



WINTER, SAFETY, AND YOUR PARKING STRUCTURE

When temperatures drop and winter sets in, safety and durability on parking structures can take a hit. Building owners/managers should follow these few basic steps to ensure the winter weather does not create more problems in spring.

- Make sure the deck is leak free prior to freezing temperatures. If the deck does not have any leaks then water with the potential to freeze and expand within the concrete cannot occur. When water is allowed to infiltrate cracks and joints prior to or through winter months the resulting freeze thaw cycles can result in failed concrete or widening of joints/cracks which results in more chloride soaked water intrusion into the concrete. The delay of a low cost sealant repair in fall can turn into a costly concrete repair by spring.
- Reviewing the snow removal intricacies with your snow removal team/contractor now can reduce the need for repairs from snow plow damage in the spring. Snow plow contractors should be made aware of the following items;
 - Snow accumulated in our area is approximately 18lbs/Cu.Ft.
 - Your garage is designed at a 40lbs/SF weight for cars + 15lbs/SF for snow load.
 - Combining the two you are safe for a 55lbs/SF load without any car loading.
 - This equates to not stacking your snow higher than 3ft to avoid damages to the concrete.
 - Stack your snow along the beam lines and at least 2ft away from the spandrel walls to avoid dislodging them.
 - Make sure to mark your expansion joints in a way that the snow plow crew can recognize them when the snow has covered them up.
 - Make sure your plows have rubber blades or casters to keep them ½” above the deck.
 - Develop an angled snow plow routine to avoid direct contact with your expansion joints, tee to tee joints and control joints.
 - Do not store your snow directly over drains.
 - Keep salt laden snow away from masonry walls.
 - A ½ ton truck with a bed full of salt and a plow could potentially overload the deck, repeated smaller loaded trips are recommended.

- If significant deicing salts/chlorides are part of the snow/ice removal plan then a water intrusion inhibitor should be active throughout the areas where salt will be placed. These systems can include, a penetrating silane sealer or vehicular deck coating. These systems help with removal as water and ice cannot penetrate as deep into the concrete allowing the snow/ice to be removed and dislodged more efficiently.
- Consider a spring wash-down of the entire deck to flush the concrete of the remaining chlorides left over from winter snow removal activities. Spring wash downs should include the pressure washing or a high volume low pressure rinse of the deck along with detailing the drains, i.e. lifting of the drain lids and flushing with water, protecting the drains from solids during the wash down and correcting any leaking or damaged pipes from the winter freeze.

Winter weather can cause some serious issues for your structures. However, completing maintenance items, having written procedures to follow, and washing the deck clean of damaging chlorides in the spring will go a long way in prolonging your structures life span and decrease maintenance and repair costs.

Please contact one of the following project managers at Carl Walker Construction to review and create a preventative maintenance and repair plan for your garage.

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