

Do I Really Have to Do That?

...on My Tile & Stone Installations

by
Dean Moilanen



AIA APPROVED SESSION



- Noble Company is a registered provider with The American Institute of Architects Continuing Education System.
- Credit Earned on the completion of this program will be reported to CES Records for AIA Members. Certificates of Completion for non-AIA members are available upon request.
- This program is registered with the AIA CES for continuing professional education.
- As such, it does not include content that may be deemed or construed to be an approval or endorsement by the AIA of any material or construction or any method or manner of handling, using, distributing, or dealing in any material or product.
- Questions related to specific materials, methods, and services will be addressed at the conclusion of this presentation.

IDCEC Approved Session



- This CEU is registered with the International Design Continuing Education Council (IDCEC) for continuing education credits. This credit will be accepted by most interior design Associations and State Boards.
- The content included is not deemed or construed to be an approval or endorsement by IDCEC of any material or construction or any method or manner of handling, using, distributing or dealing in any material or product.
- Questions related to specific materials, methods and services should be directed to the instructor or provider of this CEU.
- This program is registered for 1 CEU value.
- Your attendance will be reported to IDCEC by your instructor after this CEU. Please do not share the class-code with anyone who has not attended this CEU.
- Certificates of completion will be issued electronically through your IDCEC account once attendance has been reported for you. Please allow 5 business days for attendance reporting.
- Attendees who do not have a unique IDCEC number will be provided with a paper Certificate of Completion after this CEU.

4

Course Description

This course includes a collection of tile industry myths, urban legends, misconceptions, and misunderstandings. We will review industry standards, products, installation methods, and practices used to ensure safe, durable installations. Despite best efforts to educate, problems still exist due to resistance to proper methods, product selection, and practices.

This course will provide you with the standards, recommendations, and necessary practices to achieve problem-free, durable tile installations. We will review substrate preparation, performance testing, and more to help achieve successful systems.

Learning Objectives

- Identify trends in product development, installation methods, and industry standards which endeavor to minimize unacceptable means and methods and provides durable and safe finished installations.
- Acknowledge that in spite of best efforts, there still remains a number of prevailing notions, stubbornly-held beliefs, and legacy old school practices which continue to prevent current best practices from thriving.
- Examine the impact these holdover notions and practices have on the quality and longevity of tile and stone installations, as well as, health and safety concerns that stem from the consequences of adhering to certain non-standard installation methods.
- By aligning these various issues and concerns with installation guidelines and industry best practices, we can improve quality and minimize failure and injury.

Learning Objectives

This is not...an exhaustive or definitive survey of all current tile & stone issues and concerns.

- We have consulted numerous tile contractors, training gurus, and product techies to compile the scenarios discussed in this presentation.
- Unfortunately, we do not have time nor space to cover every installation concern or issue that was raised during the research portion of this presentation.

Do I Really Have to...

Where we are today...



Do I Really Have to...

Where we are today...



Do I Really Have to...

Where we are today...



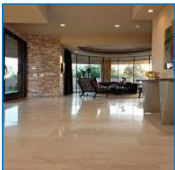
Do I Really Have to...

Where we are today...



Do I Really Have to...

Where we are today...



Do I Really Have to

ANSI A108.5-2.2.2 Adequate Coverage Confronts.....the dreadedand resurgent"5 Spotting".



Do I Really Have to

ANSI A108.5-2.2.2 Adequate Coverage Confronts.....the dreadedand resurgent"5 Spotting".



Do I Really Have to

ANSI A108.5-2.2.2 Outlines the process of achieving the coverage needed to bond tile or stone to the wall or floor substrate. Spot the results in:

Voids and hollow spots beneath the finished surface that will not support point loading and compressive forces. Cracked tile and collapsed walking surfaces issues are not just cosmetic issues...they create trip/fall hazards.

