

# CHANGES TO THE 2017 TCNA HANDBOOK

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The Tile Council of North America (TCNA) Handbook is the tile industry guide to successful tile installation. The methods and guidelines in this book are continually reviewed by industry leaders, including installers and tile and installation product manufacturers. Following the recommendations in the Handbook will produce durable installations of ceramic, glass and natural stone tile. Even though the TCNA Handbook is published every year, the majority of the changes are made in odd numbered years. There are many changes to the 2017 Handbook; here is a summary of the expanded and clarified sections.

## EJ171

Some of the most important changes are found in EJ171, concerning the location and installation of movement joints in the tiled assembly. These changes were made to help clarify the guidelines to architects, engineers and installers. First, the location of a movement joint is no longer confined to a range; rather, proper placement is defined with a maximum spacing and no minimum spacing. Interior movement joints shall be placed no more than 25' apart in both directions. Movement joints in exterior installations, interiors exposed to direct sunlight and above-ground tile installations shall be spaced NO more than 12' apart in both directions.

This allows the designer more freedom in placement of the soft joints for a more appealing look. The width of the movement joints are now determined by the spacing of the movement joints and the coefficient of thermal expansion of the ceramic or natural stone tile. EJ171 contains a chart and an equation to help determine the proper joint width. Depth of the movement joint is also defined in this Handbook release. Recommendation for perimeter and change of plane movement joints are more clearly defined, including minimum joint width in these instances. The small detail drawings now show outside corners as well as inside corners for perimeter joints. Guidelines for movement joints in walls have been added to EJ171.

Two of the technical requirements of the sealant (caulk) were changed. Class 12 ½ Sealant is no longer an option, in favor of the more elastic Class 25 Sealant (capable of 25% elongation and compression). The requirement for Shore A hardness in traffic locations was reduced from 35 to 25.

## SRSB

A definition and details for the installation and use of Structural Ribbed Self-supporting Boards (SRSB) in tile assemblies on roof decks and balconies was added. After many years, the manufacturer of TI ProBoard received approval from the Handbook committee to create details for the Handbook incorporating this SRSB in ceramic and natural stone tile assemblies. These boards are an excellent replacement for plywood on framed decks. A reinforced resin structure is filled with a cement mortar then waterproofed and tiles are bonded to the surface with modified thin-set mortars. The specifics of the board have been well defined and characterized in the Handbook.

## P602

Several changes were made to the swimming pool detail, P602. Glass tile was added to the approved list of tiling material. Changes are made to the Alternate Deck Profile to bring it in line with what is actually being done in the field. A recommendation to apply a Penetrating Colloidal Silicate waterproofing to the concrete before the installation of tile was added. This silicate material is commonly added to the concrete or sprayed on to reduce the loss of water through the concrete shell. Installations over this material have been successful and the committee felt it should be included in the Handbook. Be sure to check with the waterproofing material and mortar manufacturer to assure compatibility of the components. Epoxy mortar was added to the acceptable bond coats for the installation of tile in swimming pools.

## OTHER UPDATED SECTIONS

The Green Building section was updated to recognize the recently acquired EPD for ceramic tile and the cement-based grouts and mortars used to install them. Many environmental sustainability agencies, i.e. Green Globes and ASHRAE, now recognize Green Squared Certified as a way to reduce global impact and products that comply are part of their approved materials list.

Tile installers are all aware that the minimum grout joint width for any ceramic and natural stone tile installation is 1/16". There should be no instance when a grout would be expected to fill a joint less than 1/16". Therefore, the criteria for Non-sanded Grout has been changed to 1/16" to 1/8" wide joints instead of joints less than 1/8".



Technical Bulletin

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The definition of Critical Lighting or wall wash light has been expanded to explain the causes in greater detail. The Handbook explains how tiles that are in spec and properly installed can have exaggerated shadows when low angle lighting is used. The Handbook includes recommendations on how to avoid the effect through tile selection and light placement.

Other changes include various editorial corrections and:

- A definition for cement backerboard was added to F250 for Stone. This eliminates confusion as to which backerboard can be used successfully for natural stone tile installations.
- Shower Curb and Seat drawings were corrected to show that the top surface must be sloped towards the drain.
- Glass Tile was added to the W245 and W248 details, with a caution to check with tile and installation product manufacturers before installing over non-porous surfaces, i.e. waterproof coated backerboard.

## CUSTOM TECHNICAL SERVICES

The 2017 TCNA Handbook is an invaluable source of information on proper installation of ceramic, glass and natural stone tile for tile assemblies that will last for years. Most of the situations a contractor or design professional will encounter have been included. When assistance is needed, CUSTOM has a highly qualified technical service staff to help with any specific tile installation. This team can interpret the TCNA Handbook and suggest modifications to a detail to Accommodate the jobsite conditions or tile being installed.

For questions about tile installation, contact Technical Services at **800.282.8786**.

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