



Proterra™

PRODUCT GUIDE



A COMPLETE ENGINEERED RETAINING WALL SYSTEM

Proterra™

When demanding projects call for a complete engineered retaining wall system, Oaks Proterra™ wall featuring M-Lock technology delivers a stable structure, even in true vertical applications. Standard, Double and Triple units bring modular stability to the most challenging slopes, while the available smooth and split-faced surfaces provide beautiful design aesthetics in any setting.



FEATURES AT A GLANCE

- Appropriate for freestanding, gravity, geosynthetic reinforced, and stabilized backfill walls.
- 3 setback options (vertical, 8° and 16° batter)
- A complete wall system in 2 finish options (split-face or smooth)
- False joints for added patterning on smooth-face
- Attractive standard colour options with custom colours available on request
- Standard units include built-in cutting guides for ½ block and 45° corners
- Coping-Step unit can be used as an attractive stand-alone step system
- Suitable for straight wall or gradual curve applications
- Machine installable

ICON LEGEND



FREESTANDING



GEOGRID
REINFORCED



SINGLE-DEPTH
GRAVITY



STABILIZED
BACKFILL



MULTI DEPTH
GRAVITY



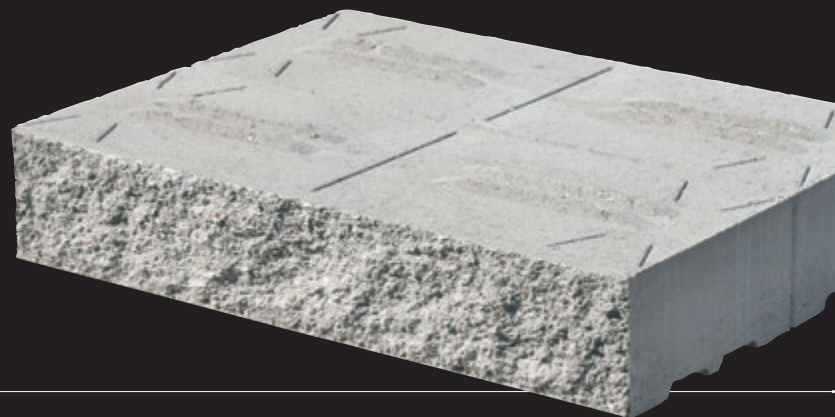
STRAIGHT
WALL



CURVED
WALL



MACHINE
INSTALLED





Wall: Proterra™ Split, Natural
Pavers: Molina 80mm, Luna

Proterra™ Smooth

Nueva® Collection |

COLOURS (SMOOTH)

Note: Coloured wall units also available as custom order. Minimum quantities apply.



GREYFIELD, SMOOTH



NATURAL, SMOOTH

SIZES (W x H x D)

See Packaging on page 12.



STANDARD UNIT
1000 x 185 x 375 mm
39.37 x 7.28 x 14.76"
Individually Packaged



DOUBLE UNIT
1000 x 185 x 750 mm
39.37 x 7.28 x 29.52"
Packaged with a Standard Unit as a Combo Bundle



TRIPLE UNIT
1000 x 185 x 1125 mm
39.37 x 7.28 x 44.29"
Individually Packaged



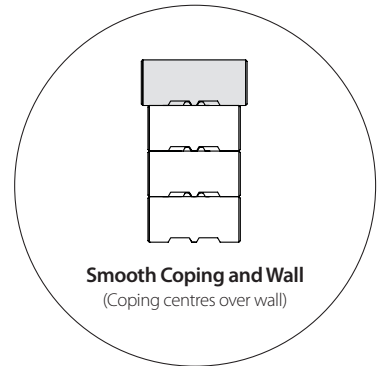
STANDARD CORNER UNIT
1000 x 185 x 375 mm
39.37 x 7.28 x 14.76"
Individually Packaged



COPING-STEP UNIT
1000 x 185 x 430 mm
39.37 x 7.28 x 16.92"
Individually Packaged



COPING CORNER/END UNIT
1000 x 185 x 430 mm
39.37 x 7.28 x 16.92"
Individually Packaged



Standard, Double and Triple units bring customizable, modular stability and deliver a stable structure using M-Lock technology.

M-Lock Technology



Proterra™ Split

Legacy Collection |

COLOURS (SMOOTH)

Note: Coloured wall units also available as custom order. Minimum quantities apply.



GREYFIELD, SPLIT



NATURAL, SPLIT



TIMBERWOOD, SPLIT

SIZES (W x H x D)

See Packaging on page 12.



