ANCHOR DIAMOND Group

INSTALLATION GUIDE

ANCHOR DIAMOND

FEATURING DIAMOND PRO® RETAINING WALL SYSTEM

DEVELOPED BY ANCHOR DIAMOND WALL INDUSTRY EXPERTS

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HOW TO USE THIS GUIDE

This guide is designed to provide you with ideas as well as information on product use and installation procedures. Because actual project conditions vary, final wall design, including the incorporation of geosynthetic reinforcement, must be performed by a qualified engineer. While this guide provides general guidelines, installation contractors should refer to construction drawings provided by a qualified local engineer for final specifications.

Additional installation information is available online at anchordiamond.com. Information includes basic wall construction as well as other applications, including:

- 90° corners
- curves
- cap placement
- guardrails
- terraced walls
- water applications
- fences

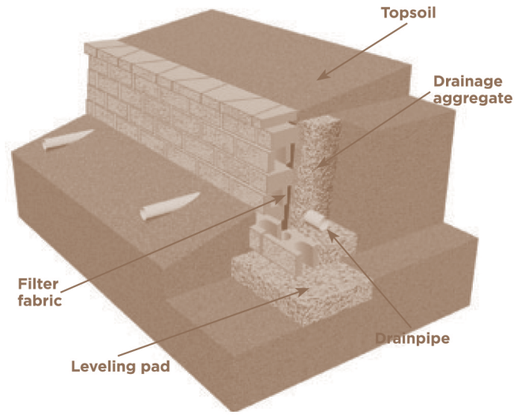
BEFORE YOU BEGIN

Advance planning and careful layout at the job site help ensure a successful retaining wall project.

- Review the site plan to confirm lot lines, wall location, length and elevations.
- Understand on-site soils. Ideal soils are sand and gravel. For walls built in clay or poor soils, work with a local engineer to confirm the wall design and the required soil reinforcement. Black or organic soils should not be used as backfill.
- Confirm the location of underground utilities.
- Seek all necessary building permits.
- Prepare a drawing of the site with the wall location, lengths and elevations.
- Plan drainage to prevent erosion or buildup of water behind the wall. Consider where the water will drain through the wall, where downspouts will expel water and whether there's an underground sprinkler. For walls greater than 3 feet in height, a perforated drainpipe is recommended at the base of the aggregate to quickly remove large amounts of water. See page 19 for more information on water applications.
- Check the block delivered to ensure it is the correct color. Check the geosynthetic reinforcement to confirm that it's the strength and weight specified in the engineering plans.
- Be sure to use the right tools. Hand tools include a shovel, 4-foot level, dead-blow hammer, 2- or 3-pound hammer, chisel, hand tamper, hydraulic splitter and string line. Power tools include a circular saw with a masonry blade and a compactor.
- Always wear protective eyewear.

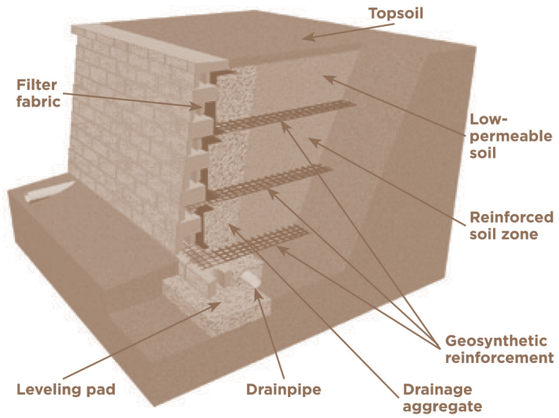
Segmental retaining walls typically fall into one of three categories.

GRAVITY RETAINING WALL



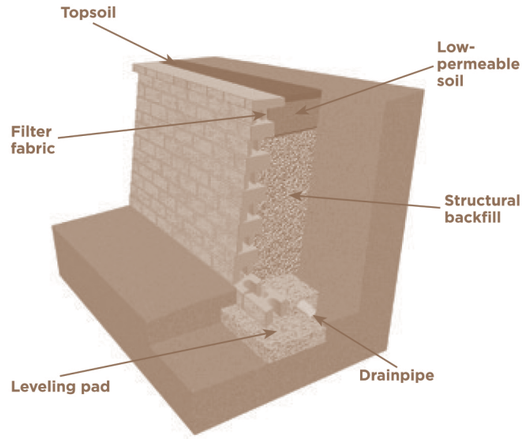
The first category - a gravity wall - is a retaining wall that does not use soil reinforcement. A gravity wall has height limitations specific to each product. An advantage of this type of retaining wall is that it requires a smaller work area behind the wall. A gravity wall relies on the weight and setback of the block to resist the soil forces being exerted on the wall.

GEOSYNTHETI C-REINFORCED RETAINING WALL



The second category is a geosynthetic-reinforced wall, which needs to be designed by a qualified engineer. There are (theoretically) no height limitations with reinforced retaining walls, and they are used in larger applications. They require more work area behind the structure. The block of soil is stabilized by introducing reinforcement layers into the soil mass behind the facing units. The larger the stabilized soil mass, the more soil can be retained or held back. The geosynthetic reinforcement in the soil extends past the theoretical failure plane and serves to create a large, rectangular mass of block and soil, restraining the retained soil.

ANCHORPLEX™ RETAINING WALL SYST EM



The third category is the Anchorplex™ retaining wall system, which offers a unique, nonconventional solution to problematic wall construction sites. It is a retaining wall built with Anchor products and self-compacting structural backfill specified by ANCHOR DIAMOND Group, and backed by engineering support tools developed by Anchor.

Use of the Anchorplex retaining wall system completely eliminates the need for the construction of a mechanically stabilized earth zone behind the wall facing and requires substantially less excavation than is usually necessary in grid-reinforced wall construction.

