NEW Smooth Faced Product Line!
Now compatible with VESPA software
Optimized for Gravity or Grid Design
Mechanical Installation
Proven Performance for Walls 7m High+
Modular Design
proterra™

The next generation of engineered commercial retaining wall systems from OAKS is here! Standard, Double and Triple units bring modular stability to the most challenging projects, while Proterra™’s available smooth and split-faced surfaces provide beautiful aesthetics in any setting.

COLORS

NATURAL - Split

GREYFIELD - Split

TIMBERWOOD - Split

NATURAL - Smooth*

GREYFIELD - Smooth*

TIMBERWOOD - Smooth*

*For finish configuration by unit see next page.
product details

When demanding projects call for a complete retaining wall system, Proterra™, complete with its M-Lock technology, ensures a stable structure.

- 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
- 3 standard color options with custom colors available on request
- Standard units include built-in cutting guides for half-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

M-Lock Technology

![Proterra™ Coping](image)

WALL TYPES

- **FREESTANDING**
- **MULTI DEPTH GRAVITY**
- **GEOGRID REINFORCED**
- **STABILIZED BACKFILL**

ALIGNMENT

- **STRAIGHT WALL**
- **MACHINE INSTALLED**

INSTALLATION OPTIONS
**wall systems**

**TYPICAL FREESTANDING WALL**

- COPING UNIT
- STANDARD UNIT
- OPTIONAL TRIPLE UNIT AS FOOTING
- FINISHED GRADE
- 150mm (6") MIN. COMPACTED GRANULAR-BASE LEVELING PAD

**TYPICAL SINGLE DEPTH GRAVITY WALL**

- COPING UNIT
- STANDARD UNIT
- 0°
- FINISHED GRADE
- 150mm (6") MIN. COMPACTED GRANULAR-BASE LEVELING PAD

**STABILIZED BACKFILL WALL**

- COPING UNIT
- STANDARD UNIT
- EXTEND GEOSYNTHETIC REINFORCEMENT TO WITHIN 25mm (1") OF FRONT EDGE OF BLOCK FACE
- FINISHED GRADE
- 150mm (6") MIN. COMPACTED GRANULAR-BASE LEVELING PAD

**TYPICAL MULTI-DEPTH GRAVITY WALL**

- SEPARATION GEOTEXTILE (Required at top of gravel fill, optional at back & bottom)
- LOW PERMEABILITY SOIL
- COPING UNIT
- STANDARD UNIT
- TRIPLE UNIT (To be split as shown if textured face needed on the front face)
- 8° BATTER
- FINISHED GRADE
- 300mm (12") MIN. GRAVEL FILL (free-draining aggregate)

**TYPICAL GEOSYNTHETIC REINFORCED WALL**

- SEPARATION GEOTEXTILE (Required at top of gravel fill, optional at back & bottom)
- LOW PERMEABILITY SOIL
- COPING UNIT
- STANDARD UNIT
- COMPACTED NATIVE BACKFILL (Where appropriate) or IMPORTED FILL
- 300mm (12") MIN. GRAVEL FILL (Free-draining aggregate)

**AutoCAD versions of these, and several more, Proterra drawings can be downloaded from:**

-OAKSpavers.com/resources/design-tools-guidelines/autocad-drawings

**step construction**

**SAMPLE STEP CONSTRUCTION USING PROTERRA™ STEP UNIT**

- STEP UNIT
- STEP
- STANDARD UNIT
- 12.5" (318mm)
- 7.25" (185mm)

**NOTE:** Other layout options available. Where International Accessibility Standards are in effect, we recommend Oaks Aria Step system.