STANDARD UNIT
1000 x 185 x 375 mm
39.37 x 7.28 x 14.76"
Individually Packaged



DOUBLE UNIT
1000 x 185 x 750 mm
39.37 x 7.28 x 29.52"
Packaged with a Standard Unit as a Combo Bundle



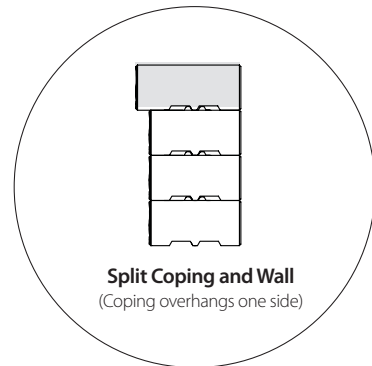
STANDARD CORNER UNIT
875 x 185 x 375 mm
34.44 x 7.28 x 14.76"
Individually Packaged



COPING-STEP UNIT
1000 x 185 x 430 mm
39.37 x 7.28 x 16.92"
Individually Packaged

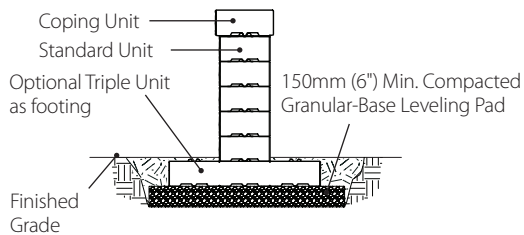


COPING CORNER/END UNIT
875 x 185 x 430 mm
34.44 x 7.28 x 16.92"
Individually Packaged