For more information about the Anchorplex retaining wall system, go to anchordiamond.com.

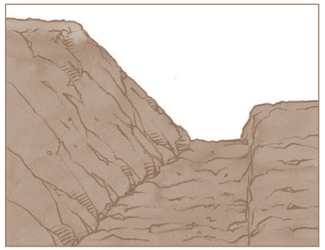


Diagram 1—Excavation

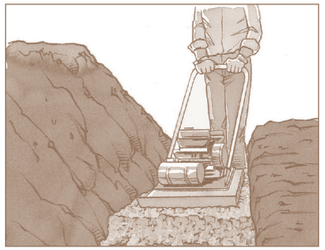


Diagram 2—Leveling Pad


Diagram 3—Base Course

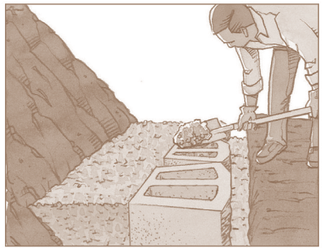


Diagram 4—Core Fill

1. STAKE OUT THE WALL

• Have a surveyor stake out the wall's placement. Verify the locations with the project supervisor.

2. EXCAVATION

• Excavate for the leveling pad to the lines and grades shown on the approved plans, and excavate enough soil from behind the wall for the geosynthetic reinforcement material.
• The trench for the leveling pad should be at least 2 feet wide and a minimum of 1 foot 2 inches deep, enough to bury the first course below grade, plus 6 inches for the leveling pad. Ensure that a minimum of 8 inches or 10 percent of the total wall height (whichever is greater) is below grade. *See Diagram 7.*

3. LEVELING PAD

• An aggregate leveling pad is made of compactible base material of ¾-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 aggregate, making sure it's level front to back and side to side. Mist lightly with water before compaction, if needed.
See Diagram 2.

4. BASE COURSE

• This is the most important step in the installation process.
• Begin laying block at the lowest elevation of the wall, whenever possible. Remove the rear lip of the block by hitting with a hammer and chisel from the back so that the block will lie flat on the leveling pad.
• Place first block and level, front to back and side to side; lay subsequent blocks in same manner.
• 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.
• Place soil in front of the base course and compact. Base course should be buried. Continue to fill and compact after each course is laid.
• If the wall is on an incline, don't slope the blocks. Step them up so they remain consistently level.
• Use string along back edge of the block to check for proper alignment. See Diagram 3.

5. CONSTRUCT ION OF THE NEXT COURSE

• Fill cores and voids between blocks with ¾-inch clean drainage aggregate prior to laying the next course of block. Clean any debris off the top of the blocks.
• Place the second course of blocks on top of the base course. Maintain running bond. Pull each block forward as far as possible to ensure the correct setback.
• Backfill with drainage aggregate directly behind the block, adding 6 to 8 inches at a time. Add soil fill behind the aggregate.
• Compact before the next course is laid. Don't drive heavy equipment near the wall. Self-propelled compaction equipment should not be used within 3 feet of the back of the wall.
• You'll need partial units 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.
See Diagrams 4 and 5.

6. DRAINAGE 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 spaced 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.
See Diagrams 6 and 7.

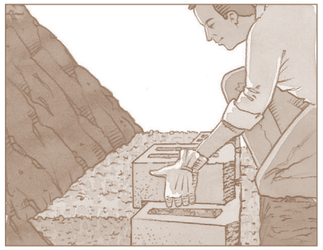


Diagram 5—Next-Course Construction

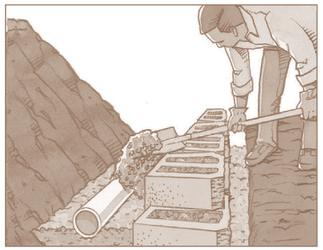


Diagram 6—Drainage

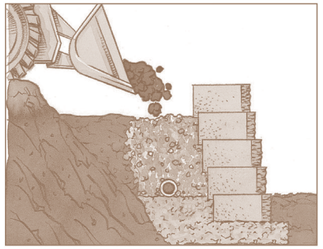


Diagram 7—Backfill

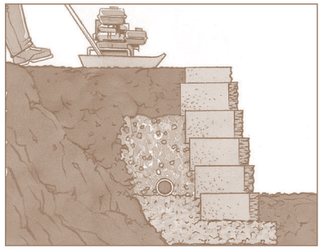


Diagram 8—Compaction

7. COMPACTION

• Shovel the backfill soil behind the drainage aggregate and compact the backfill with a hand-operated compactor. Make sure the aggregate is level with or slightly below the top of the base course.
• Continue to fill and compact after each course is laid. *See Diagram 8.*

8. REINFORCEMENT (IF REQUIRED)

• Geosyntheric reinforcement is recommended for walls taller than 4 feet or walls situated in poor soils, supporting a driveway, etc. Consult an engineer for design assistance.
• Check the wall construction plan to determine which courses will need reinforcement. Clean any debris off the top layer of blocks. Measure and cut the reinforcement to the design length in the plans. The reinforcement has a design strength direction, which must be laid perpendicular to the wall.
• Place the front edge of the material on the top course, 1 inch from the face of the block.
• Apply the next course of blocks to secure it in place. To keep it from wrinkling, pull the reinforcement taut and pin the back edge in place with stakes or staples.
• Add drainage aggregate behind the blocks; then add the backfill soil and compact it.
• Correct placement ensures that you maximize the connection strength and keep the batter consistent. A minimum of 6 inches of backfill is required prior to operating vehicles on the reinforcement.

9. 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.
• If the wall is on an incline, don't slope the blocks. Step them up so they remain consistently level.
• Use string along back edge of the block to check for proper alignment. See Diagram 3.

