BUILDING TRUST

LASER FORM®
INSTALLATION GUIDE

1 EDGE FORMING SYSTEM INSTALLATION GUIDE

- Significantly reduce set-up time and labor
- Eliminate hand finishing and improve F-Numbers at joints

1.01 ENSURE SUBGRADE IS LEVELED TO +/- ½”

- With laser or level, locate the approximate area that the form will be placed and check elevation randomly along line.
- Set Laser Form on the subgrade to a string line. The string line can be set in either of two locations. Setting the sting line to the finished edge of pavement/slab requires that the inside edge of the Laser Form be placed to the string line (follow step “A” below). An alternate and more preferable location of the string line is at a location 8” beyond the finished pavement. This requires that the outside edge of the Laser Form be placed to the string line (follow step “B” below). The taller outside edge of the form allows for easier alignment with the sting line.

1.02 ALIGN LASER FORM AND STAKE IN PLACE

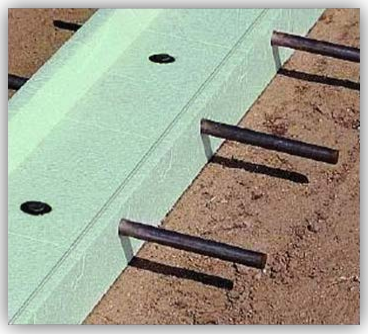
A) Place the inside face of the Laser Form to the string line and spike the form in place. Use three spikes driven vertically through the top of the form and two spikes driven at an angle through the form from the outside face per 8-foot section. Ensure that spikes are located no more than 8” from each end of a standard 8-foot section of Laser Form. Alternatively, five spikes driven at an angle through the top of the form may be used. Spikes driven at an angle prevents uplift (floating) of the form during concrete placement. Spikes placed through the top of the form will be easier to remove during stripping and cleanup. A standard 2x4 can be staked along the outer edge of the Laser Form for added stability.

-OR-

B) Place the outside face of the Laser Form to the string line and spike the form in place. Use three spikes driven vertically through the top of the form and two spikes driven at an angle through the form from the outside face per 8-foot section. Ensure that spikes are located no more than 8” from each end of a standard 8-foot section of Laser Form. Alternatively, five spikes driven at an angle through the top of the form may be used. Spikes driven at an angle prevent uplift (floating) of the form during concrete placement. Spikes placed through the top of the form will be easier to remove during stripping and cleanup. A standard 2x4 can be staked along the outer edge of the Laser Form for added stability.

- Stakes are available in three lengths, 12”, 16”, and 20” to match slab thickness and subgrade condition. Staking requirements vary depending on these factors. Loosely compacted or sandy soils may require longer stakes and more frequent staking. Fewer and shorter stakes may be used on thinner pavements with exceptionally hard subgrades.
- Although elevation of the Laser Form is not highly critical (+/- ½” of finished pavement elevation), alignment to the string line is important. Quality of the finished slab edge will suffer if Laser Form is allowed to deviate horizontally from the string line.
- Inspect inside perimeter of Laser Form for voids between the bottom of the form and the subgrade. Block all voids with fill to prevent concrete from entering the void area and floating the form.

1.03 APPLY SIKA LASER FORM® RELEASE AGENT



- Apply Sika Laser Form® Release Agent to the top and inside edge of the Laser Form. The green color of the release agent aids in ensuring that the entire surface is coated. Specifically formulated for Laser Form, the release agent greatly simplifies stripping, cleanup, and disposal. Take care to avoid application of the release agent to adjacent steel reinforcement.
- Agitate Laser Form® Release Agent before and during application to maintain homogenous mix.
- A fan tip nozzle rated at 0.5 GPM is recommended. Apply at a rate of approximately one gallon per 350 linear feet of Laser Form.
- Protect Laser Form® Release Agent from freezing.

1.04 INSERT REBAR, SMOOTH DOWELS, OR PLATE DOWELS AS REQUIRED THROUGH THE PRE-CUT OPENINGS

- If sleeved dowels are used, place sleeve over the dowel prior to placing concrete againts Laser Form.

2 POUR & FINISH

2.01 POUR CONCRETE, SCREED, AND FINISH

- Place concrete ahead of the laser-guided screed as normal. DO NOT allow the concrete being discharged from the chute to directly impact Laser Form. Damage or displacement of Laser Form may result. Instead, place concrete near the form and “shade” the concrete up to and over the Laser Form with a rake or shovel.
- Vibrate concrete normally, as you would with wood forms, near and around the dowels to ensure good consolidation.
- Allow the laser-guided screed to work over the top of Laser Form and beyond the outer edge. The screed head should always be presented to the Laser Form as near perpendicular as possible. This reduces any additional lateral load the screed may impart to Laser Form. When impractical to position the screed head perpendicular to Laser Form, sometimes encountered when completing a pour (at an end bulkhead), angle the laser screed head as much as possible to minimize the pressure on Laser Form. Ensure adequate concrete is present and a “finished” surface extends past the inside edge of Laser Form (8” from the outside edge).

- Clear waste concrete from the outside perimeter of Laser Form. This allows for easier measurement for sawcutting (required later) and cleanup.
- Power trowel as normal, allowing pans or blades to extend past Laser Form.
- No hand finishing or edging is required.

2.02 SNAP CHALK LINE AND SAWCUT CONCRETE

- After final trowel, measure 8” from the backside of Laser Form at every saw cut joint (~12’ -18’) and snap a chalk line.

- Set saw to a depth sufficient to cut to the surface of Laser Form, typically 1 ½". Carefully check to ensure that the depth of cut will not damage embedded dowels.
- Sawcut the slab, following the line marked 8" from the backside of Laser Form.

2.03 WASTE CONCRETE AND LASER FORM REMOVAL

- Laser Form removal can be performed immediately after final concrete finishing or at a later date. Leaving the concrete and Laser Form in place protects the edge of the finished slab and may be desirable in the case of tilt-up construction or delayed second pours.
- Concrete can be removed by various means. Breaking the concrete into 3'-4' sections with a small sledgehammer may facilitate removal but is not normally necessary.
- A large pry bar inserted under the concrete, parallel to the joint line, works well in removing large sections of concrete without damaging the finished slab. A claw hammer also works well in breaking the waste concrete from Laser Form.

- Once the concrete is removed from Laser Form, the spikes can be withdrawn in a similar manner. Inserting a large pry bar under the head of the spike and "popping" the spike out works well. Claw hammers, while not providing much leverage, can also be used for this purpose.
- Separate Laser Form from the waste concrete using a flat shovel or spade. Insert the blade of the spade or shovel in the sawcut joint and gently pry Laser Form from the concrete, sliding Laser Form over the embedded dowels. While one person can easily remove the form in this manner, two people working in tandem near each end of an 8-foot length of Laser Form can remove larger sections, minimizing debris for cleanup.

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