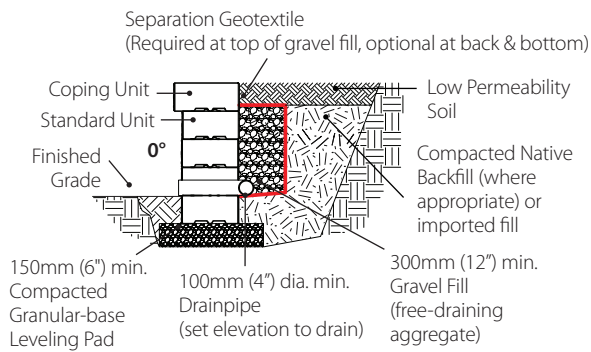


Wall Design Systems

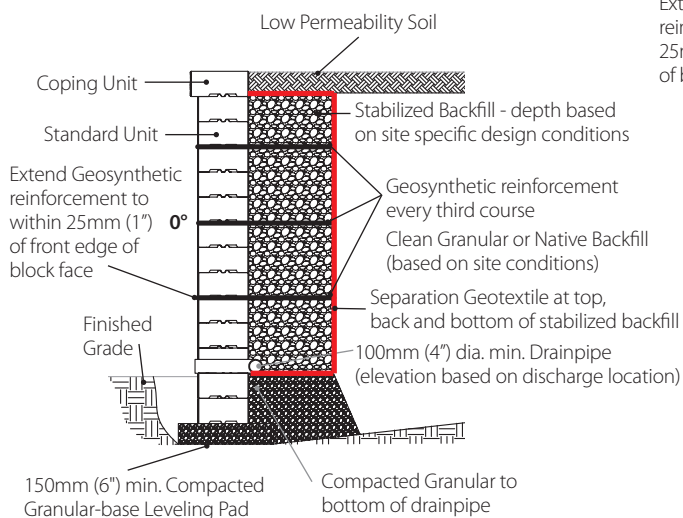
TYPICAL FREESTANDING WALL



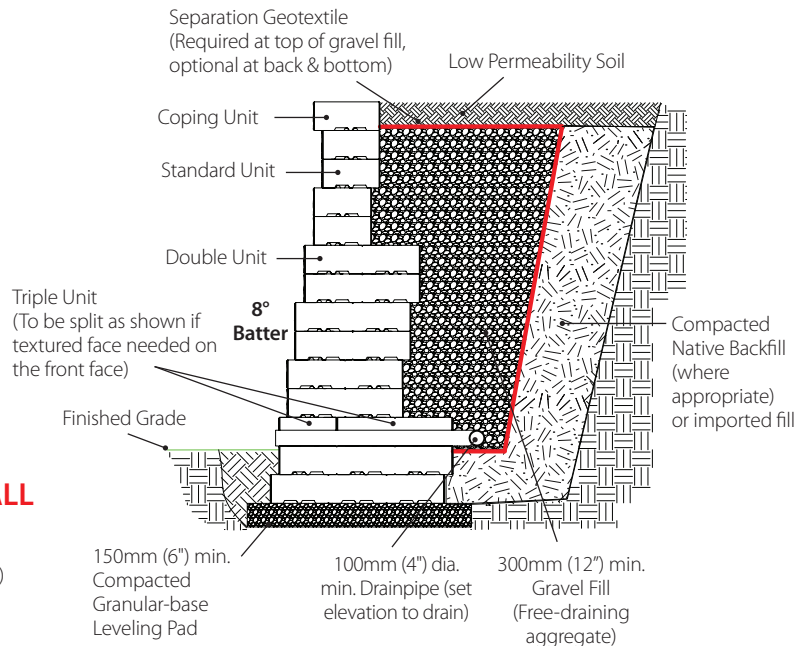
TYPICAL SINGLE DEPTH GRAVITY WALL



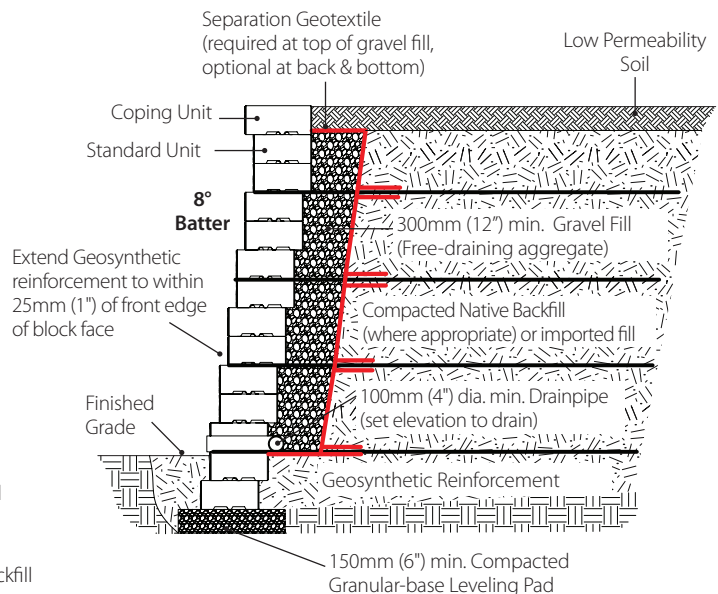
STABILIZED BACKFILL WALL



TYPICAL MULTI-DEPTH GRAVITY WALL



TYPICAL GEOSYNTHETIC REINFORCED WALL



Note: These graphics represent preliminary, non site-specific designs. Estimating information for site-specific purposes can be found in the Proterra Estimating Guide, in the Resources section of our Website. If used for construction, a registered professional engineer must be retained to review and approve the design, confirm site conditions, and inspect construction.

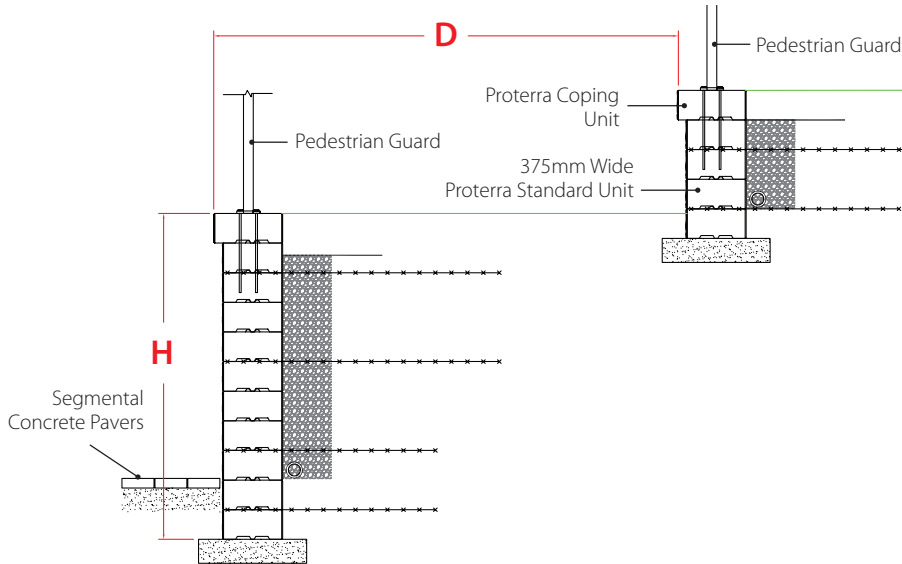
Specific Application

AutoCAD drawings can be downloaded on our website.
Scan or visit BramptonBrick.com/Resources

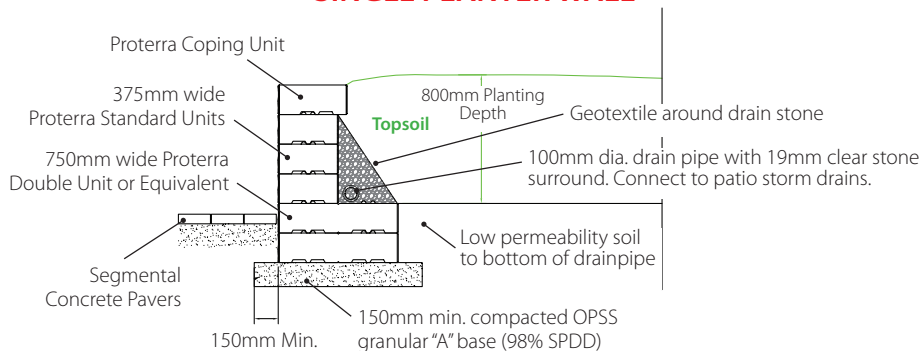


TYPICAL TERRACED WALL

When $D > 2H$ the two walls can be designed individually. When $D < 2H$, the weight of the upper wall is acting on the lower wall so the walls must be designed as one.