10. FINISH FRADE 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.

11. SITE CLEANING AND RESTORATION

• Brush off the wall and pick up an 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 DIAMOND Group retaining wall. These instructions are meant as general guidelines. Site-specific conditions may warrant additional installation requirements.
• ANCHOR DIAMOND Group 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.

RUNNING BOND

STRAIGHT WALL

Proper installation of an Anchor® retaining wall requires that running bond be maintained. Running bond occurs when the blocks are centered over the vertical joints of the previous course. This adds to wall stability and makes the wall aesthetically beautiful.

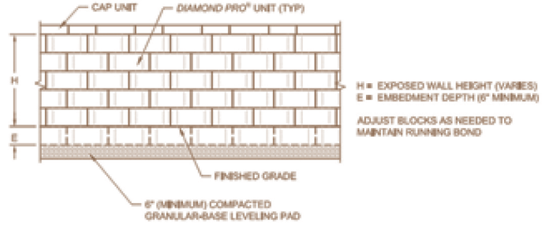
OUTSIDE CURVED WALL

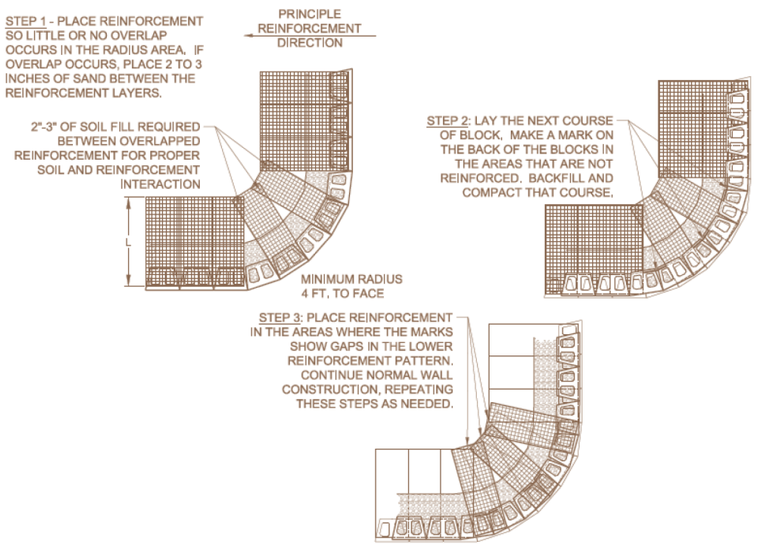
Any wall that is not perfectly straight will eventually run off bond. When this happens, skip a block position and place the next block into the next place where it is back on bond. Measure the remaining gap and cut or split* a block to fit.

Once the partial unit is in place, glue with a concrete adhesive. Partial units must not be less than 8 inches long, and should not be placed directly on top of each other. If the gap is larger than the length of one block, divide the measurement by two and put two partial units in place.

Tip: It may be possible to run the off-bond block into the soil bank to avoid cutting of partial units.

**To split a block, use a hydraulic splitter or split manually by using a hammer and chisel to score the block on all sides. Pound the chisel on the same line until the block splits. If partial unit sides are not exposed, use a circular cut-off saw with a masonry blade to achieve a tighter fit.*

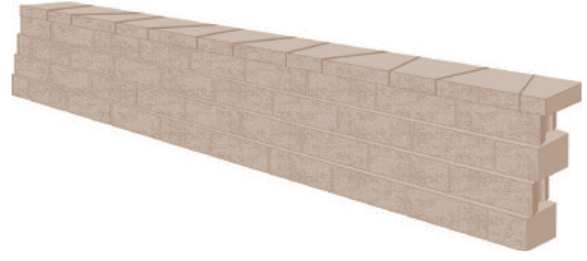




CAPPING A WALL

STRAIGHT WALL

Always start capping from the lowest elevation. Caps are trapezoidal and must be laid alternately short and long cap faces for a straight line. Cap units are supplied with a recess to the bottom of the unit to accommodate the locator, and should always be laid with the recess facing downwards.



OUTSIDE CURVES

Lay out the cap units side by side and cut at least every other cap to produce a uniform look. Start with the long side of the cap facing out and adjust to the radius.

INSIDE CURVES

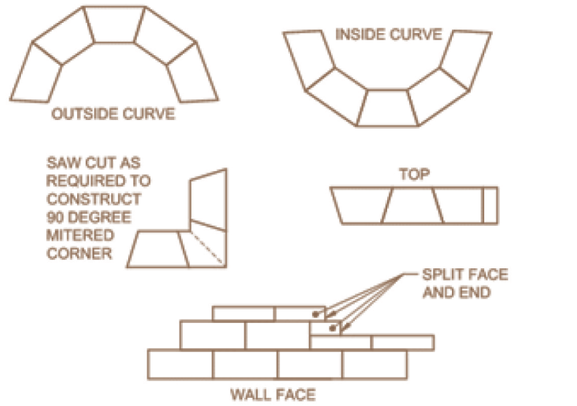
Lay cap units side by side with the short side facing out. In most circumstances, making two cuts on one cap and then not cutting the cap on either side produces the most pleasing look.

CORNERS

On a 90° corner wall, the corner caps need to be saw-cut to achieve a 45° mitered corner.

FINISHING

After layout is complete and caps are saw-cut to size, carefully glue the caps in place using a concrete adhesive.



1. ALWAYS START CAPPING WALL FROM THE LOWEST ELEVATION.
2. LAYOUT CAPS PRIOR TO USING ADHESIVE.
3. CUT CAPS TO FIT. VARIOUS COMBINATIONS OF LONG AND SHORT CAP FACES WILL BE NECESSARY FOR RADII GREATER THAN THE MINIMUM.
4. ALTERNATE SHORT AND LONG CAP FACES EVERY OTHER CAP TO ACHIEVE A STRAIGHT ROW OF CAPS.
5. USE EXTERIOR-GRADE CONSTRUCTION ADHESIVE TO SECURE CAPS.

