The

American Measurement Standard

AMS C42129-2008
This standard was developed through a comprehensive investigation process that included organizations and individuals affected by the existence and use of such a standard, and is exclusively for the measurement and calculation of square footage in a single-family dwelling. It is a voluntary guideline presented for use in single-family housing only. The methodology enclosed represents a standard of measurement that has been utilized among professional real estate practitioners for over a century. Throughout the real estate, appraisal, mortgage, architectural, building, insurance, and other professionally licensed and regulated organizations, this method of measurement is practiced and accepted. It is time-honored and currently utilized around the world.

The enclosed standard allows for the reconciliation of differences in current methods of determining square footage. The procedures and techniques described herein are an accumulation of research contributed by professional Realtors®, appraisers and home builders, and are the same principles used by leading national designers and architects. This standard represents the foremost method of measurement in residential square footage which has been established and practiced for well over 100 years. This standard helps to promote and protect the public’s interest, and provides a specific language which aids in the communication between the real estate, appraisal, and mortgage industries.

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1. Foreword and Introduction

Size or square footage, is and always has been, one of the most important factors in the home valuation process. Other than location, more weight is placed on this one component than any other item of comparability. Does the home have enough space to meet a specific buyer’s needs; rooms, room sizes, layout, and offer sufficient living space for their intended use? Square footage or gross living area provides a comparison; although not always accurate, it does offer an estimate by which to establish a logical value based on comparison with other similar properties. The total finished floor area or the size of a house is one of the most important things a potential buyer needs to know.

Agents, when reporting residential square footage, should carefully follow and adhere to these specific guidelines (in their entirety) or any other standards that are comparable to them; and should be prepared to identify any such standard of measurement, when requested. The following guidelines and illustrations were prepared with the intent of assisting agents, appraisers, and others, with the fundamental knowledge of the measurement, calculation, and the reporting of square footage in residential dwellings, and also to address the overall significance this number provides to the mortgage industry and the home valuation process.

All appraisals approved for use in a federally related loan transaction must be completed on the single most widely used appraisal form; the Fannie Mae Form 1004 and Freddie Mac Form 70, dated March 2005. This one form carries both numbers and is used for single-family dwellings only. On this form, at the top of the page under the Sales Comparison Approach, every comparable sale is automatically calculated at the “price per square foot.” This specific calculation does not take into account the land (view or location value), the age, condition, quality, style, bed and bath count, any basement square footage, garages, fireplaces, porches, decks, patios, or any other amenities.

This “price per square foot” is the only number on an appraisal report where the appraiser does not have an influence on the amount or the adjustment. Other than basic addition, subtraction, and multiplication, this one number is the only automatic calculation on the entire appraisal report. According to this federally mandated form, which requires one specific square footage number on all subject properties and comparable sales, the size of a single-family dwelling is an integral part of the comparison process. The entire home valuation system begins with this one basic unit of comparability. In the real estate industry, no other single number is more significant.

The primary and secondary mortgage markets depend on the quality of appraisal reports. Appraisal reports are dependant on the quality of information available through the “MLS” database. The “MLS” database, provided exclusively by Realtors®, is created one sale at a time and provided by the listing agent. The real estate information chain begins with this one basic component of a dwelling. Square footage (or size) serves as the foundation for our entire system of comparability. CMA’s (competitive market analyses), appraisals, and mortgage loan decisions are often developed based on this one basic ingredient. This one number is critical to the reliability and credibility of our entire home valuation system. The knowledge and skill necessary to provide this essential component of housing is the basis for this guideline. The standard herein further helps to promote dependable and reproducible measurements for use in obtaining and reporting residential square footage data.
The American Measurement Standard is a voluntary guide and subject to annual review, analysis, and recertification. This “standard” of measurement and the associated principles, allows for the cooperation among organizations which may have singular goals, objectives, and specific idiosyncratic usability of square footage information. The standard contained herein also helps to establish common and logical definitions of “finished square footage” and “gross living area.” The definitions and descriptions are provided with the intention of assisting in the preparation of consistent measurements and calculations, and to establish specific categories for use in the reporting or communication of square footage information in residential properties.

The following guide or standard is not meant to replace or supersede any legally required existing area measurement methods which may be national, state, or locally defined. This process and methodology is suitable for use with proposed new construction or existing single-family homes of any style of construction, and is based specifically on the exterior dimensions of the dwelling. It is not applicable to condominiums, apartments, and/or multifamily properties, and it does not include or consider interior measurements.

No written, residential “national standard” was in existence in the U.S. prior to 1996. Over the years, many groups have formed their own methods for use within their specific organizations. The National Association of Realtors® currently does not provide any “standard” of measurement. Numerous methods are used throughout the country and it is up to individual states to determine policy under their jurisdiction. Some states advise their licensees not to measure or report any details with regard to square footage; in many circumstances due mainly to liability concerns. However, in every state, all licensed and/or certified residential appraisers are required to provide a specific square footage number for each comparable sale.

While there are no national mandates in regard to the measurement and reporting of residential square footage information, it is the opinion of this committee that the measurement and reporting of residential square footage information is part of an agent’s fundamental responsibility to their peers and the public, and also part of the due diligence owed to consumers. The professional measurement and management of this data serves to protect the public interest and to promote consistency throughout the industry.

In 1996 the National Association of Home Builders (NAHB), at the request of the Home Builders Association of Greater New Orleans and other builder members, commissioned the NAHB Research Center (a wholly owned subsidiary of the NAHB) to act as secretariat for the formation of an ANSI (American National Standards Institute) Accredited Standards Committee. The “SQUARE FOOTAGE-METHOD FOR CALCULATING ANSI Z765” was first introduced on April 8th, 1996. In 2001 a new committee was formed to review the original edition and several changes were made bringing about the 2003 version that is available today, known as “ANSI Z765-2003.”

During a five year period of research starting in 2003, this committee reviewed and analyzed various measurement methods from across the United States; it reviewed guidelines published by state real estate commissions and licensing agencies, and also considered the guidelines published in “ANSI Z765-2003.” This panel’s determinations and recommendations were made based on the most often utilized and commonly practiced methodology as revealed throughout the research process, and also based on the professional experiences and opinions of the panel members. It was agreed that this standard should be reviewed annually and recertified in June of each subsequent year; so as to reflect any new available information and to allow for recommendations from any party materially and/or directly affected by the use or development of this standard.
Due to the complexity of the subject matter and exigency for the description and summarization of such an immense range of information, and due to the numerous methods currently utilized across the nation, it is difficult to define one true methodology that embraces and encompasses the majority of practical applications being utilized in the field today. This method of measurement consists of many variables and is used and accepted by various professions around the world, but has never before been documented in one standard of practice.

The main and most significant discrepancy between systems is the treatment of the measurement and calculation of stairs. It is the opinion of this committee that the herein method of measurement and calculation is the most similar method to what is currently practiced by the majority of agents, appraisers, and industry leading home builders and architects. (i.e., Centex Homes®, Donald Gardner Architects, Inc.®, eplans.com®, etc.)

With the continuing influx of new internet technologies, there is an ever increasing need for a consistent reporting method (or language) that can be recognized and accepted in all areas. In order for the real estate industry and the mortgage process to remain consistent and credible, all information created and communicated for the purposes of comparability (square footage), and that is to be utilized in the home valuation, appraisal, and/or mortgage informational systems, must be standardized for all users and consumers of residential square footage information. It is also this committee’s opinion that the use of public information, as provided through a mass appraisal assessment process, is NOT a reliable source of square footage information and should only be used when no other verifiable data source is available. If or when public information is relied upon for any square footage data it should be disclosed.

The mortgage industry depends on the integrity and quality of the appraisal industry; the appraisal industry depends on the quality of information provided through the MLS; and the MLS database is completely reliant on the quality and the level of detailed information provided by the listing agent of each property transaction. The information chain that provides the foundation of our home valuation process is controlled by the input of data through this one private information system. While there may always be differing points of view regarding the collection and reporting of this information, for those professionals who choose to provide this service, this standard helps to promote the public trust as well as offers a consistent and credible source for the methodology utilized in the collection and communication of square footage in single-family dwellings. Through the proper measurement, calculation, and communication of this basic component of real estate we ensure and protect the public trust in this private system.

Suggestions for the improvement of this standard are welcome and should be directed to:

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2. Scope and Purpose

A “standard” allows individuals and organizations that use different terminologies, based on different points of view to: communicate, cooperate, and calculate quantities on a common basis. It is also a “standard,” not because it has been approved by a particular organization or committee, but because it is widely used and recognized by the industry as being standard. The methodology in the American Measurement Standard was established in the early 1900’s and has remained mostly unchanged. It is internationally recognized and accepted throughout the real estate industry. It is a pre-established arrangement or organizational format of data, and/or the development guidelines of that data, in an established format of communication.

The enclosed standard illustrates the methodology and procedures for the measurement, calculation, and reporting of square footage for a single-family dwelling. The purpose of this standard is to describe a particular method of measurement and classification that will allow others to create, reproduce, and communicate similar results when applying this standard and the associated principles. In the calculation of residential square footage, the objective must be to measure accurately, calculate competently, and identify the improvements in a manner that is not misleading and describes and/or facilitates an understanding of the property.

The intent of this standard is to provide authoritative procedures for the measurement and calculation of residential square footage. This standard also defines eight specific categories for the “reporting” of square footage information which will help standardize communications between all users and consumers of residential square footage data. The enclosed categories for the communication of square footage information are a suggested practice and are NOT required to claim adherence to this standard of measurement.

3. Definitions and Descriptions

A. Square Footage -- An amount based on measurement, described in feet. The area of a dwelling that is measured and calculated according to this standard.

B. Detached Single-Family Dwelling -- A house that has open space around all its sides.

C. Attached Single-Family Dwelling -- A house with its own roof and foundation, and that is separated from other houses by dividing walls that continue from foundation to roof. Such a dwelling or house would also not share utility services with any adjoining dwellings and may be classified as a townhome, rowhouse, duplex, or other side-by-side housing. The same techniques should be used as with detached dwellings, but with the addition of the appropriate width for an exterior wall where any commons walls may be present. Note: This standard is not applicable for use in the calculation of “condominium” square footage.
D. Finished Living Area – Finished Square Footage - Heated Living Area - Heated Square Footage
All names, often interchangeable, which typically refer to the enclosed area of a house which is intended for human occupancy; and further defined as space that is suitable for year round occupancy, heated and cooled by a central, permanently installed system; and embodying walls, floors, and ceilings that are similar to the rest of the house. To be counted as finished or heated, the space must be permanently, safely, and sufficiently heated (and/or cooled depending on climate) to permit year round occupancy. [Heated – by a central system or systems; that are permanently installed in the dwelling; not portable in any nature, and must generate sufficient heat and/or cooling to make the space suitable for year round use.]