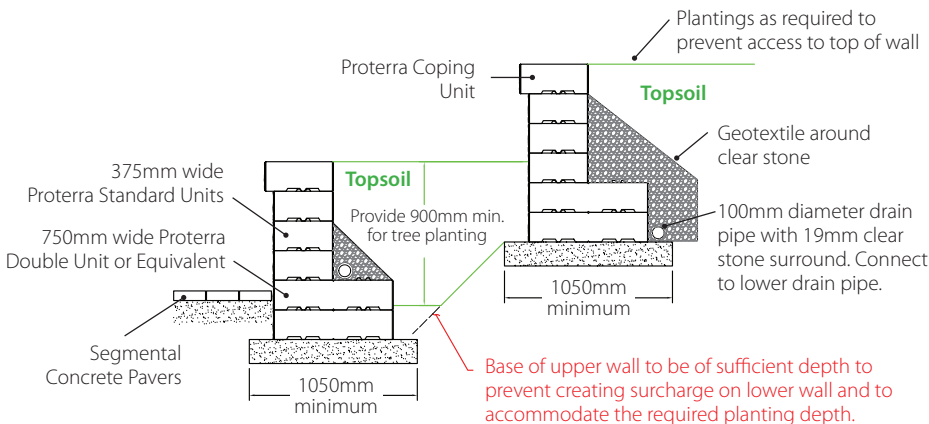


SINGLE PLANTER WALL

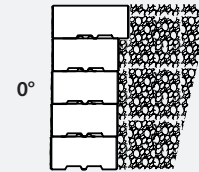


A gravity wall design avoids any issues between plantings and geogrid

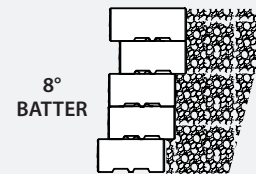
TIERED PLANTER WALLS



BATTER OPTIONS



ALTERNATE BATTER 1
(Coping level with face of wall)



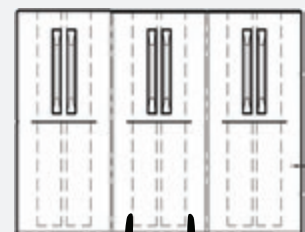
ALTERNATE BATTER 2
(Every second course setback)



ALTERNATE BATTER 3
(Every course setback)

OUTSIDE CORNER DETAIL

Corner blocks are produced for both the Split and Smooth face systems. The finished end prevents the M-Lock grooves from being visible.



Right hand matches split faces – right corner
Left hand matches split faces – left corner

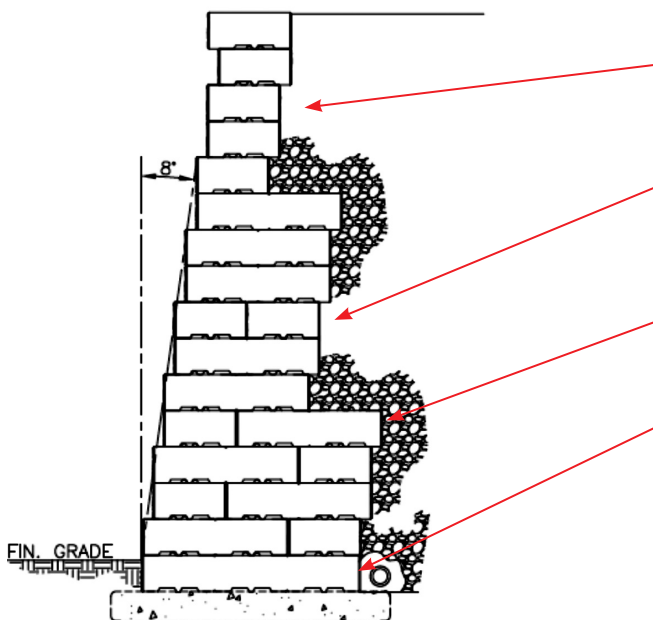
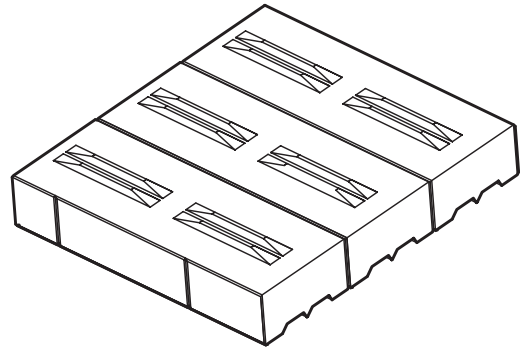
Split Details

The adjacent image is of a smooth-faced triple unit, as it comes out of the mold, ready for use. By splitting the triple unit, it can then be packaged for use as standard or double units, depending on the number of splits.