DRAINAGE

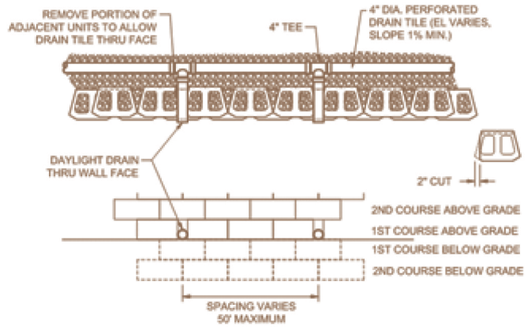
Good drainage is critical to ensuring the long-term performance of Anchor™ products. Water collected from the drainage fill behind the wal must be able to drain down and away from the wall into storm drains or an area lower than the wall, either at the end of the wall, via a carrier drain or through drainage weep holes.

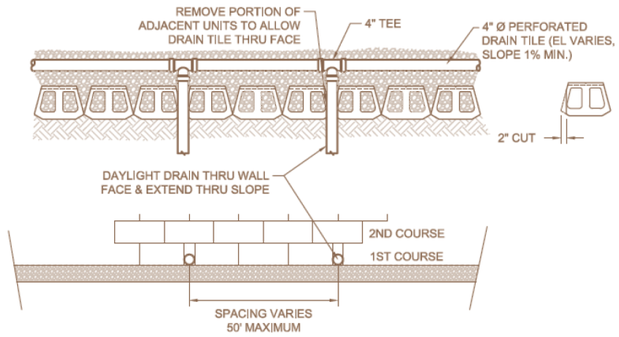
FIRST COURSE

If the wall is longer than 50 feet, drainage weep holes must be installed through the wall face, no more than 50 feet apart. Remove 2 inches off the front of two adjacent blocks to provide sufficient space for the drainpipe to exit through the face to form the weep hole.

NEXT COURSE

Build this and remaining courses using standard construction techniques.





CORNERS – INSIDE 90°

BASE COURSE

To create an inside 90° corner, begin by placing a block at the corner. Then lay a second block perpendicular to the first and continue laying out the rest of the base course working from the corner out.

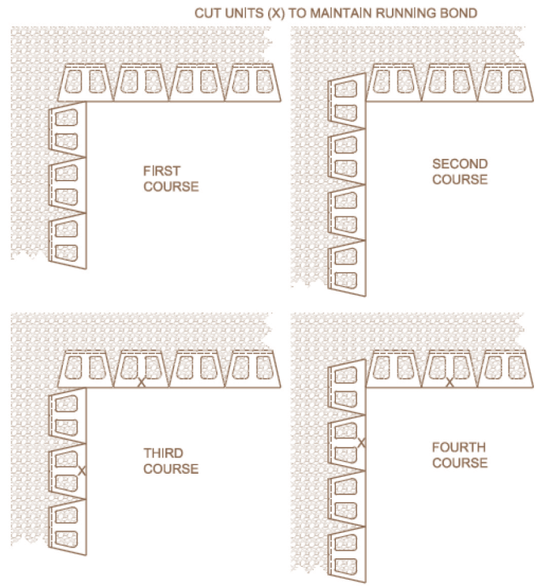
ADDITIONAL COURSES

On the second course, place all blocks in a running bond along one side of the corner. Once the second course of one wall is established, begin the second course of the adjacent wall. Several blocks away from the corner, position full blocks in a running bond.
Continue the running bond back towards the corner, until the gap becomes less than a full unit. Split* units may be required on this wall to maintain a running bond.

SUBSEQUENT COURSES

Block placement in the corner must alternate in direction with each succeeding course. The locator of the block being overlaid within the corner should be removed using a hammer and chisel, and these units should be glued in place using a concrete adhesive.

**To split a block, use a hydraulic splitter or split manually by using a hammer and chisel to score the block on all sides. Pound the chisel on the same line until the block splits. If partial unit sides are not exposed, use a circular cut-off saw with a masonry blade to achieve a tighter fit.*



CORNERS – INSIDE 90° WITH REINFORCEMENT

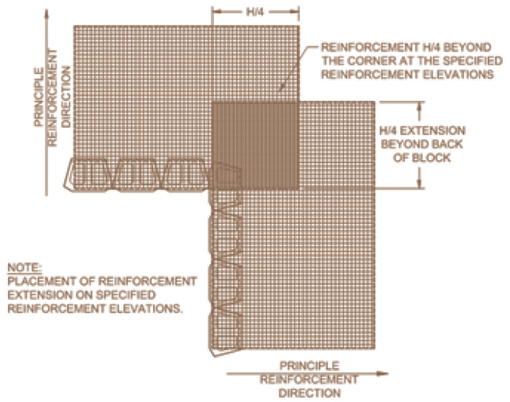
FIRST COURSE WITH REINFORCEMENT

To install reinforcement on an inside 90° corner, begin by checking the wall plan to determine reinforcement lengths and elevations. Cut reinforcement to the lengths shown in the wall plan, paying attention to the reinforcement strength direction.

Next, determine the proper placement of the reinforcement by dividing the proposed height of the wall by four. This represents the distance that reinforcement must extend beyond the front of the adjoining wall. Measure this distance from the front of the adjoining wall and begin the grid placement here. Make sure the grid is placed 1 inch back from the face of the block below and runs along the back of the adjoining wall.

