

# The Use of Noble Deck™ Over Plywood Substrates in Exterior Thin Bed Installations



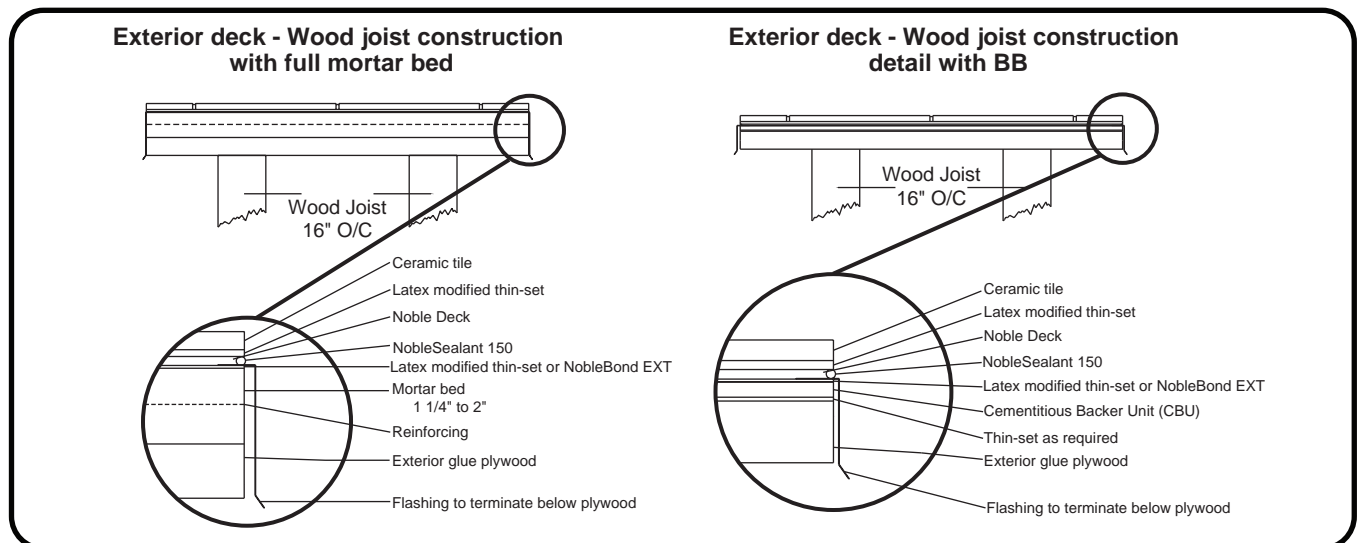
## Technical Bulletin #004

### Description:

Noble Deck is a composite sheet membrane made from Chlorinated Polyethylene (CPE), an extremely durable elastomer, with fabric laminated to both sides. Noble Deck was engineered specifically for exterior applications.

Background: A note in the Tile Council of North America's (TCNA) Handbook for Ceramic Tile Installation lists several "details" with the following note: "These methods may be suitable for exterior use in areas without freeze/thaw conditions when appropriate precautions are taken including expansion joint placement, proper slope to drain, waterproofing membrane sloped (1/4" per foot to drain)."

Recommendations: Two methods recommended by Noble Company for exterior applications of Noble Deck over wood decks are pictured below. These methods may be suitable in areas without freeze/thaw conditions. Follow TCNA guidelines. Both methods require a layer of exterior glue plywood (EGP), minimum thickness of 3/4" with wood joist spacing 16" O/C. Total thickness must be sufficient to meet deflection requirements for the flooring surface.



### Limitations:

1. It is important to note that plywood can expand and contract more than the "system" can accommodate.
2. In order to alleviate differential movement, a backer board (BB) or reinforced mortar bed must be installed over plywood decks before installing Noble Deck. NOTE: BB must be recommended by the manufacturer for use as an exterior underlayment.
3. Noble Deck can protect only the side on which it is applied. The opposite side and/or edges will absorb moisture, which can adversely affect the installation. If the underside of a wood deck is exposed, the plywood could expand beyond the system's capabilities to accommodate movement. Generally, decks over occupied space are protected from moisture attacking the underside of the deck.
4. Noble Deck cannot accommodate deflection greater than industry standards (i.e., IRC or IBC for ceramic tile; L/720 for stone tile).
5. Tile and setting materials (e.g., BB's, thin-set, etc.) must be suitable for exterior applications over decks constructed from plywood.

A licensed architect or structural engineer should evaluate the exterior deck before the installation of Noble Deck and tile. It should also be noted that exterior installations of tile require movement joint at perimeters, changes in plane and in the tile field every 8 to 12' in both directions. Noble Deck must be installed in accordance with Noble Company's current written instructions, applicable ANSI Standards, TCNA recommendations and building codes.