No split = Smooth face triple

One split = One double and one standard. As each unit has one smooth and one split face, they can be used for both the smooth and split face product lines.

Two split = Three Standard units. Two units have one smooth / one split face, while one unit has two split faces. Recommended for use in the split face wall system only unless all the double split units are used for the buried sections of the wall, or there is a split face band(s) incorporated into the smooth wall face.



WHEN ORDERING DOUBLES/TRIPLES

Each double comes with a standard unit. For jobs requiring more standards than doubles, only order the difference in standards needed.

When more doubles than standards are required, use the extra standards to create double units – making sure they are sandwiched between full double units.

Triple units do not have a split face. Use alternating Double Combos where the exposed face needs to be split.

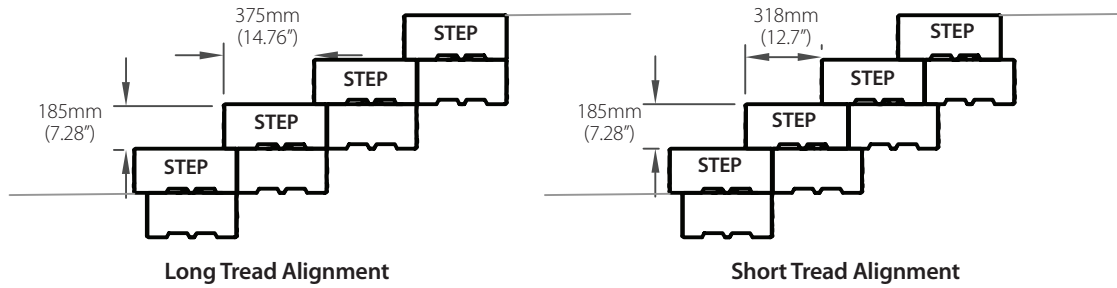
Triples can be used in buried portions of a split face wall as it is easier to level the single unit.

Step Construction

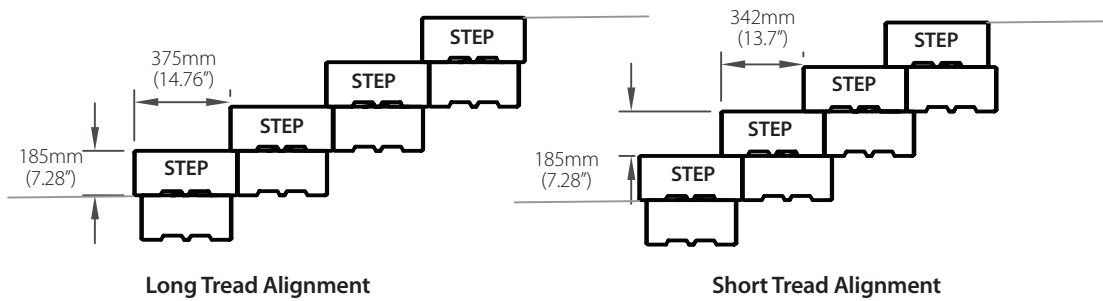
Note: Other layout options available. Where Integrated Accessibility Standards are in effect, we recommend Oaks Aria and Nueva Step systems.