EXAMPLE:

If overall
wall height is 4 feet,
the reinforcement
extension would
be 1 foot.



Place the next section of reinforcement on the adjoining wall. The reinforcement must not overlap and should lie flush with previously placed sections. Once reinforcement is in place, the next course of blocks can be installed.

SECOND COURSE WITH REINFORCEMENT

The first section of grid on this course is placed using the same formula that determines placement in front of the adjoining wall. Alternate the reinforcement extension on each course where reinforcement is required.

Place the next section of reinforcement on the adjoining wall. The reinforcement must not overlap and should lie flush with previously placed sections. Once reinforcement

CORNERS – OUTSIDE 90° AND CORNERS – OUTSIDE 90° WITH REINFORCEMENT

BASE COURSE

To build an outside 90° corner, begin by placing a corner unit and working from the corner unit outward.

NEXT COURSE

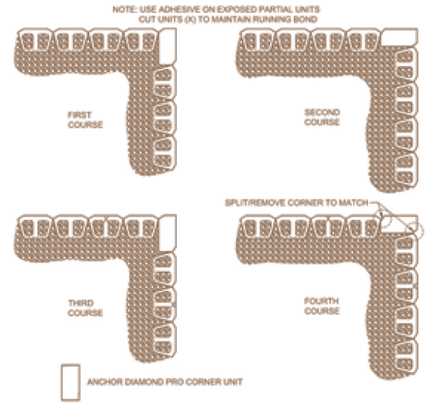
Lay a corner block perpendicular to the one below and glue the block in place with concrete adhesive. Two or three blocks away from the corner lay full blocks, maintaining running bond with the course below. Lay blocks back towards the corner block, leaving space for the final split units* required to complete the course.

Use split units immediately adjacent to the corner block to complete the course. Continue to alternate the corner unit orientation with each course and always use a concrete adhesive on all corner units and split units.

RUNNING BOND

Use split units* as necessary to maintain running bond.

**To split a block, use a hydraulic splitter or split manually by using a hammer and chisel to score the block on all sides. Pound the chisel on the same line until the block splits. If partial unit sides are not exposed, use a circular cut-off saw with a masonry blade to achieve a tighter fit.*

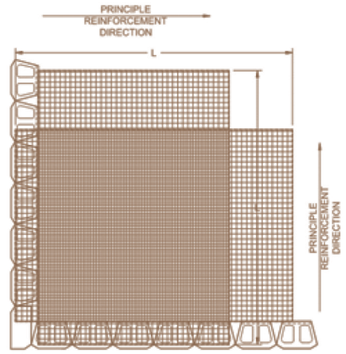


FIRST COURSE WITH REINFORCEMENT

Begin by checking the wall plan to determine reinforcement lengths and elevations. Lay a section of reinforcement near the corner of the wall, ensuring that it is placed within 1 inch of the face of the block and running along the back of the adjacent wall.

ADDITIONAL COURSES

Lay the next course of blocks and before backfilling, mark the portion of the wall without reinforcement. This is important, because once the backfill is in place this cannot be seen.



Backfill and compact behind the course of blocks. Cut an additional length of grid to correspond to the marked section of blocks. This grid should be cut to the length shown in the drawings and laid so that it is placed 12 inches back from the wall face, while running along the back, but not overlapping the adjacent wall.

Repeat this procedure at each reinforced layer within the wall, alternating the alignment of the additional layer of reinforcement at each elevation

NOTE:
IN THE "CROSS-OVER AREA" OF REINFORCEMENT, ONE OF THE LAYERS OF REINFORCEMENT SHOULD BE LOWERED OR RAISED ONE COURSE TO ALLOW PLACEMENT OF THE REINFORCEMENT WITH THE PRINCIPLE REINFORCEMENT STRENGTH DIRECTION PROPERLY ORIENTATED. THE REINFORCEMENT SHOULD NOT EXTEND INTO THE SEGMENTAL RETAINING WALL UNITS ON THE RETURN LEG OF THE 90-DEGREE CORNER.

INSIDE CURVE WITH REINFORCEMENT

CALCULATE THE RADIUS

Check the wall plan to determine the radius of the base course. This will be the smallest radius in the wall and must not be less than the minimum for the block system used.

A quick way to determine the base course radius:
1) Add 1/4 inch to the setback of the block used. Multiply that by the number of courses in the finished wall.

2) Subtract the result of step 1 from the radius of the top course. This number equals the approximate radius length of the base course.

3) To determine the radius for the front edge of the trench, subtract 6 inches from the approximate radius length of the base course.

Example: The setback of Diamond® Pro products with a 4-degree system batter is 9/16 inch. The wall is 6 courses high. The desired radius of the wall measured to the front of the block on the top course is 10 feet.

1) Setback multiplied by number of courses
l" + ¼" = 1 1/4" x 6 courses= 7½"

2) Desired radius minus setback
10' - 7½" = 9' 4½"

3) Distance to front of trench
9' 4½" - 6" = 3' 4½"

Tip: Add the depth of the block if you prefer to mark the curve from the back of the block.

LAY OUT THE TRENCH

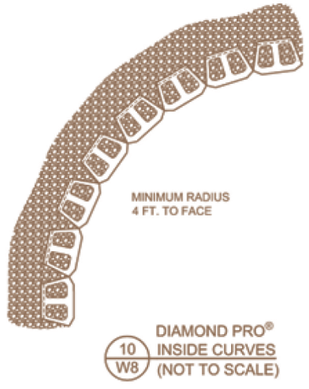
Drive a stake into the ground at the desired radius point of the curve. Attach a string and rotate it in an arc at the desired length to mark the curve in the soil. Dig the trench.

BASE COURSE

Using existing radius point stake and string, mark the base course curve on the leveling pad. Align the front of the block with the marked curve and ensure level placement from side to side and front to back.