Gross Living Area - GLA -- Often interchangeable with the above stated names, “GLA” refers to and is defined as; finished space that is above grade only.

In single-family detached dwellings, “finished” square footage is defined as the sum of all connected, finished areas; measured by exterior dimensions (walls). Each level is counted individually and any above grade space is combined to provide one total square footage number. Treat attached dwellings the same as detached dwellings, with the only difference being the addition for exterior measurements when a common wall is present.

E. Gross Building Area – GBA -- Gross building area includes any finished, partially finished, or unfinished areas that are NOT included in the main living area “GLA” calculations. GBA should be specifically numbered and defined so as to properly identify each individual section for appropriate comparison. (GBA1- Unfinished utility area – 10.0 x 12.0) - (GBA2 – Finished office inside the garage – 12.0 x 13.5) - (GBA3 – Upper level unfinished bonus room - 20.0 x 14.0) List each area, either by dimensions or total square footage. (10.0 x 12.0) or 120 square feet. “GBA” encompasses above grade space only.

Finished “GBA” -- Finished gross building area is any enclosed area which meets the criteria of “GLA,” but is NOT directly accessible without leaving the continuous, finished main living area. (e.g.- 1. A bonus room with the same level of finish as the main living area; with carpet, sheetrock walls and ceilings, and is heated and cooled by a permanent HVAC system; but requires leaving the continuous finished area (into any unfinished space) for access or entry. 2. A finished office, laundry, or other area with its only access located inside the garage. 3. A finished second level bonus room with the staircase located within (or outside of) the garage. 4. A sun room, porch, etc., which has been finished similar to the rest of the dwelling, but is not supported by any permanent, central HVAC system.

“Partially Finished GBA” -- Any enclosed area which could not be properly defined by either “finished” or “unfinished.” Any space which is at a level of finish considered less than that of “finished.” A degree of completion which is less than “finished,” but with some elements similar to finished living area; such as flooring, finished walls, ceilings, or other elements that are in keeping with the main living areas and more than that of “unfinished;” having one or more features of the finished living area. Above grade only.

“Unfinished GBA” -- Any enclosed area which does NOT meet the criteria of finished or partially finished space; such as storage areas, unfinished rooms in or above a garage, or other areas which may have wall framing in place, but does not have flooring, walls, or finished ceilings installed. Not finished similarly to the main living areas of a dwelling. All (above grade) “unfinished” or “partially finished” space is considered Gross Building Area or GBA.
F. Basement Finished Square Footage - BsmtFSF -- All areas with a level of finish similar to main finished living area or GLA, but considered as “below grade.” - “BsmtFSF” refers to and is defined as: finished space that is below grade only.

Basement Gross Building Area – BsmtGBA -- Gross building area includes any finished, partially finished, or unfinished area(s) which are NOT included in the finished living area or “BsmtFSF” calculations. BsmtGBA should be specifically numbered and defined so as to properly identify each individual section for appropriate comparison. (BsmtGBA1 - Unfinished utility area – 10.0 x 12.0) - (BsmtGBA2 - Finished office space accessed only by entering an unfinished basement area to enter the finished office – 12.0 x 13.5) - (BsmtGBA3 - Lower level partially finished bonus room - 20.0 x 14.0) List each area, either by dimensions or total square footage. (10.0 x 12.0) or 120 square feet. BsmtGBA encompasses below grade space only.

Wall and ceiling finishes include, but are not limited to; gypsum wall board, drywall, sheetrock, plaster, wallpaper, covered plaster board, wood and wood paneling. Floor finishes include, but are not limited to; carpet, hardwood, laminate, tile, cork, vinyl, and certain decorative concrete finishes. (Such as stamped, imprinted, and/or engraved flooring.) “Decorative“ finishes are defined as: long-lasting or permanent components on a concrete slab, produced by methods such as chemical staining, scoring, stamping, or other methods that modify the appearance and/or texture of the slab. No bare or painted concrete flooring is included under this standard.

G. Adjoining Finished and Unfinished Area -- Whenever finished living area encounters or is adjacent to unfinished living area (on the same level), the finished area is calculated with exterior measurements and is always allowed the largest possible calculations. Unfinished areas would be counted with any available exterior measurements and end where the exterior measurement of the finished area ends. See illustrations for examples.

H. Above Grade -- Entirely above grade. Defined as space on any level of a dwelling which has living area and no earth adjacent to any exterior wall. Any space that is ground level and up is considered as above grade. (1st, 2nd, 3rd levels, etc.) If a dwelling has three levels; a basement, main living level, and an upstairs living area; the basement is counted as below grade and both the main and upstairs levels are combined and counted as one above grade total.

I. Below Grade -- Defined as space on any level which has living area (finished, unfinished, etc.), is accessible by interior stairs, and has earth adjacent to any exterior wall. If earth is adjacent to any portion of any wall, the entire level is considered as below grade.

Grade -- Grade itself is defined as the “ground” level at the perimeter of the exterior finished surface of a dwelling.

No statement of a dwelling’s finished living area should be reported without the distinct separation of above and below grade areas. (See below)

J. Grade, Basements, and Advertising -- Agents are permitted to report the square footage of a dwelling as “total living area or total square footage,” without a separate distinction between above and below grade; for advertising purposes only. (As long as the basement space is finished similar to the upper level space and meets all the requirements for Finished Living Area.) However, the requirement that appraisers and agents must report the distinct separation between grades, should be timely disclosed to both buyer and seller. For purposes of stated square footage (other than for advertising purposes), any reported “GLA” is defined as above grade only.

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K. Bay Window -- If a window has a floor underneath, a ceiling height of at least seven feet, and otherwise meets the criteria for living area it is counted as square footage. If the bay space is a window seat, plant shelf, etc., and does not have a floor finished the same as the surrounding area, it is not considered square footage.

► To properly measure a bay window, first make two measurements; one with the width “across” and one with the distance “out” from the main exterior wall (such as 2 feet over and 2 feet out). Next, measure the straight distance across the center of the bay, and then measure the other side of the bay to make sure both sides are equal. To calculate the area of a triangle, multiply its length by its height and divide that figure by two. A bay window generally consists of two triangles and one rectangle.

L. Chimney -- Chimney boxes located outside the main living area are NOT included in square footage. Chimneys that extend to the second level which may have a hearth on the first level, but extend through the interior of the second level (but with no hearth) should not be deducted from the finished square footage. However, if the hearth or chimney is located beyond the exterior finished surface, the area cannot be included in the finished square footage. Count the exterior wall as a flat surface for measurement purposes similar to that of a bay window without flooring. Chimneys, windows, and other finished areas that protrude beyond the exterior finished surface of the outside walls, and which do not have a floor on that same level cannot be included in the square footage calculations.

M. Dormer -- Defined as a window vertically attached into a small gable projecting from a sloping roof; or the gable section itself. Dormers are to be counted as finished space as long as they are finished in a similar manner to the rest of the living area and are a functional part of the room. If the space is a functional part of the surrounding finished area, it is included within the square footage measurements.

► The measurement of dormers – Width. The width measurement equals the distance across the interior space plus both exterior wall measurements, so that the total width is the equivalent of the exterior measurements. When you calculate the interior width, take the measurement from one interior wall to the opposite interior wall and then add for both exterior walls. In the length measurement you are actually measuring from the corner of the interior wall. When you place a tape measure on the wall, you are placing it on a corner of an interior wall. Whether drywall, paneling, or other material; it is the “inside” wall. When you calculated that (interior) dimension you already added for the exterior wall. An exterior wall can only count as square footage in one area calculation. When you begin the measurement from this corner to the beginning of the exterior wall, you have already counted the exterior wall thickness from where you began the measurement. So, in other words, you DO NOT add for the exterior wall in the length measurement. Remember, the width of a dormer equals interior measurements, plus the addition of both exterior walls. The length measurement equals the actual length you take from the inside corner of the dwelling to the start of the outside wall (with no addition for the thickness of the exterior wall). You already added the thickness of the exterior wall when you began the measurement.

N. Breezeway -- A roofed passage connecting two buildings (such as a house and garage). The space may be open, screened, enclosed or otherwise. It may be heated and cooled or open air. The main function is as a connection, offering covered passage to another area.

O. Closets -- Closets are counted the same as any other living space as long as they are a functional part of the living area and finished in a similar manner. Closets need not have direct heating and/or cooling vents.

P. Mechanical Rooms -- Concealed in the walls of nearly all residential construction are pipes, ducts, chases, returns, etc., which are necessary to support the structure’s mechanical systems. In order to avoid excessive detail, if the furnace, water heater, etc., is located in a small closet/storage area within the main living space, include it within the main living area even if the space does not meet the other living area criteria.
Q. Hallways -- Hallways are counted as square footage as long as they are a functional part of the living area. Laundry rooms, pantries, utility rooms, etc., are also counted as living area as long as they meet the general criteria for living space and are not accessed only from outside the main living area.

R. Bedrooms -- A bedroom is defined as a room into which you can fit a conventional bed. Local zoning and health codes may also establish minimum requirements for bedrooms. For purposes of this standard, a bedroom should be at least 90 square feet with at least one bedroom in the dwelling of at least 120 square feet. To be defined as a bedroom, the room must have a closet.

S. Bathrooms -- A bathroom is technically defined as a “room with a bath,” or a “room where one bathes.” For the purposes of this standard, to be classified as a “full” bathroom the minimum requirements include at least three fixtures (including a sink and a toilet). A “half” bathroom must include at least two fixtures (including a toilet). Any and all other bathroom classifications may be locally defined.

T. Stairs -- Counting stairs may be thought of by any of the three statements below. (Use whichever method is easier for you to identify, as they all provide the same results.)

1. Count the stairs on the level they serve.
2. Count the stairs on the level where they start and go up.
3. Count the stairs as though you could take the top step and push it down to the same level as the first step, and count the square footage on that level.