Do I Really Have to

ANSI A108.5-2.2.2 Outlines the process of achieving the coverage needed to bond tile or stone to the wall or floor substrate. Spot the results in:



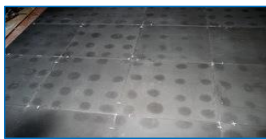
Do I Really Have to

ANSI A108.5-2.2.2 Outlines the process of achieving the coverage needed to bond tile or stone to the wall or floor substrate. Spot the results in:

These same voids and hollow spots will sound hollow, which is also considered to be an installation defect. In addition, moisture can become trapped in these voids. Discoloration of tile, stone, and grout can result from trapped moisture. Microbial growth (i.e. mold) can also find a home within these pockets and voids of moisture.

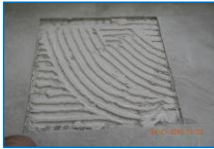
Do I Really Have to

ANSI A108.5-2.2.2 Outlines the process of achieving the coverage needed to bond tile or stone to the wall or floor substrate. Spot the results in:



Do I Really Have to

[ANSI A108.5-2.2.2](#) Adequate Coverage Confronts....the infamous and still pervasive...."rainbow swirls"



Do I Really Have to

[ANSI A108.5-2.2.2](#) Adequate Coverage Confronts....the infamous and still pervasive...."rainbow swirls"



Do I Really Have to

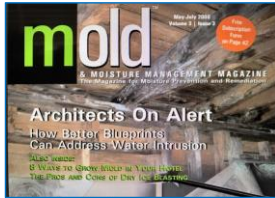
[ANSI A108.5-2.2.2](#) Adequate Coverage Confronts....the infamous and still pervasive...."rainbow swirls"



Do I Really Have to

ANSI A108.01-2.4 Substrates in Wet Areas

(NAPSA)—Do-it-yourselfers, builders and remodelers now have a new consideration for their bathroom designs. Changes made to the 2006 International Residential Code (IRC) no longer recognize moisture-resistant, paper-faced drywall (commonly known as "green board") as a suitable tile backing material in wet areas such as tub and shower surrounds. Instead, a cement-based backerboard or other approved moisture-resistant tile backerboard product must be specified to meet IRC requirements. These products tend to provide better overall performance in wet areas than green board.

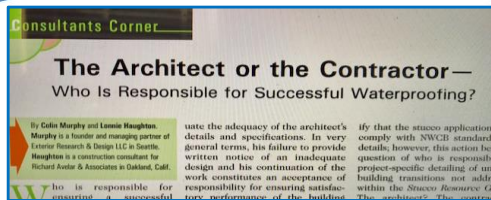


Do I Really Have to

ANSI A108.01-2.4 Substrates in Wet Areas

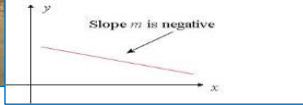


Do I Really Have to



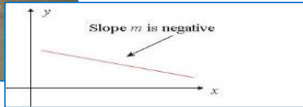
Do I Really Have to

"Slope to Drain"



Do I Really Have to

"Slope to Drain"



Do I Really Have to

"Floor Prep..."

It is the responsibility of the tile contractor to inspect the substrate (floor & wall) prior to installation, and notify the general contractor, in writing, of any defects which would prevent work from proceeding.

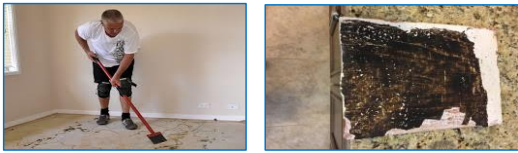
Do I Really Have to

"Floor Prep..."



Do I Really Have to

"Floor Prep..."



Do I Really Have to

Some Floor Prep Considerations

- Surface PH
- Moisture Transmission Rate
- Subfloor Condition
- Corrective Action
- Grease, Oil, Paint, Wax, Bond Breakers, Dust, Construction Debris
- Patching, Repairing, Leveling, Protrusions
- Gypcrete, Lightweight Concrete Priming/ Sealing

Do I Really Have to

Some Floor Prep Considerations

Thin-set is never to be used to patch or fix the substrate... never...ever!