ADDITIONAL COURSES

On each course, the lip of each block must be in contact with the back of the units below to ensure structural stability.



CURVES – INSIDE WITH REINFORCEMENT

Most retaining walls are designed assuming 100 percent coverage of the reinforcement. When building an inside curve the reinforcement will fan out, producing slight gaps. In order to ensure 100 percent coverage, additional lengths of reinforcement are used to fill those gaps on the next course of blocks. Don't overlap the grid on any given course.

FIRST COURSE WITH REINFORCEMENT

Cut reinforcement to the lengths specified in the wall plan. Lay segments of reinforcement within 1 inch of the face of the wall, making sure that the strength direction of each section is perpendicular to the wall face. Avoid overlapping the reinforcement by separating each section.

NEXT COURSE

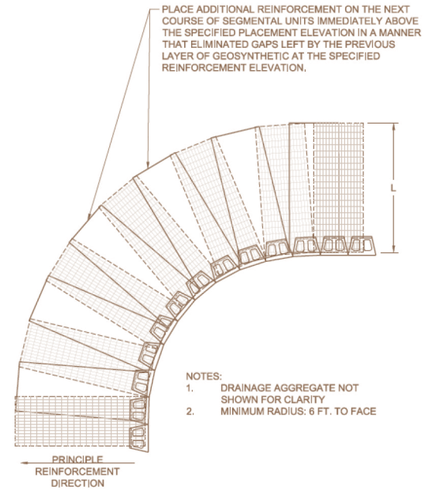
Place the next course of blocks, marking their backs to identify unreinforced areas. This step is important because when this course is backfilled, it's impossible to locate the unreinforced areas. Use the marked blocks as a guide, placing subsequent sections of reinforcement to overlap the gaps left on the previous course. This will ensure total reinforcement coverage.

ADDITIONAL COURSES

Repeat this procedure throughout the construction of the curve whenever reinforcement is required.

MINIMUM INSIDE RADIUS

The minimum radius varies by product. Please check Product Information for the product you are using at anchordiamond.com.



CURVES – OUTSIDE

LAY OUT THE RADIUS

When building an outside curve, begin by determining the desired radius of the top course at the wall face. This will be the smallest radius in the wall and must not be less than the minimum radius for the block system used.

To determine the approximate base course radius:
1) Add ¼ inch to the setback of the block used. Multiply that by the number of courses in the finished wall.
2) Add desired radius length of the top course to the result of step 1. This number equals the approximate radius length of the base course.
3) To determine the radius for the front edge of the trench, add 6 inches to the approximate radius length of the base course.

Example: The setback of the Diamond Pro• product with a 4-degree system setback is 9/rn inch. The wall is 8 courses high. The desired radius of the wall measured to the front of the block on the top course is 6 feet.

1) Setback multiplied by number of courses
l" + ¼" = l¼" x8 courses= 10"

2) Desired radius plus setback
6' + 10" = 6' 10"

3) Distance to front of trench
6' 10" + 6" = 7'4"

Tip: Subtract the depth of the block if you prefer to mark the curve from the back of the block.

LAY OUT THE TRENCH

Drive a stake into the ground at the desired radius point of the curve. Attach a string and rotate it in an arc at the desired length to mark the curve in the soil. Dig the trench.

BASE COURSE

Drive a stake into the ground at the desired center of the curve. Attach a string and rotate it in a circle around the stake to mark the radius in the soil. Align the front of the block with the curve and ensure level placement from side to side and front to back.

ADDITIONAL COURSES

On each course, the lip of each block must be in contact with the back of the units below to ensure structural stability.

CURVES – OUTSIDE WITH REINFORCEMENT

Most retaining walls are designed assuming 100 percent coverage of the reinforcement. When building an outside curve the reinforcement will have gaps, and the back edges don't overlap. To ensure 100 percent coverage, additional lengths of reinforcement are used to fill those gaps on the next course of blocks. Don't overlap the grid on one course.

FIRST COURSE WITH REINFORCEMENT

Cut reinforcement to the lengths specified in the wall plan. Lay sections of the reinforcement within 1 inch of the face of the wall with the strength direction perpendicular to the wall face. Avoid overlapping the reinforcement by separating each section.

NEXT COURSE

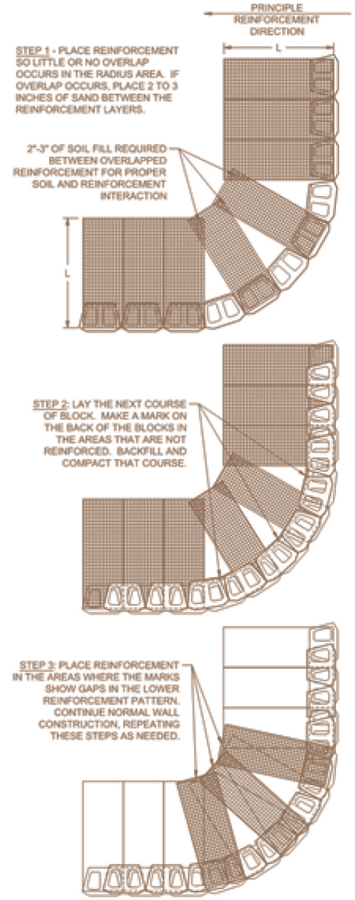
Place the next course of blocks, marking their backs to identify unreinforced areas. This step is important because when this course is backfilled, it's impossible to locate the unreinforced areas. Use the marked blocks as a guide, placing subsequent sections of reinforcement to overlap the gaps left on the previous course. This will ensure total reinforcement coverage. Repeat this procedure throughout the construction of the curve when reinforcement is required.