SAMPLE STEP CONSTRUCTION USING PROTERRA™ STEP UNIT

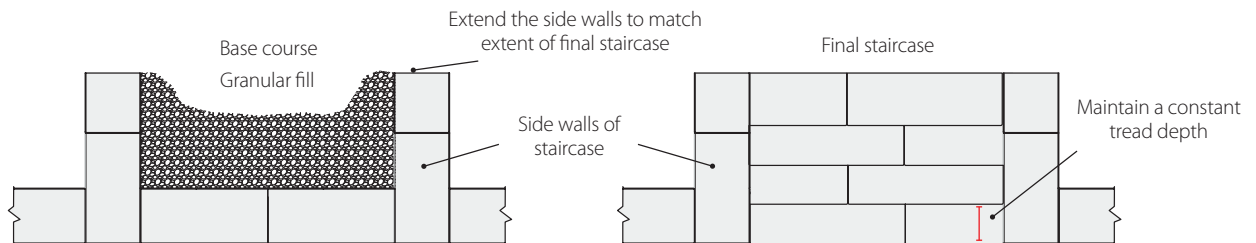
STEP ALIGNMENT - SPLIT FACE COPING



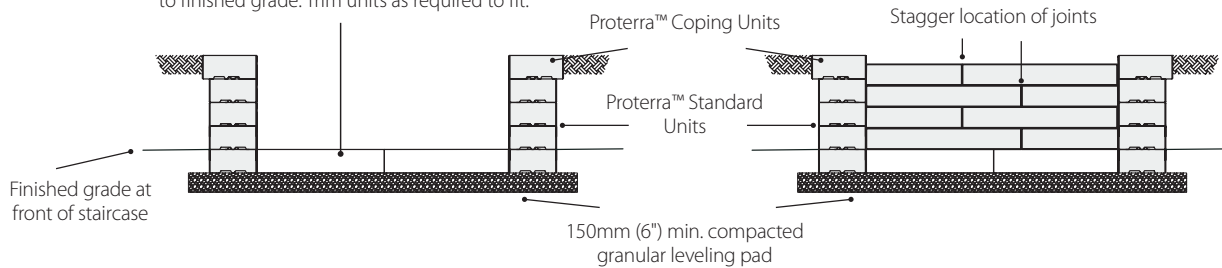
STEP ALIGNMENT - SMOOTH FACE COPING



INSET STAIRCASE USING PROTERRA™ WALL & ARIA STEP, NUEVA® STEP OR PROTERRA™ COPING-STEP UNITS



Use Proterra™ Coping Units or Coping-step Units to bring the bottom of the staircase up to finished grade. Trim units as required to fit.



Guards, Fences & Barriers

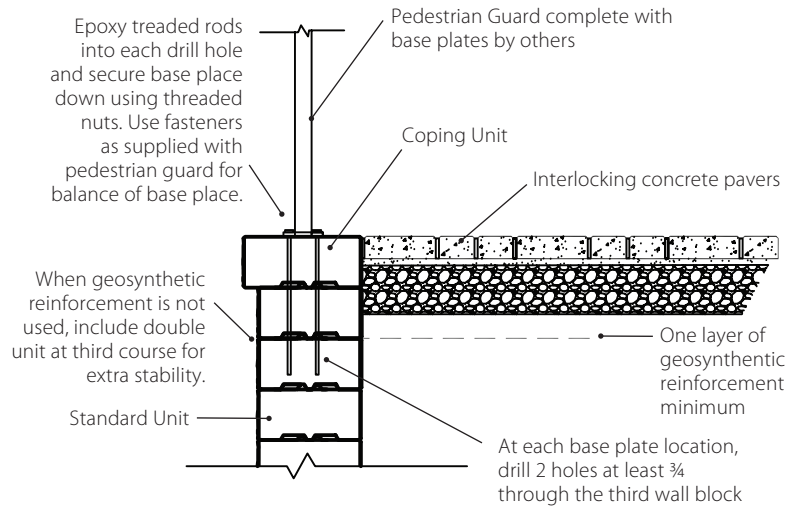
PEDESTRIAN GUARD OPTIONS

SURFACE MOUNTED DECORATIVE RAILING

When mounting a decorative railing to the top of Proterra wall, gluing a couple of courses together is not enough. To meet Building Code requirements, a minimum of three courses of wall blocks should be mechanically fastened together using threaded rods epoxied into place.



Railing Surface Mount Installation

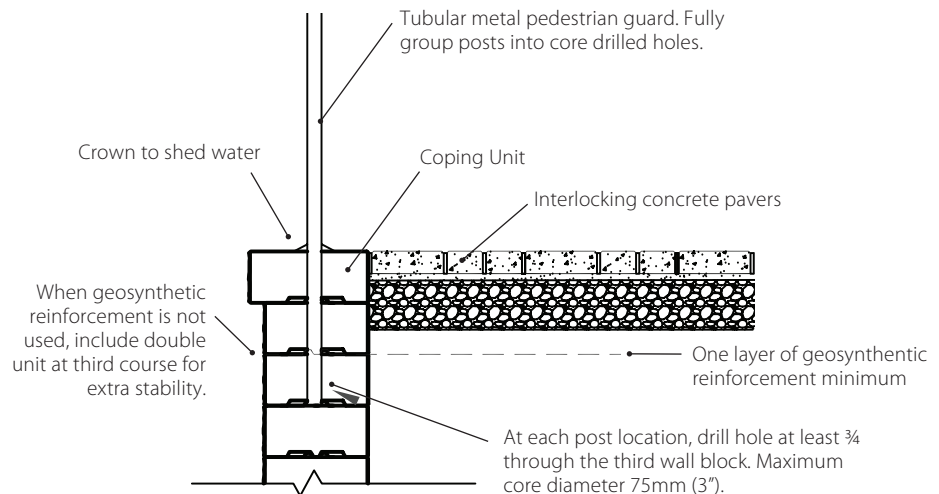


TUBULAR STEEL OR ALUMINUM RAILINGS

With round or square tubular railings, standard practice is to core drill through three courses of wall block into which the tubing is extended and grouted into place; be sure to crown the grout at surface to shed water away from the core holes. It is recommended that Proterra be used in this type of application as there is a reduced risk of unit cracking due to the core drilling as long as the cores are a minimum of 125mm (5") from any edge of the unit and core holes do not exceed 75mm (3") diameter.