When stairs extend from the first level to the second level, count them as if physically taking the stairs, pushing them all down to the first floor, and then counting them with the square footage of that first level. Also remember, the space CANNOT count on two levels. Stairs can only be square footage on one floor. Staircases are deducted from first level calculations, ONLY when there is finished space (BsmtFSF) on the lower level. (See illustrations)

If you push stairs “up” to be counted within the second level living area, it can create debate over ceiling heights to be included in the first floor GLA, the functionality of the space where air returns or other mechanical systems may be located, and extreme ceiling slopes where a determination must be made as to at what height a sloped ceiling may be counted as square footage beneath a staircase. All of which leaves this space much more open to opinion rather than standardization. Complex stairs such as circular, dual split, or one of many other unique staircases, also make for difficult determinations as to the exact measurement dimensions of stairs and leaves those areas subject to interpretation.

Agents should identify and include any “bathroom” space located beneath the stairs in the listing file. The space utilized by the staircase is already included within the first level finished square footage. Any additional functional space (such as a half or full bath) should have a fixture count so as to reflect the additional value provided by the functionality of an additional bathroom and/or by bathroom fixtures. While no space under the stairs is added to the total square footage, additional credit or value should be added whenever a bathroom is located underneath the stairs. By pushing the stairs area down it leaves no discrepancy in calculations or debate over sloped ceiling heights in a space that may slope from a height of eight feet to two feet, in a span of six feet or less. Also by utilizing this method of calculating stairs, the ceiling height requirement of seven feet is consistent throughout all finished living area.
In order to further clarify this area, view staircases and square footage by the following:

The actual staircase is counted as though physically lowered to the first floor level, thus leaving a hole in the second level measurements and eliminating any room and/or space that was located below the staircase. In most cases, areas located below staircases offer some degree of sloped ceilings. While there are cases where bathrooms, closets, or other typical (finished similarly to the rest of the living area) space may be located below a staircase, the majority of space provides sloped ceilings with limited functionality. Due to ceiling height requirements, any sloped areas under a stairway leave such spaces open to opinion rather than standardization and make reproducible calculations unlikely. In order to avoid excessive detail, NO square footage is added for ANY space located beneath a staircase.

U. Open Foyers -- Interior space that is open from the floor of one level to the ceiling of the next higher level is included in the square footage for the lower level only. Any area occupied by interior balconies, lofts, etc. on the upper level, is included in the square footage of the upper level. In cases such as an open foyer, be careful to count only the “floored” space of the second level (plus the width of any exterior walls).

V. Additions/Enclosed Areas -- When measuring and reporting the living area of homes, be alert to any additions, remodeling, etc., such as an enclosed porch, garage or other modifications. The space must meet all the criteria for living area. Pay particular attention to the heating criteria, because the heating system for the original structure may not be adequate for the increased square footage even when a HVAC vent has been added to the room. Although agents are not required to determine the adequacy of heating systems, they should at least note whether there are heat vents or other heat sources in the room. If any portable air conditioner, wall mounted heater, space heater, and/or wall heat pump (minisplit) unit is present, it should be documented and disclosed. Rooms with separate heating and/or cooling (such as wall units), that are not part of the main central system for the dwelling are NOT counted the same as the rest of the finished living area and would be included in the “Gross Building Area” category.

Porches are often added, enclosed, and/or finished the same as the main living area. However, if a window air conditioner or portable heating and/or air conditioning system is required, the area is counted under gross building area and is not considered the same as the main living space. This is an area often subject to interpretation and an agent may be prudent to contact an appraiser or ask for a second opinion to help determine if this area qualifies as “GBA” or “GLA.” If the area has no ductwork installed that is connected to the central system, the area should be separated. When in doubt, separate it out. All such space (other rooms) should be noted in the listing data to advise potential purchasers of any space that does not meet the criteria for finished living area, but which contributes to the overall functionality and therefore value of the dwelling. For example: unfinished attics and basements (with permanent stairs), bonus rooms, workshops, carports, storage areas, etc. Any feature that has contributory value to a property should be included within the listing information.

W. Attic -- The area, room, or space located directly below the roof of a building.

X. Sloped Ceilings -- In rooms with sloped ceilings, any area with a ceiling height of less than (5) five feet is not included in the finished square footage. When you find sloped ceilings, place the end of the tape on the floor and measure from the floor to the five foot point on the ceiling. At that point, start your width measurement extending from one interior wall to the other, following the same height restrictions (five feet on both sides). From the five foot mark on the sloped ceiling, the dimensions of the exterior wall must be added to create the equivalent of exterior measurements. In order to be included in the finished living area calculations, the living space with the sloped ceiling must maintain an average ceiling height of at least seven (7) feet for over one half of all the finished space; and have a minimum ceiling height of at least eight (8) feet at the center or highest point of the sloped space. (Remember that all upper level measurements should be the equivalent of exterior dimensions the same as those measured on the main or first level.)
Y. Height Requirements -- In areas without sloped ceilings, in order to be included in the finished living area calculations, living space must have an average ceiling height of at least (7) seven feet for over one half of all space. For inclusion in the finished square footage, no part (beams, ducts, and/or other obstructions) of the ceiling can drop below seven feet in height (except as noted in sloped ceilings). An agent’s judgment must be relied upon in unique spaces or in unusual height configurations.

Z. Conversion, Rounding and Squaring -- It is recommended that a tape measure indicating linear footage in tenths of a foot be used for most calculations. The following conversion chart is included as part of this text. However, remember there will be slight variations with any conversion.

1” = .08 ft. * 2” = .17 ft. * 3” = .25 ft. * 4” = .33 ft.
5” = .42 ft. * 6” = .50 ft. * 7” = .58 ft. * 8” = .67 ft.
9” = .75 ft. * 10” = .83 ft. * 11” = 92 ft. * 12” = 1.0 ft.

Always use exterior measurements where possible and round off to the nearest tenth of a foot (or nearest inch). As a rule of thumb: five tenths of a foot or less is rounded down and anything over five tenths is rounded up. Use your best judgment in these measurements. Also, remember to deduct for exterior siding, corners, or caps, when they extend beyond the actual corner of the dwelling. Homes are constructed by human beings and, as such, walls may not always “square.” Whenever you find a circumstance where the building is not the same width or length on all sides, experience and judgment must be considered and common sense must dictate any such adjustments necessary to “square” the dwelling. There is no single system that can account for every possible scenario or situation and in some instances the agent’s judgment must be relied upon.

2A. Shapes and Measurements -- The vast majority of calculations involve basic squares and rectangles. Triangles also occur in bay windows and many other areas. To calculate squares and rectangles: multiply length by width. To calculate the area of a triangle: multiply its base width by the height and divide that figure by two.

Octagons and other unusual spaces should be divided into smaller sections and broken down into more easily calculated shapes. An octagon can be converted into rectangles and triangles, and a full octagonal shape can be broken down into seven smaller calculations. For circular areas, the basic formula of a circle is radius squared (number times itself), times 3.14. The radius can be determined by measuring the diameter of the circle or the width across and dividing that number by two. Multiply that number by itself, and then multiply by 3.14 and you have your square footage. An area with a half or semi-circle shape is much more common. Simply calculate a full circle and divide your total by two.

2B. Wall Construction -- For the purposes of this standard and in order to avoid excessive detail, to calculate the width of an exterior wall add five tenths of a foot (or six inches) for Each exterior wall. There is no one standard of measurement that will replicate all construction types. When interior measurements are all that are available, you must add the width of the exterior walls. With the numerous construction types and materials today, each house could be taken on a case by case basis and consider the basic elements that make up an exterior wall. The widths and materials of exterior walls vary greatly; and in order to provide consistent and reproducible measurements, the width of five tenths of a foot, six inches, or one half a foot, are deemed to be a “typical” width and suitable for the purposes of standardization and comparability. If the exterior wall measurements are easily visible and the dimensions are significantly less and/or more than the “standard,” you should use the total that best identifies the actual measurements. The following is offered as a visual aid to understand the components of an exterior wall.
Drywall or sheetrock equals approximately 1/2 inch. A (2 x 4) wall stud equals approximately 3 1/2 inches. Exterior sheathing adds an additional 1/2 inch. (Common sheathing products include plywood, wafer board and oriented strand board “OSB.”) Exterior sidings may include vinyl, cement fiber board, brick veneer, stucco, stone, aluminum, asbestos siding, wood siding, etc. Most types of siding are considered to have a width or thickness similar to one inch. Brick, stone, log, or other similar exterior wall products are generally most similar to 3 inches (±). So, technically, walls with siding (vinyl, wood, etc.) and walls with brick veneer, stone, etc., equal different thicknesses. A typical or standard exterior wall size must be used to allow for consistent and reproducible measurements. See below.

► Wall Construction

In order to help provide consistent, reproducible measurements, add five (5) tenths of a foot or six (6) inches for “each” exterior wall.

When using interior measurements, add the above exterior wall dimensions to all interior measurements in order to obtain similar results utilized to measure finished space on the first or main level. For exteriors with overlapping pieces, boards, or sections, the exterior width measurement is made from the bottom or lowest point on the exterior siding.

The above illustration is for reference only. All measurements are approximate.

To further clarify Exterior Measurements:

All space considered as finished square footage should be derived using exterior measurements. Exterior measurements, in this case meaning the exterior dimensions or the perimeter of all finished living areas.

“Exterior Only” means you do not enter the dwelling and cannot verify any interior openings; stairs, garages, storage spaces, balconies, unfinished or partly finished space, etc. “Exterior Only” measurements are NOT an acceptable method for obtaining square footage. The word “only” signifies a potential problem.

Remember, “Exterior measurements” are utilized for the calculation of finished living space with confirmation of any interior openings - “exterior only measurements” means you did not enter the dwelling and cannot confirm any interior openings and/or the actual finished square footage.
2C. Second Level Measurements -- The goal is to measure the upper level the same way as the first level, using exterior dimensions. When calculating the square footage of a second story area (where interior measurements are all that are available) you must add the width of all exterior walls. When calculations are based on this method, it should be disclosed.

View the square footage of second stories as space you can walk on, plus exterior measurements. Use actual exterior measurements when and if possible. When you have to use interior measurements, add interior measurements plus all exterior walls, to create a width that should equal the actual exterior dimensions. Wall measurements, widths, components, and calculations vary by location and are subject to local custom. However, in order to claim adherence to this standard of measurement, the width of exterior walls (for addition to interior measurements) must be consistent with the above referenced exterior wall measurements; or, may be stated as the actual exterior measurements, when available.

2D. Detached: Finished and Unfinished Areas -- Finished areas which are connected to the main body of the house by other finished areas (such as hallways or stairways) may be included in the Gross Living Area. Finished areas that are not connected to the house in such a manner (such as hallways or stairways) CANNOT be included in any Gross Living Area and must be counted as Gross Building Area, regardless of the level of finish.