**OAKS ARIA STEP** (INTEGRATED ACCESSIBILITY STANDARD COMPLIANT)

- ACCEPTABLE RANGE IS 280 TO 355mm EACH STEP TREAD TO BE CONSISTENT
- 150mm (6") MIN.
- COMPACTED GRANULAR FILL

**Aria Step Unit**

- Width 1200mm (47.24")
- Height 165mm (6.5")
- Depth 400mm (15.75")
- Textured on one face, smooth on one face.
**TYPICAL TERRACED WALL**
*When D < 2H, design as if a single wall*

- **COPING UNIT**
- **STANDARD UNIT**
- **FINISHED GRADE**

**SEPARATION GEOTEXTILE**
(Required at top of gravel fill, optional at back & bottom)

- **300mm (12") MIN. COMPACTED GRANULAR BASE LEVELING PAD**
- **(30mm (1") DIA. MIN. DRAINPIPE)**
  (Set elevation to drain)

**GEOSYNTHETIC REINFORCEMENT**

**CORE DRILL THROUGH MIN. 3 COURSES**
**MAX CORE DIA. 75mm (3")**

**LOW PERMEABLE SOIL**

**SEPARATION GEOTEXTILE**
(Required at top of gravel fill, optional at back & bottom)

**COMPACTED NATIVE BACKFILL**
(Where appropriate) or **IMPORTED FILL**

**STANDARD UNIT**

**CROWN WITH GROUT**

**SEPARATION GEOTEXTILE**
(Required at top of gravel fill, optional at back & bottom)

**STANDARD UNIT**

**COPING UNIT**

**GEOSYNTHETIC REINFORCEMENT**

### BATTER OPTIONS

- **0° BATTER**
- **8° BATTER**
- **16° BATTER**

**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.

### INSET STAIRCASE USING PROTERRA™ WALL & ARIA STEPS

- **USE PROTERRA™ COPING UNITS OR ARIA STEP UNITS TO BRING THE BOTTOM OF THE STAIRCASE UP TO FINISHED GRADE. TRIM UNITS AS REQUIRED TO FIT.**
- **FINISHED GRADE AT FRONT OF STAIRCASE**
- **150mm (6") MINIMUM COMPACTED GRANULAR LEVELING PAD**

**BASE COURSE**

**GRANULAR FILL**

**EXTEND THE SIDE WALLS TO MATCH EXTENT OF FINAL STAIRCASE**

**SIDE WALLS OF STAIRCASE**

**FINAL STAIRCASE**

**MAINTAIN A CONSTANT TREAD DEPTH**

**STAGGER LOCATION OF JOINTS**

**SEPARATION GEOTEXTILE**
(Required at top of gravel fill, optional at back & bottom)

**COMPACTED NATIVE BACKFILL**
(Where appropriate) or **IMPORTED FILL**

**300mm (12") MIN. GRAVEL FILL**
(free-draining aggregate)

**STANDARD UNIT**

**COPING UNIT**

**GEOMETRIC SOCKETS**

**GEOSYNTHETIC REINFORCEMENT**

**CORE DRILL THROUGH MIN. 3 COURSES**

**MAX CORE DIA. 75mm (3")**

**STEEL HANDRAIL OR CHAIN LINK FENCE**

**FINISHED GRADE**

**150mm (6") DIA. MIN. DRAINPIPE**
(Set elevation to drain)

**NOTE:** These graphics represent preliminary, non-site-specific designs. If used for construction, a registered professional engineer must be retained to review and approve the design, confirm site conditions, and inspect construction.

**Not applicable for privacy or glass panel fences. Consult with Oaks staff for details on these types of applications.**

[OAKSpavers.com/resources/design-tools-guidelines/autocad-drawings]
### proterra™ (smooth) details

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### proterra™ (split) details

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#### USAGE SUMMARY

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#### 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.

The image above is how double and triple units are manufactured.

**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.
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 [ ] Ortana Extended [ ]

Wall Type: Single Unit Gravity [ ] Multi Unit Gravity [ ] Stabilized Backfill [ ]

Geogrid Reinforced [ ]

BASIC SITE INFORMATION

Number of walls on project: ____________________________ Wall batter: (check the appropriate boxes)

Maximum height: ___________________________ 0° 7° 8° 16°

Surcharge at top of wall: Landscape/Pedestrian [ ] Vehicular [ ] Slope [ ]

Building [ ] Pool [ ] Other __________________

Tiered: Yes [ ] No [ ]

If yes, provide tier information (setback, heights, # of tiers) ____________________________

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: ____________________________
Product representations shown in this publication are intended to convey the general color, texture and appearance of the product. Variations may occur in the manufacturing and printing process. Always select from an actual product sample.