Core Drilled Installation



Guards, Fences & Barriers

FENCE OPTIONS

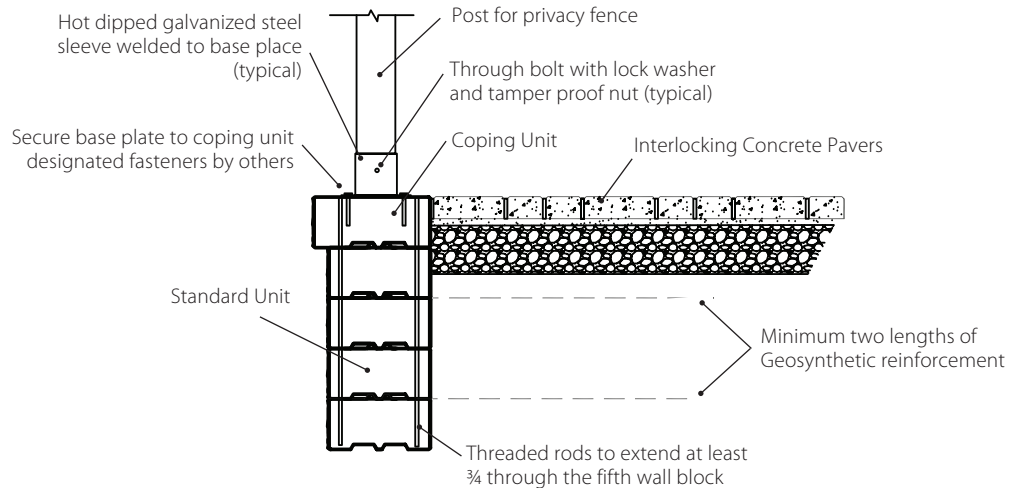
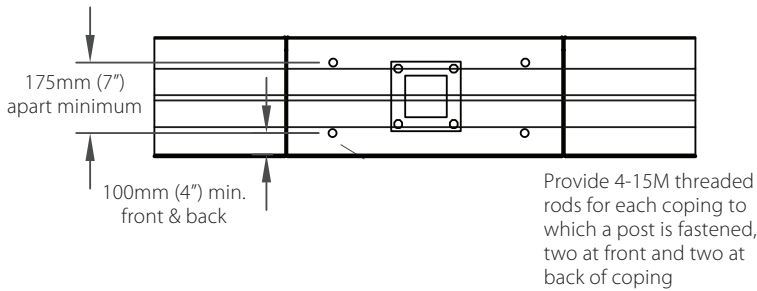
Design requirements for walls with fences at or near the top depend on the type of fence. With limited wind load, chain link fences are designed the same way as pedestrian guards. Wooden privacy and glass panel guards/fences on walls act as large sails, so the wall must be designed to account for wind loads.

With Oaks Proterra™, you can surface mount some privacy fences or noise barriers to the coping units, as long as the coping is mechanically fastened to at least four additional courses of wall block. Epoxy a rod into a drill hole at each of the four corners of the coping. (See diagram)











Fence Surface Mount Installation

PRIVACY FENCE OR NOISE BARRIER SURFACE MOUNTED ONTO WALL



Technical Information

PROTERRA USAGE SUMMARY

	Connector Type	Batter Options								
PROTERRA™ SMOOTH										
	Split tongue	0°, 8° or 16°	•	•	•	•	•	•	•	•
PROTERRA™ SPLIT										
	Split tongue	0°, 8° or 16°	•	•	•	•	•	•	•	•

PACKAGING SPECIFICATIONS PROTERRA SMOOTH

PROTERRA™ SMOOTH	Bundle Specifications					Per Section Specifications					
	Layers	Sq. Ft.	Lin. Ft.	Pieces	Weight	Sections	Sq. Ft.	Lin. Ft.	Pieces	Weight	Weight/Piece
Standard Unit	3	18	29.5	9	3150	Layer	6	9.8	3	1050	350
Standard Double	3	6	9.8	3	3150	Layer	2	3.3	1	1050	350
Triple Unit	3	6	9.8	3	3150	Layer	2	3.3	1	1050	1050
Standard Corner Unit	3	24.6	40.6	9	3150	Layer	8.2	13.5	3	1050	350
Coping-Step Unit	3	12	19.6	6	2388	Layer	4	6.5	2	796	398
Coping Corner/End Unit	3	17.1	28.1	6	2400	Layer	5.7	9.4	2	800	400