Any space, which requires you to leave a finished continuous space, cannot be included in any statement of Gross Living Area or GLA. Even though such space may be finished in a manner similar to the rest of the dwelling, if it requires you to leave the perpetual living area, it cannot be included with or counted the same as the other GLA or continuous finished living areas. Whether heated with the same central heating system as the rest of the house or heated and cooled by portable means, if it requires you to leave the continuous finished area, it is counted as Gross Building Area and not Gross Living Area.

Finished areas above garages may be included in the finished square footage only if they are connected to the house by a continuous finished area such as a hallway or staircase. Any area, space, structure, or building that requires you to exit that space, enter any unfinished or open space, and then access the main dwelling/living area must be considered as “detached” and separated from other areas. Detached space (finished or otherwise) must be counted in the gross building area category.

2E. Square Footage and the Order of Calculation -- For purposes of this standard, square footage is to be counted in sequence as listed and defined under the “Eight Categories of Square Footage.” In spaces where multiple finishes are located side by side, Finished living area or GLA is always measured first. This is to allow for the largest possible square footage calculations to be credited in the most valuable space, or the finished category.

Finished square footage or GLA should always be calculated using exterior measurements. Where a finished area meets an unfinished area, the finished space receives the benefit of the largest available dimensions. Any interior wall measurements (in a finished space) should have the width of an exterior wall added to the interior dimensions. When an area that is not part of the finished living area (e.g. a garage) shares a common wall with the finished living area, treat the common wall as the exterior wall for the living area. Therefore, the measurements for the finished space will include the thickness of any common wall and the measurements for the other area will not.
2F. Garages -- A garage is a structure (attached or detached) with its intended function for the storage of automobiles and other vehicles. Typical garages are attached to the dwelling with a direct entry into the main living area. Garage sizes and shapes vary greatly by location and there is currently no recognized or “standard” size for a one, two, or a three car garage. In order to avoid excessive detail, garages and all attached spaces which are not included in the living area (e.g. GLA, GBA, storage areas, mechanical rooms, closets, etc.) may be included in the garage calculations and defined as is typical or custom in the local market. All garage space located on the lower level (below grade) should be identified and described accordingly.

2G. DetG or Detached Garages – Any garage space that is detached from the main living area and not attached by any other covered method; such as breezeway, porch, etc. Does not include any space above a garage. Detached space designed specifically for the accommodation of vehicle storage.

2H. DetGBA or Detached Gross Building Area – Detached gross building area includes any space that is detached and/or separated from the main finished living area(s). Areas such as guest cottages, apartments, in-law suites, studios/rooms above a detached garage, or any finished or unfinished structure (on a permanent foundation) which is detached or separated from the main dwelling. Reported (named) as local market defines.

2I. Porches/Decks/Patios or P/D/P -- Any space considered as outdoor living area(s), including covered and/or open spaces. Each space measured by perimeter dimensions and listed separately. Includes all definable outdoor living spaces and/or improvements; such as screened porches, covered porches, decks, covered decks, patios, terraces, gazebos, lanais, pools, outdoor kitchens, fireplaces, arbors, water features, etc. These areas may not be included in any statement of finished square footage. (Not to include guest cottages, pool/bath houses, or other structures on permanent foundations with enclosed living area.)

PDP1 - Deck  10.0 x 12.0  (120 sq ft)
PDP2 - Covered Porch  14.2 x 16.8  (239 sq ft)
PDP3 - Pool/Concrete Patio  28.0 x 40.0
4. The Eight Basic Categories of Square Footage…

**GLA** or Gross Living Area, etc. (Size). To be considered as GLA, space must be finished, above grade, permanently heated/cooled, and suitable for year round occupancy. (See definitions, page 8)

**GBA** or Gross Building Area – Gross building area includes any above grade (finished and/or unfinished) areas that are not counted in the main GLA or accessed through the main living area. (Example - an office within a garage, that is finished similar to the main living area, but not directly accessible without leaving the finished or main living area to enter.) (See definitions, page 8)

**Basement – (BsmtFSF)** - Basement Finished Square Footage. All areas finished similar to main finished living area or GLA, but considered as “below grade.” Space must be heated and/or cooled square footage suitable for year round occupancy. (See definitions, page 9)

**Basement – (BsmtGBA)** - Basement Gross Building Area. All basement square footage not defined as finished or at a level less than finished. Partial and/or unfinished space. All areas finished similar to gross building area, but considered as “below grade.”

**Garage** – Garage space should be separated and counted as garage area only. (Not included in any gross building area calculations.) Garage space must be attached to the main living area with direct, covered access. Garage; meaning area(s) designed specifically for the accommodation of vehicle storage. (Due to wide design variations, such space may be locally defined.)

**DetG or Detached Garages** – Any garage space that is detached from the main living area and not attached by any other covered method; such as breezeway, porch, etc. Does not include any space above a garage. Detached space designed for the accommodation of vehicle storage.

**DetGBA or Detached Gross Building Area** – Detached gross building area includes any area that is detached from the main finished living area. Areas such as guest cottages, apartments, in-law suites, or any finished or unfinished structure (on a permanent foundation). Reported (named) as local market defines. (See definitions, page 16)

**PiD/P** or Porches, Decks and Patios – Anything in this category including covered and/or open spaces. Each space measured by perimeter dimensions and listed separately, but with all included within this outdoor living category. Include all definable outdoor “living space” or improvements. These areas may not be included in any statement of finished square footage. (See definitions, page 16)

The categories listed above are the eight basic categories used throughout this Guideline, to report all space affiliated with a single family dwelling. Use of these categories is a recommended method for the reporting of square footage information and designed to aid in the consistent creation and communication of residential square footage data.

**The use of these eight categories is NOT a requirement for adherence to this standard.**
5. Commentary on AMS C42129-2008

A. The Measurement and Calculation of Square Footage

This standard does NOT address the use of the International System of Units (SI).

To calculate square footage in a single-family dwelling, multiply the length by the width of each rectangular space. Then add the subtotals of any and all spaces, and round off your calculations to the nearest square foot. A house should be measured to the nearest tenth of a foot (or nearest inch).

In order to claim adherence to this standard, all of the requirements must be employed when reporting square footage in single-family housing. The total is to be reported to the nearest whole square foot. Begin at one corner of the dwelling and proceed with measuring each exterior wall. Round off your measurements to the nearest tenth of a foot (or nearest inch). A tape measure that indicates linear footage in “tenths of a foot” will greatly simplify your calculations. Draw the sketch using graph or similar paper and be certain all sides are equal (or square) before leaving the site. Legal sized graphing paper and the use of the markings as a reference will greatly increase the accuracy of your sketch.

Write down each measurement as you move around the perimeter of the dwelling and record each number in a correlating sequence on the grid or graph paper. A clipboard, graphing paper, sharp writing instrument, a one hundred foot tape measure, calculator, (screwdriver, lawn spike, putty, Velcro, or some method of attaching one end of the tape in areas where it is not possible or practical to attach the other end of the tape), flashlight, a laser measure if available, and a digital camera, should all be part of your property information collection equipment.

Measure the perimeter of the dwelling making sure any garage doors are open to permit the measurement and inspection of the interior of the garage. Carefully inspect the interior of the garage and any storage areas, as well as the interior of the dwelling to locate any stair openings, unfinished spaces, and/or storage areas which should be deducted from the exterior measurements. Measure porches, decks, patios, barns, pools, detached buildings (on permanent foundations only), balconies, etc., in a similar manner and include any amenities/features that have contributory value. Any item which adds value to a property (and is not deemed personal property) should be listed and described in the listing file and MLS records.

► Corners -- When taking measurements on dwellings with exteriors such as vinyl siding, cement fiber board, wood siding, certain brick and other styles; or any time a “corner cover” is present, be careful to adjust for any difference between the corner “cap” and the actual location of the corner. There can be differences up to one inch (or more) between the actual location of the corner on the house and the “cap,” which can be on one or both ends of a wall measurement. Make sure to total and review your calculations prior to leaving the site. It’s much easier to verify and correct any inconsistencies while you are physically present than to try and estimate a difference later.
B. Agent’s Responsibility and Allowable Data Sources

It is up to each individual agent to actively pursue the knowledge of calculating square footage; within their office, peer group, or through any qualified available source. By learning and following one specific set of standards or guidelines, agents are better prepared to create, communicate, and defend their calculations should any question arise. By having a “standard” of measurement to refer to, the verification of the method utilized and the ability to say “this is how I calculated the square footage” can greatly reduce any possible liability.

An agent may rely on the square footage reported by other persons when it is “reasonable under the circumstances to do so.” Generally speaking, an agent working with a buyer may rely on the listing agent’s square footage representations, except in those unusual instances when there is an error in the reported square footage that should be obvious to a reasonably prudent agent. Should any “red flags” regarding square footage be noticed, point them out to the listing agent, make all parties aware of the question, and then seek to verify the information and correct any error.

An agent who relies on another’s measurements would still be expected to recognize an obvious error in the reported square footage and to alert any and all interested parties. An agent should NOT rely on square footage information determined and/or provided by the property owner or included in property tax or public records. An agent should also NOT rely on square footage information included in a listing (or an appraisal report) which was prepared in connection with an earlier transaction (without verification of its accuracy). Square footage information may be obtained by an outside source, such as a licensed and/or certified appraiser or other competent professional. It is also appropriate for an agent to rely on measurements and calculations performed by other professionals with greater experience in determining square footage.

**In all circumstances, an agent should disclose the source of square footage information which is to be included as part of the listing file.** Real estate agents are expected to be able to accurately calculate the square footage of most dwellings; and when reporting square footage, whether to a party to a real estate transaction, another real estate agent, or others, a real estate agent is expected to provide accurate square footage information that was compiled using these or other comparable Guidelines.

Even though you are NOT required (by most states) to measure any dwelling, you are expected to know the basics of construction and measurement. Regardless of whether you ever personally measure a listing, most states agree that a licensed professional should have the knowledge to calculate the size of a single-family dwelling, and to discover any significant over and/or under-statement of square footage.

