



CHECKER BLOCK INSTALLATION GUIDELINES

SITE EXAMINATION

- A. Contractor shall inspect, accept and verify in writing to the grid installation subcontractor that site conditions meet specifications for the following items prior to installation of bedding materials and concrete grid units:
- B. Verify that drainage and subgrade preparation, compacted density and elevations conform to specified requirements.
- C. Verify that geotextiles, if applicable, have been placed according to drawing and specifications.
- D. Verify that base materials, thickness, compacted density, surface tolerances and elevations conform to specified requirements.
- E. Verify density test results for the soil subgrade, base materials to the Owner, Contractor, and grid installation subcontractor.
- F. Do not proceed with installation of bedding materials and concrete grids until subgrade soil and base conditions are corrected by the Contractor or designated subcontractor.

SITE PREPARATION

- A. Verify that subgrade is dry, or have Site Contractor certify that subgrade and base materials meet project requirements. Confirm elevations and grading meet project requirements and are ready to support bedding sand, concrete grids, and imposed loads.
- B. If required, install poured concrete edge restraints per the drawings at the indicated elevations.

INSTALLATION

Note: Stabilization of the subgrade and/or base material may be necessary with weak or saturated subgrade soils.

Local aggregate base materials typical to those used for highway flexible pavements are recommended. Mechanical tampers are recommended for compaction of soil subgrade and aggregate base in areas not accessible to large compaction equipment. Such areas can include that around lamp standards, utility structures, building edges, curbs, tree wells and other protrusions. The recommended base surface tolerance should be $\pm 3/8$ in. (± 10 mm) over a 10 ft. (3 m) straight edge. The elevations and surface tolerance of the aggregate base determine the final surface elevations of concrete grids. The installation contractor cannot correct deficiencies in the base surface with additional bedding materials. Therefore, the surface elevations of the base should be checked and accepted by the General Contractor, with written certification to the paving subcontractor prior to placing bedding materials and concrete grids.

- A. Compact soil subgrade to 95% standard Proctor density.
- B. Install a minimum of 8 in. of compacted (95% of standard Proctor density), dense-graded base course, or greater thickness based on the project engineer's requirements.
- C. Spread the 1" bedding sand layer evenly over the compacted base course and screed.
- D. Ensure the grid units are free from foreign materials before installation.
- E. Lay the grid units on the bedding sand. Maintain straight joint lines.
- F. Joints between the grids shall not exceed 3/16 in. (5 mm).
- G. Checker Block units are not typically cut for installation. If units are cut in the field, be sure to coat the cut concrete surface with an Aliphatic Polyurethane epoxy coating, after cleaning and drying the surface. Let the coating dry overnight before installing in the ground.
- H. Ensure that grid pavers are seated and leveled with roller compactor or static roller drum. Protect the units with plywood if using a vibratory plate compactor.
- I. Use tie rods to anchor units on slopes steeper than 3:1.
- J. Use concrete, plastic, or metal edge restraints to contain the grid pavement.



- K. Apply topsoil into the joints and openings until full. Grass selection is critical to longevity under tires and drought. Merion Kentucky bluegrass, Kentucky 31 tall fescue and Manhattan perennial ryegrass have a high tolerance to wear. A turf grass specialists in your area should be consulted for the proper recommendation.
- L. Broadcast grass seed at the rate recommended by seed source. Add topsoil to completely cover surface.
- M. Distribute straw covering to protect germinating grass seed or sod. Water entire area. Do not traffic pavement for 30 days, if seeded.
- N. The grass should not be exposed to tires until it is well established and regularly watered, typically three to four weeks.

FIELD QUALITY CONTROL

- A. Check final elevations for conformance to the drawings. Allow 1/8 to 1/4 in. (3 to 6 mm) above specified surface elevations to compensate for minor settlement.
- B. The final surface tolerance from grade elevations shall not deviate more than ± 3/8 in. (10 mm) over a 10 ft (3 m) straightedge.
- C. The surface elevation of grid units shall be 1/8 to 1/4 in. (3 to 6 mm) above adjacent drainage inlets, concrete collars or channels.
- D. Lippage: No greater than 1/8 in. (3 mm) difference in height between adjacent grid units.

SITE PROTECTION

- A. After work in the section is complete, the Contractor shall be responsible for protecting work from damage due to subsequent construction activity on the site.

IMPORTANT NOTE ON BASE THICKNESS

The subgrade soil and base preparation are critical to the performance of any pavement or paver system. The subgrade soil and base, in addition to the paver product, must be able to safely transfer the load into the underlying foundation subgrade soil in a stable manner. All pavement design is site-specific based on actual soil conditions and anticipated vehicular loading patterns, and shall be done by a licensed professional engineer. Hastings offers the following base thickness guidelines for typical Checker Block applications:

Minimum Dense-Graded Aggregate Base Thickness Guidelines for Checker Block¹

Conditions	Subgrade Soil Types	Residential Loading Driveways, walkways, paths, cart paths, trails	Commercial Loading Streetways, emergency access, erosion control, slopes, boat ramps
Stable, firm, dry granular soils (CBR > 10) Ground ruts with vehicular traffic (5<CBR<10) Ground is soft, moist, and ruts easily (CBR<5)	GP, GW, GC, SW, SP, SC ML, CL, MH, CH	8-inch base 10-inch base 12-inch base	8-inch base 12-inch base 16-inch base

notes:

- Subgrade is compacted to 95% of standard Proctor density.
- No free-standing water is observed and a 6 oz woven separation fabric is installed to separate the subgrade from the base material.
- A 1” thick leveling sand bed is used to set the Checker Block grid pavers.

FOR MORE INFORMATION GO TO: www.checkerblock.com

