure 23).

FIGURE 23: SHOWER DOOR

Hardware and Ironwork

Hardware and ironwork are used for decorative and practical purposes. Unless it is an intended specialty feature, hardware finishes shall not be corroded, rusted, tarnished, blemished, stained, scratched, chipped, cracked or dented. Hardware must function properly without catching or binding and should not require excessive force to operate. Hardware and ironwork shall be securely attached to a supporting surface.

Chemicals and certain cleaning agents can damage or corrode hardware and ironwork. Do not use chemicals and cleaners that could cause damage to these items. Corrosive chemicals and cleaners include abrasive pads, harsh chemicals, alcohol and organic solvents. Outdoor elements, such as salt air and humidity, can cause hardware and ironwork to deteriorate.

Fireplaces

Fireplaces may include refractory panels, synthetic logs, gas logs, fireplace doors, masonry hearths and facing, chimneys, fireplace fans, dampers and fireboxes. Performance standards for properly installed functioning fireplaces and accessories are as follows:

- Refractory panels shall not have cracks or gaps.
- Fireplace doors shall operate smoothly and align with one another.
- Mortared joints shall not have cracks that equal or exceed a 1/4 of an inch in width.
- Under normal weather conditions, water shall not infiltrate the chimney.
- The chimney shall draw properly.
- A gas fireplace shall not have a gas leak.
- If the fireplace contains gas logs, the logs shall be positioned in accordance with the manufacturer's specifications.

Irrigation Systems

Irrigation systems shall not leak, break or clog and shall water all intended areas. Long-term overspray on driveways and exterior walls may cause premature deterioration.

Fencing

A fence shall not lean in excess of two inches from plumb, fall over or contain broken or detached boards. Masonry fences shall not have cracks or cracks in the mortar equal to or in excess of 1/8 of an inch in width. Adequate weep holes shall be placed in the lowest course of a masonry wall/fence to allow seepage to pass through the wall. Weep holes are small holes in the mortar along the lower row of masonry that are part of the wall drainage system. Do not obstruct these weep holes.

Pest Control

Properly functioning eave returns, truss blocks, attic vents and roof vents openings, weep holes and other openings shall not allow rodents, birds, or other similar pests into the home or attic space.

Two-Year Warranty for Plumbing, Electrical, Heating, Ventilation and Air Conditioning Delivery Systems

The performance standards for the components of a home subject to a warranty of two years are discussed below. These components include electrical delivery systems, plumbing delivery systems, and heating, ventilation and air conditioning systems.

Electrical Delivery Systems

The electrical delivery system consists of wiring, panels, breakers, fuses, switches and receptacle outlets. Electrical systems are designed to carry a specified maximum load. Installing or placing too many electrical fixtures or appliances on an electrical circuit will overload the circuit and create a safety hazard. Electrical systems shall be used only for the purposes for which they were designed. All electrical wiring and electrical components shall be installed and function according to the National Electrical Code (NEC).

Electrical Wiring

The performance standards apply only to electrical wiring and components located on the home's side of the meter. The local utility company is responsible for any defects that may occur at or beyond the meter. All wiring installed in the home shall be in compliance with the NEC.

Electrical Panel, Breakers and Fuses

Sufficient electrical panels and breakers shall be installed to provide adequate electrical service during normal use. Electrical panels and breakers shall be clearly marked to indicate the area serviced by that breaker (see Figure 24). Circuit breakers shall not trip repeatedly during normal use. The builder/remodeler is not responsible for electrical service interruptions, tripped circuit breakers or blown fuses caused by external conditions such as power surges and circuit overloads.

