WALL BRACING & ALIGNMENT SYSTEM

A proper bracing system acts as an alignment system to keep the walls straight and plumb during concrete placement, and doubles as a type of scaffolding to for easy access to the top opening of the walls for the entire building. Typically, the wall alignment system is installed on the inner side of an ICF wall but can be used on either side of the forms.

There are many different bracing brands and systems available. However, each bracing unit typically consists of three essential pieces: a vertical upright steel channel with slots for attaching screws to the form webs, a turnbuckle arm, and a scaffold bracket (or triangle).

Normally, wall bracing systems are installed after placing at least three rows of forms. Attach the bracing system to the webs using #10 screws with a hex head.

Place bracing units no more than 2 feet (0.610 m) from each corner or wall end, and every 7 feet (2.134 m) or less thereafter in accordance with OSHA/OHSA requirements. Bracing units should also be placed on either side of every door and window opening.

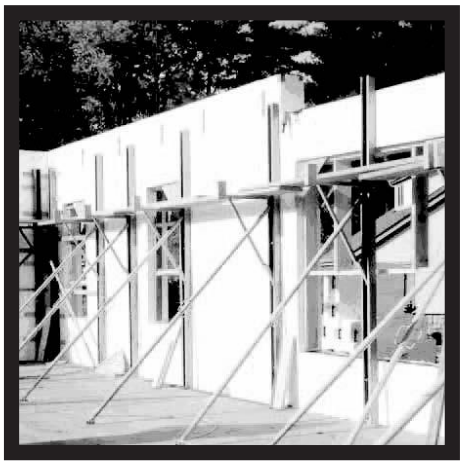
STEP 1: Attach the upright steel channel to the webs with a screw in each row. The screws should be snug but not tight. Always place screws near the top of the slots to accommodate settling at the interlock during concrete placement.

STEP 2: Attach a turnbuckle arm to the upright with a bolt and then secure it to the floor or ground. In light or sandy soil, additional care must be taken to secure diagonal turnbuckle.

STEP 3: The scaffold bracket is then inserted behind the top of the turnbuckle and secured at the bottom with an additional bolt.

STEP 4: Place the appropriate scaffolding planks and rails according to safety regulations. For requirements on toe board and handrail configuration, consult OSHA/OHSA.

STEP 5: ***Prior to concrete placement, make certain walls are leaning slightly inward.*** The wall must not lean out at all. They will be pushed straight after the concrete has been placed. *(It is much easier to push the wall straight then pull)*



STEP 6: A string line must be used to achieve straight walls.

STEP 7: Before and after concrete placement, the diagonal turnbuckle arm is used to adjust wall straightness to string line. Have someone with a keen eye for straight and plumb looking at the line while another worker can twist the turnbuckle, pushing the wall into plumb position.