While an agent is expected to use reasonable skill, care, and diligence when calculating square footage, it should be noted that most commissions and/or licensing agencies do not expect absolute perfection. Because all properties are unique and no guideline can anticipate every possibility, minor discrepancies in calculating square footage are not considered to constitute negligence on the part of the agent. Minor variations in tape readings and small differences in rounding off or conversion, from inches to decimals, when multiplied over distances, can cause reasonable discrepancies between two competent measurements of the same dwelling. In addition to differences caused by minor variations in measurements and calculations, discrepancies between measurements may also be attributable to reasonable differences in interpretation. For instance, two agents might reasonably differ about whether an addition to a dwelling is sufficiently finished to be included within the measured living area or finished square footage.
Differences based upon an agent’s thoughtful judgment are generally not considered to constitute an error on the agent’s part. Deviations in the calculated square footage of a small amount will seldom be cause for concern, with regard to licensing agencies (check with your state licensing agency to verify local rules). No specific percentage guidelines can chronically and uniformly apply to all properties. Due to the large variations in total square footage and designs, any specific percentage guidelines cannot consistently apply to all scenarios. In unusual designs, complex angled dwellings, large square footages, or any in any dwelling which provides an elevated degree of difficulty, a second (and sometimes even a third) opinion is always a good idea. In such cases, all sketches and information should be included within the listing file, along with the reasoning behind the final determination of square footage.

Agents are not required by most license laws or commission rules to report the square footage of properties offered for sale or rent. But, when they do report square footage, it is essential that this information be accurate. (Additional rules and regulations may be subject to individual state policy. Verify your state’s requirements, commission rules, and/or licensing laws.) Agents should be prepared (when requested) to provide documentation of how the square footage was determined and to identify the standard used in the measurement and calculation of any square footage information they provide.

► Reproducible Measurements -- Two professionals measuring the same dwelling should be within a few feet of each other, only accounting for slight technique differences. A basic, rectangular, one level dwelling, if measured by two different people using the same standard and reading the tape with the same rounding principles, should be very close in size. When the same standard is uniformly applied, the results should be recognizable as having been applied and uniform in their statements of square footage. The herein contained method for calculating square footage requires measurements to be taken to the nearest tenth of a foot (or nearest inch) with the final floor area reported to the nearest whole square foot.

Information provided by public records and most county tax departments is NOT a reliable source for obtaining square footage. Public records are created in a mass appraisal system (as an estimate of size only) and were never intended to be utilized for specific square footage measurements. Regardless of when or how square footage information is obtained, the responsibility of its accuracy rests with the listing agent. A professional real estate agent is expected to have a fundamental knowledge of home construction, calculating square footage, and enough knowledge to recognize an obvious error in square footage.
C. Reporting and “MLS”

“Reporting” is defined as any statement and/or disclosure (written or otherwise) about a specific property made to any interested party and/or to the “MLS” databank. (MLS is a registered trademark, owned and operated exclusively in the U.S. by the “NAR” - National Association of Realtors®.) Any agent with the authority and ability to report property listing information to the “MLS” database is considered to be a “member” in good standing with the “NAR” and therefore must adhere to its policies and code of ethics. Agents with the ability and the authority to participate in the sharing of information (as provided through the MLS) must also abide by the policies, rules, and bylaws associated with their local “MLS” and Association or Board of Realtors®, and further uphold all associated state and national policies, rules, and regulations required of members of such organizations.

A listing agent should have a “sketch” in the office file showing all property dimensions and the basic design or layout (room locations and functionality). The file should also include a square footage statement for all levels of the dwelling; plus the date, person and/or company who prepared the sketch, and the measurement standard and/or guidelines followed. (A “grid” similar to those included in the illustrations section of this publication serves as an excellent disclosure tool but is not mandatory. It does serve as a statement of how calculations were made and allows others, who may not be familiar with the property, to disclose details to potential buyers, agents, appraisers, and others.) Each listing file must contain a legible sketch of the dwelling.

Any stated square footage that is obtained from exterior measurements only, and cannot confirm the actual interior openings, must be properly disclosed and is NOT considered a reliable indicator of total square footage. “Exterior Only,” signifying the property measurements are estimated with no interior inspection.

In listing a property for sale, to accurately reflect the size, condition, bedroom and bathroom count, and/or the amenities/features of a property (and therefore make credible disclosures to the public and all other interested parties), an agent should make every attempt to enter the property prior to publishing any listing information.

Agents should also consider the potential consequence of pricing and advertising property information where no interior inspection has been completed; and where no room count, room sizes, condition, etc., has been inspected, verified, and/or confirmed by the listing agent. In the event that an interior inspection is not possible, a disclosure should be made similar to the following: “Finished square footage calculations made based on an exterior only inspection and may not accurately reflect the actual finished living area. The agent (listing company) makes no representations as to the interior condition of the dwelling and/or its components; and makes no representations and/or warranties otherwise. All information provided is subject to verification.”

Statements for illustration only. Consult an attorney in your area for specific disclosure requirements.

In such cases where direct measurement of certain areas is not possible; due to terrain, structures, or other possible obstacles which prevent the direct measurement of a particular area (or where interior measurements and the addition of exterior walls is also not possible), any such space or circumstances should be adequately disclosed. Such as: “Calculations developed under extraordinary circumstances precluding the direct measurement of said area. Dimensions are an estimation only and subject to verification.”

► (This information is not meant or offered as a legal opinion or advice and is only a general description of a possible disclosure statement. Please consult a licensed professional to assist you in the preparation of any disclosure statement(s) to meet your individual needs.)

► This standard is a voluntary application; but, when applied, must be applied in its entirety. It cannot be used selectively or be used as part of a combination of methods. The standard must be followed universally or it is considered not applicable and void. Use of exterior only measurements does NOT allow for compliance with these Guidelines and voids any use and/or claim of adherence.
D. New Construction and Plans

Whenever you report a finished square footage total (taken from a builder’s and/or designer’s plans), it should be disclosed that the finished square footage calculations are based on plan dimensions only and may differ from the actual finished square footage. Such as: “GLA taken directly from builder’s plan and subject to verification;” or “Square footage measurements obtained from the builder’s plans of the proposed dwelling and the actual, as built finished square footage may differ from the plan dimensions.” A similar type statement (or other form of disclosure) should always be included when relying on square footage information taken from a builder’s plans. The measurement of completed new construction is always recommended to confirm the “as built” square footage, which may be greater or smaller than stated in the original or pre-construction plans.

E. Pictures, Comparisons, and “MLS”

A photo of the property, taken at or near the time of closing, provides an accurate record of the property at that specific time. Additional photos showing any exterior features (such as decks, porches, patios, detached buildings, fencing, pools, etc.) are also extremely helpful in understanding what was offered and included at the time of sale. Many new owners make immediate improvements; new exterior siding, windows, porches, decks, fencing, landscaping, paint, etc. A photo taken at the time of closing provides an accurate reflection of the property condition and what was included at the time of sale. Existing homes should be photographed with a front and rear photo included, plus a photo of any additional feature which provides contributory value and is not visible within the front and rear photos. New construction dwellings should have a photo added at the time the C/O (certificate of occupancy) is issued or soon thereafter. Any photos of new construction submitted at the time of listing or prior to completion are subject to local MLS rules and regulations.

Pictures of the front and rear of the dwelling are recommended on all listings reported through the “MLS.” For the proper comparison of properties (CMA’s, appraisals, etc.) and to allow for consistency in information sharing throughout the national database, photos of any and all items that provide contributory value to the property should be included in the sold information as reported through “MLS.” Front and rear photos are encouraged for all “closed” properties (when physically possible).

Even if a dwelling is not listed for sale through MLS; if the property is reported as a “closed” sale (entered for comparable use only or otherwise), front and rear photographs are recommended to be included with the closed sale information.

Collection, Calculation, and Communication
To claim adherence to this standard of measurement, you must consistently follow this standard in its entirety, and cannot utilize just the parts you like or agree with.

This standard may be used to measure and calculate all detached and attached single-family houses, including townhomes, row houses, and/or other side-by-side housing types. This standard does not apply to the measurement and calculation of condominium units and does not cover room dimensions. Users of this standard are cautioned to carefully verify the legal definition of property ownership to avoid any confusion and/or violation of state law. The term Square Footage is utilized due to its common use among real estate practitioners and consumers. The terms Gross Living Area and GLA are utilized due to their common use within the real estate, appraisal, and lending industries.

The statements *(suitable)* or *(intended for human occupancy)* are used by established building codes to describe a room or space, that has as one of its requirements, a specified amount of natural or mechanical light and ventilation. The definition of gross living area and other similar terms does not imply that any such spaces conform to any requirements for light and ventilation, and is considered beyond the scope of this standard.

All sketches contained herein were created specifically for use in this publication and were developed using Apex Sketching Software provided through Alamode, Inc., and licensed through Carolina Appraisers and Real Estate.

### 6. Illustrations

For assistance in measuring, calculating, and reporting the square footage of single-family homes, refer to the following illustrations and instructions. (Pages 24-55) These 16 sketches and following explanations are included to provide practical examples of the methodology utilized in the *American Measurement Standard*. 
“A” - One Story with Detached Garage and Breezeway.

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<th>Dimensions</th>
<th>Subtotal</th>
<th>Total</th>
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<tbody>
<tr>
<td>Main 1st Level</td>
<td>50.0’ x 35.0’</td>
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<tr>
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<tr>
<td>Breezeway</td>
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GLA 1,750 sq ft  
GBA1 54 sq ft  
Garage 484 sq ft

Top Sketch -- MLS Report – GLA 1,750 - GBA/Brzwy 54 - Gar 484

“B” - One Story with Attached Garage and Deck.

<table>
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</thead>
<tbody>
<tr>
<td>Main 1st Level</td>
<td>50.0’ x 35.0’</td>
<td>1,750</td>
<td>1,750</td>
</tr>
<tr>
<td>Garage</td>
<td>22.0’ x 22.0’</td>
<td>484</td>
<td>484</td>
</tr>
<tr>
<td>Deck</td>
<td>10.0’ x 10.0’</td>
<td>100</td>
<td>100</td>
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</table>

GLA 1,750 sq ft  
Garage 484 sq ft  
P/D/P 100 sq ft

Bottom Sketch -- MLS Report – GLA 1,750 - Gar 484 - P/D/P 100
"A" - One Story with Attached Garage, Screened Porch, & Finished Office.

<table>
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<th>Subtotal</th>
<th>Total</th>
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<td>1,750</td>
</tr>
<tr>
<td>Garage</td>
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<td>484</td>
</tr>
<tr>
<td>Screen Porch</td>
<td>13.0’ x 10.0’</td>
<td>130</td>
<td>130</td>
</tr>
<tr>
<td>Finished Office</td>
<td>12.0’ x 13.0’</td>
<td>156</td>
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</tr>
</tbody>
</table>

GLA 1,750 sq ft
GBA1 Det Finished 130 sq ft
Gar 484 sq ft
P/D/P1 ScPorch 130 sq ft

"B" - One Story with Attached Garage, Unfinished Office, and Unfinished Storage; Plus Bay Window and Fireplace.

