

## **2.0 GUIDELINE CONSTRUCTION AND INSTALLATION PROCEDURES**

*The following provides guideline construction and installation procedures for the DURA-HOLD and DURA-HOLD II wall systems supplied by DURA-SALES, 2481 Bull Creek Rd., Tarentum, PA 15084. Phone (724)224-7700. Refer to "Guideline Technical Specifications" for requirements regarding the materials, manufacture, and general execution of the wall system products.*

### **2.1 Excavation**

Ensure that excavated slopes are cut to stable configurations and surface drainage from areas outside the excavation is conveyed away from excavated areas. Ensure that surface drainage collected within an excavation is conveyed from the area in conformance with the sedimentation control plan.

Allow sufficient excavation below the leveling pad grade and behind the wall for placement of base material below the wall and granular backfill behind the wall.

Allowing for tieback units, fully excavate or channel cut the area behind the wall face with allowable room behind the wall for placement of granular backfill.

### **2.2 Base**

Place the base or first course for toe, heel and central rails on a leveling pad at least 12 inches below finished grade and check for level in all directions.

Provide a minimum thickness of nine (9) inches of compacted select granular backfill or six (6) inches of concrete for a leveling pad where strip footing is not required.

Select the type and size of footing based on foundation support requirements.

### **2.3 Stacking**

Stack all Dura-Hold rail units with the chamfered side toward the exposed wall face. Stack all Dura-Crib rail units with the beveled side toward the exposed wall face. Dura-Hold II rail units may be stacked to form a battered or vertical wall face. For a vertical face, stack successive rail units by reversing the position of the tongue-and-groove from the unit immediately below. This manual is only applicable for battered arrangements.

Lift Dura-Hold and Dura-Hold II unit using a scissors clamp mounted on a backhoe, crane or other suitable lifting device.

Sweep the tongue-and-groove free of product burrs and debris prior to installing a unit at the next higher level.

Slide each unit into place with bars or other devices to properly seat the unit. The unit should not be just laid in place.

Cut units for corners or wall ends as required using a masonry power saw.

## **2.4 Tiebacks**

Stack tiebacks as generally described in stacking.

Seat the unit at the front and rear of the wall.

For Dura-Hold and Dura-Hold II walls, provide rear support for the tieback using standard units. For Dura-Hold II walls with a vertical face, adjust the position of the tieback to correspond to the tongue-and-groove of the rail unit immediately below. For Dura-Crib walls, provide rear support for the tieback anywhere along the tieback unit but preferably at the last key. The back face may be open or closed face, depending on the design. The design charts presented herein assume closed front and back faces, and a closed central wall for all the system.

## **2.5 Backfill**

Place free draining aggregate within and to the required depths behind the wall. Place and compact aggregate in lifts as wall courses are installed. As required, place geotextile between granular backfill and general backfill materials.

Ensure the grade and connectivity of drainage conduits in the backfill using level surveys and water flow tests.

Do not use on site soils for select backfill within or immediately behind the wall system unless the material meets the requirements for free draining aggregate.

Take care when operating backfill and/or compaction equipment near the wall to avoid dislodging installed units and inducing additional stresses.

## **2.6 Coping Units**

Stack coping units as described in stacking.

As required, core coping units for installation of fence or guiderail posts. The effect of mounting fence or other structures on the wall must be assessed by a qualified, registered professional engineer.

Cut coping units as required using a masonry power saw.

Dura-Crib coping units shall be fastened by use of butyl tape or other flexible adhesive applied along both sides of the tongue of the underlying course.

## **2.7 Corners**

Stack corner units as described in stacking.

## **2.8 Finished Grades**

Check finished grades above and at the base of the wall after wall erection and backfill operations are complete.

Ensure that all drainage measures above the wall, such as ditches and swales, are in place and properly graded after wall erection and backfill operations are complete. Check the upper wall courses to assure that units have not been dislodged during backfill. If units have become dislodged, carefully push back into place.

Check the number of wall courses below the finished toe of wall grade at the toe of the wall to ensure the wall is correctly embedded and that a slight downhill slope of the finished grade exists away from the wall.