PACKAGING SPECIFICATIONS PROTERRA SPLIT

PROTERRA™ SPLIT	Bundle Specifications					Per Section Specifications					
	Layers	Sq. Ft.	Lin. Ft.	Pieces	Weight	Sections	Sq. Ft.	Lin. Ft.	Pieces	Weight	Weight/Piece
Standard Unit	3	18	29.5	9	3150	Layer	6	9.8	3	1050	350
Standard Double	3	6	9.8	3	3150	Layer	2	3.3	1	1050	350
Standard Corner Unit	3	22.4	36.9	9	2772	Layer	7.4	12.3	3	924	308
Coping-Step Unit	3	12	19.6	6	2388	Layer	4	6.5	2	796	398
Coping Corner/End Unit	3	15.6	25.7	6	2088	Layer	5.2	8.6	2	696	348



Proterra™ Smooth, Natural (Multi-Gravity Wall)



Proterra™ Split & Smooth, Timberwood



Proterra™ Split & Smooth, Natural



retaining wall design request form

GENERAL INFORMATION

Applicant: _____ Date: _____
 Contact Name: _____ Wall Installer: _____
 Phone #: _____ Wall Installer Contact #: _____
 Email: _____ Wall Installer Email: _____
 Applicant Type: Architect Engineer Landscape Architect Contractor
 Home Owner Developer Other _____

PROJECT INFORMATION

Project Name: _____
 Project Address: _____
 Contact: _____
 Site Plan Available: Yes No Geotechnical Report Available: Yes No

DESIGN SERVICE INFORMATION

Date Needed: _____ Bid/Start Date: _____
 Service Requested: Wall Design for Quoting Drawing for Building Permit Application
 Construction Drawings
 Product Requested: Proterra Ortana/Ortana Plus Nueva® Wall
 Wall Type: Single Unit Gravity Multi Unit Gravity Stabilized Backfill Geogrid Reinforced

BASIC SITE INFORMATION

Number of walls on project: _____
 Maximum height: _____
 Surcharge at top of wall: Landscape/Pedestrian Vehicular Slope
 Building Pool Other _____
 Tiered: Yes No
 If yes, provide tier information (setback, heights, # of tiers) _____

Wall batter: (check the appropriate boxes)

	0°	3.5°	7°	8°	16°
Ortana	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proterra™ (split)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proterra™ (smooth)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nueva® 150 Wall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nueva® 75 Wall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Rail or fence at top of wall? Yes No If yes, type of rail or fence: _____
 Site soil description: Clean sands and gravel (ø=36") Sands, sandy silts (ø=32") Silts, sandy and silty clays (ø=27")
 (if geotechnical report not available)
 Slope below wall: Yes No How steep: _____ How high: _____
 Site soil used for Infill? Yes No Engineered or native? _____
 Water application? Yes No Details: _____
 Special site requirements/Information: _____

REV_05/20



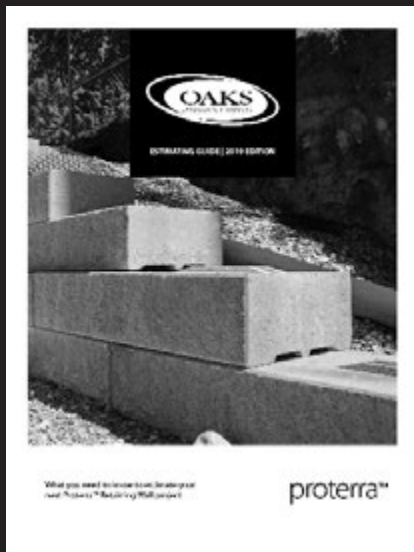
A digital version of this form is available on our website.
 Scan or Visit: www.bramptonbrick.com/en/engineering-services-form

We're here to help!



Need help with estimating and designing for your Proterra™ project? Or, are you looking for solutions for other applications? Oaks has you covered! Check out our comprehensive **Proterra Estimating Guide** and **Designer Resource Guide** which are available in the **Resources Section** of our website.

Resources



Proterra Estimating Guide



Designer Resource Guide

MORE PROTERRA™ RESOURCES ARE AVAILABLE ON THE PRODUCT PAGES OF OUR WEBSITE.

www.bramptonbrick.com/en/proterra-smooth
www.bramptonbrick.com/en/proterra-split



OAKSpavers.com

CA - 1.800.709.OAKS (6257) | US - 1.800.876.OAKS (6257)

Brampton

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Brampton, ON L7A 1E9

Boisbriand

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Boisbriand, QC J7H 1N3

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3007 County Rd. #29
PO Box 141, Brockville, ON K6V 5V2

Cambridge

1038 Rife Road
Kitchener, ON N2A 4A5

Hillsdale

2108 Flos Road Four East
Hillsdale, ON L0L 1V0

Markham

455 Rodick Road
Markham, ON L6G 1B2

Detroit

51744 Pontiac Trail
Wixom, MI 48393

Farmersburg

1256 East County Rd. 950 N.
Farmersburg, IN 47850