ADDITIONAL COURSES

Repeat this procedure throughout the construction of the curve whenever reinforcement is required.

MINIMUM RADIUS

Each product has a unique radius. Check the Product Information on anchordiamond.com.



GUARDRAILS

Impact on a guardrail system will transfer additional loads to the top of the wall. These additional loads must be accounted for in the design and construction of the wall.

A qualified engineer should always be consulted to determine the likely loads the guardrail will transfer to the wall and to produce a wall design that takes these into account.

Consult a qualified engineer before design, construction and installation take place.

The final location of the posts and guardrail in relation to the wall should be positioned according to the design from the engineer, as should any additional reinforcement required in the design.

Install any sleeves according to the wall plan. Sleeves should be at least 1 inch larger than the posts to allow for concrete and grouting.

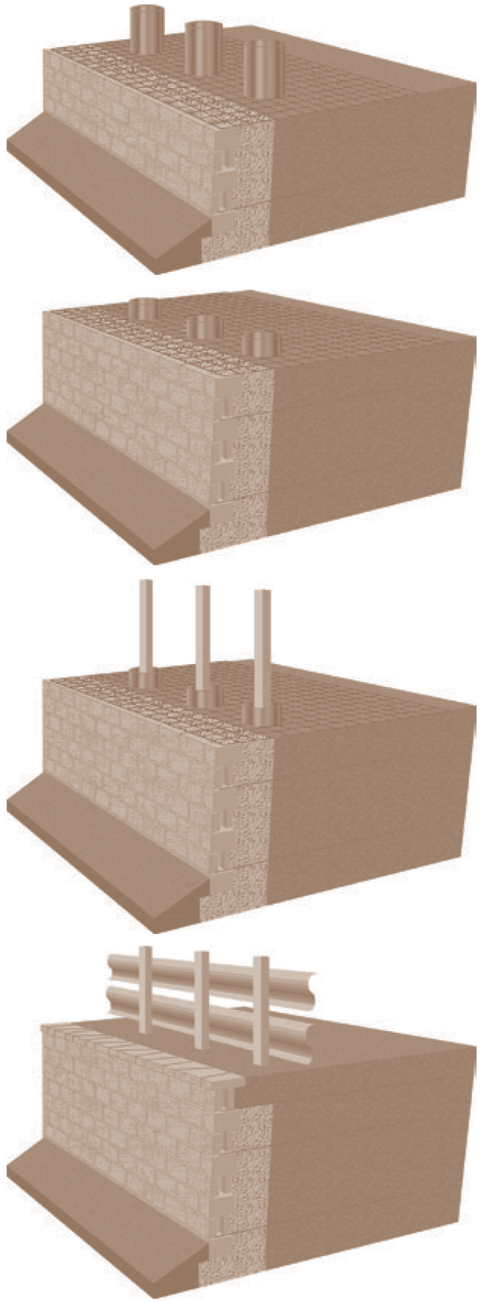
Walls should not be completed and sleeves then 'punched' through the already installed backfill and reinforcement layers after construction is complete. This may result in damage to the reinforcement grids and lead to subsequent failure of the wall.

Sleeves should be installed and held in place before any reinforcement the sleeve passes through is positioned, with the wall blocks, drainage material and backfill being installed and constructed in accordance with the instructions found elsewhere on anchordiamond.com.

Carefully cut the reinforcement cross straps to allow the reinforcement to fit around the sleeve without distortion or additional tension being introduced to the grid when in its final location.

Ensure the reinforcement grid is installed in accordance with the instructions found elsewhere on anchordiamond.com.

Grout the guardrail posts into each sleeve after the wall is built.



FENCES

The specific dimensions of the fence and fence post spacing are required to accurately determine the placement of the sleeves.

Provide at least 1 inch clearance between the inside of the sleeve and the outside of the post to allow for mortar and grout. Install the sleeves according to the wall plan during the construction of the wall.

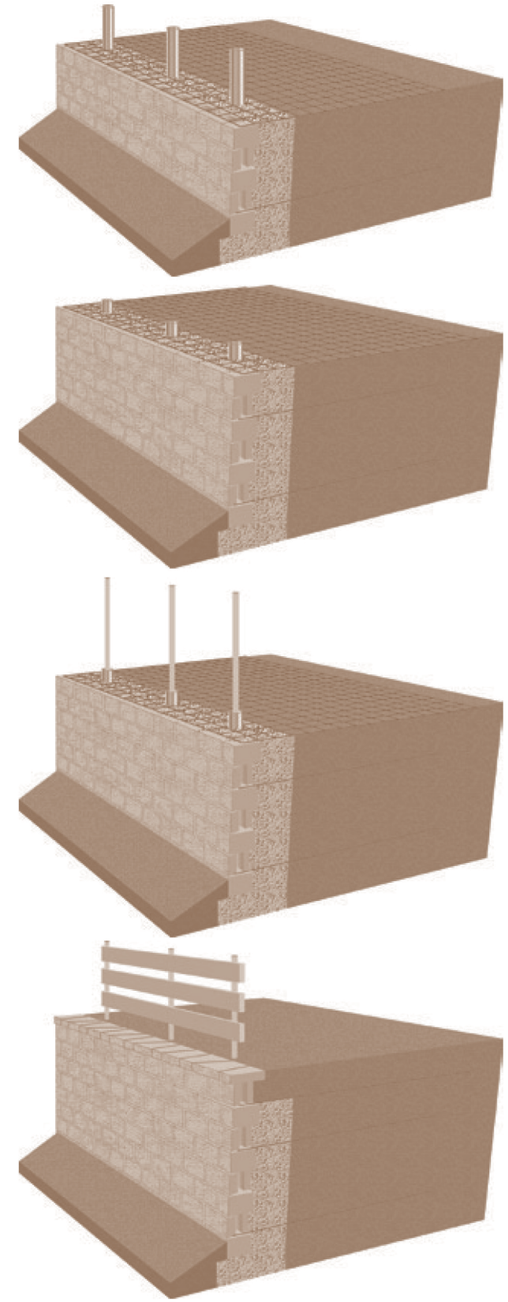
If the fence is at least 3 feet back from the wall face, generally no additional reinforcement is required.