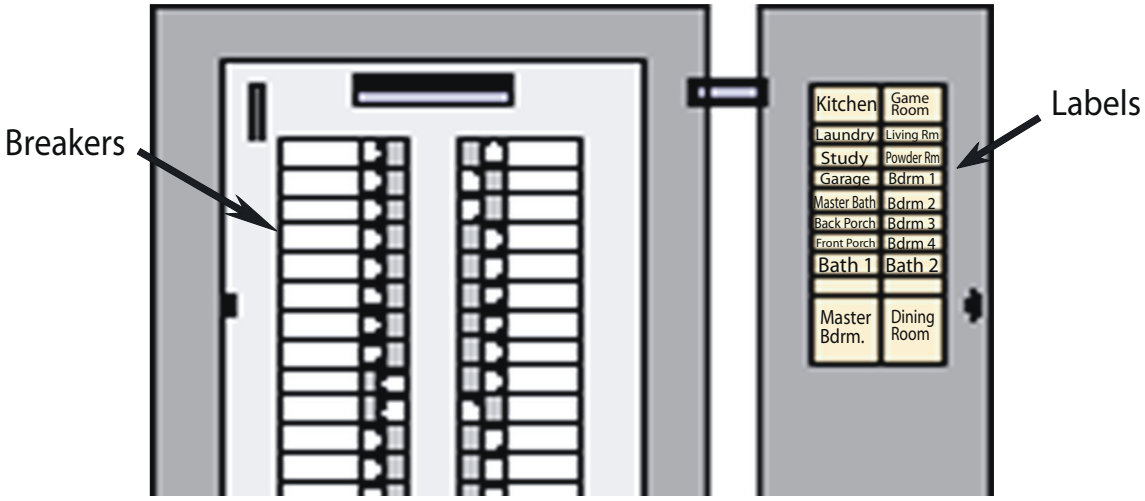

FIGURE 24: TYPICAL ELECTRICAL BREAKER PANEL

Misusing or overloading circuits may cause a safety hazard and should be avoided. For example, plugging too many electrical devices into an outlet may cause a circuit to become overloaded. Any modifications to the existing electrical system should be performed by a licensed electrician.

Electric Outlets with Ground Fault Interrupters

Certain electrical outlets must have Ground Fault Interrupters (GFI). GFIs are designed to provide extra safety and are usually installed in bathrooms, kitchens, outdoors and other areas in close proximity to water. GFIs are designed to trip easily in the event of an electrical short. They have a button that can be pushed to test and to reset the GFI (see Figure 25). Replacing a GFI plug with a regular plug will cause a safety hazard. GFIs shall be installed and operated according to the manufacturer's specifications. GFIs are not designed to provide service to large electrical appliances that require an uninterrupted flow of electricity such as refrigerators and freezers. All GFI outlets shall be identified.

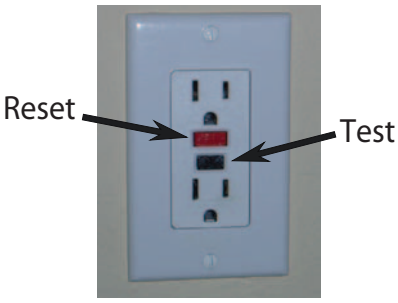

FIGURE 25: GFI OUTLET

Fixtures, Outlets, Doorbells and Switches

Electrical fixtures, including outlets, doorbells and switches, shall be installed and operated according to the manufacturer's specifications under normal circumstances, The electrical components shall not cause lights to dim, flicker or burn out excessively.

Wiring and Outlets for Cable Television, Telephone, Ethernet or Other Services

Wiring and outlets for cable television, telephone, ethernet or other services in your home shall be installed and operated according to the manufacturer's and service provider's specifications.

Plumbing Delivery Systems

The plumbing delivery system consists of water and gas pipes, sewer and drain lines and fittings and values. Plumbing systems are to be used only for the purposes for which they were designed. All plumbing components shall be installed according to the International Residential Code (IRC). (*Cosmetic defects are limited to a one-year warranty.)*

Pipes (Water and Gas Pipes, Sewer and Drain Lines, Fittings and Valves)

The performance standards apply only to plumbing delivery system components located on the home's side of the meter. The local water supply company is responsible for any defects that may occur at or beyond the meter. Plumbing components are installed and insulated as stated in the manufacturer's specifications.

Water pressure inside the home shall not exceed 80 pounds per square inch or be less than 40 pounds per square inch. This standard assumes the water supply reaches the home at more than 40 pounds per square inch of pressure. In the event the water supplies does not provide the home with 40 pounds per square inch of pressure, the builder/remodeler cannot be held responsible for achieving the minimum standard.

The plumbing delivery system shall not leak. If a water pipe is leaking immediately shut-off the supply. Failure to do so could lead to additional damage or create a safety hazard. It is important to know the location of the water supply cut-off valves in the event of an emergency. If you smell gas, leave immediately and contact the gas company.