<table>
<thead>
<tr>
<th>Area</th>
<th>Dimensions</th>
<th>Subtotal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main 1st Level</td>
<td>50.0’ x 35.0’</td>
<td>1,750</td>
<td>1,750</td>
</tr>
<tr>
<td>Bay Triangle</td>
<td>3.0’ x 3.0’</td>
<td>(9 div x 2) x 2</td>
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<tr>
<td>Bay Rectangle</td>
<td>5.0’ x 3.0’</td>
<td>15</td>
<td>15</td>
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<tr>
<td>*Bay @ Right</td>
<td>9.0’ x 3.0’</td>
<td>27</td>
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<tr>
<td>(Total GLA)</td>
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<td>(1,801)</td>
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<tr>
<td>Garage</td>
<td>22.0’ x 22.0’</td>
<td>484</td>
<td>484</td>
</tr>
<tr>
<td>Unheated Office</td>
<td>12.0’ x 16.0’</td>
<td>192</td>
<td>192</td>
</tr>
<tr>
<td>Unfinished Storage</td>
<td>10.0’ x 16.0’</td>
<td>160</td>
<td>160</td>
</tr>
</tbody>
</table>

GLA 1,801 sq ft
GBA1 Unheated Office 192 sq ft
GBA2 Unfinished Storage 160 sq ft
Gar 484 sq ft

* Chimney boxes located outside the main living space are not included in square footage. Count the exterior wall as a flat surface for measurement purposes.
Residential Square Footage

Drawing for Illustration Only

See Comments Page 29
One Story with Attached Garage, Unfinished Storage Areas, Porch and Deck.

<table>
<thead>
<tr>
<th>Area</th>
<th>Dimensions</th>
<th>Subtotal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main 1st Level</td>
<td>10.0' x 20.0'</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td></td>
<td>31.0' x 48.0'</td>
<td>1,488</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(5.0' x 5.0')</td>
<td>(-25)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(8.0' x 4.0')</td>
<td>(-32)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>28.0 x 4.0'</td>
<td>112</td>
<td></td>
</tr>
<tr>
<td></td>
<td>20.0' x 8.0'</td>
<td>160</td>
<td>1,903</td>
</tr>
<tr>
<td>Garage</td>
<td>21.0' x 21.0'</td>
<td>441</td>
<td>441</td>
</tr>
<tr>
<td>Unfinished Stg 1</td>
<td>5.0' x 5.0'</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Unfinished Stg 2</td>
<td>15.0' x 6.0'</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>Unfinished Stg 3</td>
<td>6.0' x 6.0'</td>
<td>36</td>
<td>151</td>
</tr>
<tr>
<td>Porch</td>
<td>10.0' x 20.0'</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>Deck</td>
<td>12.0' x 12.0'</td>
<td>144</td>
<td>144</td>
</tr>
<tr>
<td>GLA</td>
<td></td>
<td></td>
<td>1,903 sq ft</td>
</tr>
<tr>
<td>GBA</td>
<td>(All Unf Stg)</td>
<td>GBA—1-2-3</td>
<td>151 sq ft</td>
</tr>
<tr>
<td>Gar</td>
<td></td>
<td></td>
<td>441 sq ft</td>
</tr>
<tr>
<td>P/D/P1</td>
<td>Porch</td>
<td></td>
<td>200 sq ft</td>
</tr>
<tr>
<td>P/D/P2</td>
<td>Deck</td>
<td></td>
<td>144 sq ft</td>
</tr>
</tbody>
</table>

Three unfinished storage areas. The first two are very basic and like most others. The area measuring 5.0’ x 5.0’ is different due to the door, which opens into the garage only and does NOT have access from inside the dwelling. Since the space can only be accessed from inside the garage space, even though the space is within the exterior measurements of the finished living area, the space must be deducted from the other finished living area. If the same storage space opened from inside the house, it would be included within the finished living area (even if it was a mechanical room and not finished the same as the rest of the finished living area). The location of the door makes the difference between this closet being included in the GLA or GBA.
Residential Square Footage

2nd Level

50.0' x 35.0' = 1750 sq ft
Minus 3.2' x 12.0' = 38 sq ft
2nd Level = 1,712

Total sq ft 2nd Level = 1,712

1st Level

50.0' x 35.0' = 1750 sq ft
Stairs included in 1st level
Total sq ft 1st Level = 1,750

Stairs to 2nd Level
3.2' x 12.0' = 38 sq ft

Total GLA = 3,462

Drawing for Illustration Only
See Comments Page 31
Two Story with Basic Staircase.

<table>
<thead>
<tr>
<th>Area</th>
<th>Dimensions</th>
<th>Subtotal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main 1st Level</td>
<td>50.0' x 35.0'</td>
<td>1750</td>
<td>1,750</td>
</tr>
<tr>
<td>Upper 2nd Level</td>
<td>50.0' x 35.0'</td>
<td>1750</td>
<td>1,750</td>
</tr>
<tr>
<td>Staircase</td>
<td>(12.0' x 3.2')</td>
<td>(-38.0')</td>
<td>-38</td>
</tr>
<tr>
<td>Level 1</td>
<td></td>
<td></td>
<td>1,750 sq ft</td>
</tr>
<tr>
<td>Level 2</td>
<td></td>
<td></td>
<td>1,712 sq ft</td>
</tr>
<tr>
<td>Total GLA</td>
<td></td>
<td></td>
<td>3,462 sq ft</td>
</tr>
</tbody>
</table>

▶ Stairs may be viewed by any of the following statements:

1. Count the stairs on the level they serve.
2. Count the stairs on the level where they start and go up.
3. Count the stairs as though you could take the top step and push it down to the same level as the first step, and count the square footage on that level.

If stairs extend from the first level to the second level, count them as if physically taking the stairs, pushing them all down to the first floor, and then counting them with the square footage on that first level. Also remember, the space CANNOT count on two levels.

**Stairs can only count as square footage on one floor.**

Stairs and Second Levels

Count any finished living area on a second (or higher) level as floored, walkable space only. All second floor measurements should have the staircase opening deducted from the second floor GLA, or more easily defined as only counting space on an upper level as that of "floored" finished space, plus the width of all exterior wall(s).

▶ See sketch page 55
Residential Square Footage

1st Level

Stairs to 2nd Level
Include in 1st GLA

Stairs to Basement
Deduct

2nd Level

Stairs to 1st Level
Deduct from 2nd Level GLA

Basement

No Stairs Taken
Out of Basement
Square Footage

Drawing for Illustration Only
See Comments Page 33
Two Story with Basement.

<table>
<thead>
<tr>
<th>Area</th>
<th>Dimensions</th>
<th>Subtotal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main 1&lt;sup&gt;st&lt;/sup&gt; Level</td>
<td>40.0’ x 25.0’</td>
<td>1000</td>
<td>1,000</td>
</tr>
<tr>
<td>Stairs to Bsmt</td>
<td>(12.0’ x 3.2’)</td>
<td>(-38)</td>
<td>-38</td>
</tr>
<tr>
<td>Upper 2&lt;sup&gt;nd&lt;/sup&gt; Level</td>
<td>40.0’ x 25.0’</td>
<td>1000</td>
<td>1,000</td>
</tr>
<tr>
<td>Staircase</td>
<td>(12.0’ x 3.2’)</td>
<td>(-38)</td>
<td>-38</td>
</tr>
<tr>
<td>Basement</td>
<td>40.0’ x 25.0’</td>
<td>1000</td>
<td>1,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GLA</th>
<th>GLA1 Level One</th>
<th>Level Two</th>
<th>962</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basement FSF</td>
<td></td>
<td></td>
<td>1000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total GLA</th>
<th>1&lt;sup&gt;st&lt;/sup&gt; + 2&lt;sup&gt;nd&lt;/sup&gt; Level</th>
<th>1,924 sq ft</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Basement</td>
<td>Basement FSF</td>
<td>1,000 sq ft</td>
</tr>
</tbody>
</table>

Three levels, four sets of stairs, and each floor with the same exterior measurements.

This basement offers 1,000 square feet of living space. The stairs start in the basement and go up, so they are counted as square footage in the basement; leaving the total at 1,000 square feet. The first level also offers 1,000 basic square feet, but has two sets of stairs. The staircase that leads from the basement to the first level, which is counted in the basement square footage, must be deducted from the square footage of the first floor. 1,000 square feet minus the stairs of (12.0 x 3.2 or 38 square feet) leaving 962 total square feet on the first level.

The staircase that leads to the second level is already included in the first level measurements, so deduct that set of stairs from the second level measurements. The second floor has the same basic 1,000 square feet exterior, minus the staircase of 38 square feet also provides 962 square feet as on the first floor. This leaves matching totals (962) on the first and second floors, and the basement with the full 1,000 square feet.

(Property may be advertised as 2,924 sq ft)

<table>
<thead>
<tr>
<th>GLA1</th>
<th>1,000 sq ft</th>
<th>Stairs from Bsmt</th>
<th>-38 sq ft</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLA2</td>
<td>1,000 sq ft</td>
<td>Stairs from 1&lt;sup&gt;st&lt;/sup&gt; Floor</td>
<td>-38 sq ft</td>
</tr>
<tr>
<td>Basement FSF</td>
<td>1,000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total Living Area of GLA** 1,924 sq ft

**Total Basement Finished Square Footage** 1,000 sq ft
Residential Square Footage

Drawing for Illustration Only
See Comments Page 35
A two story dwelling generally has a second floor with the same basic area as the first floor or main living area. A one and one half (1.5 or 1 ½) story design is simply a dwelling with a reduction of square footage in the second level, generally due to the slope of the roof. The 1.5 or 2 story description is a broad generalization and there are literally thousands of possible upper level combinations. Designs and/or style names are typically localized in descriptions.