If the fence is installed within 3 feet from the face of the wall, there may be some load transferred to the wall from wind, snow or pedestrians. Additional reinforcement around the fence sleeves may be needed. Consult a suitably qualified engineer before installation takes place.

Walls should not be completed and sleeves then 'punched' through the already installed backfill and reinforcement layers after construction is complete. This may result in damage to the reinforcement grids and lead to subsequent failure of the wall.

Carefully cut the reinforcement cross straps to allow the reinforcement to fit around the sleeve without distortion or additional tension being introduced to the grid when in its final location.

Grout the fence post into the sleeve after the wall is built.



TERRACES

INDEPENDENT TERRACED WALLS

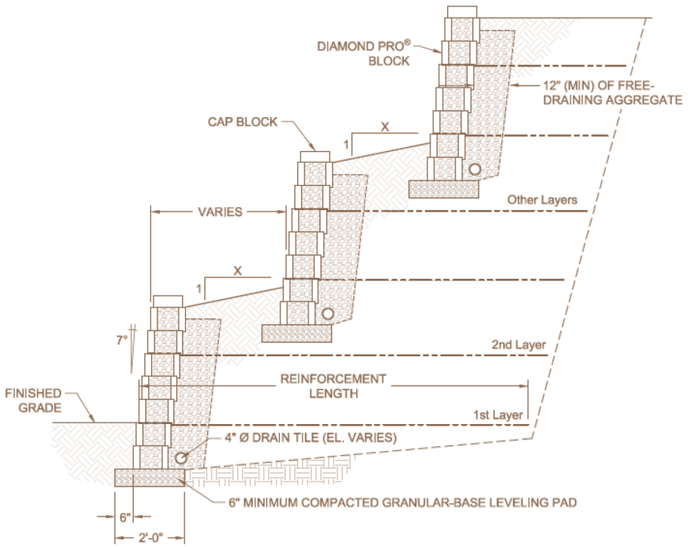
For each wall to be independent of others, they must be built using a 2:1 ratio: The upper wall must be built a distance away from the lower wall of at least twice the height of the lower wall. In addition, the upper wall must also be equal to or less than the height of the lower wall. Exceptions to this general rule include weak soil conditions or where slopes exist above, below or between wall locations. For example, if the lower terrace is 3 feet 4 inches tall the distance to the upper terrace must be at least 6 feet 8 inches, and the upper wall must not be higher than 3 feet 4 inches.

Proper drainage is vital to maintaining stable, long-lasting terraced walls. Drainage pipe must be installed so that the water is directed around or under the lower wall. (Never place the drainpipe outlet for the upper wall above or behind the lower wall.)

DEPENDENT TERRACED WALLS

When the distance between the lower and upper walls is less than twice the height of the lower wall, the walls become structurally dependent on each other. In this situation, it is important to take global stability (the resistance to overall mass movement of the whole SRW system in a circular or sliding mode) into account, incorporating additional reinforcement-and longer layers-into the wall plan. In addition, structurally dependent walls require even more excavation, backfill and time.

For dependent walls, consult a qualified engineer.



WATER APPLICATIONS

With correct design and construction, Anchor® products can be successfully installed at the edge of water channels, river banks and drainage ditches.

The final design of the wall is affected by various factors, including the movement and velocity of the adjacent water, erosion and scour, the direction of water travel to the wall, the risk of flooding, as well as the soil and ground conditions where the wall is being built.

A qualified engineer should always be consulted to determine the effect of water on the wall and to design a wall that takes all these factors into account.

Consult a qualified engineer before design, construction and installation take place, and follow the engineer's design.

Any reinforced-zone material should be made up of free draining material.

BASE COURSE

Place a filter fabric with extra length (as specified by the engineer's design) in front of the wall. The filter fabric will sit below the leveling pad, extend out into the reinforced zone and, after installation of the base course, up the front of the wall.

Install the leveling pad and the base course, the drainage aggregate and drainpipe.

Wrap the filter fabric up the face of the wall to the top of the base course. Place soil fill in front of the wall and fully compact, trapping the filter fabric against the front of the wall.

Install a second layer of filter fabric to the front of the wall, with sufficient width to allow the filter fabric to extend up the face of the wall to the depth of the layer of larger stones required to prevent scour along the base of the wall.

Install a minimum of 3 inches of sand over the filter fabric, before installing the layer of larger stones. Use the layer of larger stones to trap the filter fabric against the face of the wall.

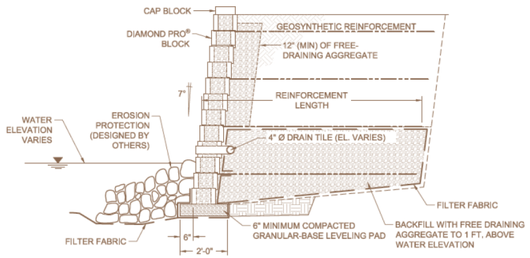
NEXT COURSE

Continue construction of the wall. A filter fabric should be installed between the drainage aggregate and the reinforced-soil zone for the full height and length of the wall. This prevents any clogging of the drainage fill by fines from the reinforced zone.

ADDITIONAL COURSES

Continue these steps until the wall is complete.

The final section of filter fabric should cover the drainage aggregate and run up against the back of the top course of block.



ANCHOR
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