Do I Really Have to

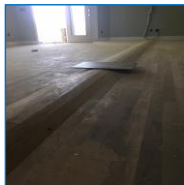
Some Floor Prep Considerations

Once you install over the existing substrate, you have accepted/owned the floor/wall and you own the results



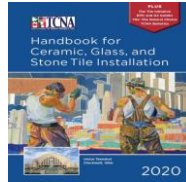
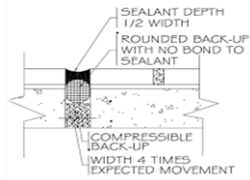
Do I Really Have to

EJ 171 – Movement Joints:



Do I Really Have to

EJ 171 – Movement Joints:



Do I Really Have to

EJ 171 – Movement Joints:

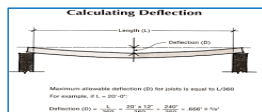
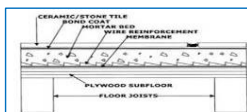
Joints that need to be honored....

- Construction
- Cold joints
- Contraction
- Isolation
- Acoustic
- Perimeter
- Expansion

Do I Really Have to

Deflection...

- The combination of larger tile & stone and cost cutting subfloor building methods (24" on-center/3/4" substrate) is wreaking havoc on residential floors.
- It has been a repeated request by tile/stone contractors to develop a method for identifying problematic floors.



Do I Really Have to

Deflection...

- The design professional (architect or engineer) is the only entity that can provide these assurances. Installing over a floor with reflection issues transfers liability to you.

Do I Really Have to

"Write it... Don't "say it"...

- Oral contracts and change orders are "enforceable", but the burden of proof is on you.
- Document ASAP, via e-mail, text, letter....a written confirmation of the oral agreement.
- RFI's (Request for Information) are sometimes viewed by A/E & owners as default change orders or contract revisions which favor the contractor.

Do I Really Have to

"Write it... Don't "say it"...

- Oral Contracts
- Change Orders
- RFI's (Request for Information)

Do I Really Have to

"Write it... Don't say it"...

Oral contracts and change orders are "enforceable", but the burden of proof is on you.



Do I Really Have to

RFI Continued...

- A/E & owners are sometimes opposed to oral change orders or RFI responses.
- Written RFI's can sometimes be viewed by both the contractor AND owner as tedious, time-consuming and schedule killers.
- The scope of your concerns, the potential financial liability of the RFI in question, and the relationship between the subcontractor, GC, and the owner may also determine how RFI's are handled.

Do I Really Have to

RFI Continued...

- The scope of your concerns, the potential financial liability of the RFI in question, and the relationship between the subcontractor, GC, and the owner may also determine how RFI's are handled.
- Employ flexibility in your own use of this communication tool.

Do I Really Have to

[RFI Continued...](#)

Don't Fall into the RFI Trap

Requests for Information (RFIs) can be by turns helpful, illuminating, infuriating and costly, but one thing's for certain—you must take them seriously.

Do I Really Have to

[RFI Continued...](#)



Do I Really Have to

[Commit to Improvement and Change:](#)

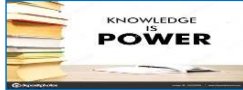


Do I Really Have to

Commit to Improvement and Change:

"United we stand....divided....we.... fail."

Organizations, certifications, and standards are for the good of the tile-setter and the tile industry.



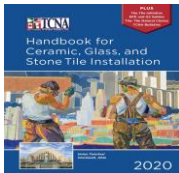
Do I Really Have to

Commit to Improvement and Change:

- NTCA Training and Workshops
https://www.tile-assn.com/events/event_list.asp
- Certified Tile Installer <https://www.ceramictilefoundation.org/certified-tile-installer-cti-program>
- Advanced Certification <https://www.ceramictilefoundation.org/advanced-certifications-for-tile-installers>

Do I Really Have to

Commit to Improvement and Change:



Do I Really Have to

Commit to Improvement and Change:

NTCA Website
<https://www.tile-assn.com>

TCNA Website
<https://www.tcnatile.com>



Do I Really Have to

Recap of "Pressing Concerns"...

- "5 Spot" Bonding of Floor/Wall Tile/Stone
- Improper Adhesive Application
- Improper Wall Substrates & Mold
- Slope to Drain

Do I Really Have to

Recap of "Pressing Concerns"...

- Floor Prep
- Lack of Movement Joints
- Deflection
- Documentation
- Advancing Your Skill and Knowledge

Do I Really Have to

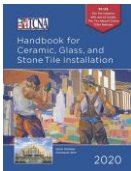
Recap of "Pressing Concerns"...

