## Tolerances

Tolerances apply to the amount of variation that should be expected from our rug dimensions, design details, and color matching (QD vs. Standard). Tolerances should be discussed whenever a client demonstrates expectation of exacting results, when the client has little experience with custom handmade products, or if the circumstances of an installation suggest that tight tolerances are needed. Whenever these situations occur, the design or estimating team should be consulted or asked to review the details to ensure a successful project.

## Overall Rug Dimensions

It is impossible to supply handmade carpets that meet exact ordered sizes on every order. In addition to dimensional variability during the custom, hand-crafted production process, the carpets can even stretch or shrink during transit while rolled up. In order to control the size of shaped (and non-rectilinear) pieces, templates are mandatory. Rug dimension tolerances vary depending on the product type:

## HAND-KNOTTED RECTANGULAR AREA RUGS

- The greater of $4.0 \%$ or $2^{\prime \prime}$ in the length and width. As an example, on a $10^{\prime}$ long area rug, the actual rug length may be anywhere from $9^{\prime} 7^{\prime \prime}$ to $10^{\prime} 5$.". Only solid colors can be cut and bound to the exact size.


## HAND-TUFTED AND MACHINE-TUFTED RECTANGULAR AREA RUGS

- The greater of $1.0 \%$ or one half inch in the width and length.


## WALL-TO-WALL CARPETS OF ANY TYPE

- Provided there is no pattern layout intent (border, design elements cutting in at walls in a particular way, etc.), tolerances are not applicable. Oversizing is required for wall-to-wall carpets which covers the tolerance needs.


## TEMPLATED RUGS

- If templated rugs are to be stretched in over tack strip, consult with the mill and we will recommend appropriate under sizing to allow for stretching to achieve the final desired size. For rugs, we'll do our best to match the template, but normal hand-tufted tolerance should be recognized. This means under sizing a rug slightly if it can't be more than a desired dimension or oversizing slightly if it can't be under a certain dimension. Contact the mill for recommendations when there is a max/min situation with a template.


## BROADLOOM

- Tolerance of $3^{\prime \prime}$ in the width of the roll.


## Design Details

Expect minor variations in design details throughout a carpet. It is difficult to quantify these variations beyond saying that clients should not expect our carpets to look like they were produced by a machine where every detail looks the same throughout the carpet. Our products are produced and finished by hand. Much like hand-painted artwork this results in minor differences that demonstrate the artisan work involved and enhances the beauty of the finished product. This is particularly true in hand-knotted carpets where every aspect of the carpet is produced by hand resulting in even more variations in yarn thickness, color dyeing and design details.

## Color Matching

Scott Group Studio only uses natural fibers. Because they come from nature, each lot of natural wool or silk yarn is unique, creating nuances in the appearance once the yarns are dyed. Two different raw lots using the exact same dye formula will generally produce two different colors. Our process to mitigate these differences is to use our custom lab preparation process, but some differences remain in all custom dyed yarns. One example is that dyed wool or silk yarns will often look different under different light sources, consequently, the color matching light source should be specified on all samples and orders as managing to multiple light sources is often not possible.

## Color Movement over time

## FAST FADE

Natural yarns are not white, they are more of a cream/yellow color. Because of this, the color of a dyed yarn is a combination of dyes and the natural color of the yarn. Unfortunately, the natural color of the yarn is not as light fast as the dyes. The natural color can fade relatively quickly when exposed to light. This is the same process that we go through in Northern climates as our hair will lighten in the summer months when we're exposed to more sunshine. This phenomenon is often referred to as "fast fade" in wool carpets. This will be more noticeable in lighter shades where the natural color is a larger component of the final color. In dark shades, this is much less noticeable as the natural yarn color is not a significant factor.

## PILE CRUSH AND BLOOMING

Color is how we perceive how light reflects from the surface of any media. A simple way to see this is to look at the cut and loop of the same yarn. Cut yarn will appear darker than the loop, yet it's the same yarn with the same dyes. In tufted carpet the cut pile will appear darker and more saturated when it's freshly tufted and sheared. As the tips of the sheared yarn open over time (sometimes referred to as "blooming"), there is more surface to reflect light and the color will appear lighter. This is also seen as the pile is crushed under use or even due to the rolling of the carpet. The crushing is essentially the yarn laying over and once again reflecting more light and appearing lighter. This is seen with when vacuuming a cut pile carpet. If the carpet if vacuumed away from the observer it will appear lighter (the sides of yarns are reflecting more light), but if the carpet is vacuumed toward the observer it will appear darker (the tips of the yarn are absorbing light). Even loop carpet is susceptible to a pile crush of sorts. The loops shape will go from a round top to a flatter top as it's subjected to use. This will create more light reflection and the appearance of a lighter color. Pile crush is more prominent in two level carpets where the higher tufts are exposed and not support by adjacent tufts. In order of expected crush and bloom, multi-level cut would be first followed by cut, multi-level loop and then loop.

## FADE OVER TIME

All textiles fade over time with exposure to light. The amount of fade depends on the color and the time and nature of light exposure. In general terms, the lighter the shade the more the effect the loss of yellow will influence the appearance. The darker shades will more lose some color, but probably be affected more by wear and crushing all of which will result in a faded appearance over time.