### 1 1/2 Story with Finished Basement.

<table>
<thead>
<tr>
<th>Area</th>
<th>Dimensions</th>
<th>Subtotal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main 1&lt;sup&gt;st&lt;/sup&gt; Level</td>
<td>15.0' x 42.0'</td>
<td>630</td>
<td></td>
</tr>
<tr>
<td></td>
<td>22.0' x 34.0'</td>
<td>748</td>
<td></td>
</tr>
<tr>
<td></td>
<td>24.0' x 42.0'</td>
<td>1008</td>
<td>2,386</td>
</tr>
<tr>
<td>Stairs to Basement</td>
<td>(12.0' x 3.2')</td>
<td>(-38)</td>
<td>-38</td>
</tr>
<tr>
<td>Main 1&lt;sup&gt;st&lt;/sup&gt; Level</td>
<td>Total GLA1</td>
<td>2,348</td>
<td></td>
</tr>
<tr>
<td>2&lt;sup&gt;nd&lt;/sup&gt; Level Bonus Rm</td>
<td>8.0' x 6.0'</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td></td>
<td>12.0' x 24.0'</td>
<td>288</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(8.0' x 2.0')</td>
<td>(-16)</td>
<td></td>
</tr>
<tr>
<td>Bonus Room 2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>Total GLA2</td>
<td>320</td>
<td></td>
</tr>
<tr>
<td>Finished Basement</td>
<td>28.0' x 25.0'</td>
<td>700</td>
<td></td>
</tr>
<tr>
<td></td>
<td>15.0' x 14.0'</td>
<td>210</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BsmtFSF</td>
<td>910 sq ft</td>
<td></td>
</tr>
<tr>
<td>GLA</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; Level</td>
<td>2,348</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bonus Room</td>
<td>320</td>
<td></td>
</tr>
<tr>
<td>Total GLA</td>
<td></td>
<td>2,668 sq ft</td>
<td></td>
</tr>
<tr>
<td>BsmtFSF</td>
<td></td>
<td>910 sq ft</td>
<td></td>
</tr>
<tr>
<td>Garage</td>
<td>22.0' x 24.0'</td>
<td>528 sq ft</td>
<td></td>
</tr>
</tbody>
</table>
Bonus Rooms and Access.

<table>
<thead>
<tr>
<th>Area</th>
<th>Dimensions</th>
<th>Subtotal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main 1st Level</td>
<td>40.0' x 30.0'</td>
<td>1200</td>
<td>1,200</td>
</tr>
<tr>
<td>2nd Level “A”</td>
<td>22.0' 22.0'</td>
<td>484</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8.0' x 2.0'</td>
<td>16</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Total “A”</strong> 1,700 sq ft</td>
</tr>
<tr>
<td>Main 1st Level</td>
<td>40.0' x 30.0'</td>
<td>1200</td>
<td></td>
</tr>
<tr>
<td>Stairs</td>
<td>12.0' x 4.0'</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Total 1st Level</strong> 1,248</td>
</tr>
<tr>
<td>2nd Level “B”</td>
<td>22.0' 22.0'</td>
<td>484</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8.0' x 2.0'</td>
<td>16</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td>(12.0' x 4.0') (-48)</td>
<td>- 48</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Total 2nd Level</strong> 452</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1,248 + 452 = 1700</td>
<td><strong>Total “B”</strong> 1,700 sq ft</td>
</tr>
<tr>
<td>Main 1st Level</td>
<td>40.0' x 30.0'</td>
<td>1200</td>
<td>1,200</td>
</tr>
<tr>
<td>2nd Level “C”</td>
<td>22.0' 22.0'</td>
<td>484</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8.0' x 2.0'</td>
<td>16</td>
<td>500</td>
</tr>
<tr>
<td>GLA “C”</td>
<td>Finished GLA</td>
<td></td>
<td><strong>Total “C”</strong> 1,200</td>
</tr>
<tr>
<td>GBA “C”</td>
<td>GBA1</td>
<td></td>
<td>500</td>
</tr>
<tr>
<td>“A” GLA</td>
<td>Finished</td>
<td></td>
<td>1,700</td>
</tr>
<tr>
<td>“B” GLA</td>
<td>Finished</td>
<td></td>
<td>1,700</td>
</tr>
<tr>
<td>“C” GLA</td>
<td>Finished</td>
<td></td>
<td>1,200</td>
</tr>
</tbody>
</table>

Sketch “A” and “B” both contain staircases that are considered as finished living space. Therefore, both sets of stairs are included in the GLA calculations and both plans provide a total of 1,700 square feet of GLA. The only change in sketch “C” is the location of the staircase. However, that location has a substantial influence on the utility, function, classification, and ultimately the value of the space. In this configuration, you must leave the heated, finished area in order to enter the upstairs bonus room. You must leave the finished lower level, walk into the outside air, and then up the staircase to enter the finished space above the garage. Sketch “C” would be reported with 1,200 total square feet or GLA, plus a 500 square feet bonus room. The bonus room would be listed as gross building area or GBA.
Dormers

3 Stop at interior wall

2

1

Start at interior corner

4

12.0'

32.0'

8.0'

14.0'

32.0'

4.0'

8.0'

4.0'

0.8

12.0'

8.0'

Dormer "width" measurements
are calculated like all other
2nd level measurements

Dormer "length" measurements
start at the interior wall
of the finished living area
and end at the start
of the outside wall

Drawing for Illustration Only
See Comments Page 39
Dormer Calculations.

The “Width” of a dormer is calculated using inside measurements, plus the width of both exterior walls; just like most other second story measurements. The “Length” is calculated using interior wall to interior wall; you start on the inside corner of the dormer and stop at the beginning of the exterior wall. You do NOT add the width of the exterior wall in the length measurement.

This sketch is a look at two basic dormers. The top sketch shows exterior measurements of 12.0 x 8.0. These measurements are generally taken from inside the dwelling and you have to account for the exterior walls in your calculations. When you measure the interior width, the measurement from one interior wall to the opposite interior wall shows 7.0’. (Arrow one shows the interior dimensions or what you actually measure.) Then add for both exterior walls to get the correct total measurement. (Five tenths for each exterior wall - see wall construction.) Arrow two shows your total width measurement (exterior wall to exterior wall) and arrow three shows your length measurement; from the corner wall of the main living area to the beginning of the exterior wall.

In the length measurement, you are actually measuring from the corner of an interior wall. When you place your tape measure on the wall, you are placing it on the corner of an interior wall. When you calculated that measurement in the second level living area you added for the exterior wall; in this case five tenths or one half foot. So this time when you pull the tape measure, from this interior corner to the inside wall against the dormer or outside wall, you have already counted the exterior measurement. Width equals interior measurements plus the addition of both exterior walls. The length equals the actual measurement you take from inside the dwelling with no addition for an exterior wall. (Look at it as though you are adding the exterior wall when you begin the measurement.)

Although you normally add the width of an exterior wall, you can’t count the same wall twice. In dormer calculations, just remember to count the length measurement from the interior corner to the beginning of the outside or exterior wall.

The bottom line: do not add for an exterior wall in the length measurement of a dormer. Width = 7.0 feet interior measurement, plus 5.0 tenths for both exterior walls, for a total width of 8.0’. (12.0’ x 8.0’ = 96 sq ft.) Length = 12.0’ using interior measurements only. The top dormer is 96 square feet.

In the lower sketch, both dormers are identical and are calculated the same as above. Here, we have an interior width of 3.0’. Then we add both exterior walls for a total exterior width of 4.0’. The length starts at the interior corner and goes to where the wall starts (on the inside of the exterior wall), giving us a total measurement of 8.0’. 8.0’ x 4.0’ = 32 square feet, times two dormers - 32.0 sq ft times two dormers for a total of 64 square feet.
Basement with Finished and Unfinished Space.

<table>
<thead>
<tr>
<th>Area</th>
<th>Dimensions</th>
<th>Subtotal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main 1\textsuperscript{st} Level</td>
<td>50.0’ x 40.0’</td>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>Staircase to Bsmt</td>
<td>12.0’ x 4.0’</td>
<td>48</td>
<td>1,952</td>
</tr>
<tr>
<td>Basement</td>
<td>50.0’ x 40.0’</td>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>Finished Sq Ft</td>
<td>40.0’ x 32.5’</td>
<td>1300</td>
<td>1,589</td>
</tr>
<tr>
<td></td>
<td>17.5 x 16.5</td>
<td>289</td>
<td></td>
</tr>
<tr>
<td>Unfinished Sq Ft</td>
<td>23.5 x 17.5</td>
<td>411</td>
<td>411</td>
</tr>
<tr>
<td>GLA</td>
<td></td>
<td>1,952 sq ft</td>
<td></td>
</tr>
<tr>
<td>BsmtFSF</td>
<td></td>
<td>1,589 sq ft</td>
<td></td>
</tr>
<tr>
<td>BsmtGBA</td>
<td></td>
<td>411 sq ft</td>
<td></td>
</tr>
</tbody>
</table>

The basement measurements are 40.0 x 32.5 or 1,300 square feet; plus 17.5 (18.0 - 0.5) x 16.5 (16.0 plus five tenths of a foot for the exterior wall) or 289 square feet (remembering the rounding guideline). The finished area of the basement totals 1,589 square feet or (BsmtFSF).

The unfinished storage area would be measured as 23.5 x 17.5 or 411 square feet of BsmtGBA. (The stairs are included in the basement measurements and are deducted from the first level measurements.)
Basement with Finished and Unfinished Space.

<table>
<thead>
<tr>
<th>Area</th>
<th>Dimensions</th>
<th>Subtotal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main 1st Level</td>
<td>65.4’ x 40.0’</td>
<td>2616</td>
<td>2,616</td>
</tr>
<tr>
<td>Bay Window</td>
<td>3.0’ x 3.0’</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>5.0’ x 3.0’</td>
<td>15</td>
<td>24</td>
</tr>
<tr>
<td>Front Entrance</td>
<td>(10.0’ x 6.0’)</td>
<td>(-60)</td>
<td>-60</td>
</tr>
<tr>
<td>Staircase</td>
<td>(12.0’ x 3.4’)</td>
<td>(-41)</td>
<td>-55</td>
</tr>
<tr>
<td></td>
<td>(4.0’ x 3.6’)</td>
<td>(-14)</td>
<td></td>
</tr>
<tr>
<td>Total GLA</td>
<td></td>
<td></td>
<td>2,525</td>
</tr>
<tr>
<td>Basement BsmtFSF</td>
<td>65.4’ x 20.5’</td>
<td>1341</td>
<td>1,341</td>
</tr>
<tr>
<td>Basement BsmtGBA</td>
<td>65.4’ x 19.5’</td>
<td>1275</td>
<td></td>
</tr>
<tr>
<td>Entrance Above</td>
<td>(10.0’ x 6.0’)</td>
<td>(-60)</td>
<td></td>
</tr>
<tr>
<td>Total GBA</td>
<td></td>
<td></td>
<td>1,215</td>
</tr>
<tr>
<td>GLA</td>
<td></td>
<td></td>
<td>2,525 sq ft</td>
</tr>
<tr>
<td>BsmtFSF</td>
<td></td>
<td></td>
<td>1,341 sq ft</td>
</tr>
<tr>
<td>BsmtGBA</td>
<td></td>
<td></td>
<td>1,215 sq ft</td>
</tr>
</tbody>
</table>

The stairs are located in the unfinished storage area and should be included within the unfinished measurements or GBA. (BsmtGBA)

A bay window, as long at both sides are equal, is easily calculated with the “out” measurement multiplied by the “over” measurement; in this case 3.0’ x 3.0’ or 9.0 square feet.
Advanced Calculations

Level 1

- Utility: 11.0 sq ft
- Bedroom
- Bedroom
- Full Bath
- Kitchen
- Dining Room
- Foyer
- Bedroom

Basement

- Full Bath
- Storage: 8.0 sq ft
- Workshop: 18.0 sq ft
- Rec Room
- 2 Car Garage

Drawing for Illustration Only
See Comments Page 45
Basement with Four Different Categories.