It is the homeowner's responsibility to prevent drain and sewage pipes from becoming clogged due to the insertion of inappropriate materials into the system, with the exception of clogs or blockage due to construction debris. Allowing a drain or sewer pipe to become clogged may cause further damage to the home.

During cold weather, it is necessary to take action to prevent exposed pipes and interior and exterior faucets from freezing. Maintain a reasonable temperature in the home during colder months to prevent pipes from freezing, especially at times when the home is vacant.

Individual Wastewater Treatment System

Individual wastewater treatment systems, including septic systems, are designed and installed according to health and safety codes and laws. A wastewater treatment system shall be capable of properly handling normal flow of household waste in accordance with the Texas Commission on Environmental Quality requirements.

Heating, Ventilation and Air Conditioning Delivery Systems (HVAC)

HVAC systems provide a home with a temperature and humidity control. The HVAC system shall be installed and operated according to the manufacturer's specifications. The HVAC system is designed specifically for the home. If any changes are made to the size or configuration of the home, consult a professional to evaluate the home's HVAC system requirements. The homeowner is responsible for maintenance, including changing filters, as recommended by the manufacturer.

Refrigerant Line

A refrigerant line shall not leak. Condensation may form on a refrigerant line due to temperature variations, but such condensation is not a leak. Refrigerant lines must be insulated.

Heating and Cooling Functions

A heating system shall be capable of heating the inside of the home to 68-degrees Fahrenheit. A cooling system shall be capable of cooling the inside of the home to 78-degrees Fahrenheit. Temperatures may vary by no more than four degrees Fahrenheit between rooms that are served by the same thermostat.

Vents, Grills and Registers

Vents, grills and registers must be installed according to the manufacturer's specifications. They shall be attached securely to the supporting surface. They shall operate easily and smoothly when normal pressure is applied.

Ductwork

Ductwork distributes cool and warm air throughout the home. Ductwork shall be installed, insulated and properly sealed in accordance with the manufacturer's specifications. The air-conditioning system shall be free and clear of any debris or obstruction preventing the free-flow of air.

Ten-Year Warranty on Structural Components

Major structural components include the load-bearing portions of your home. These elements include footings and foundations, beams, headers, girders, lintels, columns, load-bearing walls, partitions, roof framing systems, ceiling framing, floor systems and masonry arches. The foundation and major structural components are subject to a warranty period of ten years.

See One-Year Warranty information for Foundations and Slabs on page 7 under the One-Year Warranty section.

Slab Foundations

The performance standards for slab foundations are defined by the "Guidelines for the Evaluation and Repair of Residential Foundations" as published by the Texas Section of the American Society of Civil Engineers (ASCE) (2002), as modified by the warranties and performance standards.

Guidelines for the Evaluation and Repair of Residential Foundations can be found at: http://**www.trcc.state.tx us/publications/pub_index.htm.**

Pier and Beam Foundations

The performance standards for the pier and beam foundation are identified in section 5.3 of the "Guidelines for the Evaluation and Repair of Residential Foundations" as published by the Texas Section of the American Society of Civil Engineers (ASCE) (2002), as modified by the warranties and performance standards.

Guidelines for the Evaluation and Repair of Residential Foundations can be found at: http://**www.trcc.state.tx us/publications/pub_index.htm.**

Index

Contact the Commission

The commission has a toll-free help line available to assist Texas homeowners and builders/remodelers with questions about the commission and the State-sponsored Inspection and Dispute Resolution Process (SIRP). The commission's business hours are Monday through Friday from 8:00 a.m. to 5:00 p.m.

You may contact the commission by:

Phone (Toll-Free):	**(877) 651-TRCC (8722)**
Phone (In Austin):	**(512) 463-1040**
Fax:	**(512) 463-9507**
Mailing Address:	**P.O. Box 13144 Austin, TX 78711**
Physical Address:	**311 E. 14th Street Suite 200 Austin, TX 78701**
Website:	**www.trcc.state.tx.us**
Email:	**info@trcc.state.tx.us**

Texas Residential Construction Commission
Quality Construction for Texans

LIMITED HOME WARRANTIES AND BUILDING AND PERFORMANCE STANDARDS EFFECTIVE JUNE 1, 2005

Texas Residential Construction Commission
Quality Construction for Texans

P.O. Box 13144
Austin, TX 78711