ANCHOR DIAMOND Group
INSTALLATION GUIDE

ANCHOR DIAMOND™

DIAMOND PRO® AIR

DEVELOPED BY ANCHOR DIAMOND WALL INDUSTRY EXPERTS

DIAMOND PRO® AIR

Diagram 1 - Excavation

STAKE OUT THE WALL

- A surveyor shall locate the proposed base of wall location. Verify the wall location with the project supervisor.

EXCAVATION

- Excavate for the leveling pad to the lines and grades shown on the approved plans and excavate enough soil behind the wall for the geosynthetic reinforcement material (if required.)
- The trench for the leveling pad should be at least 2 feet wide and a minimum to bury the first course below grade, plus 6 inches for the leveling pad. ***See Diagram 1.***

Diagram 2 - Leveling Pad

LEVELING PAD

- An aggregate leveling pad is made of compactible base material of 3/4-inch minus with fines.
- If the planned grade along the wall front will change elevation, the leveling pad may be stepped up by the height of the block (typically 8-inch increments) to match the grade change. Always start at the lowest level and work upward.
- Compact the 6 inch (minimum thickness) aggregate leveling pad, using ordinary compaction methods, to provide a level, hard surface on which to place the base course. Mist lightly with water before compaction, if needed. ***See Diagram 2.***
- For walls with step-ups in the base course, extra care should be given to properly compact the aggregate leveling pad at the step-up locations.

Diagram 3 - Base Course

BASE COURSE

- This is the most important step in the installation process.
- Begin laying block at the lowest elevation of the wall, whenever possible.
- Place first block and level, front to back and side to side; lay subsequent blocks in the same manner.
- Use string along back edge of the block to check for proper alignment. ***See Diagram 3.***
- Place the blocks side by side, flush against each other, and make sure the blocks are in full contact with the leveling pad. Level front to back and side to side. ***See Diagram 4.***
- If the wall in on an incline, don't slope the blocks. Step them up so they remain consistently level.
- Place soil in front of the base course and compact after each course is laid.

ANCHOR DIAMOND

Diagram 4 - Base Course

Diagram 5 - Core Fill

Diagram 7 - Reinforcement

CONSTRUCTION OF THE NEXT COURSE

- Place 12 inches (minimum) of drainage aggregate between, and directly behind the wall units. Fill voids in wall units with free drainage aggregate. Place backfill soil and compact. Only lightweight hand operated compaction equipment is allowed within 3 feet from the back of the wall. ***See Diagram 5.***
- Remove excess fill from top of units before placement of the next course.
- Place the next course of block over the locator lugs using the alignment cores. Align locator lugs into the core of unit. Pull each block forward as far as possible to engage the locator lugs. Maintain running bond with row below.
- On curves, use partial unites to stay on bond. A circular saw with a masonry blade is recommended for cutting partial units. Use safety glasses and other protective equipment when cutting.

DRAINAGE DESIGN (PER DESIGN)

- Each project is unique. The grades on the site will determine at what level to install the drainpipe. Place the drainpipe (4-inch perforated piping) so water drains down and away from the wall into a storm drain, or daylight just above grade.
- Fill in the area behind the blocks with clean drainage aggregate, at least 1 foot from the wall. You may need to place and backfill several courses to achieve the proper drainage level.
- The outlet pipes should be space not more than every 50 feet and at low points of the wall. In order for the drainage aggregate to function properly, it must keep clear of regular soil fill.

REINFORCED BACKFILL PLACEMENT AND COMPACTION (PER PLAN)

- Place reinforced backfill in 6 to 8 inch loose lifts and compact to the densities specified on the approved wall construction plans.
- Only hand operated compaction equipment is allowed within 3 feet from the back of the wall.
- If the compaction equipment is too small to achieve the required compaction, thinner lifts should be used.
- Install each subsequent course in a similar manner. Repeat procedure to the extent of wall height.

REINFORCEMENT PLACEMENT (PER PLAN)

- Refer to the approved wall construction plans for the reinforcement type, strength, and placement location. Measure and cut the reinforcement to the lengths shown on the plans.
- Ensure the reinforced backfill is placed and compacted flush with the top of the units and is graded reasonably flat prior to reinforcement placement. Clean any debris off the top layer of blocs prior to reinforcement placement.
- The reinforcement has a primary strength direction, which must be laid perpendicular to the wall face.
- Place the reinforcement within 1 inch of the front of the units. ***See Diagram 6.***
- Place the next course of units. Pull the reinforcement hand taut and place staples, stakes, or fill at the back of the reinforcement to maintain reinforcement tension during placement of drainage aggregate and reinforced backfill.
- Place a minimum of 6 inches of reinforced backfill prior to operating equipment above the reinforcement, Avoid sudden braking or turning on fill placed over reinforcement.

ANCHOR DIAMOND

CAPPING A WALL

- Always start capping from the lowest elevation. If the wall elevation changes, caps can be stacked where the wall steps up.
- Lay caps at the elevation change and work back toward the previous step up. Cut caps with a diamond-blade saw to fit, as needed.
- Carefully glue with a high strength concrete adhesive.

FINISH GRADE AND SURFACE DRAINAGE

- Protect the wall with a finished grade at the top and bottom. To ensure proper water drainage away from the wall, use 6 inches of soil with low permeability and seed or plant to stabilize the surface.
- Consult the wall design engineer if water may be directed behind the wall. If needed, create a swale to divert water away from the wall. This will minimize water seeping into the soil and drainage aggregate behind the wall.

SITE CLEANING AND RESTORATION

- Brush off the wall and pick up any debris left from the construction process. Notify the job superintendent in writing of the completion and that it is ready for final inspection and acceptance.
- Planting vegetation in front and on top of the wall will help reduce the chance of erosion.
- Following these best practices for construction will ensure the success of your anchor wall systems retaining wall. These instructions are meant as general guidelines. Site-specific conditions may warrant additional installation requirements.
- Anchor wall systems recommends you consult a professional engineer to design walls over 4 feet high, and have compaction tested by a qualified geotechnical engineer.

SAFETY NOTE: Always use appropriate equipment, including safety glasses or goggles and respirators, when splitting, cutting or hammering units.

DIAMOND PRO® AIR

ANCHOR DIAMOND Group
5909 Baker Rd. Suite 550
Minnetonka, MN 55345
1-952-933-8855

For more info visit
AnchorDiamond.com