This sketch offers another twist on a dwelling with a lower level. It offers a finished living area, garage, workshop, plus a storage area with an outside only entrance. The first level is very basic with exterior dimensions of 50.0 x 40.0 or 2,000 square feet. The staircase measures 11.0 x 3.4 or 37 square feet. 2,000 minus 37, equals 1,963 square feet or GLA.

The basement is always counted with finished square footage first. The exterior measurements are 40.0 x 26.5 or 1,060 square feet. Follow the arrows (1-2, 3-4, etc.) to see the order of how the measurements should be calculated. In the finished area, deduct the storage space of 17.5 x 7.5 or 131 square feet. 1,060 minus 131 equals 929 square feet of finished basement or BsmtFSF.

In this design, the workshop area would be counted next. With a length of 18.5 and a width of 23.5 (outside wall to outside wall in this case), the partially finished workshop would be 435 square feet.

Next, count the garage. Arrows #7 and #8 show the measurement from the exterior wall of the garage to the interior garage wall. With a length of 21.5 and a width of 23.5 (arrows #5 and #6), the total garage is 505 square feet.

Okay, the finished basement space of 929, plus the partially finished workshop of 435, plus the garage of 505, and finally the unfinished storage area of 131 square feet, providing a total of 2,000 square feet. Such details, not only allow for better property comparisons, but can influence the total value of the property.

(All measurements in tenths of a foot)

<table>
<thead>
<tr>
<th>Area</th>
<th>Dimensions</th>
<th>Subtotal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLA</td>
<td>(2,000 – 37)</td>
<td>1,963 sq ft</td>
<td></td>
</tr>
<tr>
<td>BsmtFSF</td>
<td></td>
<td>929</td>
<td></td>
</tr>
<tr>
<td>BsmtGBA1</td>
<td></td>
<td>435</td>
<td></td>
</tr>
<tr>
<td>BsmtGBA2</td>
<td></td>
<td>131</td>
<td></td>
</tr>
<tr>
<td>Garage</td>
<td></td>
<td>505</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Bsmt Total 2,000)</td>
<td></td>
</tr>
</tbody>
</table>
**Sketch "A"**

One Level Ranch Style

50.0' x 40.0' = 2,000 sq ft

2,000 sq ft of finished living area (GLA), all on one level

---

**Sketch "B"**

44.0' x 40.0' = 1,760 sq ft

20.0' x 12.0' = 240 sq ft

Total GLA = 2,000 sq ft

1,760 sq ft of finished living space, located on the 1st level

240 sq ft of finished space, located on the 2nd level

1,760 sq ft of GLA and 240 sq ft of GBA

1st Level

2nd Level

Bonus Room

Drawing for Illustration Only

See Comments Page 47

Sketch by Artex"
Square Footage and Comparability.

House “A” offers 2,000 finished square feet on one level and in one continuous floor plan. House “B” offers 1,760 square feet of continuous space on the first level, plus a 240 square feet finished bonus room, which is only accessible through the garage. You must leave the finished living area, enter the garage, and then go up a flight of unfinished stairs to access the second level bonus room. The bonus room is finished similar to the main living area and heated and cooled by the same central system. However, due to the reduced “utility” or “functionality” of the upper level space, it is technically defined as finished gross building area and should not be listed in any statement of gross living area or GLA. The two dwellings are not a fair comparison and should never be reported with the same “finished” square footage.

If both houses are reported in the MLS as sold with 2,000 square feet, the next time an agent is working on a CMA or an appraiser is selecting comparable sales, they will only see two houses with the same square footage. Just by looking at the exterior pictures of the houses, it is not possible to tell the difference in living areas. If these two houses are used together or considered equal sizes, for comparable purposes, someone’s value is going to be adversely effected.

The “reporting” or communication square footage details are just as important as the proper measurement and calculation of that same square footage information. Details allow for the fair comparison of “similar” properties.

Order of reporting as defined in the eight categories of square footage:

1. GLA
2. GBA
3. BsmtFSF
4. BsmtGBA
5. Gar
6. DetGar
7. DetGBA
8. P/D/P
Sectionalized Calculations.

Take one section at a time and do the math. There is no right or wrong order. The colored (or dark) sections on the sketch above are just one example of how you can box off individual areas and gives you some sectionalized method for calculating a total. Small sections added together or large sections with deductions; both should provide the same results.

<table>
<thead>
<tr>
<th>Area</th>
<th>Dimensions</th>
<th>Subtotal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main 1st Floor</td>
<td>14.0' x 2.0'</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10.0' x 4.0'</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td></td>
<td>20.0' x 4.0'</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td></td>
<td>32.0' x 6.0'</td>
<td>192</td>
<td></td>
</tr>
<tr>
<td></td>
<td>38.0' x 70.0'</td>
<td>2,660</td>
<td></td>
</tr>
<tr>
<td></td>
<td>14.0' x 4.0'</td>
<td>56</td>
<td></td>
</tr>
<tr>
<td></td>
<td>14.0' x 16.0'</td>
<td>224</td>
<td></td>
</tr>
<tr>
<td></td>
<td>14.0' x 2.0'</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td></td>
<td>20.0' x 2.0'</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td></td>
<td>26.0' x 6.0'</td>
<td>156</td>
<td></td>
</tr>
<tr>
<td></td>
<td>18.0' x 4.0'</td>
<td>72</td>
<td></td>
</tr>
<tr>
<td>GLA</td>
<td></td>
<td></td>
<td>3,576 sq ft</td>
</tr>
</tbody>
</table>
Sloped Ceilings

At least one-half of the finished square footage must be 7.0' feet or higher, where sloped ceilings are present.

The darkest (or blue) area with a ceiling height of less than 5 feet is NOT included in the GLA.

Note: at the 5 ft mark, add the width of exterior wall(s).
► Sloped Ceilings

This sketch shows a building section of a typical one and one half story dwelling with a loft or upper living area, which has a ceiling height on both sides of less than five feet. The area marked in blue (or the darkest section on both sides of the loft area) is less than five feet in height and would NOT be counted in the finished living area. The rest of the space, as long as over one half of the total room width is at least seven feet in height can be counted as GLA, as long as it meets the other requirements for gross living area.

When you find rooms with sloped ceilings, place the end of the tape on the floor and measure straight up, from the floor to the five foot point on the ceiling. At that point, start your width measurement extending from one interior wall to the other, following the same height restrictions (i.e., five feet on both sides). From the five foot mark on the sloped ceiling, the dimensions of the exterior wall must be added to create the equivalent of exterior measurements. In order to be included in the finished living area calculations, the living space with the sloped ceiling must maintain an average ceiling height of at least seven (7) feet for over one half of all the finished space; and have a minimum ceiling height of at least eight (8) feet at the center or highest point of the sloped space.

Size Matters!
**Shapes and Solutions.**

30.0’ x 10.0’ = 300 sq ft

Basic Rectangles or Squares
Length Times Width Equals Total Square Footage

18 feet from bottom to top

Triangle = Length Times Width
Divided by Two
18 sq ft times 18 sq ft = 324 sq ft
324 Square Feet Divided by 2 = 162 sq ft

Triangle Measurement of 162 square feet

18 feet across the bottom

The basic formula of a circle; radius squared (number times itself), times 3.14. Measure the diameter of the circle (width across), and divide by two. Multiply that number by itself, and then by 3.14, and you should have your square footage. An area with a half circle shape is much more common, so just remember to divide your total by two.

(Octagons should be broken down into rectangles and triangles.)
Garages

Detached 2 Car Garage

Calculations: 20.8 x 22.0 or 458 sq ft

Attached 2 Car Garage

Living Area

Calculations: 20.3 x 22.0 or 447 sq ft

Drawing for illustration only
Garages

The top drawing shows a basic detached garage. (Detached: standing by itself; not sharing any wall with another building; separated; disconnected.) All the walls are separate from any other area and are counted similar to finished square footage with all exterior measurements; rectangle - length times width for the total square footage. The distance between arrow #1 and arrow #2 (22.0), times the distance between arrow #3 and arrow #4 (20.8), for a total of 22.0 x 20.8 or 458 square feet.

The bottom drawing shows an attached garage with finished living space attached to one wall of the garage. Arrows #1 and #2 are identical to the detached version above and are measured from exterior wall to exterior wall. But in this case, arrow #3 is an exterior measurement and arrow #4 is an interior measurement. The distance between arrows #3 and #4 is five tenths of a foot shorter than the #3 to #4 measurement due to the presence of an interior wall. 22.0 x 20.3 or 447 square feet. The difference in this case is only 11 square feet. But, a professional should know the difference and understand that such differences can often alter the property’s value.

The logic behind this is simple; you are giving any finished space the benefit of the most possible square footage. The rules of calculating finished space call for exterior measurements. The finished living area is always given the benefit of the exterior wall and therefore provides for the largest possible measurement in the most valuable space.

To properly calculate any statement of square footage, you must view the interior of any attached garage.
Stairs can only count as square footage on one floor

1. Count the stairs where they "start"
2. Count the stairs on the level they "serve"
3. Count the stairs as though you could take the highest step, push all the stairs to the 1st level and count the square footage on that level

Do Not add any square footage for any space located below the stairs

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Notes
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The American Measurement Standard
Calculating Residential Square Footage

AMS C42129 - 2008

- Measurement
- Calculation
- Communication

American Measurement Standard
Notes: