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Garage Slabs

To Tie or Not to Tie
To Aprons

North Dakota Ready Mix & Concrete Products
Association



Tie if it Doesn't Cause a Problem

A Simple Question Demands a Simple Answer!

- Without tying the two together – both cold
 - One slab moves vertically compared to the other
 - Apron Drops Lower
 - Settlement/Consolidation in backfill at foundation
 - Something else
 - Apron Rises above Garage Slab
 - Frost expansion in waterlogged soils
 - Expansive soils installed too dry

What are some typical problems?

- What about tied slabs – garage & apron – both cold
 - If vertical movement occurs, ties will cause issues
 - Pull out
 - Crack Concrete – either or both slabs
 - Spalling type distress
 - Crack running parallel to garage front

Typical Problems

- If both garage floor and apron have similar subgrade conditions
 - Both freeze and rise at a uniform rate
 - No problems are created
- If dissimilar soils are present
 - One may move differently than the other
 - Granular compared to clay
 - Wet vs. dry

Uniform Subgrade Conditions

- Put in a transition joint where a crack might be expected
- If a warm garage floor is in play
 - Transition a granular material from the garage (thickest) to a distance away from garage (thinnest)
 - Provide drainage



Think Transitions

- **Avoid the tied joint**
- Use other transition systems to mitigate vertical movement
 - Transition granular vs. in-situ soils
 - Remove poorly consolidated foundation backfill soils and replace with drained granular
 - Use a transition in thickness
- Warn the homeowner about the pros & cons
- Suggest a transition joint close to the garage

Tied Joint??



Comments?

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