- The topics touched on today are....the tip of the iceberg.
- We cannot continue to rely someone else to fix the problems and issues.
- Knowledge IS power....expose yourself to training, new techniques, new products, and your peers in the industry.

Why leave it to just anyone?

"Because tile is a permanent finish, the lowest bid should not be the driving factor, but rather who is the most qualified to perform the scope of the work specified."

- TCNA Handbook



The Tile Council of North America urges design professionals to include language in specifications to secure qualified contractors and installers. The following nonprofit programs are well-established and recognized by the Handbook Committee:

- Advanced Certifications for Tile Installers (ACT)
- Ceramic Tile Education Foundation (CTEF) Certified Tile Installer Program
- International Masonry Institute (IMI) Contractor College
- Journeyman Tile Layer Apprenticeship Programs
- Natural Stone Institute (NSI) Accreditation for Natural Stone Tile Installation
- National Tile Contractors Association (NTCA) Five Star Contractor Program
- Tile Contractors Association of America (TCAA) Trowel of Excellence Program



MasterSpec®

1.5 QUALITY ASSURANCE

A. Installer Qualifications:

1. Installer is [a **Five-Star member of the National Tile Contractors Association**] [or] [a **Trowel of Excellence member of the Tile Contractors' Association of America**].
2. Installer's supervisor for Project holds the International Masonry Institute's Foreman Certification.
3. Installer employs only [Ceramic Tile Education Foundation Certified Installers] [or] [installers recognized by the U.S. Department of Labor as Journeyman Tile Layers] for Project.
4. Installer employs at least one installer for Project that has completed the Advanced Certification for Tile Installers (ACT) certification for installation of [mud floors] [mud walls] [membranes] [shower receptors] [gauged porcelain tile/gauged porcelain tile panels and slabs] [and] [large format tile].



BSD SpecLink

QUALITY ASSURANCE
 Maintain one copy of all [ANSI A118.1](#) and [TCNA](#) on file.
 Manufacturer Qualifications: Company specializing in manufacturing the types of products specified in this section, with minimum **five** years of documented experience.
 Installer Qualifications:
 Company specializing in performing this installation, with minimum of **five** years of documented experience.
 Accredited **Five Star** member of the National Tile Contractors Association (NTCA) or **Treasurer of Excellence** member of the Tile Contractors' Association of America (TCAA).
 Installer Certification:
 Ceramic Tile Education Foundation (CTEF): Certified Tile Installer (CTI).
 Apprenticeship Program: Installer has achieved Journeyworker status through an apprenticeship from the International Union of Bricklayers and Allied Craftworkers (IBAC) or a U.S. Department of Labor (DOL) recognized program.
 Advanced Certifications for Tile Installers (ACT): Certification in the installation of membranes, mortar bed (wet) floors, mortar (wet) walls, shower receptors, large format tile, gauged porcelain tile/pansels/slabs and grouts.
 International Masonry Training and Education Foundation (IMTEF): Supervisor Certification Program (SCP).

ACT
 Advanced Certifications for Tile Installers

LARGE FORMAT TILE








MEMBRANES

MUD WORK

SHOWERS



GAUGED PORCELAIN TILE



GROUTS


      

ACT
 Advanced Certifications for Tile Installers
tilecertifications.com

CTEF
 Ceramic Tile Education Foundation
ceramictilefoundation.org
info@ceramictilefoundation.org

  National Tile Contractors Association / Five Star Contractor Group
tile-assn.com
NTCAqualifiedlabor@tile-assn.com

  Tile Contractors' Association of America
tcaa-inc.org
info@tcaa-inc.org

 Tile Council of North America, Inc.
TCNAtile.com/find-qualified
info@tenatle.com

ANY QUESTIONS?

**This concludes our program.
Please feel free to contact me for additional information.**

Dean Moilanen
Director of Architectural Services – Noble Company,
AIA Allied Member - Las Vegas, CSI, CTEF, IIBEC, NTCA Ambassador

702-604-6366
dean@noblecompany.com

THANK YOU!

©2012

 Noble Company
Las Vegas, NV 89169

[illegible]